REMEDIAL INVESTIGATION REPORT/REMEDIAL ACTION REPORT

AOC-19: QC Laboratory
Hess Corporation – Former Port Reading Complex (HC-PR)
835 West Avenue
Port Reading, Middlesex County, New Jersey
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1.0 INTRODUCTION

On behalf of Hess Corporation (Hess), Earth Systems, Inc. (Earth Systems) has prepared this Remedial Investigation/Remedial Action Report (RIR/RAR) for the environmental area of concern designated as AOC-19: Former Quality Control Laboratory (QC Lab or Site) associated with the Hess Corporation Former Port Reading Complex (HC-PR). The former QC Lab is located on Block 664.01 and Lot 1.01 (835 West Avenue, Port Reading, Middlesex County, New Jersey).

A United States Geological Survey (USGS) 7.5 minute series quadrangle map (Arthur Kill, New Jersey), depicting the HC-PR facility and associated land features is presented as **Figure 1**. **Figure 2** presents the Site Layout of the entire HC-PR property and **Figure 3** presents the location of the former QC Lab.

The QC Lab was demolished in 2015 and included the decommissioning of four (4) underground storage tanks (USTs). The USTs served the Lab as the endpoint of waste petroleum products that were tested and evaluated within the building. The UST decommissioning was performed per the Technical Requirements for Site Remediation (TRSR) of the New Jersey Department of Environmental Protection (NJDEP) and included the collection and analyses of post-excavation soil samples to assess the adjacent soil for potential UST-related impacts. The analyses identified soil impacts that were attributable to historic releases from the USTs. This RIR/RAR documents the additional remedial investigation and remedial actions conducted to address the soil and groundwater impacts present in AOC 19. Remedial investigation activities were all conducted in accordance with the revised Remedial Investigation Workplan submitted and approved in June 2016. All impacted soil has been excavated from the AOC and post remediation groundwater sampling confirms that soil remediation to address impacts attributable to the historic UST release was effective. This RIR/RAR is being submitted in conjunction with a Remedial Action Permit (RAP) application to establish a Classification Exception Area (CEA) to address residual groundwater metal impacts, unrelated to the historic UST release. Once the RAP is approved, the Licensed Site Remediation Professional (LSRP) will issue a Limited Restricted Use Response Action Outcome to close out the AOC.

This RIR/RAR has been completed to document delineation and remediation of soil and groundwater impacts at the former QC Lab location to satisfy all NJDEP requirements in accordance with New Jersey Administrative Code (N.J.A.C.) 7:26E, *TRSR*; N.J.A.C 7:26C, *The Administrative Requirements for the Remediation of Contaminated Sites (ARRCS)*; N.J.S.A. 58:10C-1 et seq., *The Site Remediation Reform Act (SRRA)*; and the associated NJDEP SRRA Guidance Documents.

2.0 BACKGROUND

2.1 Site Description

The HC-PR facility is an approximate 223-acre irregularly shaped parcel, situated in an industrially developed waterfront area. A Site location map for the HC-PR facility is presented as **Figure 1**. The HC-PR facility is identified as Block 756, Lot 3; Block 756.01, Lots 1.02, 2, and 3; Block 756.02, Lots 1 and 8; Block 757, Lot 1; Block 760, Lot 6; Block 760.01, Lots 2 and 3; Block 760.02, Lots 1, 2, and 3; Block 1096.01, Lot 6, and Block 664.01, Lots 1.01 and 1.02. The QC laboratory building was formerly located on Block 664.01, Lot 1.01.

A review of the QC Lab property history noted that it had been a vacant field until the property's acquisition by Hess. The construction of the QC Lab occurred between 1957 and 1963 and was constructed for the assessment of raw and refined components of the HC-PR operations. The spent material, after assessment, was discharged to laboratory-grade sinks which drained via piping to the USTs. The QC Lab property is separated from the HC-PR facility by a Conrail railroad right-of-way.

2.2 Site Topography

The local topography of the former refinery portion of the Site is relatively flat, with a very gradual southeastward slope downward to the Arthur Kill. The entire Site is approximately 210 acres and ranges in elevation from about 5 to 30 feet above mean sea level (MSL). The southeast-sloping ground surface elevation within QC Lab area ranges from 14 to 24 feet above MSL, as defined by National Geodetic Vertical Datum of 1929.

2.3 Site Geology and Hydrogeology

The geology of the HC-PR facility was determined by reviewing subsurface investigation data collected at the HC-PR facility and from the Geologic Map of the State of New Jersey. The HC-PR facility is underlain by the Magothy and Raritan formations, which are the lowest members of the Cretaceous-age Coastal Plain physiographic sediments. The Raritan Formation consists of sands and clays of variable color and grain size, and the overlying Magothy Formation consists of dark lignitic sand and clay containing glauconite near the top. The western section of the HC-PR facility is underlain by a thick clay unit, while marsh deposits underlie the eastern and southeastern section of the HC-PR facility.

The shallow unconfined water table at the HC-PR facility was encountered between approximately 2 and 11 feet below ground surface (bgs). Groundwater flow is predominately southeasterly in the northwest portion of the HC-PR facility and east-southeasterly in the central portion of the HC-PR facility. The HC-PR facility wells located adjacent the Arthur Kill and North Drainage Ditch are affected by tidal influences. Wells located further away from the Arthur Kill are generally unaffected by tidal influence. An average hydraulic gradient of approximately 0.001 feet /per feet was calculated for the

Site. The general flow of groundwater beneath the QC lab is to the east, southeast. Shallow groundwater contour maps have been included as **Figures 4.1** and **4.2**.

3.0 REGULATORY COMPLIANCE

3.1 Identification of Applicable Standards

The applicable regulatory standards for the Site are the NJDEP Residential (RSRS) and Non-Residential Soil Remediation Standards (NRSRS), the Impact to Groundwater (IGW) default standard, and the Groundwater Quality Standards (GWQS).

During the soil investigation activities, groundwater was observed in soil borings at approximately 6-7 feet below grade. Groundwater was detected in the AOC monitoring wells ranging from depths of 2 to 6 feet below grade. Therefore, soil samples collected in 2016 were only compared to the IGW pathway if collected above 6 feet below grade.

Aluminum and manganese were detected above their respective IGW in multiple soil samples. As per the NJDEP document, Frequently Asked Questions for the Impact to Groundwater Pathway in Soil Remediation Standards, the impact to groundwater pathway does not need to be addressed for these compounds since the IGW standard is not based on health considerations, but primarily on aesthetic conditions such as taste, odor and appearance. In addition to aluminum and manganese, iron and sodium were also detected in groundwater samples collected from the AOC. The GWQS for these compounds are not health based and these compounds do not need to be addressed as part of remediation of this AOC.

3.2 Receptor Evaluation

An updated Receptor Evaluation is included in **Appendix A.**

3.3 Quality Assurance Project Plan

Samples were collected in accordance with the sampling procedures outlined in the Quality Assurance Project Plan (QAPP), which is included as **Appendix J**. The QAPP provides guidance to the project team to ensure all field activities are completed in a manner consistent with the NJDEP requirements and that all data produced is of sufficient quality to meet NJDEP standards.

A summary of non-conformances for each sampling event is included in **Appendix J**. Based on a review of the analytical results, the data is deemed valid. Laboratory reports and Electronic Data Deliverables (EDDs) are included in **Appendix K**.

3.4 Significant Events and/or Seasonal Variations Influencing the Investigation

All environmental sampling was conducted without incident in accordance with the Site QAPP and NJDEP Field Sampling Procedures Manual (FSPM).

4.0 HISTORIC SITE INVESTIGATION ACTIVITIES

4.1 Summary of UST Removal and Investigation

In June 2013, one UST (Tank-1) was removed from near the southeastern corner of the QC Lab building. Three (3) additional USTs (T1, T2, and T3) were discovered beneath the QC floor slab during the building demolition process in February 2015 and were removed. The three (3) USTs had been cut and filled with sand, likely between 1970 and 1972 when the south addition of the QC Lab was constructed over the USTs. The size, contents and removal date of the USTs are as follows:

Tank ID	Size (gallons)	Contents	Removal
Tank-1	10,000	Waste Oil	6/19/2013
T1	1,000	Waste Oil	2/23/2015
T2	4,000	Waste Oil	2/23/2015
T3	10,000	Waste Oil	2/23/2015

The following is a summary of the soil sampling conducted following the removal of the above referenced USTs.

<u>UST T1</u>
Three (3) centerline bottom samples were collected at 9 feet below the invert of UST T1. The samples were analyzed for Extractable Petroleum Hydrocarbons (EPH). EPH was not detected in any of the samples.

<u>UST Tank-1</u>
Six (6) samples were collected just above the water table at 6.5-feet below grade following the removal of Tank 1. The samples were analyzed for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Metals, and EPH. Beryllium was detected at concentrations of 0.75 and 0.88 parts per million (ppm), which exceeds the Impact to Groundwater (IGW) screening level of 0.7 ppm. Laboratory results indicate that the remaining tested compounds did not exceed the applicable NJ Soil Remediation Standards (NJSRS).

<u>UST T2 & T3</u>
Eleven (11) soil samples were collected just above the water table at 6-feet below grade following the removal of USTs T2 and T3. The soil samples were analyzed for EPH and contingent VOCs, SVOCs, Metals, and Polychlorinated Biphenyls (PCBs). Contingent

analysis was conducted on the three samples with the highest EPH concentrations (PE-6, PE-8, and PE-9). PCBs were not detected in any of the three samples. Several VOCs and 2-methyl naphthalene were detected over IGW in all three samples. The following table summarizes the exceedances. Laboratory results indicate that the remaining tested compounds did not exceed the applicable NJSRS.

Compound	IGW	PE-6 (6.0-6.5')	PE-8 (6.0-6.5')	PE-9 (6.0-6.5')
Benzene	0.005	0.298	0.776	1.2
MTBE	0.2	ND	0.383	ND
Xylenes	19	1.36	35.7	1.2
2-Methyl Naphthalene	8	17.9	10.5	27.2

Piping Samples

Sixteen (16) piping samples were collected from the various piping runs. The majority of the soil samples were collected at 2-feet to 4-feet below grade. One sample (P-7R) was collected at 5.5-feet below grade. The soil samples were analyzed for EPH, VOCs, SVOCs, and metals, with the exception of P-12 and P-13, which were only analyzed for metals. Lead was detected in soil samples P-5 and P-12 at concentrations of 127 ppm and 97.7 ppm, respectively, in excess of the IGW screening level of 90 ppm. Beryllium was detected at concentrations of 0.99 ppm and 0.81 ppm in P-6 and P-13, respectively, in excess of the IGW screening level of 0.7 ppm. Arsenic was detected at a concentration of 78.7 ppm in soil sample P-13, which exceeds the NJSRS of 19 ppm. Several VOCs were detected over IGW in soil samples P-7 and P-7R. The following table summarizes the exceedances. Laboratory results indicate that the remaining tested compounds did not exceed the applicable NJSRS.

Compound	IGW	P-7 (2.0-2.5')	P-7R (5.5-6.0')
Acetone	19	39.4	ND
Benzene	0.005	0.384	0.623
Ethyl Benzene	13	10.1	14.8
MTBE	0.2	0.694	27.2
Toluene	7	17.5	4.95
Xylenes	19	54.7	66

Following review of the UST Tank-1 post-excavation soil analytical results, metal concentrations above applicable NJDEP SRS were noted within the excavations. The NJDEP was notified and Case No. 13-07-24-14427-02 was assigned. Subsequently, the incident number was incorporated into the Site RCRA/ISRA case.

Post-excavation sample results from the four (4) UST excavations identified elevated contaminant concentrations that are associated with petroleum products. Several metals were also present at elevated concentrations. Based on visual staining and sample results, the impacts are likely associated with a historic release from UST T2. The post-excavation sample exceedances are summarized on **Figures 5** and **6**.

Following the removal of UST Tank-1, a temporary well point (QC-TW-1) was installed in December 2013 and a groundwater sample was collected for laboratory analysis. The sample was analyzed for VOCs, Base Neutral (BN) compounds, Metals, and ammonia. The VOC analysis indicated the presence of benzene at 1.8 part per billion (ppb) which was slightly above its Groundwater Quality Standard (GWQS) of 1 ppb. Several metals exceeded their applicable GWQS, which was likely due to the turbidity associated with a sample collected from a temporary well point. The location of QC-TW-1 is depicted on **Figure 5**.

The EnviroTrac 2014 Site Investiation/Remedial Action Report documenting closure and sampling is included as **Appendix I**.

5.0 REMEDIAL INVESTIGATION ACTIVITIES

A revised RIW was submitted and approved in May 2016. All remedial investigation activities were conducted in accordance with the approved RIW. The following sections summarize the 2016-2017 investigation activities and the 2016 soil remediation activities.

5.1 Remedial Soil Investigation

As detailed in the approved 2016 RIW, the purpose of the 2016 RI activities was to delineate impacts detected during historic sampling events, as summarized in **Section 4.0**.

As explained in the 2016 RIW, a 1991 as-built plan identified a potential additional 6,000-gallon heating oil UST adjacent to the northeast corner of the former building. Therefore, a geophysical survey was conducted in June 2016. The survey did not identify any additional USTs. The survey did identify 5 areas which appeared to be backfilled with non-native fill material, including the area identified on the 1991 plan (identified as T4 on the attached figures). The remaining areas identified were consistent with the locations of the historic USTs described in **Section 4.1**. An anomaly was also identified on the western side of the former building which appeared to be related to former utility connections. A copy of the geophysical report is included in **Appendix B**.

In June 2016, Earth Systems installed a total of 31 soil borings. The soil borings were installed with a Geoprobe to depths ranging from 10 to 15 feet below grade and screened with a calibrated PID. Soil samples were collected at various depths, either biased towards elevated PID readings or based on previous sampling results. Soil boring logs are included as **Appendix C**.

Soil samples were analyzed for select parameters including EPH, BNs, VOCs, Metals, and hexavalent chromium.

The following is a summary of the 2016 RI soil analytical results.

VOCs

VOC concentrations were lower than the applicable soil standards in all soil samples, with the exception of samples collected from soil borings T2-2A, T2-7A, and T2-8A. The following table summarizes the compounds which exceeded the default IGW standard for these three samples.

Client Sample ID:		NJ Default Impact to Groundwater Soil Screening (NJAC 7:26D 11/13)	T2-2A (6.0-6.5)	T2-7A (6.0-6.5)	T2-8A (6.0-6.5)
Date Sampled:			6/30/2016	6/30/2016	6/29/2016
Matrix:			Soil	Soil	Soil
GC/MS Volatiles (SW846 8260C)					
Benzene	mg/kg	0.005	**0.193**	**0.118**	**0.392**
Methyl Tert Butyl Ether	mg/kg	0.2	ND (0.018)	0.0228 J	**11**
Xylene (total)	mg/kg	19	0.643	0.0426 J	**25.3**

Metals and BN compounds were not detected above the applicable standards in any of the soil samples collected. Hexavalent chromium was also not detected in any of the soil samples above applicable guidance values.

EPH results ranged from non-detect to a maximum concentration of 844 ppm, below the applicable standard of 17,000 ppm.

Soil sample locations and analytical results are summarized on **Figure 7** and **Table 1**.

5.2 Remedial Groundwater Investigation

Temporary wells were installed in the vicinity of both Tank 1 and T2. The wells were installed to an approximate depth of 15 feet below grade. The well was screened from approximately 3 feet below grade to the base of the well. Prior to sampling, three well volumes were purged from the wells. Groundwater purge sheets are included as **Appendix D**. Groundwater samples were collected from both wells and analyzed for VOCs and SVOCs.

Targeted VOC and SVOC compounds were not detected in the groundwater sample collected from temporary well TW-TK-2. Several VOC and SVOC compounds were detected at concentrations which exceed the GWQS in the groundwater sample collected from temporary well TW-T2-5. The following table summarizes the exceedances.

Client Sample ID:		NJ Groundwater Criteria (NJAC 7:9C 7/07)[1]	TW-T2-5
Lab Sample ID:			JC23248-25
Date Sampled:			6/30/2016
Matrix:			Ground Water
GC/MS Volatiles			
Benzene	ug/l	1	**560**
Methyl Tert Butyl Ether	ug/l	70	**516**
GC/MS Semi-volatiles			
Benzo(a)anthracene	ug/l	0.1	**13.4**
Benzo(a)pyrene	ug/l	0.1	**4.48**
Benzo(b)fluoranthene	ug/l	0.2	**2.63**
Chrysene	ug/l	5	**21.1**
bis(2-Ethylhexyl)phthalate	ug/l	3	**25.2**
2-Methylnaphthalene	ug/l	30	**2780**
Naphthalene	ug/l	300	**633**

Groundwater analytical results are summarized on **Figure 8** and **Table 2**.

5.3 Remedial Investigation Summary & Conclusions

The goal of the RI was to delineate any impacts attributable to a release from the former USTs. The additional soil and groundwater investigation activities conducted in June 2016 confirmed that only VOC impacts were present in the vicinity of former UST T2. No VOC soil impacts were identified for the remaining USTs and piping. Groundwater impacts were also detected in the former UST T2 location.

Historic soil sampling identified several metals which exceeded applicable soil standards. The soil samples were collected in the 2 to 4 feet below grade zone. Three soil samples exceeded the default IGW standard for beryllium, two soil samples exceeded the default IGW standard for lead, and one sample exceeded all applicable standards for arsenic. The following summarizes the analytical results and explains why these metals are not considered contaminants of concern related to former UST T2.

Beryllium

Beryllium was detected in several historic soil samples at concentrations in excess of the default IGW standard of 0.7 ppm. In accordance with the Compliance Attainment Guidance document, the IGW pathway can be addressed via averaging soil concentrations across a specified functional area. The functional area is defined horizontally by the AOC boundaries and vertically from approximately 2 to 4.5 feet below grade. All historic beryllium soil results were evaluated using ProUCL software and the value the program suggested to use as representative is 0.66 ppm, less than the IGW default standard. The ProUCL worksheets are included as **Appendix E**. Therefore, no additional soil investigation or remediation is necessary to address beryllium soil concentrations present in the AOC.

Lead

Lead was detected in historic soil samples P-5 and P-12 at concentrations of 127 and 97.7 ppm, respectively, in excess of the default IGW standard of 90 ppm. In accordance with the Compliance Attainment Guidance document, the IGW pathway can be addressed via averaging soil concentrations across a specified functional area. The functional area is defined horizontally by the AOC boundaries and vertically from approximately 2 to 4.5 feet below grade. All historic lead soil results were evaluated using ProUCL software and the value the program suggested to use as representative is 60.38 ppm, less than the IGW default standard. The ProUCL worksheets are included as **Appendix E**. Therefore, no additional soil investigation or remediation is necessary to address lead soil concentrations present in the AOC.

Arsenic

Arsenic was detected in one historic soil sample P-13 at a concentration of 78.7 ppm, in excess of all soil standards. In accordance with the Compliance Attainment Guidance document, arsenic can be addressed via averaging soil concentrations across a specified functional area. The functional area is defined horizontally by the AOC boundaries and vertically from approximately 2 to 4.5 feet below grade. All historic arsenic soil results were evaluated using ProUCL software and the value the program suggested to use as representative is 16.19 ppm, less than the standard of 19 ppm. The ProUCL worksheets are included as **Appendix E**. Therefore, no additional soil investigation or remediation is necessary to address arsenic soil concentrations present in the AOC.

6.0 REMEDIAL ACTION

Based on a review of historic data and the remedial investigation analytical results and field observations, a historic release from UST T2 appeared to have impacted both soil and groundwater localized to the former location of UST T2. Excavation of VOC impacted soil was selected as the appropriate remedial action to address the impacts present in this AOC.

In November 2016, Earth Systems installed an additional 12 soil borings to further determine the horizontal and vertical limits of the soil impacts to refine the excavation. The soil samples were analyzed for VOCs, the only contaminant of concern.

Soil samples T2-13A, T2-20A, and T2-21A were the only samples in which VOC compounds were detected above the IGW standard during the November 2016 sampling event. Soil analytical results are summarized on **Figure 7** and **Table 3**.

6.1 Soil Excavation

Soil remediation activities were conducted in November 2016. The top 2-3 feet of soil was segregated as overburden. The excavation was irregular in shape and measured approximately 1,000 square feet. The excavation extended to a depth of 12 feet below grade. Groundwater was not observed in the excavation. Approximately 478 tons of soil were excavated for off-site disposal. The excavation was then backfilled with the segregated overburden and certified clean fill. Soil disposal manifests and clean fill documentation is included as **Appendix F**.

A combination of both June and November 2016 soil sample analytical results were evaluated to determine the extent of the soil remediation. Bottom samples were collected at a depth of 12 to 12.5 feet below grade. Sidewall samples were collected at the base of the excavation sidewalls, approximately 12 feet below grade. In addition, due to the presence of historic shallower impacts, additional sidewall samples were collected at 6 feet below grade in select locations. All samples had concentrations that were either non-detect or less than applicable standards. The following table summarizes the samples utilized as remediation verification samples.

Sample ID	Sample Depth (feet below grad)	Sample Purpose
T2-3A & B	6’ & 12’	Sidewall
T2-10A	6’	Sidewall
T2-11A & B	6’ & 12’	Sidewall
T2-14A & B	6’ & 12’	Sidewall
T2-18A & B	6’ & 12’	Sidewall
T2-22A	6’	Sidewall
T2-1B	12’	Bottom
T2-2B	12’	Bottom
T2-5B	12’	Bottom
T2-4B	12’	Bottom
T2-13B	12’	Bottom

Remediation verification soil analytical results are summarized on **Figure 9** and **Table 4**.

6.2 Post Remediation Groundwater Investigation

In June 2016, three monitoring wells (MW-1 through MW-3) were installed by a NJ licensed well driller in accordance with the locations and specifications outlined in the approved RIW. Following soil remediation activities in November 2016, a fourth monitoring well (MW-4) was installed in the approximate former location of temporary well TW-T2-5. All monitoring wells were installed via direct push drilling (Geoprobe) to depths ranging from 13 to 15 feet below grade and screened from 3 feet below grade to the bottom of the well. Monitoring well documentation is included in **Appendix G**.

All groundwater samples were collected utilizing low flow sampling methods. Water quality readings were collected in five-minute intervals and recorded in the field (see **Appendix D**). Groundwater samples were collected once the water quality indicator parameters had stabilized.

In addition to the groundwater sampling events summarized below, a groundwater sample was collected from monitoring well PER-6R as part of the Sitewide groundwater sampling event. No VOCs or SVOCs were detected in the groundwater sample in excess of the GWQS. Aluminum, iron, and sodium were detected at concentrations in excess of the GWQS; however, as discussed in **Section 3.1**, these compounds are not considered contaminants of concern. The analytical results for monitoring well PER-6R are summarized on **Figure 10.4** and **Table 5**.

6.2.1 August 2016 Groundwater Sampling Event

In August 2016, prior to conducting soil remediation, groundwater samples were collected from monitoring wells MW-1, MW-2, and MW-3. The groundwater samples were analyzed for VOCs, SVOCs, and metals. All targeted VOC and SVOC compounds were either non-detect or detected at a concentration less than the GWQS. Arsenic was detected at a concentration of 16.9 ppb in the groundwater sample collected from well MW-3, in excess of the arsenic standard of 3 ppb. Aluminum, iron, manganese, and sodium were also detected at concentrations above the GWQS; however, as discussed in **Section 3.1**, these compounds are not considered contaminants of concern.

The analytical results are summarized on **Figure 10.1** and **Table 5**. Monitoring well purge records are included as **Appendix D**.

6.2.2 January 2017 Groundwater Sampling Event

In January 2017, groundwater samples were collected from all four monitoring wells (MW-1 through MW-4). The groundwater samples were analyzed for VOCs, SVOCs, and metals. All targeted VOC and SVOC compounds were either non-detect or detected at a concentration less than the GWQS in wells MW-1, MW-2, and MW-3. Benzene was detected at a concentration of 1.2 ppb in the groundwater sample collected from MW-4, just above the GWQS of 1 ppb. Arsenic was detected at a concentration of 3.5 ppb in the groundwater sample collected from well MW-2 and at a concentration of 10.7 ppb in the groundwater sample collected from well MW-4, in excess of the arsenic standard of 3 ppb. Aluminum, iron, manganese, and sodium were also detected at concentrations above the GWQS; however, as discussed in **Section 3.1**, these compounds are not considered contaminants of concern. The analytical results are summarized on **Figure 10.2** and **Table 5**. Monitoring well purge records are included as **Appendix D**.

6.2.2 February 2017 Groundwater Sampling Event

In February 2017, a groundwater sample was collected from monitoring well MW-4 only. The groundwater sample was analyzed for VOCs, SVOCs, and metals. All targeted

SVOC compounds were either non-detect or detected at a concentration less than the GWQS. Benzene was detected at a concentration of 0.59 ppb in the groundwater sample collected from MW-4, below the GWQS of 1 ppb. As per the 2012 *Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria* document, a confirmatory groundwater sample can be collected and the two samples can be averaged to document compliance. The following table summarizes the benzene concentrations for both sampling events and the average concentration, which is less than the GWQS.

Compound	GWQS (ppb)	Jan 2017 Results	Feb 2017 Results	Average
Benzene	**1**	**1.2**	0.59	0.895

Arsenic was detected at a concentration of 9.4 ppb in the groundwater sample collected from well MW-4, in excess of the arsenic standard of 3 ppb. Aluminum and iron were also detected in the groundwater sample in excess of their respective GWQS; however, as discussed in **Section 3.1**, these compounds are not considered contaminants of concern. The analytical results are summarized on **Figure 10.0** and **Table 5**. Monitoring well purge records are included as **Appendix D**.

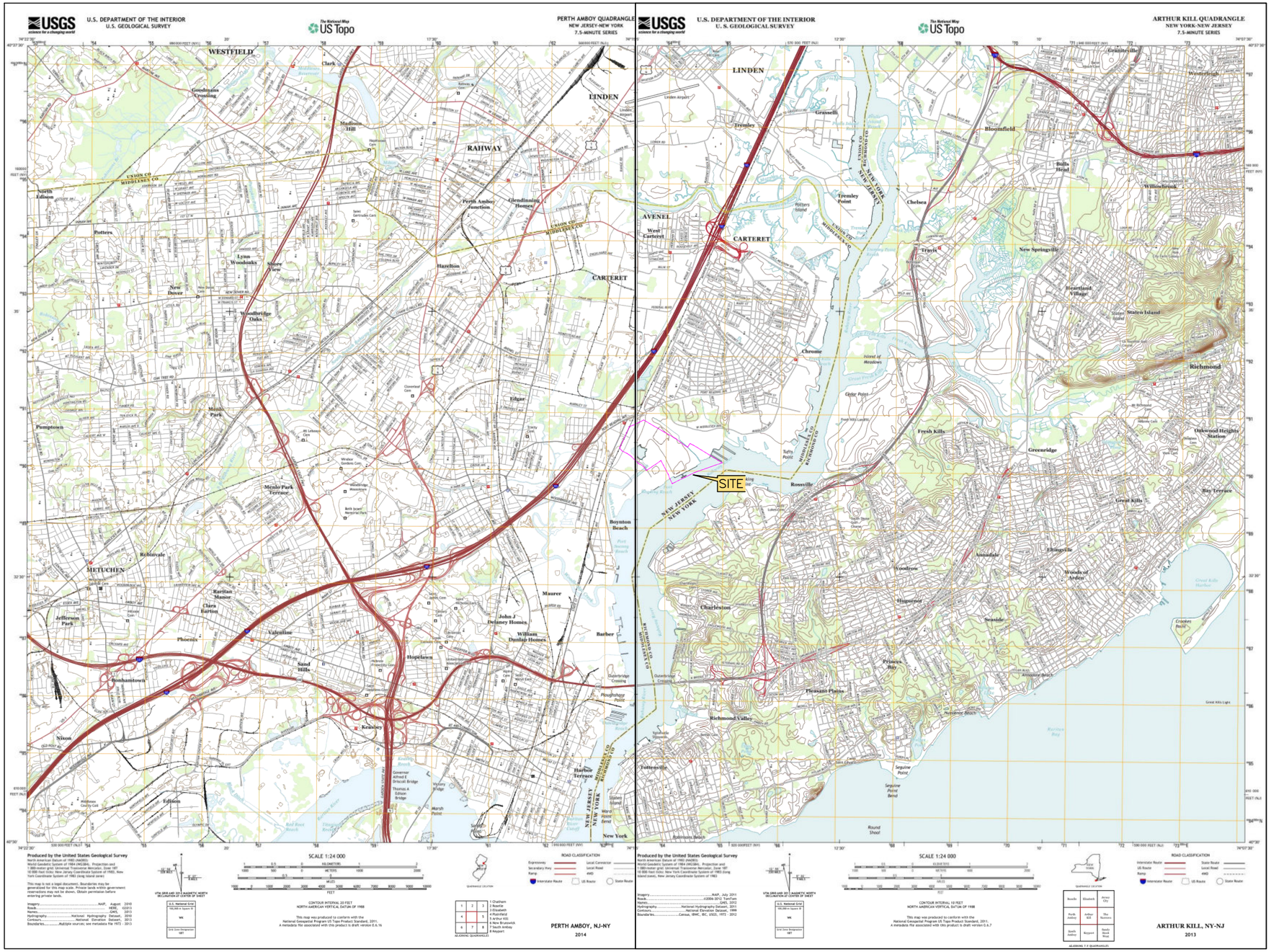
6.3 Remedial Action Conclusions

A review of historic soil results indicated that a release had occurred and was related to the former UST T2. Remedial investigation activities confirmed that VOC soil and groundwater impacts were present in the vicinity of UST T2. Soil excavation was selected as the appropriate remedial action to address impacted soil. A total of 478 tons of soil were removed for offsite disposal. Remediation verification soil samples and post remediation groundwater sampling confirm that the remediation was effective.

However, arsenic has been detected in the groundwater samples collected from AOC 19 monitoring wells. The arsenic concentrations detected in the groundwater samples does not appear to be related to a release from former UST T2. No significant arsenic soil contamination was detected during soil investigation activities. The administrative option selected to address arsenic concentrations in groundwater is the establishment of a Classification Exception Area (CEA) for this compound.

The CEA documentation and RAP application are included with this submittal (**Appendix H**). Once the NJDEP approves the RAP application, the LSRP will issue a Limited Restricted Use RAO to close out this AOC.

FIGURES



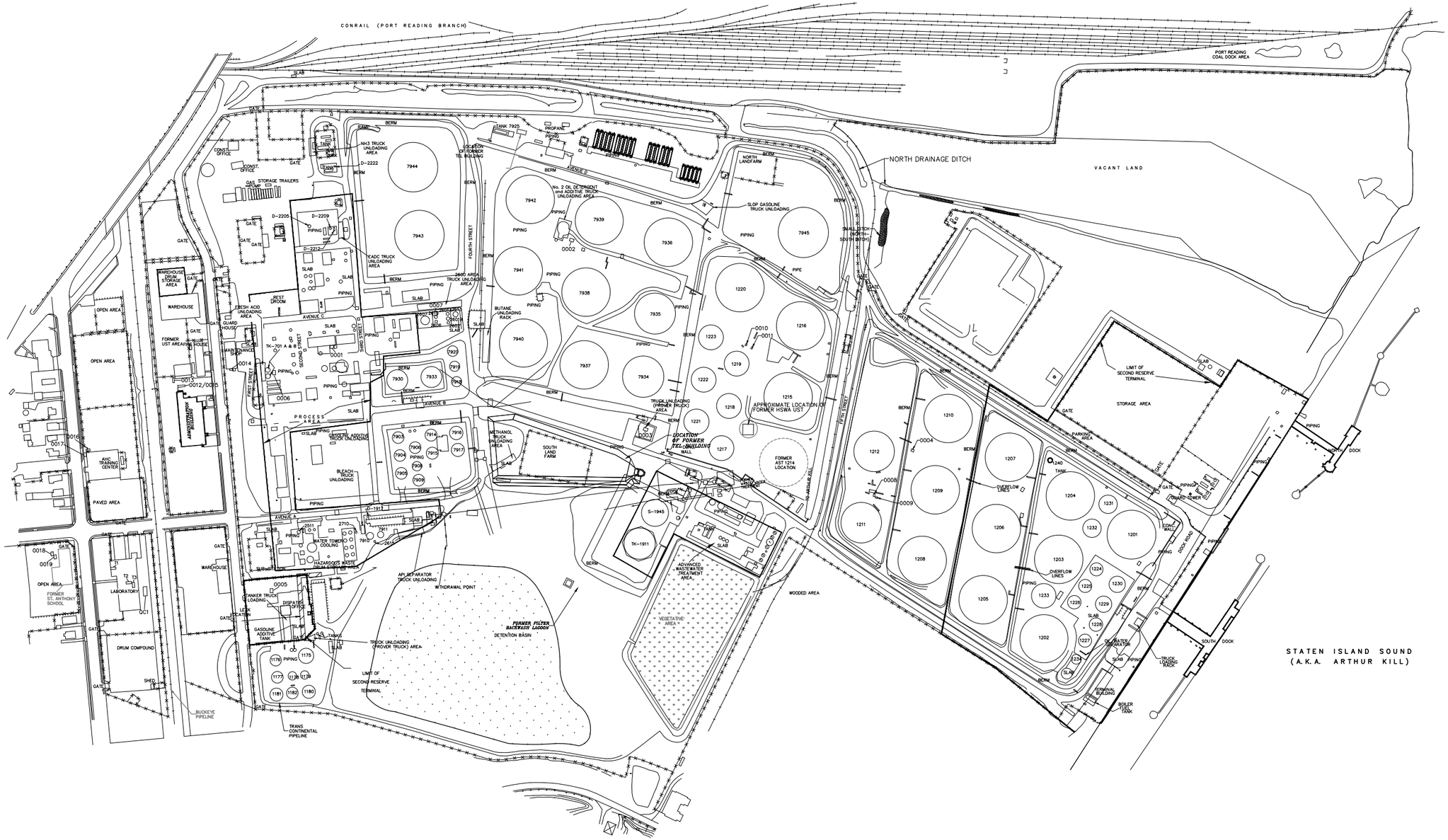
USGS MAP

Hess Corporation Former Port Reading Complex (HC–PR)
750 Cliff Road
Port Reading, New Jersey

Earth Systems

Figure 1

09/15 FIG1



0 200 400

(SCALE IN FEET)

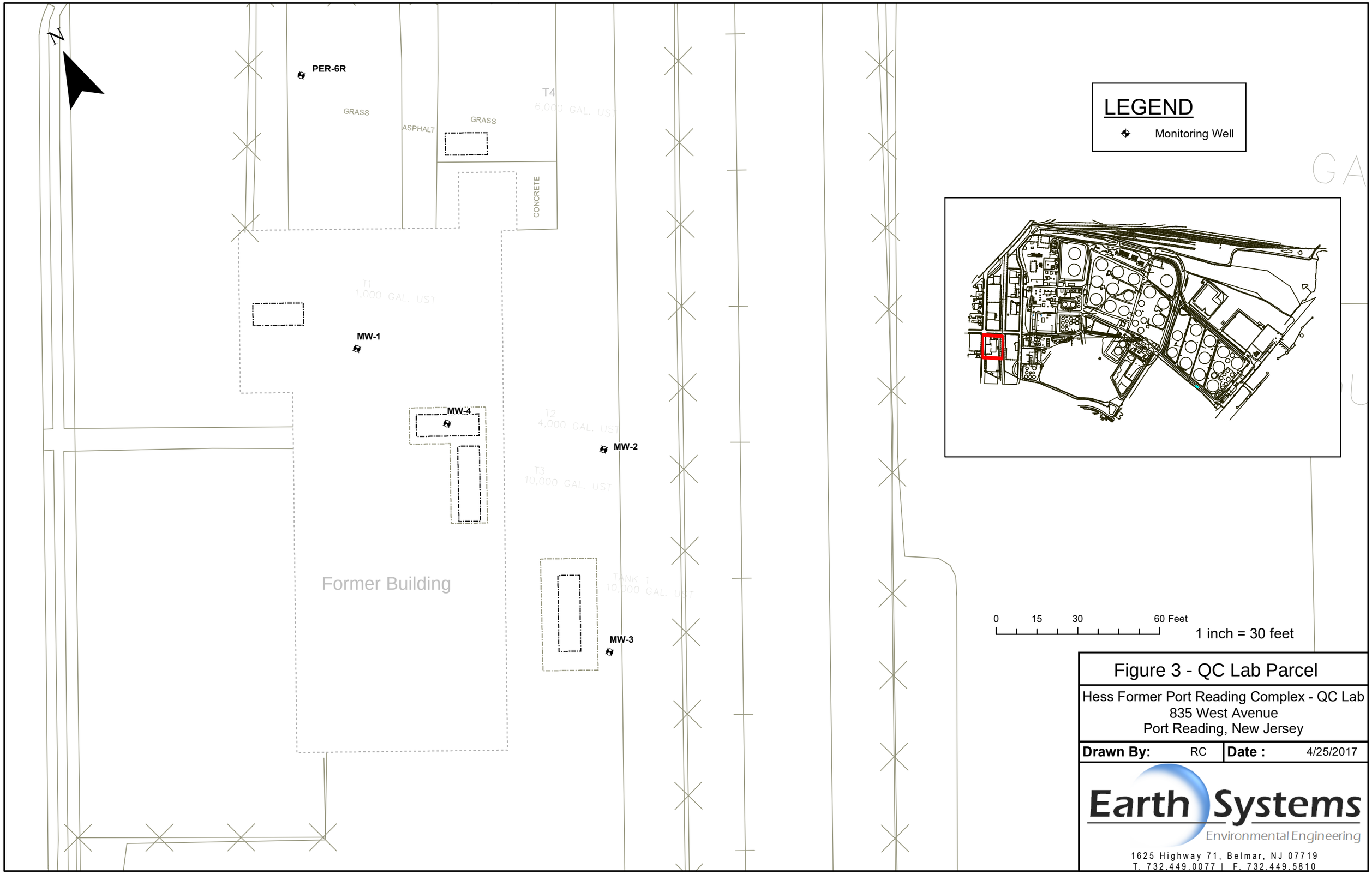
SITE PLAN

Hess Corporation Former Port Reading Complex (HC–PR)
750 Cliff Road
Port Reading, New Jersey

Earth Systems

Figure 2

09/15 FIG2


N
PER-6R
GRASS
ASPHALT
GRASS
T4
6,000 GAL. UST
CONCRETE
T1
1,000 GAL. UST
MW-1
MW-4
T2
4,000 GAL. UST
MW-2
T3
10,000 GAL. UST
Former Building
TANK 1
10,000 GAL. UST
MW-3
LEGEND
Monitoring Well
0
15
30
60 Feet
1 inch = 30 feet
Figure 3 - QC Lab Parcel
Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey
Drawn By: RC
Date : 4/25/2017
Earth Systems
Environmental Engineering
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GROUNDWATER CONTOUR MAP (8/2/16)

HESS CORPORATION
HESS PORT READING COMPLEX
FORMER QC LABORATORY
835 WEST AVENUE
PORT READING, NEW JERSEY

Earth Systems

Figure 4.1

I:\Clients\E\EARTHSYSTEMS\HESS\PINNACLE\LAB\LAB BLDG BASE 2.dwg, GWC 8216, 4/11/2017 9:58:51 AM, pinnacle
FILE: I:\CLIENTS\E\EARTHSYSTEMS\HESS\PINNACLE\LAB\LAB BLDG BASE 2.DWG, DATE: 04/11/2017 09:58:51AM

GROUNDWATER CONTOUR MAP (1/9/17)

HESS CORPORATION
HESS PORT READING COMPLEX
FORMER QC LABORATORY
835 WEST AVENUE
PORT READING, NEW JERSEY

Earth Systems

Figure 4.2

FILE: E:\CLIENTS\E\EARTHSYSTEMS\HESS\PINNACLE\LAB\LAB BLDG BASE 2.DWG, DATE: 04/11/2017 09:59:04AM

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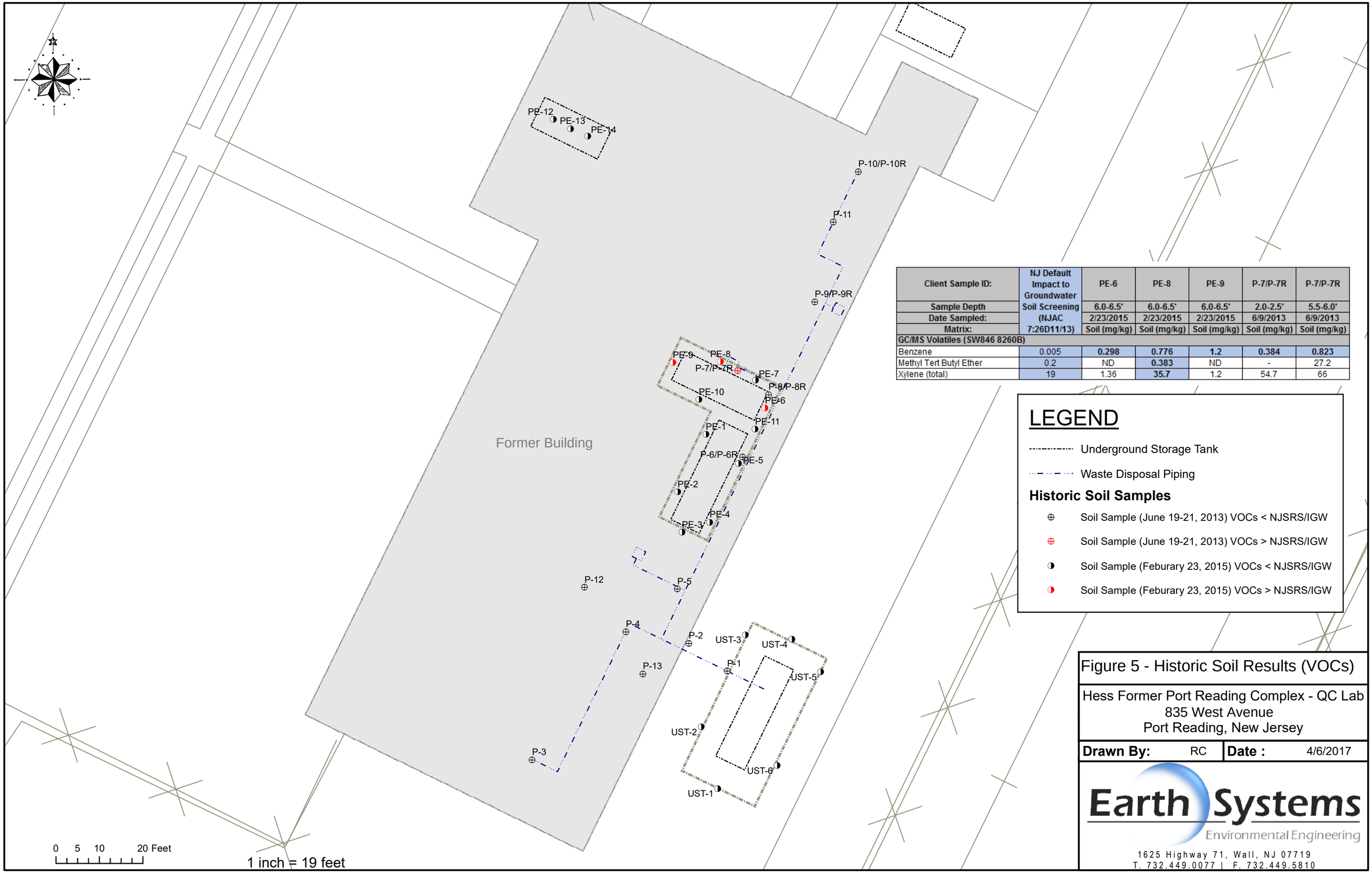

Client Sample ID:	NJ Default Impact to Groundwater Soil Screening (NJAC 7:26D11/13)	PE-6	PE-8	PE-9	P-7/P-7R	P-7/P-7R
Sample Depth		6.0-6.5'	6.0-6.5'	6.0-6.5'	2.0-2.5'	5.5-6.0'
Date Sampled:		2/23/2015	2/23/2015	2/23/2015	6/9/2013	6/9/2013
Matrix:		Soil (mg/kg)	Soil (mg/kg)	Soil (mg/kg)	Soil (mg/kg)	Soil (mg/kg)
GC/MS Volatiles (SW846 8260B)						
Benzene	0.005	**0.298**	**0.776**	**1.2**	**0.384**	**0.823**
Methyl Tert Butyl Ether	0.2	ND	**0.383**	ND	-	27.2
Xylene (total)	19	1.36	**35.7**	1.2	54.7	66

LEGEND

Underground Storage Tank

Waste Disposal Piping

Historic Soil Samples

Soil Sample (June 19-21, 2013) VOCs < NJSRS/IGW

Soil Sample (June 19-21, 2013) VOCs > NJSRS/IGW

Soil Sample (Feburary 23, 2015) VOCs < NJSRS/IGW

Soil Sample (Feburary 23, 2015) VOCs > NJSRS/IGW

Figure 5 - Historic Soil Results (VOCs)

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By: RC **Date :** 4/6/2017

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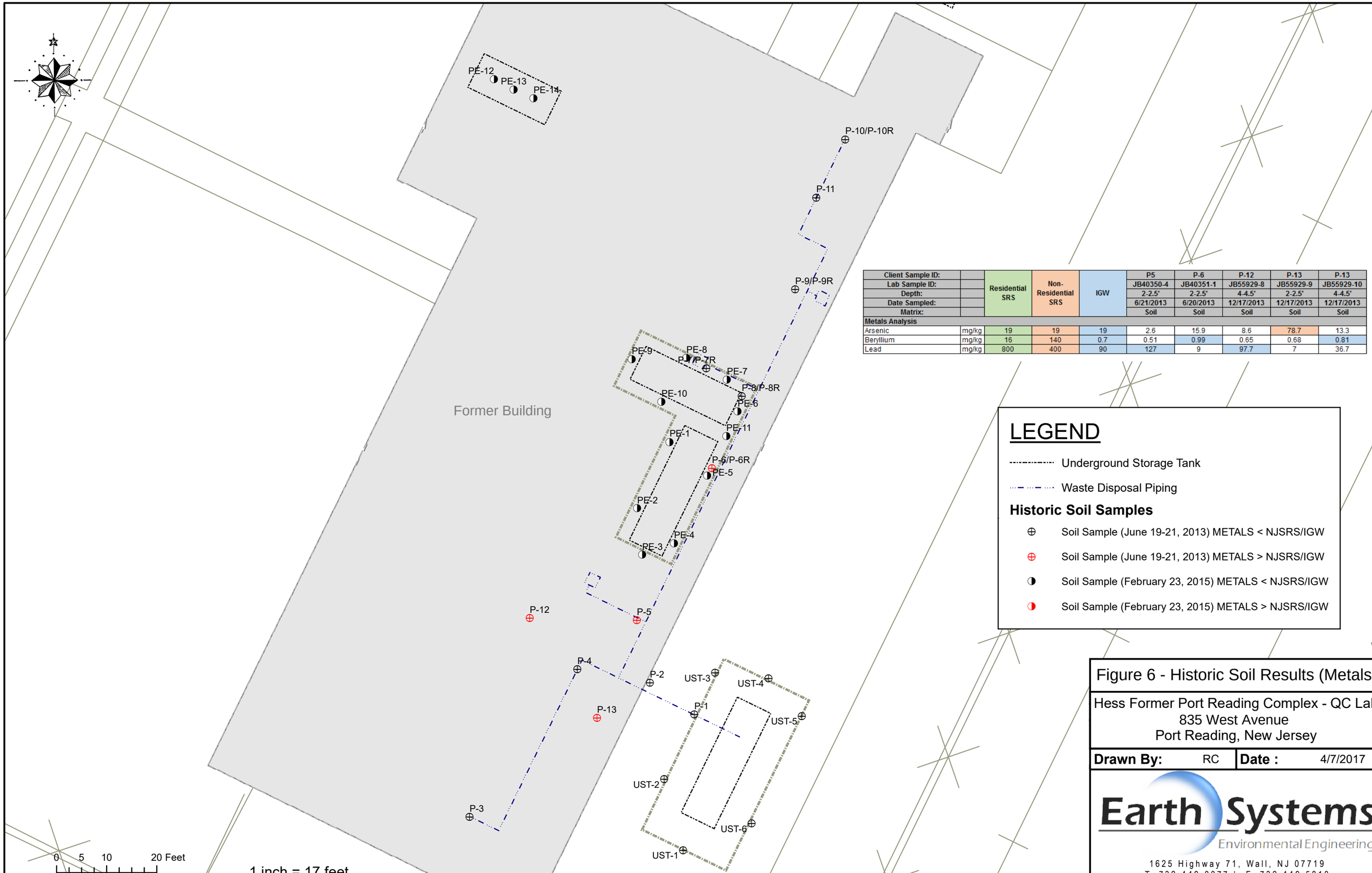

Client Sample ID:		Residential SRS	Non-Residential SRS	IGW	P5	P-6	P-12	P-13	P-13
Lab Sample ID:					JB40350-4	JB40351-1	JB55929-8	JB55929-9	JB55929-10
Depth:					2-2.5'	2-2.5'	4-4.5'	2-2.5'	4-4.5'
Date Sampled:					6/21/2013	6/20/2013	12/17/2013	12/17/2013	12/17/2013
Matrix:					Soil	Soil	Soil	Soil	Soil
Metals Analysis									
Arsenic	mg/kg	19	19	19	2.6	15.9	8.6	78.7	13.3
Beryllium	mg/kg	16	140	0.7	0.51	0.99	0.65	0.68	0.81
Lead	mg/kg	800	400	90	127	9	97.7	7	36.7

Figure 6 - Historic Soil Results (Metals)

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By: RC **Date :** 4/7/2017

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Environmental Engineering

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Compound/ Sample ID	Sample Depth	Benzene	Methyl Tert Butyl Ether	Xylene (total)
	NJDEP IGW	0.005	0.2	19
T3-1B	12.0-12.5'	ND (0.00017)	0.0107	ND (0.00028)
T3-2B	12.0-12.5'	0.00027 J	0.007	0.00025 J
T3-3B	12.0-12.5'	ND (0.00012)	0.007	ND (0.00020)
T3-4B	12.0-12.5'	ND (0.00013)	0.0015	ND (0.00022)
T3-5B	12.0-12.5'	ND (0.00015)	0.0042	ND (0.00025)
T3-6B	12.0-12.5'	ND (0.00013)	0.0052	ND (0.00022)
TK-6B	12.0-12.5'	ND (0.00012)	ND (0.00027)	ND (0.00020)
TK-1B	12.0-12.5'	ND (0.00015)	ND (0.00032)	ND (0.00024)
TK-2B	12.0-12.5'	ND (0.00012)	ND (0.00026)	ND (0.00020)
TK-3B	12.0-12.5'	ND (0.00013)	ND (0.00028)	ND (0.00021)
TK-4B	12.0-12.5'	ND (0.00015)	0.0019	ND (0.00026)
TK-5B	12.0-12.5'	ND (0.00013)	ND (0.00029)	ND (0.00022)
TK-7B	12.0-12.5'	ND (0.00015)	ND (0.00032)	ND (0.00024)
T2-1A	6.0-6.5'	ND (0.00013)	0.00034 J	ND (0.00021)
T2-1B	12.0-12.5'	0.0067	0.0174	0.0066
T2-5B	12.0-12.5'	1.6	0.0799	45.1
T2-6A	6.0-6.5'	ND (0.00014)	0.002	0.0023
T2-8A	6.0-6.5'	0.392	11	25.3
T2-9A	6.0-6.5'	ND (0.00015)	0.0194	0.00058 J
T2-2A	6.0-6.5'	0.193	ND (0.018)	0.643
T2-2B	12.0-12.5'	0.0028	0.0024	0.0382
T2-3A	6.0-6.5'	0.00036	0.0073	0.0041
T2-3B	12.0-12.5'	ND (0.00013)	0.0442	ND (0.00022)
T2-4A	6.0-6.5'	ND (0.00012)	0.0156	ND (0.00020)
T2-4B	12.0-12.5'	ND (0.00014)	0.0542	ND (0.00024)
T2-7A	6.0-6.5'	0.118	0.0228 J	0.0426 J
T2-10A	6.0-6.5'	ND (0.00012)	0.00062 J	ND (0.00020)
T2-11A	6.0-6.5'	ND (0.00016)	0.0029 J	0.0379
T2-11B	12.0-12.5'	ND (0.0076)	ND (0.063)	ND (0.13)
T2-13A	6.0-6.5'	0.217	ND (0.068)	1.53 J
T2-13B	12.0-12.5'	0.0016	ND (0.0010)	2.31
T2-14A	6.5-7.0'	ND (0.0076)	ND (0.064)	ND (0.13)
T2-14B	12.0-12.5'	0.0011	ND (0.0014)	0.0139 J
T2-15A	6.0-6.5'	ND (0.00018)	ND (0.0015)	0.0185 J
T2-15B	12.0-12.5'	ND (0.00011)	ND (0.00092)	0.023
T2-16A	6.0-6.5'	ND (0.00010)	ND (0.00087)	ND (0.0026)
T2-16B	12.0-12.5'	0.0013	ND (0.00094)	ND (0.0028)
T2-17A	6.0-6.5'	ND (0.00010)	ND (0.00085)	0.0178 J
T2-17B	12.0-12.5'	ND (0.00011)	ND (0.00091)	ND (0.0028)
T2-18A	6.0-6.5'	0.00043 J	0.0011 J	0.0279 J
T2-18B	12.0-12.5'	ND (0.00018)	ND (0.0015)	0.0162 J
T2-20A	6.0-6.5'	ND (0.0063)	ND (0.052)	0.806 J
T2-20B	9.5-10.0'	ND (0.0073)	ND (0.061)	2.36
T2-21A	6.0-6.5'	0.0344	0.0878 J	1.96
T2-21B	9.5-10.0'	0.00033 J	ND (0.0012)	6.82
T2-22A	6.0-6.5'	ND (0.0068)	ND (0.015)	ND (0.011)

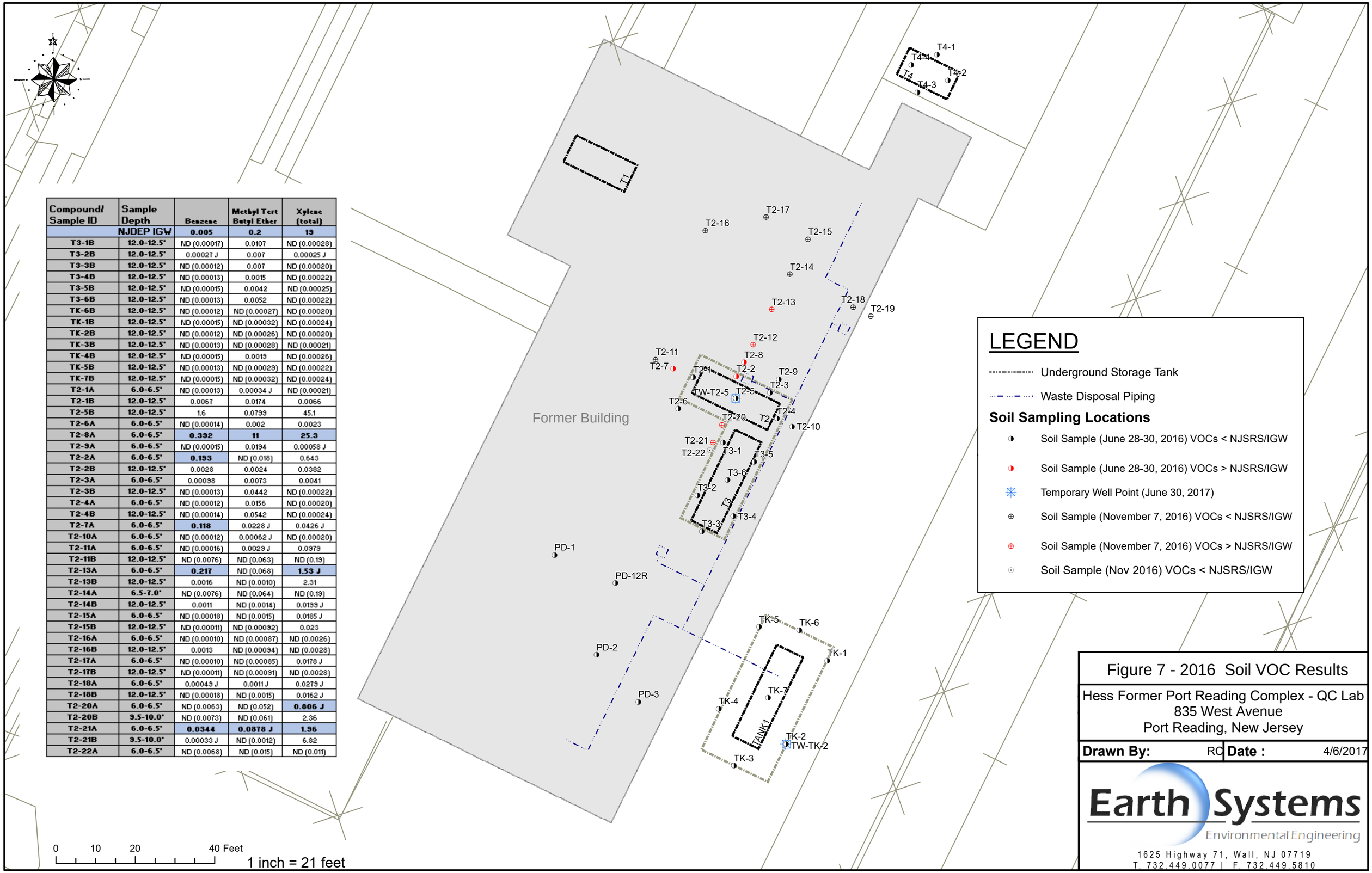

Figure 7 - 2016 Soil VOC Results

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By: RC **Date :** 4/6/2017

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Environmental Engineering
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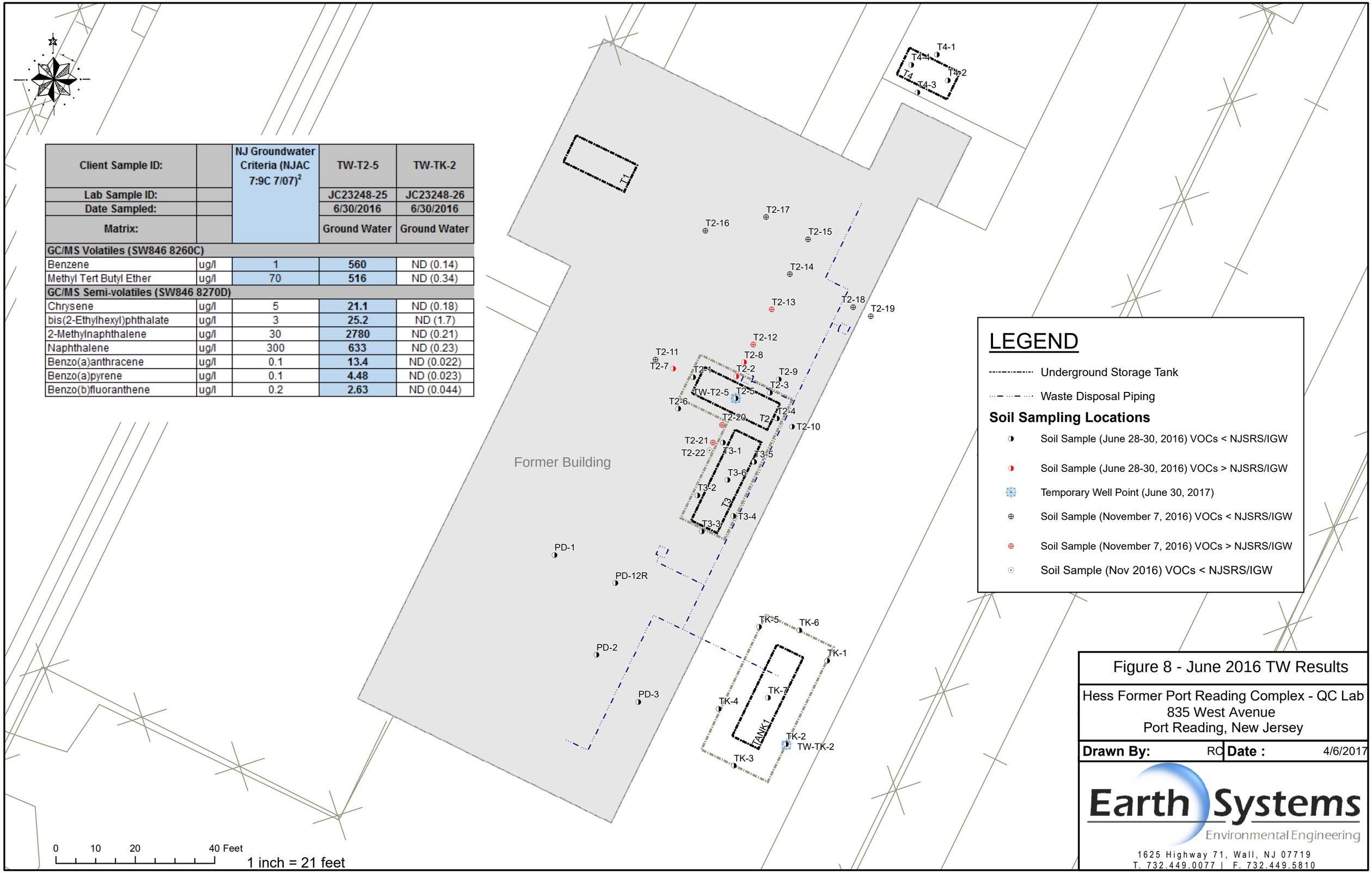
Client Sample ID:		NJ Groundwater Criteria (NJAC 7:9C 7/07)[2]	TW-T2-5	TW-TK-2
Lab Sample ID:			JC23248-25	JC23248-26
Date Sampled:			6/30/2016	6/30/2016
Matrix:			Ground Water	Ground Water
GC/MS Volatiles (SW846 8260C)				
Benzene	ug/l	1	**560**	ND (0.14)
Methyl Tert Butyl Ether	ug/l	70	**516**	ND (0.34)
GC/MS Semi-volatiles (SW846 8270D)				
Chrysene	ug/l	5	**21.1**	ND (0.18)
bis(2-Ethylhexyl)phthalate	ug/l	3	**25.2**	ND (1.7)
2-Methylnaphthalene	ug/l	30	**2780**	ND (0.21)
Naphthalene	ug/l	300	**633**	ND (0.23)
Benzo(a)anthracene	ug/l	0.1	**13.4**	ND (0.022)
Benzo(a)pyrene	ug/l	0.1	**4.48**	ND (0.023)
Benzo(b)fluoranthene	ug/l	0.2	**2.63**	ND (0.044)



LEGEND

Underground Storage Tank

Waste Disposal Piping

Soil Sampling Locations

Soil Sample (June 28-30, 2016) VOCs < NJSRS/IGW

Soil Sample (June 28-30, 2016) VOCs > NJSRS/IGW

Temporary Well Point (June 30, 2017)

Soil Sample (November 7, 2016) VOCs < NJSRS/IGW

Soil Sample (November 7, 2016) VOCs > NJSRS/IGW

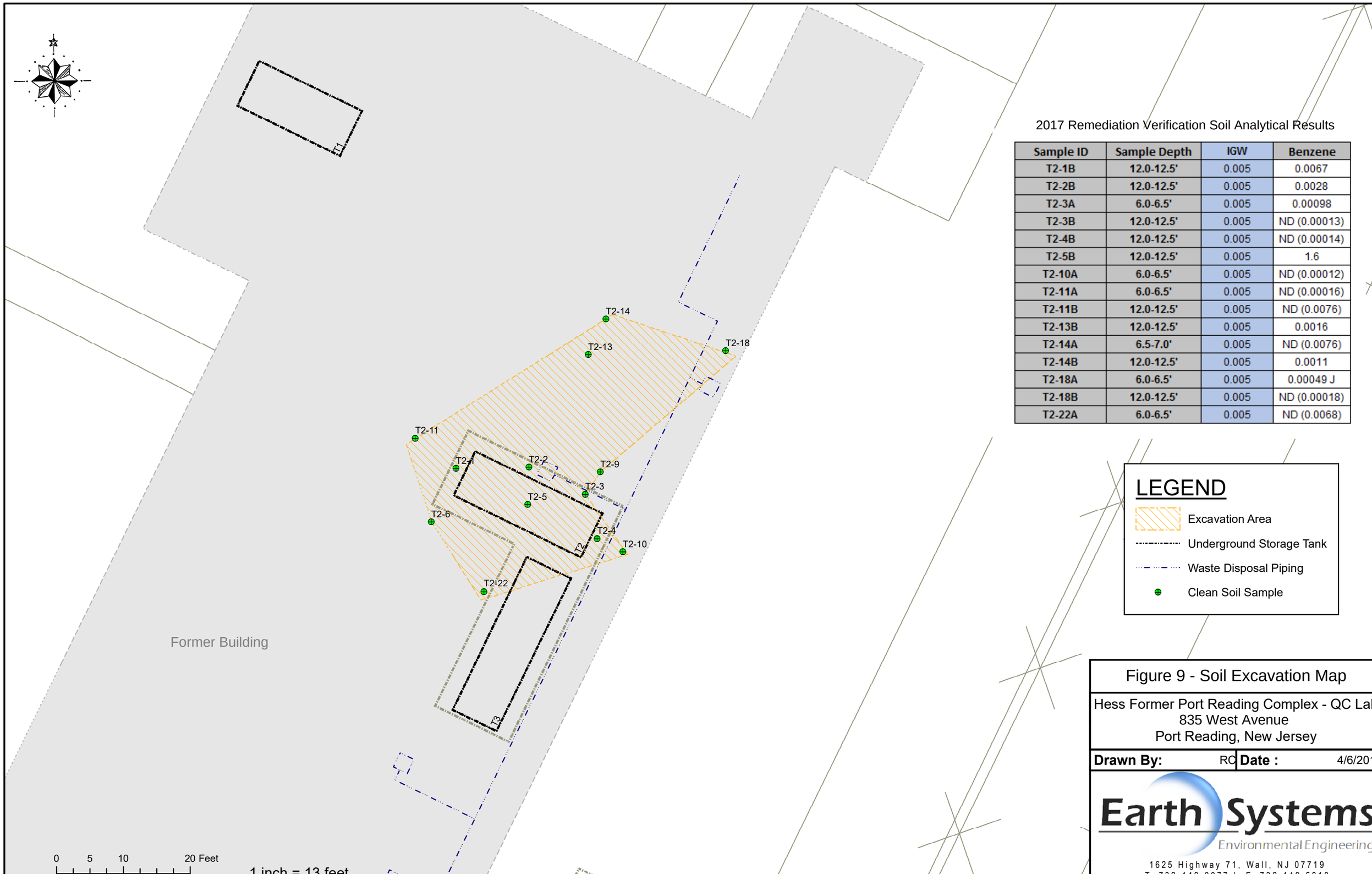
Soil Sample (Nov 2016) VOCs < NJSRS/IGW

Figure 8 - June 2016 TW Results

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By: RC **Date :** 4/6/2017

Earth Systems
Environmental Engineering
1625 Highway 71, Wall, NJ 07719
T. 732.449.0077 | F. 732.449.5810



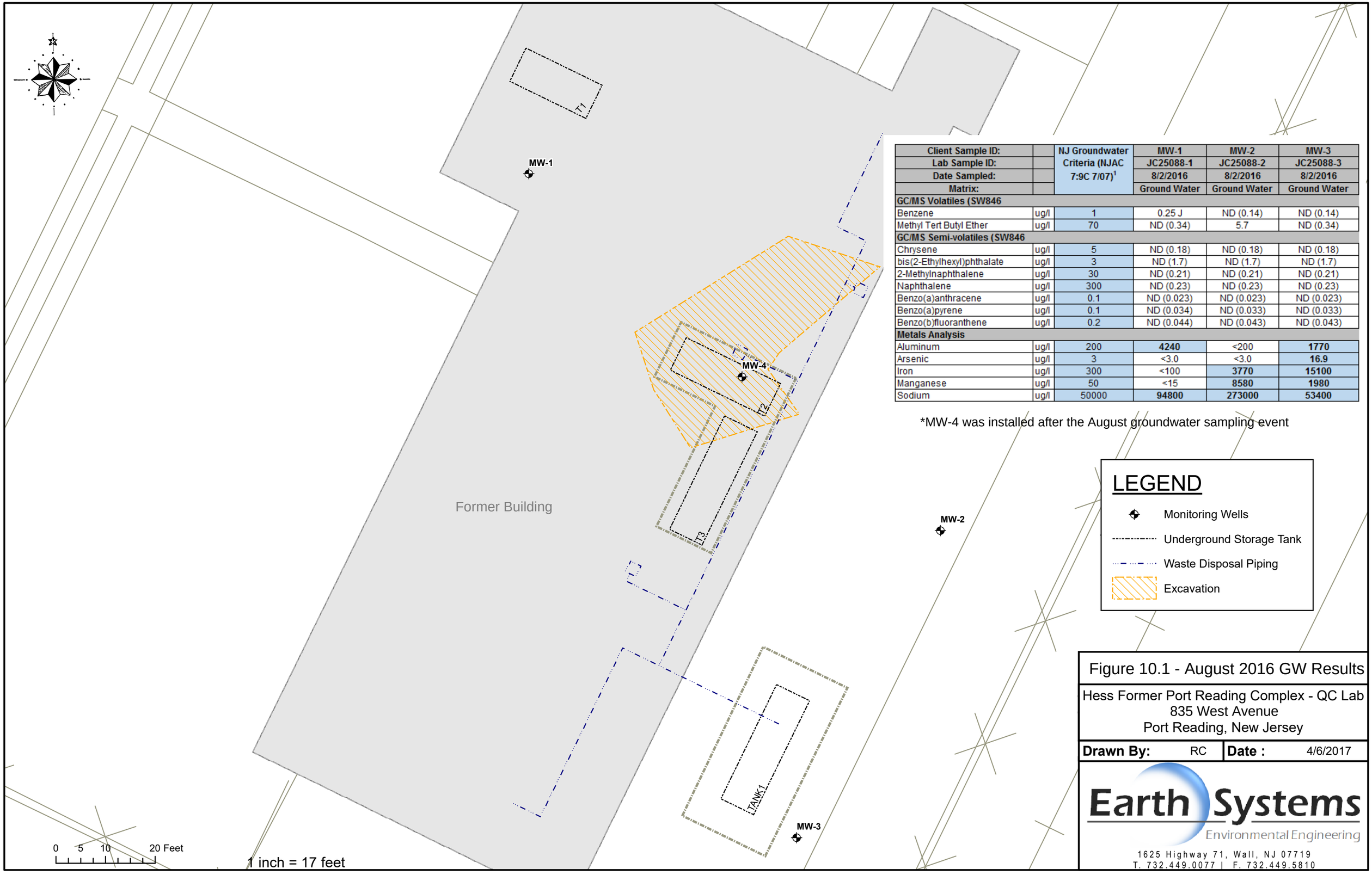
2017 Remediation Verification Soil Analytical Results

Sample ID	Sample Depth	IGW	Benzene
T2-1B	12.0-12.5'	0.005	0.0067
T2-2B	12.0-12.5'	0.005	0.0028
T2-3A	6.0-6.5'	0.005	0.00098
T2-3B	12.0-12.5'	0.005	ND (0.00013)
T2-4B	12.0-12.5'	0.005	ND (0.00014)
T2-5B	12.0-12.5'	0.005	1.6
T2-10A	6.0-6.5'	0.005	ND (0.00012)
T2-11A	6.0-6.5'	0.005	ND (0.00016)
T2-11B	12.0-12.5'	0.005	ND (0.0076)
T2-13B	12.0-12.5'	0.005	0.0016
T2-14A	6.5-7.0'	0.005	ND (0.0076)
T2-14B	12.0-12.5'	0.005	0.0011
T2-18A	6.0-6.5'	0.005	0.00049 J
T2-18B	12.0-12.5'	0.005	ND (0.00018)
T2-22A	6.0-6.5'	0.005	ND (0.0068)

Figure 9 - Soil Excavation Map

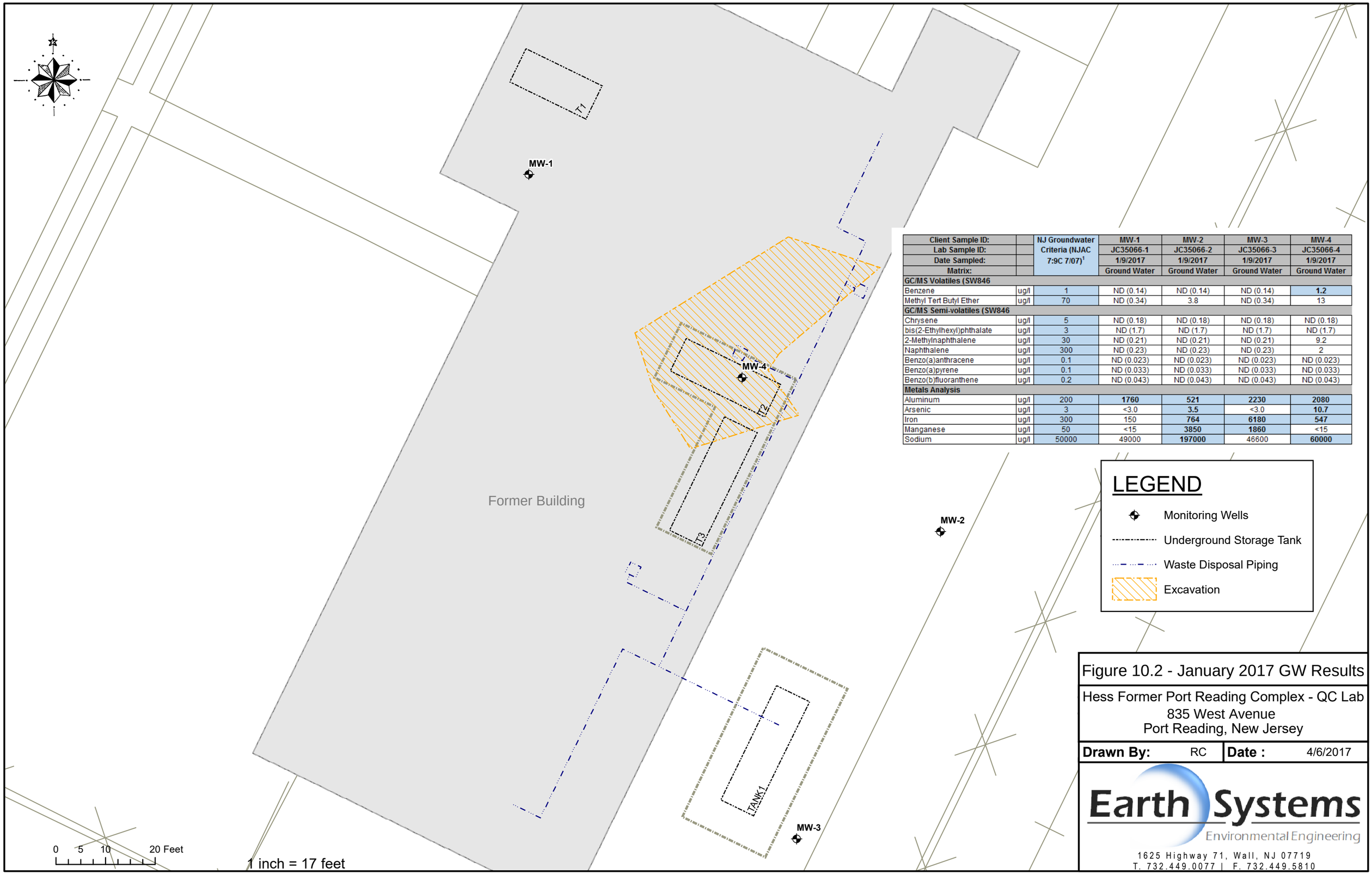
Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By: RC **Date :** 4/6/2017



Client Sample ID:		NJ Groundwater Criteria (NJAC 7:9C 7/07)[1]	MW-1	MW-2	MW-3
Lab Sample ID:			JC25088-1	JC25088-2	JC25088-3
Date Sampled:			8/2/2016	8/2/2016	8/2/2016
Matrix:			Ground Water	Ground Water	Ground Water
GC/MS Volatiles (SW846					
Benzene	ug/l	1	0.25 J	ND (0.14)	ND (0.14)
Methyl Tert Butyl Ether	ug/l	70	ND (0.34)	5.7	ND (0.34)
GC/MS Semi-volatiles (SW846					
Chrysene	ug/l	5	ND (0.18)	ND (0.18)	ND (0.18)
bis(2-Ethylhexyl)phthalate	ug/l	3	ND (1.7)	ND (1.7)	ND (1.7)
2-Methylnaphthalene	ug/l	30	ND (0.21)	ND (0.21)	ND (0.21)
Naphthalene	ug/l	300	ND (0.23)	ND (0.23)	ND (0.23)
Benzo(a)anthracene	ug/l	0.1	ND (0.023)	ND (0.023)	ND (0.023)
Benzo(a)pyrene	ug/l	0.1	ND (0.034)	ND (0.033)	ND (0.033)
Benzo(b)fluoranthene	ug/l	0.2	ND (0.044)	ND (0.043)	ND (0.043)
Metals Analysis					
Aluminum	ug/l	200	**4240**	<200	**1770**
Arsenic	ug/l	3	<3.0	<3.0	**16.9**
Iron	ug/l	300	<100	**3770**	**15100**
Manganese	ug/l	50	<15	**8580**	**1980**
Sodium	ug/l	50000	**94800**	**273000**	**53400**

*MW-4 was installed after the August groundwater sampling event

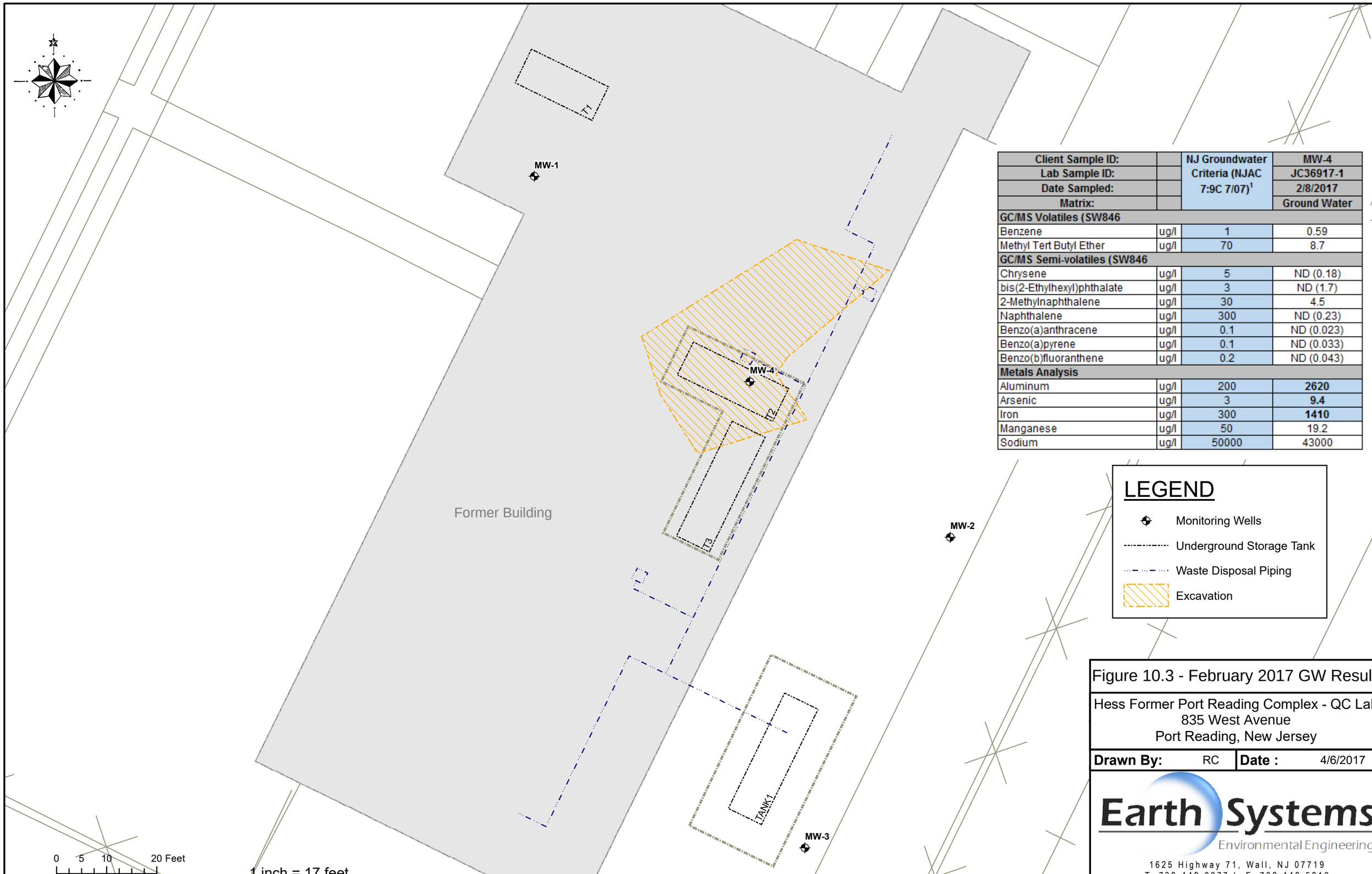


Client Sample ID:		NJ Groundwater Criteria (NJAC 7:9C 7/07)[1]	MW-1	MW-2	MW-3	MW-4
Lab Sample ID:			JC35066-1	JC35066-2	JC35066-3	JC35066-4
Date Sampled:			1/9/2017	1/9/2017	1/9/2017	1/9/2017
Matrix:			Ground Water	Ground Water	Ground Water	Ground Water
GC/MS Volatiles (SW846						
Benzene	ug/l	1	ND (0.14)	ND (0.14)	ND (0.14)	**1.2**
Methyl Tert Butyl Ether	ug/l	70	ND (0.34)	3.8	ND (0.34)	13
GC/MS Semi-volatiles (SW846						
Chrysene	ug/l	5	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)
bis(2-Ethylhexyl)phthalate	ug/l	3	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)
2-Methylnaphthalene	ug/l	30	ND (0.21)	ND (0.21)	ND (0.21)	9.2
Naphthalene	ug/l	300	ND (0.23)	ND (0.23)	ND (0.23)	2
Benzo(a)anthracene	ug/l	0.1	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.023)
Benzo(a)pyrene	ug/l	0.1	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)
Benzo(b)fluoranthene	ug/l	0.2	ND (0.043)	ND (0.043)	ND (0.043)	ND (0.043)
Metals Analysis						
Aluminum	ug/l	200	**1760**	**521**	**2230**	**2080**
Arsenic	ug/l	3	<3.0	**3.5**	<3.0	**10.7**
Iron	ug/l	300	150	**764**	**6180**	**547**
Manganese	ug/l	50	<15	**3850**	**1860**	<15
Sodium	ug/l	50000	49000	**197000**	46600	**60000**

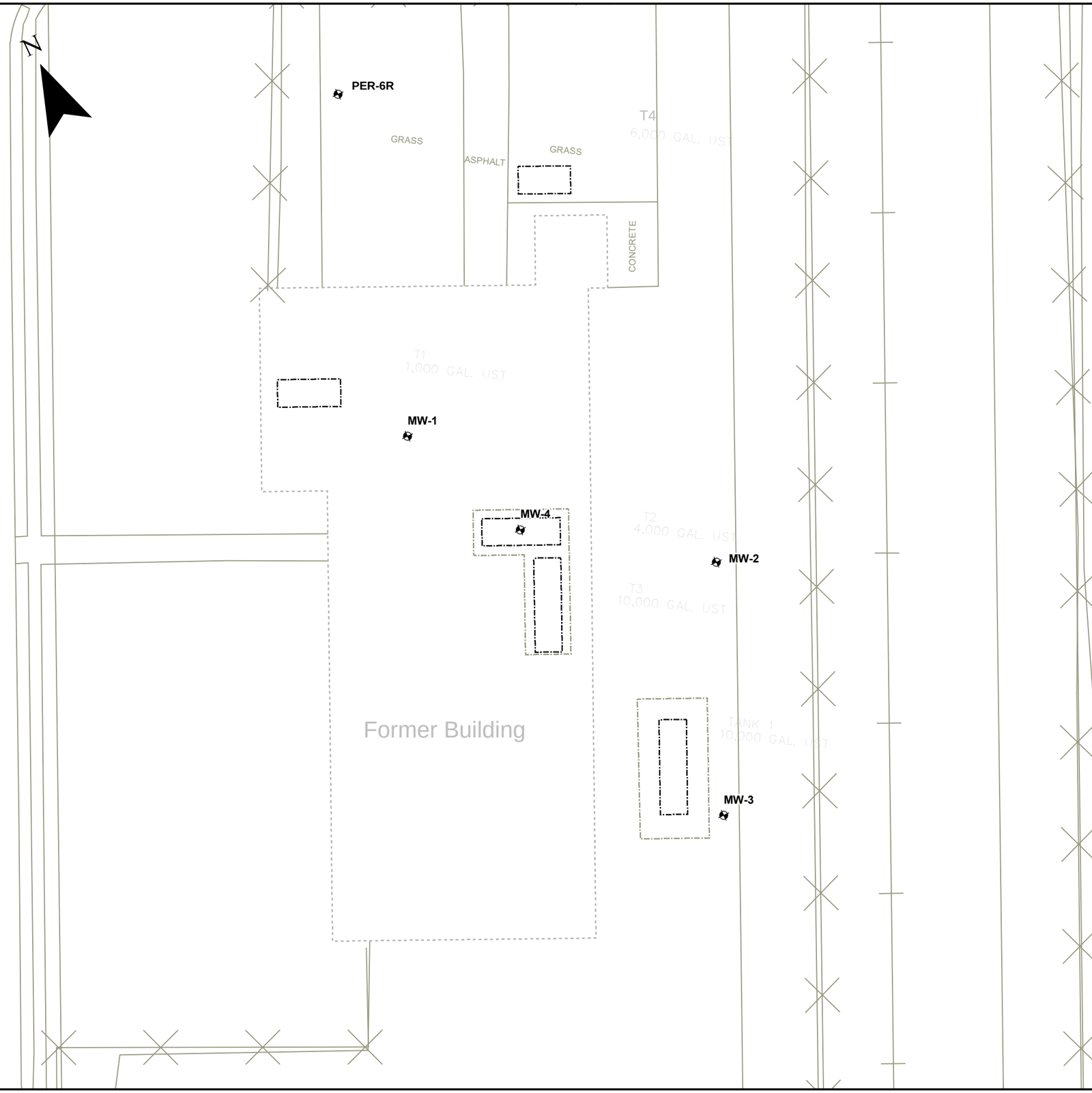
Figure 10.2 - January 2017 GW Results

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By: RC **Date :** 4/6/2017



Client Sample ID:		NJ Groundwater Criteria (NJAC 7:9C 7/07)[1]	MW-4
Lab Sample ID:			JC36917-1
Date Sampled:			2/8/2017
Matrix:			Ground Water
GC/MS Volatiles (SW846			
Benzene	ug/l	1	0.59
Methyl Tert Butyl Ether	ug/l	70	8.7
GC/MS Semi-volatiles (SW846			
Chrysene	ug/l	5	ND (0.18)
bis(2-Ethylhexyl)phthalate	ug/l	3	ND (1.7)
2-Methylnaphthalene	ug/l	30	4.5
Naphthalene	ug/l	300	ND (0.23)
Benzo(a)anthracene	ug/l	0.1	ND (0.023)
Benzo(a)pyrene	ug/l	0.1	ND (0.033)
Benzo(b)fluoranthene	ug/l	0.2	ND (0.043)
Metals Analysis			
Aluminum	ug/l	200	**2620**
Arsenic	ug/l	3	**9.4**
Iron	ug/l	300	**1410**
Manganese	ug/l	50	19.2
Sodium	ug/l	50000	43000



LEGEND

Monitoring Well

Client Sample ID:		GWQS	PER-6R
GC/MS Volatiles			
VOCs	ug/l	-	<GWQS
GC/MS Semi-volatiles			
SVOCs	ug/l	-	<GWQS
Metals Analysis			
Aluminum	ug/l	200	**494**
Iron	ug/l	300	**438**
Sodium	ug/l	50000	**63,300**
General Chemistry			
Nitrogen, Ammonia	mg/l	3	<0.20

0 15 30 60 Feet

1 inch = 30 feet

Figure 10.4 - November 2016 PER-6R Groundwater Results

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By: RC **Date :** 4/25/2017

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
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TABLES

Table 1
Former Hess Port Reading Complex (HC-PR)
AOC-19: QC Laboratory
750 Cliff Road, Port Reading, Middlesex County, New Jersey
June 2016 Soil Analtytical Results (VOCs)

Client Sample ID: / Sample Depth (ft) / Lab Sample ID: / Date Sampled: / Matrix:		NJ Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Default Impact to Groundwater Soil Screening (NJAC	T3-1B	T3-2B	T3-3B	T3-4B	T3-5B	T3-6B	TK-6B	TK-1B	TK-2B	TK-3B	TK-4B
Sample Depth (ft)					12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'
Lab Sample ID:					JC23137-2A	JC23137-5A	JC23137-7A	JC23137-9A	JC23137-11A	JC23137-13A	JC23137-21A	JC23214-1A	JC23214-3A	JC23214-5A	JC23214-7A
Date Sampled:					6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016
Matrix:					Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
GC/MS Volatiles (SW846 8260C)															
Acetone	mg/kg	70000	NA	19	ND (0.0026)	0.0116	ND (0.0019)	ND (0.0020)	ND (0.0023)	ND (0.0021)	ND (0.0019)	ND (0.0023)	ND (0.0018)	ND (0.0020)	ND (0.0024)
Benzene	mg/kg	2	5	0.005	ND (0.00017)	0.00027 J	ND (0.00012)	ND (0.00013)	ND (0.00015)	ND (0.00013)	ND (0.00012)	ND (0.00015)	ND (0.00012)	ND (0.00013)	ND (0.00015)
Bromochloromethane	mg/kg	-	-	-	ND (0.00045)	ND (0.00032)	ND (0.00032)	ND (0.00034)	ND (0.00039)	ND (0.00035)	ND (0.00032)	ND (0.00039)	ND (0.00031)	ND (0.00034)	ND (0.00041)
Bromodichloromethane	mg/kg	1	3	0.005	ND (0.00021)	ND (0.00015)	ND (0.00015)	ND (0.00016)	ND (0.00019)	ND (0.00017)	ND (0.00015)	ND (0.00018)	ND (0.00015)	ND (0.00016)	ND (0.00019)
Bromoform	mg/kg	81	280	0.03	ND (0.00037)	ND (0.00026)	ND (0.00027)	ND (0.00029)	ND (0.00033)	ND (0.00029)	ND (0.00027)	ND (0.00032)	ND (0.00026)	ND (0.00028)	ND (0.00034)
Bromomethane	mg/kg	25	59	0.04	ND (0.00068)	ND (0.00048)	ND (0.00049)	ND (0.00052)	ND (0.00060)	ND (0.00053)	ND (0.00049)	ND (0.00059)	ND (0.00048)	ND (0.00051)	ND (0.00062)
2-Butanone (MEK)	mg/kg	3100	44000	0.9	ND (0.0025)	ND (0.0018)	ND (0.0018)	ND (0.0019)	ND (0.0022)	ND (0.0019)	ND (0.0018)	ND (0.0021)	ND (0.0017)	ND (0.0019)	ND (0.0023)
Carbon disulfide	mg/kg	7800	110000	6	ND (0.00024)	0.00054 J	ND (0.00017)	ND (0.00018)	ND (0.00021)	ND (0.00019)	ND (0.00017)	ND (0.00021)	ND (0.00017)	ND (0.00018)	ND (0.00022)
Carbon tetrachloride	mg/kg	0.6	2	0.005	ND (0.00023)	ND (0.00017)	ND (0.00017)	ND (0.00018)	ND (0.00020)	ND (0.00018)	ND (0.00017)	ND (0.00020)	ND (0.00016)	ND (0.00017)	ND (0.00021)
Chlorobenzene	mg/kg	510	7400	0.6	ND (0.00023)	ND (0.00016)	ND (0.00016)	ND (0.00017)	ND (0.00020)	ND (0.00018)	ND (0.00016)	ND (0.00020)	ND (0.00016)	ND (0.00017)	ND (0.00021)
Chloroethane	mg/kg	220	1100	NA	ND (0.00060)	ND (0.00043)	ND (0.00043)	ND (0.00046)	ND (0.00053)	ND (0.00047)	ND (0.00043)	ND (0.00052)	ND (0.00042)	ND (0.00045)	ND (0.00055)
Chloroform	mg/kg	0.6	2	0.4	ND (0.00033)	ND (0.00024)	ND (0.00024)	ND (0.00026)	ND (0.00029)	ND (0.00026)	ND (0.00024)	ND (0.00029)	ND (0.00023)	ND (0.00025)	ND (0.00030)
Chloromethane	mg/kg	4	12	NA	ND (0.00030)	ND (0.00021)	ND (0.00021)	ND (0.00023)	ND (0.00026)	ND (0.00023)	ND (0.00021)	ND (0.00026)	ND (0.00021)	ND (0.00022)	ND (0.00027)
Cyclohexane	mg/kg	-	-	-	ND (0.00077)	ND (0.00054)	ND (0.00055)	ND (0.00059)	ND (0.00067)	ND (0.00060)	ND (0.00055)	ND (0.00066)	ND (0.00054)	ND (0.00057)	ND (0.00070)
1,2-Dibromo-3-chloropropane	mg/kg	0.08	0.2	0.005	ND (0.00068)	ND (0.00048)	ND (0.00049)	ND (0.00052)	ND (0.00060)	ND (0.00053)	ND (0.00049)	ND (0.00059)	ND (0.00048)	ND (0.00051)	ND (0.00062)
Dibromochloromethane	mg/kg	3	8	0.005	ND (0.00021)	ND (0.00015)	ND (0.00015)	ND (0.00016)	ND (0.00018)	ND (0.00016)	ND (0.00015)	ND (0.00018)	ND (0.00015)	ND (0.00016)	ND (0.00019)
1,2-Dibromoethane	mg/kg	0.008	0.04	0.005	ND (0.00034)	ND (0.00024)	ND (0.00024)	ND (0.00026)	ND (0.00030)	ND (0.00027)	ND (0.00025)	ND (0.00029)	ND (0.00024)	ND (0.00025)	ND (0.00031)
1,2-Dichlorobenzene	mg/kg	5300	59000	17	ND (0.00024)	ND (0.00017)	ND (0.00017)	ND (0.00018)	ND (0.00021)	ND (0.00019)	ND (0.00017)	ND (0.00021)	ND (0.00017)	ND (0.00018)	ND (0.00022)
1,3-Dichlorobenzene	mg/kg	5300	59000	19	ND (0.00019)	ND (0.00014)	ND (0.00014)	ND (0.00015)	ND (0.00017)	ND (0.00015)	ND (0.00014)	ND (0.00017)	ND (0.00014)	ND (0.00014)	ND (0.00018)
1,4-Dichlorobenzene	mg/kg	5	13	2	ND (0.00021)	ND (0.00015)	ND (0.00015)	ND (0.00017)	ND (0.00019)	ND (0.00017)	ND (0.00015)	ND (0.00019)	ND (0.00015)	ND (0.00016)	ND (0.00020)
Dichlorodifluoromethane	mg/kg	490	230000	39	ND (0.00077)	ND (0.00054)	ND (0.00055)	ND (0.00059)	ND (0.00067)	ND (0.00060)	ND (0.00055)	ND (0.00066)	ND (0.00054)	ND (0.00057)	ND (0.00070)
1,1-Dichloroethane	mg/kg	8	24	0.2	ND (0.00026)	ND (0.00019)	ND (0.00019)	ND (0.00020)	ND (0.00023)	ND (0.00021)	ND (0.00019)	ND (0.00023)	ND (0.00018)	ND (0.00020)	ND (0.00024)
1,2-Dichloroethane	mg/kg	0.9	3	0.005	ND (0.00024)	ND (0.00017)	ND (0.00017)	ND (0.00018)	ND (0.00021)	ND (0.00019)	ND (0.00017)	ND (0.00021)	ND (0.00017)	ND (0.00018)	ND (0.00022)
1,1-Dichloroethene	mg/kg	11	150	0.008	ND (0.00021)	ND (0.00015)	ND (0.00015)	ND (0.00017)	ND (0.00019)	ND (0.00017)	ND (0.00015)	ND (0.00019)	ND (0.00015)	ND (0.00016)	ND (0.00020)
cis-1,2-Dichloroethene	mg/kg	230	560	0.3	ND (0.00062)	ND (0.00044)	ND (0.00044)	ND (0.00047)	ND (0.00054)	ND (0.00048)	ND (0.00044)	ND (0.00053)	ND (0.00043)	ND (0.00046)	ND (0.00056)
trans-1,2-Dichloroethene	mg/kg	300	720	0.6	ND (0.00022)	ND (0.00016)	ND (0.00016)	ND (0.00017)	ND (0.00019)	ND (0.00017)	ND (0.00016)	ND (0.00019)	ND (0.00016)	ND (0.00017)	ND (0.00020)
1,2-Dichloropropane	mg/kg	2	5	0.005	ND (0.00043)	ND (0.00031)	ND (0.00031)	ND (0.00033)	ND (0.00038)	ND (0.00034)	ND (0.00031)	ND (0.00037)	ND (0.00030)	ND (0.00033)	ND (0.00040)
cis-1,3-Dichloropropene	mg/kg	2	7	0.005	ND (0.00028)	ND (0.00019)	ND (0.00020)	ND (0.00021)	ND (0.00024)	ND (0.00022)	ND (0.00020)	ND (0.00024)	ND (0.00019)	ND (0.00021)	ND (0.00025)
trans-1,3-Dichloropropene	mg/kg	2	7	0.005	ND (0.00031)	ND (0.00022)	ND (0.00022)	ND (0.00024)	ND (0.00027)	ND (0.00024)	ND (0.00022)	ND (0.00027)	ND (0.00022)	ND (0.00023)	ND (0.00028)
Ethylbenzene	mg/kg	7800	110000	13	ND (0.00021)	0.00055 J	ND (0.00015)	ND (0.00016)	ND (0.00018)	ND (0.00016)	ND (0.00015)	ND (0.00018)	ND (0.00015)	ND (0.00016)	ND (0.00019)
Freon 113	mg/kg	-	-	-	ND (0.00068)	ND (0.00048)	ND (0.00049)	ND (0.00052)	ND (0.00060)	ND (0.00053)	ND (0.00049)	ND (0.00059)	ND (0.00048)	ND (0.00051)	ND (0.00062)
2-Hexanone	mg/kg	-	-	-	ND (0.0020)	ND (0.0014)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.0014)	ND (0.0017)	ND (0.0014)	ND (0.0015)	ND (0.0018)
Isopropylbenzene	mg/kg	-	-	-	ND (0.00022)	0.0012 J	ND (0.00015)	ND (0.00017)	ND (0.00019)	ND (0.00017)	ND (0.00016)	ND (0.00019)	ND (0.00015)	ND (0.00016)	ND (0.00020)
Methyl Acetate	mg/kg	78000	NA	22	ND (0.0029)	ND (0.0020)	ND (0.0020)	ND (0.0022)	ND (0.0025)	ND (0.0022)	ND (0.0021)	ND (0.0025)	ND (0.0020)	ND (0.0021)	ND (0.0026)
Methylcyclohexane	mg/kg	-	-	-	ND (0.00071)	0.0023	ND (0.00051)	ND (0.00055)	ND (0.00062)	ND (0.00055)	ND (0.00051)	ND (0.00061)	ND (0.00050)	ND (0.00053)	ND (0.00065)
Methyl Tert Butyl Ether	mg/kg	110	320	0.2	0.0107	0.007	0.007	0.0015	0.0042	0.0052	ND (0.00027)	ND (0.00032)	ND (0.00026)	ND (0.00028)	0.0019
4-Methyl-2-pentanone(MIBK)	mg/kg	-	-	-	ND (0.0012)	ND (0.00084)	ND (0.00085)	ND (0.00092)	ND (0.0010)	ND (0.00093)	ND (0.00086)	ND (0.0010)	ND (0.00084)	ND (0.00089)	ND (0.0011)
Methylene chloride	mg/kg	34	97	0.01	ND (0.00048)	ND (0.00034)	ND (0.00034)	ND (0.00037)	ND (0.00042)	ND (0.00038)	ND (0.00035)	ND (0.00041)	ND (0.00034)	ND (0.00036)	ND (0.00044)
Styrene	mg/kg	90	260	3	ND (0.00020)	ND (0.00014)	ND (0.00015)	ND (0.00016)	ND (0.00018)	ND (0.00016)	ND (0.00015)	ND (0.00018)	ND (0.00014)	ND (0.00015)	ND (0.00019)
1,1,2,2-Tetrachloroethane	mg/kg	1	3	0.007	ND (0.00034)	ND (0.00024)	ND (0.00024)	ND (0.00026)	ND (0.00029)	ND (0.00026)	ND (0.00024)	ND (0.00029)	ND (0.00024)	ND (0.00025)	ND (0.00031)
Tetrachloroethene	mg/kg	2	5	0.005	ND (0.00039)	ND (0.00028)	ND (0.00028)	ND (0.00030)	ND (0.00035)	ND (0.00031)	ND (0.00028)	ND (0.00034)	ND (0.00028)	ND (0.00030)	ND (0.00036)
Toluene	mg/kg	6300	91000	7	ND (0.00018)	ND (0.00012)	ND (0.00013)	ND (0.00013)	ND (0.00015)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00012)	ND (0.00013)	ND (0.00016)
1,2,3-Trichlorobenzene	mg/kg	-	-	-	ND (0.00032)	ND (0.00022)	ND (0.00023)	ND (0.00024)	ND (0.00028)	ND (0.00025)	ND (0.00023)	ND (0.00027)	ND (0.00022)	ND (0.00024)	ND (0.00029)
1,2,4-Trichlorobenzene	mg/kg	73	820	0.7	ND (0.00026)	ND (0.00018)	ND (0.00018)	ND (0.00020)	ND (0.00022)	ND (0.00020)	ND (0.00018)	ND (0.00022)	ND (0.00018)	ND (0.00019)	ND (0.00023)
1,1,1-Trichloroethane	mg/kg	290	4200	0.3	ND (0.00023)	ND (0.00017)	ND (0.00017)	ND (0.00018)	ND (0.00021)	ND (0.00018)	ND (0.00017)	ND (0.00020)	ND (0.00016)	ND (0.00018)	ND (0.00021)
1,1,2-Trichloroethane	mg/kg	2	6	0.02	ND (0.00045)	ND (0.00032)	ND (0.00032)	ND (0.00035)	ND (0.00040)	ND (0.00035)	ND (0.00033)	ND (0.00039)	ND (0.00032)	ND (0.00034)	ND (0.00041)
Trichloroethene	mg/kg	7	20	0.01	ND (0.00027)	ND (0.00019)	ND (0.00019)	ND (0.00021)	ND (0.00023)	ND (0.00021)	ND (0.00019)	ND (0.00023)	ND (0.00019)	ND (0.00020)	ND (0.00024)
Trichlorofluoromethane	mg/kg	23000	340000	34	ND (0.00088)	ND (0.00063)	ND (0.00063)	ND (0.00068)	ND (0.00077)	ND (0.00069)	ND (0.00064)	ND (0.00076)	ND (0.00062)	ND (0.00066)	ND (0.00081)
Vinyl chloride	mg/kg	0.7	2	0.005	ND (0.00028)	ND (0.00020)	ND (0.00020)	ND (0.00022)	ND (0.00025)	ND (0.00022)	ND (0.00020)	ND (0.00024)	ND (0.00020)	ND (0.00021)	ND (0.00026)
m,p-Xylene	mg/kg	12000	170000	19	ND (0.00031)	0.00025 J	ND (0.00022)	ND (0.00024)	ND (0.00027)	ND (0.00024)	ND (0.00022)	ND (0.00026)	ND (0.00022)	ND (0.00023)	ND (0.00028)
o-Xylene	mg/kg	12000	170000	19	ND (0.00028)	ND (0.00020)	ND (0.00020)	ND (0.00022)	ND (0.00025)	ND (0.00022)	ND (0.00020)	ND (0.00024)	ND (0.00020)	ND (0.00021)	ND (0.00026)
Xylene (total)	mg/kg	12000	170000	19	ND (0.00028)	0.00025 J	ND (0.00020)	ND (0.00022)	ND (0.00025)	ND (0.00022)	ND (0.00020)	ND (0.00024)	ND (0.00020)	ND (0.00021)	ND (0.00026)
Total TIC, Volatile	mg/kg	-	-	-	0	0.1448 J	0	0	0	0	0	0	0	0	0
Total Alkanes	mg/kg	-	-	-	0	0.0198 J	0	0	0	0	0	0	0	0	0

Client Sample ID:	TK-5B	TK-7B	T2-1A	T2-1B	T2-5B	T2-6A	T2-8A	T2-9A	T2-2A	T2-2B	T2-3A	T2-3B	T2-4A	T2-4B	T2-7A	T2-10A
Sample Depth (ft)	12.0-12.5'	12.0-12.5'	6.0-6.5'	12.0-12.5'	12.0-12.5'	6.0-6.5'	6.0-6.5'	6.0-6.5'	6.0-6.5'	12.0-12.5'	6.0-6.5'	12.0-12.5'	6.0-6.5'	12.0-12.5'	6.0-6.5'	6.0-6.5'
Lab Sample ID:	JC23214-10A	JC23214-12A	JC23214-14	JC23214-15A	JC23214-17A	JC23214-19	JC23214-22	JC23214-25	JC23248-1	JC23248-2A	JC23248-4	JC23248-5A	JC23248-7	JC23248-8A	JC23248-10	JC23248-13
Date Sampled:	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016
Matrix:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
GC/MS Volatiles (SW846 8260C)																
Acetone	0.0072 J	ND (0.0023)	0.0599	0.0878	ND (0.12)	0.0688	0.883	0.0524	ND (0.13)	0.0541	0.033	ND (0.0021)	0.0268	0.0052 J	ND (0.11)	0.0124
Benzene	ND (0.00013)	ND (0.00015)	ND (0.00013)	0.0067	1.6	ND (0.00014)	**0.392**	ND (0.00015)	**0.193**	0.0028	0.00098	ND (0.00013)	ND (0.00012)	ND (0.00014)	**0.118**	ND (0.00012)
Bromochloromethane	ND (0.00035)	ND (0.00039)	ND (0.00034)	ND (0.00035)	ND (0.020)	ND (0.00037)	ND (0.023)	ND (0.00041)	ND (0.021)	ND (0.00035)	ND (0.00035)	ND (0.00035)	ND (0.00031)	ND (0.00038)	ND (0.019)	ND (0.00032)
Bromodichloromethane	ND (0.00017)	ND (0.00018)	ND (0.00016)	ND (0.00017)	ND (0.0095)	ND (0.00018)	ND (0.011)	ND (0.00019)	ND (0.010)	ND (0.00017)	ND (0.00017)	ND (0.00017)	ND (0.00015)	ND (0.00018)	ND (0.0089)	ND (0.00015)
Bromoform	ND (0.00029)	ND (0.00032)	ND (0.00028)	ND (0.00029)	ND (0.017)	ND (0.00031)	ND (0.019)	ND (0.00034)	ND (0.018)	ND (0.00029)	ND (0.00029)	ND (0.00029)	ND (0.00026)	ND (0.00032)	ND (0.016)	ND (0.00027)
Bromomethane	ND (0.00053)	ND (0.00059)	ND (0.00051)	ND (0.00053)	ND (0.030)	ND (0.00057)	ND (0.034)	ND (0.00062)	ND (0.033)	ND (0.00054)	ND (0.00053)	ND (0.00053)	ND (0.00047)	ND (0.00058)	ND (0.028)	ND (0.00049)
2-Butanone (MEK)	ND (0.0019)	ND (0.0021)	ND (0.0019)	ND (0.0019)	ND (0.11)	ND (0.0021)	ND (0.12)	ND (0.0023)	ND (0.12)	ND (0.0020)	ND (0.0019)	ND (0.0019)	ND (0.0017)	ND (0.0021)	ND (0.10)	ND (0.0018)
Carbon disulfide	ND (0.00019)	ND (0.00021)	0.00055 J	0.00033 J	ND (0.011)	0.00071 J	ND (0.012)	ND (0.00022)	ND (0.011)	ND (0.00019)	0.0011 J	ND (0.00019)	0.00034 J	ND (0.00020)	ND (0.010)	0.00050 J
Carbon tetrachloride	ND (0.00018)	ND (0.00020)	ND (0.00018)	ND (0.00018)	ND (0.010)	ND (0.00019)	ND (0.012)	ND (0.00021)	ND (0.011)	ND (0.00018)	ND (0.00018)	ND (0.00018)	ND (0.00016)	ND (0.00020)	ND (0.0097)	ND (0.00017)
Chlorobenzene	ND (0.00018)	ND (0.00020)	ND (0.00017)	ND (0.00018)	ND (0.010)	ND (0.00019)	ND (0.011)	ND (0.00021)	ND (0.011)	ND (0.00018)	ND (0.00018)	ND (0.00018)	ND (0.00016)	ND (0.00019)	ND (0.0095)	ND (0.00016)
Chloroethane	ND (0.00047)	ND (0.00052)	ND (0.00045)	ND (0.00047)	ND (0.027)	ND (0.00050)	ND (0.030)	ND (0.00055)	ND (0.029)	ND (0.00048)	ND (0.00047)	ND (0.00047)	ND (0.00041)	ND (0.00051)	ND (0.025)	ND (0.00043)
Chloroform	ND (0.00026)	ND (0.00029)	ND (0.00025)	ND (0.00026)	ND (0.015)	ND (0.00028)	ND (0.017)	ND (0.00031)	ND (0.016)	ND (0.00026)	ND (0.00026)	ND (0.00026)	ND (0.00023)	ND (0.00028)	ND (0.014)	ND (0.00024)
Chloromethane	ND (0.00023)	ND (0.00026)	ND (0.00022)	ND (0.00023)	ND (0.013)	ND (0.00025)	ND (0.015)	ND (0.00027)	ND (0.014)	ND (0.00023)	ND (0.00023)	ND (0.00023)	ND (0.00020)	ND (0.00025)	ND (0.012)	ND (0.00021)
Cyclohexane	ND (0.00060)	ND (0.00066)	ND (0.00058)	0.0023	2.32	ND (0.00064)	0.564	0.0015 J	1.87	0.0036	0.0063	ND (0.00060)	ND (0.00053)	ND (0.00065)	0.396	ND (0.00055)
1,2-Dibromo-3-chloropropane	ND (0.00053)	ND (0.00059)	ND (0.00051)	ND (0.00053)	ND (0.030)	ND (0.00057)	ND (0.034)	ND (0.00062)	ND (0.032)	ND (0.00054)	ND (0.00053)	ND (0.00053)	ND (0.00047)	ND (0.00058)	ND (0.028)	ND (0.00048)
Dibromochloromethane	ND (0.00016)	ND (0.00018)	ND (0.00016)	ND (0.00017)	ND (0.0094)	ND (0.00018)	ND (0.011)	ND (0.00019)	ND (0.010)	ND (0.00017)	ND (0.00016)	ND (0.00016)	ND (0.00015)	ND (0.00018)	ND (0.0088)	ND (0.00015)
1,2-Dibromoethane	ND (0.00027)	ND (0.00029)	ND (0.00026)	ND (0.00027)	ND (0.015)	ND (0.00028)	ND (0.017)	ND (0.00031)	ND (0.016)	ND (0.00027)	ND (0.00026)	ND (0.00027)	ND (0.00023)	ND (0.00029)	ND (0.014)	ND (0.00024)
1,2-Dichlorobenzene	ND (0.00019)	ND (0.00021)	ND (0.00018)	ND (0.00019)	ND (0.011)	ND (0.00020)	ND (0.012)	ND (0.00022)	ND (0.011)	ND (0.00019)	ND (0.00019)	ND (0.00019)	ND (0.00017)	ND (0.00020)	ND (0.010)	ND (0.00017)
1,3-Dichlorobenzene	ND (0.00015)	ND (0.00017)	ND (0.00014)	ND (0.00015)	ND (0.0085)	ND (0.00016)	ND (0.0097)	ND (0.00018)	ND (0.0092)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00013)	ND (0.00016)	ND (0.0080)	ND (0.00014)
1,4-Dichlorobenzene	ND (0.00017)	ND (0.00019)	ND (0.00016)	ND (0.00017)	ND (0.0095)	ND (0.00018)	ND (0.011)	ND (0.00020)	ND (0.010)	ND (0.00017)	ND (0.00017)	ND (0.00017)	ND (0.00015)	ND (0.00018)	ND (0.0090)	ND (0.00015)
Dichlorodifluoromethane	ND (0.00060)	ND (0.00066)	ND (0.00058)	ND (0.00060)	ND (0.034)	ND (0.00064)	ND (0.039)	ND (0.00070)	ND (0.037)	ND (0.00060)	ND (0.00059)	ND (0.00060)	ND (0.00053)	ND (0.00065)	ND (0.032)	ND (0.00055)
1,1-Dichloroethane	ND (0.00021)	ND (0.00023)	ND (0.00020)	ND (0.00021)	ND (0.012)	ND (0.00022)	ND (0.013)	ND (0.00024)	ND (0.013)	ND (0.00021)	ND (0.00020)	ND (0.00021)	ND (0.00018)	ND (0.00022)	ND (0.011)	ND (0.00019)
1,2-Dichloroethane	ND (0.00019)	ND (0.00021)	ND (0.00018)	ND (0.00019)	ND (0.011)	ND (0.00020)	ND (0.012)	ND (0.00022)	ND (0.011)	ND (0.00019)	ND (0.00019)	ND (0.00019)	ND (0.00017)	ND (0.00020)	ND (0.010)	ND (0.00017)
1,1-Dichloroethene	ND (0.00017)	ND (0.00019)	ND (0.00016)	ND (0.00017)	ND (0.0095)	ND (0.00018)	ND (0.011)	ND (0.00020)	ND (0.010)	ND (0.00017)	ND (0.00017)	ND (0.00017)	ND (0.00015)	ND (0.00018)	ND (0.0090)	ND (0.00015)
cis-1,2-Dichloroethene	ND (0.00048)	ND (0.00053)	ND (0.00046)	ND (0.00048)	ND (0.027)	ND (0.00051)	ND (0.031)	ND (0.00056)	ND (0.029)	ND (0.00049)	ND (0.00048)	ND (0.00048)	ND (0.00042)	ND (0.00052)	ND (0.026)	ND (0.00044)
trans-1,2-Dichloroethene	ND (0.00017)	ND (0.00019)	ND (0.00017)	ND (0.00017)	ND (0.0099)	ND (0.00018)	ND (0.011)	ND (0.00020)	ND (0.011)	ND (0.00018)	ND (0.00017)	ND (0.00017)	ND (0.00015)	ND (0.00019)	ND (0.0093)	ND (0.00016)
1,2-Dichloropropane	ND (0.00034)	ND (0.00037)	ND (0.00033)	ND (0.00034)	ND (0.019)	ND (0.00036)	ND (0.022)	ND (0.00040)	ND (0.021)	ND (0.00034)	ND (0.00034)	ND (0.00034)	ND (0.00030)	ND (0.00037)	ND (0.018)	ND (0.00031)
cis-1,3-Dichloropropene	ND (0.00022)	ND (0.00024)	ND (0.00021)	ND (0.00022)	ND (0.012)	ND (0.00023)	ND (0.014)	ND (0.00025)	ND (0.013)	ND (0.00022)	ND (0.00021)	ND (0.00022)	ND (0.00019)	ND (0.00023)	ND (0.011)	ND (0.00020)
trans-1,3-Dichloropropene	ND (0.00024)	ND (0.00027)	ND (0.00023)	ND (0.00024)	ND (0.014)	ND (0.00026)	ND (0.016)	ND (0.00028)	ND (0.015)	ND (0.00024)	ND (0.00024)	ND (0.00024)	ND (0.00021)	ND (0.00026)	ND (0.013)	ND (0.00022)
Ethylbenzene	ND (0.00016)	ND (0.00018)	ND (0.00016)	0.00017 J	12.7	ND (0.00017)	8.68	ND (0.00019)	0.273	0.0129	0.0229	ND (0.00016)	ND (0.00014)	ND (0.00018)	0.0585 J	ND (0.00015)
Freon 113	ND (0.00053)	ND (0.00059)	ND (0.00051)	ND (0.00053)	ND (0.030)	ND (0.00057)	ND (0.034)	ND (0.00062)	ND (0.032)	ND (0.00054)	ND (0.00053)	ND (0.00053)	ND (0.00047)	ND (0.00058)	ND (0.028)	ND (0.00048)
2-Hexanone	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.087)	ND (0.0016)	ND (0.099)	ND (0.0018)	ND (0.093)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0013)	ND (0.0017)	ND (0.082)	ND (0.0014)
Isopropylbenzene	ND (0.00017)	ND (0.00019)	0.00026 J	0.0055	2.81	0.0014 J	0.925	ND (0.00020)	4.09	0.0042	0.015	ND (0.00017)	ND (0.00015)	ND (0.00018)	1.19	ND (0.00015)
Methyl Acetate	ND (0.0022)	ND (0.0025)	ND (0.0021)	ND (0.0022)	ND (0.13)	ND (0.0024)	ND (0.14)	ND (0.0026)	ND (0.14)	ND (0.0023)	ND (0.0022)	ND (0.0022)	ND (0.0020)	ND (0.0024)	ND (0.12)	ND (0.0020)
Methylcyclohexane	ND (0.00056)	ND (0.00061)	0.0018 J	0.022	14	0.0025	4.57	0.0109	13.6	0.0431	0.0336	ND (0.00056)	0.00070 J	ND (0.00060)	9.06	ND (0.00051)
Methyl Tert Butyl Ether	ND (0.00029)	ND (0.00032)	0.00034 J	0.0174	0.0799	0.002	**11**	0.0194	ND (0.018)	0.0024	0.0073	0.0442	0.0156	0.0542	0.0228 J	0.00062 J
4-Methyl-2-pentanone(MIBK)	ND (0.00093)	ND (0.0010)	ND (0.00090)	ND (0.00094)	ND (0.053)	ND (0.00099)	ND (0.060)	ND (0.0011)	ND (0.057)	ND (0.00094)	ND (0.00092)	ND (0.00093)	ND (0.00082)	ND (0.0010)	ND (0.050)	ND (0.00085)
Methylene chloride	0.00061 JB	ND (0.00041)	0.00072 JB	ND (0.00038)	ND (0.021)	0.00061 JB	ND (0.024)	0.00085 JB	ND (0.023)	0.0031 J	ND (0.00037)	ND (0.00038)	ND (0.00033)	ND (0.00041)	ND (0.020)	ND (0.00034)
Styrene	ND (0.00016)	ND (0.00018)	ND (0.00015)	ND (0.00016)	ND (0.0090)	ND (0.00017)	ND (0.010)	ND (0.00019)	ND (0.0097)	ND (0.00016)	ND (0.00016)	ND (0.00016)	ND (0.00014)	ND (0.00017)	ND (0.0085)	ND (0.00015)
1,1,2,2-Tetrachloroethane	ND (0.00026)	ND (0.00029)	ND (0.00025)	ND (0.00026)	ND (0.015)	ND (0.00028)	ND (0.017)	ND (0.00031)	ND (0.016)	ND (0.00026)	ND (0.00026)	ND (0.00026)	ND (0.00023)	ND (0.00029)	ND (0.014)	ND (0.00024)
Tetrachloroethene	ND (0.00031)	ND (0.00034)	ND (0.00030)	ND (0.00031)	ND (0.018)	ND (0.00033)	ND (0.020)	ND (0.00036)	ND (0.019)	ND (0.00031)	ND (0.00031)	ND (0.00031)	ND (0.00027)	ND (0.00034)	ND (0.016)	ND (0.00028)
Toluene	ND (0.00014)	ND (0.00015)	ND (0.00013)	0.00040 J	1.06	ND (0.00015)	2.05	ND (0.00016)	0.0604 J	0.00087 J	0.00038 J	ND (0.00014)	ND (0.00012)	ND (0.00015)	ND (0.0073)	ND (0.00013)
1,2,3-Trichlorobenzene	ND (0.00025)	ND (0.00027)	ND (0.00024)	ND (0.00025)	ND (0.014)	ND (0.00026)	ND (0.016)	ND (0.00029)	ND (0.015)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00022)	ND (0.00027)	ND (0.013)	ND (0.00023)
1,2,4-Trichlorobenzene	ND (0.00020)	ND (0.00022)	ND (0.00019)	ND (0.00020)	ND (0.011)	ND (0.00021)	ND (0.013)	ND (0.00023)	ND (0.012)	ND (0.00020)	ND (0.00020)	ND (0.00020)	ND (0.00018)	ND (0.00022)	ND (0.011)	ND (0.00018)
1,1,1-Trichloroethane	ND (0.00018)	ND (0.00020)	ND (0.00018)	ND (0.00018)	ND (0.010)	ND (0.00019)	ND (0.012)	ND (0.00021)	ND (0.011)	ND (0.00019)	ND (0.00018)	ND (0.00018)	ND (0.00016)	ND (0.00020)	ND (0.0098)	ND (0.00017)
1,1,2-Trichloroethane	ND (0.00036)	ND (0.00039)	ND (0.00034)	ND (0.00036)	ND (0.020)	ND (0.00038)	ND (0.023)	ND (0.00041)	ND (0.022)	ND (0.00036)	ND (0.00035)	ND (0.00036)	ND (0.00031)	ND (0.00039)	ND (0.019)	ND (0.00032)
Trichloroethene	ND (0.00021)	ND (0.00023)	ND (0.00020)	ND (0.00021)	ND (0.012)	ND (0.00022)	ND (0.013)	ND (0.00024)	ND (0.013)	ND (0.00021)	ND (0.00021)	ND (0.00021)	ND (0.00018)	ND (0.00023)	ND (0.011)	ND (0.00019)
Trichlorofluoromethane	ND (0.00069)	ND (0.00076)	ND (0.00067)	ND (0.00069)	ND (0.039)	ND (0.00073)	ND (0.045)	ND (0.00081)	ND (0.042)	ND (0.00070)	ND (0.00068)	ND (0.00069)	ND (0.00061)	ND (0.00075)	ND (0.037)	ND (0.00063)
Vinyl chloride	ND (0.00022)	ND (0.00024)	ND (0.00021)	ND (0.00022)	ND (0.013)	ND (0.00024)	ND (0.014)	ND (0.00026)	ND (0.014)	ND (0.00022)	ND (0.00022)	ND (0.00022)	ND (0.00020)	ND (0.00024)	ND (0.012)	ND (0.00020)
m,p-Xylene	ND (0.00024)	ND (0.00027)	ND (0.00023)	0.0064	42.3	0.0018	**22.3**	ND (0.00028)	0.517	0.0357	0.0035	ND (0.00024)	ND (0.00021)	ND (0.00026)	0.0238 J	ND (0.00022)
o-Xylene	ND (0.00022)	ND (0.00024)	ND (0.00021)	ND (0.00022)	2.79	0.00053 J	2.95	0.00058 J	0.126	0.0025	0.00058 J	ND (0.00022)	ND (0.00020)	ND (0.00024)	0.0188 J	ND (0.00020)
Xylene (total)	ND (0.00022)	ND (0.00024)	ND (0.00021)	0.0066	45.1	0.0023	**25.3**	0.00058 J	0.643	0.0382	0.0041	ND (0.00022)	ND (0.00020)	ND (0.00024)	0.0426 J	ND (0.00020)
Total TIC, Volatile	0	0	0.816 J	0.456 J	28.6 J	1.202 J	51.9 J	0.294 J	397 J	0.403 J	1.301 J	0.039 J	0	0.039 J	188 J	0
Total Alkanes	0	0	0.15 J	0.025 J	169.9 J	0.732 J	183 J	0.291 J	78 J	0.094 J	0	0	0	0	37 J	0.0821 J

[a] This compound in BS is outside in house QC limits bias high.
[b] Sample received out of holding time for pH analysis.
[c] Elevated detection limit due to dilution required for high interfering element.

Table 1 cont.
Former Hess Port Reading Complex (HC-PR)
AOC-19: QC Laboratory
750 Cliff Road, Port Reading, Middlesex County, New Jersey
June 2016 Soil Analtytical Results (Chromium)

Client Sample ID: Sample Depth (ft)		NJ Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	T3-1B 12.0-12.5'	T3-2B 12.0-12.5'	T3-3B 12.0-12.5'	T3-4B 12.0-12.5'	T3-5B 12.0-12.5'	T3-6B 12.0-12.5'	TK-6B 12.0-12.5'	TK-1B 12.0-12.5'	TK-2B 12.0-12.5'	TK-3B 12.0-12.5'	TK-4B 12.0-12.5'	TK-5B 12.0-12.5'	TK-7B 12.0-12.5'	T2-1B 12.0-12.5'	T2-5B 12.0-12.5'	T2-2B (12.0-12. 12.0-12.5'	T2-3B (12.0-12. 12.0-12.5'	T2-4B (12.0-12. 12.0-12.5'
Lab Sample ID:				JC23137-2	JC23137-5	JC23137-7	JC23137-9	JC23137-11	JC23137-13	JC23137-21	JC23214-1	JC23214-3	JC23214-5	JC23214-7	JC23214-10	JC23214-12	JC23214-15	JC23214-17	JC23248-2	JC23248-5	JC23248-8
Date Sampled:				6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/30/2016	6/30/2016	6/30/2016
Matrix:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
General Chemistry																					
Chromium, Hexavalent	mg/kg	240	20	<0.48	<0.48	0.65	<0.46	0.61	0.86	<0.47	<0.48	<0.49	<0.48	<0.45	<0.47	<0.45	<0.47	<0.48	0.6	<0.48	0.72
Redox Potential Vs H2	mv	-	-	402	358	349	383	359	384	347	375	291	320	299	336	325	211	231	327	363	381
Solids, Percent	%	-	-	82.8	83.8	84.3	87.4	84.7	84.4	85.1	82.7	81.8	83.3	88.7	85.8	89.8	85.6	83.5	85.1	84.2	85.5

Table 1 cont.
Former Hess Port Reading Complex (HC-PR)
AOC-19: QC Laboratory
750 Cliff Road, Port Reading, Middlesex County, New Jersey
June 2016 Soil Analtytical Results (SVOCs)

Client Sample ID:		NJ Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Default Impact to Groundwater Soil Screening (NJAC	T3-1B	T3-2B	T3-3B	T3-4B	T3-5B	T3-6B	TK-6B	TK-1B	TK-2B	TK-3B	TK-4B	TK-5B	TK-7B	T2-1B	T2-5B	T2-2B	T2-3B	T2-4B
Sample Depth (ft)					12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'
Lab Sample ID:					JC23137-2A	JC23137-5A	JC23137-7A	JC23137-9A	JC23137-11A	JC23137-13A	JC23137-21A	JC23214-1A	JC23214-3A	JC23214-5A	JC23214-7A	JC23214-10A	JC23214-12A	JC23214-15A	JC23214-17A	JC23248-2A	JC23248-5A	JC23248-8A
Date Sampled:					6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/30/2016	6/30/2016	6/30/2016
Matrix:					Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
GC/MS Semi-volatiles (SW846 8270D)																						
Acenaphthene	mg/kg	3400	37000	110	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.012)	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.013)	0.0255 J	ND (0.013)	0.0688	ND (0.014)	ND (0.013)
Acenaphthylene	mg/kg	NA	300000	NA	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.020)	ND (0.018)	ND (0.020)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.019)	ND (0.018)	ND (0.020)	ND (0.019)	ND (0.020)	ND (0.019)
Acetophenone	mg/kg	2	5	3	ND (0.0079)	ND (0.0080)	ND (0.0081)	ND (0.0079)	ND (0.0083)	ND (0.0076)	ND (0.0083)	ND (0.0080)	ND (0.0082)	ND (0.0081)	ND (0.0078)	ND (0.0081)	ND (0.0079)	ND (0.0078)	ND (0.0083)	ND (0.0079)	ND (0.0084)	ND (0.0081)
Anthracene	mg/kg	17000	30000	2400	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.024)	ND (0.022)	ND (0.024)	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.022)	ND (0.023)	ND (0.023)	ND (0.022)	ND (0.024)	0.0265 J	ND (0.024)	ND (0.023)
Atrazine	mg/kg	210	2400	0.2	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.015)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.016)
Benzo(a)anthracene	mg/kg	0.6	2	0.8	ND (0.010)	0.0140 J	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	0.0216 J	ND (0.010)	ND (0.011)	ND (0.011)
Benzo(a)pyrene	mg/kg	0.2	0.2	0.2	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.018)	ND (0.016)	ND (0.018)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.017)
Benzo(b)fluoranthene	mg/kg	0.6	2	2	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.017)
Benzo(g,h,i)perylene	mg/kg	380000	30000	NA	ND (0.018)	ND (0.019)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.018)	ND (0.018)	ND (0.019)	ND (0.018)	ND (0.020)	ND (0.019)
Benzo(k)fluoranthene	mg/kg	6	23	25	ND (0.017)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.018)
4-Bromophenyl phenyl ether	mg/kg	-	-	-	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)
Butyl benzyl phthalate	mg/kg	1200	14000	230	ND (0.0090)	ND (0.0091)	ND (0.0092)	ND (0.0090)	ND (0.0094)	ND (0.0087)	ND (0.0094)	ND (0.0091)	ND (0.0093)	ND (0.0092)	ND (0.0088)	ND (0.0092)	ND (0.0090)	ND (0.0089)	ND (0.0094)	ND (0.0089)	ND (0.0096)	ND (0.0092)
1,1'-Biphenyl	mg/kg	3100	34000	140	ND (0.0050)	ND (0.0051)	ND (0.0051)	ND (0.0051)	ND (0.0053)	ND (0.0049)	ND (0.0053)	ND (0.0051)	ND (0.0052)	ND (0.0052)	ND (0.0050)	ND (0.0052)	ND (0.0051)	ND (0.0050)	ND (0.0053)	0.0914	ND (0.0054)	ND (0.0052)
Benzaldehyde	mg/kg	6100	68000	NA	ND (0.0091)	ND (0.0092)	ND (0.0093)	ND (0.0092)	ND (0.0096)	ND (0.0088)	ND (0.0096)	ND (0.0093)	ND (0.0095)	ND (0.0094)	ND (0.0090)	ND (0.0094)	ND (0.0091)	ND (0.0090)	ND (0.0096)	ND (0.0091)	ND (0.0097)	ND (0.0094)
2-Chloronaphthalene	mg/kg	-	-	-	ND (0.0087)	ND (0.0089)	ND (0.0089)	ND (0.0088)	ND (0.0092)	ND (0.0085)	ND (0.0092)	ND (0.0089)	ND (0.0091)	ND (0.0090)	ND (0.0086)	ND (0.0090)	ND (0.0088)	ND (0.0087)	ND (0.0092)	ND (0.0087)	ND (0.0093)	ND (0.0090)
4-Chloroaniline	mg/kg	-	-	-	ND (0.013)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)
Carbazole	mg/kg	24	96	NA	ND (0.0053)	ND (0.0054)	ND (0.0054)	ND (0.0054)	ND (0.0056)	ND (0.0052)	ND (0.0056)	ND (0.0054)	ND (0.0055)	ND (0.0055)	ND (0.0053)	ND (0.0055)	ND (0.0053)	ND (0.0053)	ND (0.0056)	ND (0.0053)	ND (0.0057)	ND (0.0055)
Caprolactam	mg/kg	31000	340000	12	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)
Chrysene	mg/kg	62	230	80	ND (0.012)	0.0151 J	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.012)	ND (0.011)	0.0380 J	0.0277 J	ND (0.012)	ND (0.012)
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	ND (0.0079)	ND (0.0080)	ND (0.0080)	ND (0.0079)	ND (0.0083)	ND (0.0076)	ND (0.0082)	ND (0.0080)	ND (0.0082)	ND (0.0081)	ND (0.0078)	ND (0.0081)	ND (0.0079)	ND (0.0078)	ND (0.0083)	ND (0.0078)	ND (0.0084)	ND (0.0081)
bis(2-Chloroethyl)ether	mg/kg	0.4	2	0.2	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.015)	ND (0.017)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.016)
bis(2-Chloroisopropyl)ether	mg/kg	23	67	5	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.013)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.013)	ND (0.012)	ND (0.013)	ND (0.012)
2,4-Dinitrotoluene	mg/kg	0.7	3	NA	ND (0.011)	ND (0.012)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.012)
2,6-Dinitrotoluene	mg/kg	0.7	3	NA	ND (0.018)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.018)	ND (0.020)	ND (0.019)
3,3'-Dichlorobenzidine	mg/kg	1	4	0.2	ND (0.031)	ND (0.031)	ND (0.031)	ND (0.031)	ND (0.032)	ND (0.030)	ND (0.032)	ND (0.031)	ND (0.032)	ND (0.031)	ND (0.030)	ND (0.031)	ND (0.031)	ND (0.030)	ND (0.032)	ND (0.031)	ND (0.033)	ND (0.032)
1,4-Dioxane	mg/kg	-	-	-	ND (0.024)	ND (0.025)	ND (0.025)	ND (0.024)	ND (0.026)	ND (0.024)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.024)	ND (0.025)	ND (0.024)	ND (0.024)	ND (0.026)	ND (0.024)	ND (0.026)	ND (0.025)
Dibenzo(a,h)anthracene	mg/kg	0.2	0.2	0.8	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.017)
Dibenzofuran	mg/kg	-	-	-	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.014)	ND (0.016)	ND (0.015)	ND (0.016)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	0.0286 J	ND (0.016)	0.0726 J	ND (0.016)	ND (0.015)
Di-n-butyl phthalate	mg/kg	6100	68000	760	ND (0.0060)	ND (0.0061)	ND (0.0061)	ND (0.0060)	ND (0.0063)	ND (0.0058)	ND (0.0063)	ND (0.0061)	ND (0.0062)	ND (0.0062)	ND (0.0059)	ND (0.0061)	ND (0.0060)	ND (0.0059)	ND (0.0063)	ND (0.0060)	ND (0.0064)	ND (0.0062)
Di-n-octyl phthalate	mg/kg	2400	27000	3300	ND (0.0091)	ND (0.0093)	ND (0.0093)	ND (0.0092)	ND (0.0096)	ND (0.0089)	ND (0.0096)	ND (0.0093)	ND (0.0095)	ND (0.0094)	ND (0.0090)	ND (0.0094)	ND (0.0092)	ND (0.0091)	ND (0.0096)	ND (0.0091)	ND (0.0098)	ND (0.0094)
Diethyl phthalate	mg/kg	49000	550000	88	ND (0.0078)	ND (0.0079)	ND (0.0080)	ND (0.0079)	ND (0.0082)	ND (0.0076)	ND (0.0082)	ND (0.0080)	ND (0.0081)	ND (0.0080)	ND (0.0077)	ND (0.0080)	ND (0.0079)	ND (0.0078)	ND (0.0082)	ND (0.0078)	ND (0.0083)	ND (0.0081)
Dimethyl phthalate	mg/kg	-	-	-	ND (0.0065)	ND (0.0066)	ND (0.0067)	ND (0.0066)	ND (0.0069)	ND (0.0063)	ND (0.0069)	ND (0.0067)	ND (0.0068)	ND (0.0067)	ND (0.0065)	ND (0.0067)	ND (0.0066)	ND (0.0065)	ND (0.0069)	ND (0.0065)	ND (0.0070)	ND (0.0067)
bis(2-Ethylhexyl)phthalate	mg/kg	35	140	1200	ND (0.0086)	ND (0.0087)	0.135	ND (0.0086)	ND (0.0090)	ND (0.0083)	ND (0.0090)	ND (0.0088)	ND (0.0089)	ND (0.0088)	ND (0.0085)	ND (0.0088)	ND (0.0086)	ND (0.0085)	ND (0.0090)	0.0501 J	ND (0.0092)	ND (0.0089)
Fluoranthene	mg/kg	2300	24000	1300	ND (0.016)	ND (0.017)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.017)
Fluorene	mg/kg	2300	24000	170	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.018)	ND (0.016)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.017)	0.0567	0.176	0.137	ND (0.018)	ND (0.017)
Hexachlorobenzene	mg/kg	0.3	1	0.2	ND (0.0093)	ND (0.0094)	ND (0.0095)	ND (0.0093)	ND (0.0098)	ND (0.0090)	ND (0.0097)	ND (0.0095)	ND (0.0097)	ND (0.0096)	ND (0.0092)	ND (0.0095)	ND (0.0093)	ND (0.0092)	ND (0.0098)	ND (0.0093)	ND (0.0099)	ND (0.0096)
Hexachlorobutadiene	mg/kg	6	25	0.9	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.015)	ND (0.016)	ND (0.015)
Hexachlorocyclopentadiene	mg/kg	45	110	320	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.015)
Hexachloroethane	mg/kg	35	140	0.2	ND (0.018)	ND (0.018)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.018)	ND (0.018)	ND (0.019)	ND (0.018)	ND (0.019)	ND (0.019)
Indeno(1,2,3-cd)pyrene	mg/kg	0.6	2	7	ND (0.017)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.018)	ND (0.018)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.017)	ND (0.018)	ND (0.017)	ND (0.018)	ND (0.018)
Isophorone	mg/kg	510	2000	0.2	ND (0.0079)	ND (0.0080)	ND (0.0080)	ND (0.0079)	ND (0.0083)	ND (0.0076)	ND (0.0082)	ND (0.0080)	ND (0.0082)	ND (0.0081)	ND (0.0078)	ND (0.0081)	ND (0.0079)	ND (0.0078)	ND (0.0083)	ND (0.0078)	ND (0.0084)	ND (0.0081)
2-Methylnaphthalene	mg/kg	230	2400	8	ND (0.0083)	ND (0.0084)	ND (0.0085)	ND (0.0083)	ND (0.0087)	ND (0.0080)	ND (0.0087)	ND (0.0085)	ND (0.0086)	ND (0.0085)	ND (0.0082)	ND (0.0085)	ND (0.0083)	0.0933	3.84	2.7	ND (0.0089)	ND (0.0086)
2-Nitroaniline	mg/kg	39	23000	NA	ND (0.0087)	ND (0.0088)	ND (0.0089)	ND (0.0087)	ND (0.0091)	ND (0.0084)	ND (0.0091)	ND (0.0088)	ND (0.0090)	ND (0.0089)	ND (0.0086)	ND (0.0089)	ND (0.0087)	ND (0.0086)	ND (0.0091)	ND (0.0086)	ND (0.0093)	ND (0.0089)
3-Nitroaniline	mg/kg	-	-	-	ND (0.0092)	ND (0.0093)	ND (0.0094)	ND (0.0092)	ND (0.0096)	ND (0.0089)	ND (0.0096)	ND (0.0094)	ND (0.0096)	ND (0.0094)	ND (0.0091)	ND (0.0094)	ND (0.0092)	ND (0.0091)	ND (0.0097)	ND (0.0092)	ND (0.0098)	ND (0.0095)
4-Nitroaniline	mg/kg	-	-	-	ND (0.0095)	ND (0.0097)	ND (0.0097)	ND (0.0096)	ND (0.010)	ND (0.0092)	ND (0.010)	ND (0.0097)	ND (0.0099)	ND (0.0098)	ND (0.0094)	ND (0.0098)	ND (0.0096)	ND (0.0094)	ND (0.010)	ND (0.0095)	ND (0.010)	ND (0.0098)
Naphthalene	mg/kg	6	17	25	ND (0.010)	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	1.46	0.778	ND (0.011)	ND (0.011)
Nitrobenzene	mg/kg	31	340	0.2	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)
N-Nitroso-di-n-propylamine	mg/kg	0.2	0.3	0.2	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)
N-Nitrosodiphenylamine	mg/kg	99	390	0.4	ND (0.013)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)
Phenanthrene	mg/kg	NA	300000	NA	ND (0.012)	ND (0.013)	ND (0.013)	ND (0.012)	ND (0.013)	ND (0.012)	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.013)	ND (0.012)	ND (0.013)	ND (0.012)	0.103	0.317	0.206	ND (0.013)	ND (0.013)
Pyrene	mg/kg	1700	18000	840	ND (0.012)	0.0219 J	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	0.0172 J	0.0624	0.0442	ND (0.013)	ND (0.012)
1,2,4,5-Tetrachlorobenzene	mg/kg	-	-	-	ND (0.0093)	ND (0.0095)	ND (0.0095)	ND (0.0094)	ND (0.0098)	ND (0.0090)	ND (0.0098)	ND (0.0095)	ND (0.0097)	ND (0.0096)	ND (0.0092)	ND (0.0096)	ND (0.0094)	ND (0.0092)	ND (0.0098)	ND (0.0093)	ND (0.010)	ND (0.0096)
Total TIC, Semi-Volatile	mg/kg	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	6.08 J	15.3 J	12.39 J	0	0
Total Alkanes	mg/kg	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	4.23 J	12 J	9.2 J	0	0

Client Sample ID:		NJ Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Default Impact to Groundwater Soil Screening (NJAC 7:26D11/13)	T2-1A	T2-6A	T2-8A	T2-9A	T2-2A	T2-3A	T2-4A	T2-7A	T2-10A
Sample Depth (ft)					6.0-6.5'	6.0-6.5'	6.0-6.5'	6.0-6.5'	6.0-6.5'	6.0-6.5'	6.0-6.5'	6.0-6.5'	6.0-6.5'
Lab Sample ID:					JC23214-14	JC23214-19	JC23214-22	JC23214-25	JC23248-1	JC23248-4	JC23248-7	JC23248-10	JC23248-13
Date Sampled:					6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016
Matrix:					Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
GC/MS Semi-volatiles (SW846 8270D)													
2-Methylnaphthalene	mg/kg	230	2400	8	ND (0.0086)	0.0644 J	1.04	0.0603 J	1.28	0.497	ND (0.0086)	3.9	ND (0.0085)

Table 1 cont.
Former Hess Port Reading Complex (HC-PR)
AOC-19: QC Laboratory
750 Cliff Road, Port Reading, Middlesex County, New Jersey
June 2016 Soil Analtytical Results (EPH)

Client Sample ID:		NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	T3-1B	T3-2B	T3-3B	T3-4B	T3-5B	T3-6B	T4-1B	T4-2B	T4-3B	T4-4B	TK-6B	TK-1B	TK-2B
Sample Depth (ft)			12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	11.0-11.5'	12.0-12.5'	11.0-11.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'
Lab Sample ID:			JC23137-2A	JC23137-5A	JC23137-7A	JC23137-9A	JC23137-11A	JC23137-13A	JC23137-15	JC23137-17	JC23137-18	JC23137-20	JC23137-21A	JC23214-1A	JC23214-3A
Date Sampled:			6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/29/2016	6/29/2016
Matrix:			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
GC Semi-volatiles (NJDEP EPH)															
EPH (C9-C28)	mg/kg	-	-	-	-	-	-	-	38.3	ND (3.9)	ND (4.1)	ND (3.6)	ND (4.0)	ND (3.8)	ND (3.9)
EPH (>C28-C40)	mg/kg	-	-	-	-	-	-	-	ND (3.9)	ND (3.9)	ND (4.1)	ND (3.6)	ND (4.0)	ND (3.8)	ND (3.9)
Total EPH (C9-C40)	mg/kg	17,000	-	-	-	-	-	-	38.3	ND (3.9)	ND (4.1)	ND (3.6)	ND (4.0)	ND (3.8)	ND (3.9)
C10-C12 Aromatics	mg/kg	-	ND (0.069)	ND (0.071)	ND (0.070)	ND (0.070)	ND (0.074)	ND (0.068)	-	-	-	-	-	-	-
C12-C16 Aromatics	mg/kg	-	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.17)	ND (0.16)	-	-	-	-	-	-	-
C16-C21 Aromatics	mg/kg	-	ND (0.29)	ND (0.30)	ND (0.30)	ND (0.29)	ND (0.31)	ND (0.29)	-	-	-	-	-	-	-
C21-C36 Aromatics	mg/kg	-	ND (0.40)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.43)	ND (0.40)	-	-	-	-	-	-	-
Total Aromatics	mg/kg	-	ND (0.069)	ND (0.071)	ND (0.070)	ND (0.070)	ND (0.074)	ND (0.068)	-	-	-	-	-	-	-
C9-C12 Aliphatics	mg/kg	-	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	-	-	-	-	-	-	-
C12-C16 Aliphatics	mg/kg	-	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.12)	ND (0.11)	-	-	-	-	-	-	-
C16-C21 Aliphatics	mg/kg	-	ND (2.1)	ND (2.2)	ND (2.2)	ND (2.2)	ND (2.3)	ND (2.1)	-	-	-	-	-	-	-
C21-C40 Aliphatics	mg/kg	-	ND (0.72)	ND (0.74)	ND (0.74)	ND (0.73)	ND (0.77)	ND (0.71)	-	-	-	-	-	-	-
Total Aliphatics	mg/kg	-	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.12)	ND (0.11)	-	-	-	-	-	-	-
Total EPH	mg/kg	17000	ND (0.069)	ND (0.071)	ND (0.070)	ND (0.070)	ND (0.074)	ND (0.068)	-	-	-	-	-	-	-

Client Sample ID:		NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	TK-3B	TK-4B	TK-5B	TK-7B	T2-1B	T2-5B	T2-6A	T2-2B	T2-3B	T2-4B	T2-7A	T2-10A
Sample Depth (ft)			12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	6.0-6.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	6.0-6.5'	6.0-6.5'
Lab Sample ID:			JC23214-5A	JC23214-7A	JC23214-10A	JC23214-12A	JC23214-15A	JC23214-17A	JC23214-19	JC23248-2A	JC23248-5A	JC23248-8A	JC23248-10	JC23248-13
Date Sampled:			6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016
Matrix:			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
GC Semi-volatiles (NJDEP EPH)														
EPH (C9-C28)	mg/kg	-	ND (4.1)	-	ND (3.9)	ND (3.5)	194	701	186	821	ND (3.8)	ND (3.8)	494	ND (3.8)
EPH (>C28-C40)	mg/kg	-	ND (4.1)	-	ND (3.9)	ND (3.5)	ND (6.1)	ND (12)	ND (10)	23.3	ND (3.8)	ND (3.8)	34.6	ND (3.8)
Total EPH (C9-C40)	mg/kg	17000	ND (4.1)	-	ND (3.9)	ND (3.5)	194	701	186	844	ND (3.8)	ND (3.8)	529	ND (3.8)
C10-C12 Aromatics	mg/kg	-	-	ND (0.064)	-	-	-	-	-	-	-	-	-	-
C12-C16 Aromatics	mg/kg	-	-	ND (0.15)	-	-	-	-	-	-	-	-	-	-
C16-C21 Aromatics	mg/kg	-	-	ND (0.27)	-	-	-	-	-	-	-	-	-	-
C21-C36 Aromatics	mg/kg	-	-	ND (0.37)	-	-	-	-	-	-	-	-	-	-
Total Aromatics	mg/kg	-	-	ND (0.064)	-	-	-	-	-	-	-	-	-	-
C9-C12 Aliphatics	mg/kg	-	-	ND (0.11)	-	-	-	-	-	-	-	-	-	-
C12-C16 Aliphatics	mg/kg	-	-	ND (0.10)	-	-	-	-	-	-	-	-	-	-
C16-C21 Aliphatics	mg/kg	-	-	ND (2.0)	-	-	-	-	-	-	-	-	-	-
C21-C40 Aliphatics	mg/kg	-	-	ND (0.67)	-	-	-	-	-	-	-	-	-	-
Total Aliphatics	mg/kg	-	-	ND (0.10)	-	-	-	-	-	-	-	-	-	-
Total EPH	mg/kg	17000	-	ND (0.064)	-	-	-	-	-	-	-	-	-	-

Table 1 cont.
Former Hess Port Reading Complex (HC-PR)
AOC-19: QC Laboratory
750 Cliff Road, Port Reading, Middlesex County, New Jersey
June 2016 Soil Analytical Results (Metals)

Client Sample ID:		NJ Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	T3-1B	T3-2B	T3-3B	T3-4B	T3-5B	T3-6B	TK-6B	TK-1B	TK-2B	TK-3B	TK-4B	TK-5B	TK-7B	T2-1B	T2-5B	T2-2B	T2-3B	T2-4B
Sample Depth (ft)				12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'
Lab Sample ID:				JC23137-2A	JC23137-5A	JC23137-7A	JC23137-9A	JC23137-11A	JC23137-13A	JC23137-21A	JC23214-1A	JC23214-3A	JC23214-5A	JC23214-7A	JC23214-10A	JC23214-12A	JC23214-15A	JC23214-17A	JC23248-2A	JC23248-5A	JC23248-8A
Date Sampled:				6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/28/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/29/2016	6/30/2016	6/30/2016	6/30/2016
Matrix:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Metals Analysis																					
Aluminum	mg/kg	78000	NA	11200	12500	13100	10200	11300	11400	11000	11800	11000	12800	9070	11500	5440	12800	14900	11500	11900	12500
Antimony	mg/kg	31	450	<2.3	<2.4	<2.4	<2.4	<2.3	<2.3	<2.4	<2.4	<2.4	<2.4	<2.2	<2.2	<2.1	<2.3	<2.3	<2.3	<2.3	<2.3
Arsenic	mg/kg	19	19	6	6	5.7	4.9	5.2	5.8	5.3	5.4	5.1	6.2	6.7	5.9	<2.1	6.5	6.4	5.6	6.3	5.7
Barium	mg/kg	16000	59000	107	120	104	108	114	118	118	133	84	109	88.6	114	38.3	69.7	159	109	131	138
Beryllium	mg/kg	16	140	0.89	1	0.91	0.76	0.87	0.89	0.82	1	0.91	1.1	0.82	1.1	0.39	0.88	1.1	0.95	0.92	1.1
Cadmium	mg/kg	78	78	<0.58	<0.59	<0.59	<0.60	<0.58	<0.57	<0.59	0.75	<0.59	0.61	<0.55	0.61	<0.54	<0.57	0.64	<0.56	<0.58	<0.57
Calcium	mg/kg	-	-	1990	2180	1830	1890	2150	2090	1890	1040	1560	1820	11700	2460	1180	1420	1610	1710	2060	2290
Chromium	mg/kg	-	-	21.9	23.6	23.8	19.2	25	22.9	20.7	22.2	22.8	24.1	21	24.6	13	20.3	24.7	22.1	22.4	24.7
Cobalt	mg/kg	1600	590	11.5	10.7	10.2	11.3	11.5	11.8	14.6	17.4	11.2	12.7	10.3	12.4	<5.4	9.3	13.7	11.3	11.5	9.5
Copper	mg/kg	3100	45000	13.7	15.3	12.5	12.6	13.2	12.7	14.8	17.5	14.2	18	13	17	16.2	13.9	17.8	14.4	15.5	16.7
Iron	mg/kg	-	-	24900	25800	24200	21600	23900	25000	23300	28500	24500	26000	22300	26200	12400	24400	27200	23800	25500	25100
Lead	mg/kg	400	800	11.6	12.4	11.2	10.5	11.5	11.9	12.9	17.6	11.5	12.4	10.3	12.9	4.7	12.3	12.9	12.6	12.4	12.1
Magnesium	mg/kg	-	-	5460	5690	5740	4720	5630	5870	5020	5120	5550	5800	5970	5970	2710	3070	5480	5560	5860	5920
Manganese	mg/kg	11000	5900	703	651	489	839	546	616	1170	2230	702	705	588	914	195	391	686	671	723	276
Mercury	mg/kg	23	65	<0.036	<0.038	<0.038	<0.036	<0.036	<0.038	<0.033	<0.039	<0.037	<0.038	<0.034	<0.035	<0.034	<0.036	<0.037	<0.037	<0.035	<0.036
Nickel	mg/kg	1600	23000	25.4	28.2	25.5	22.1	26.8	27.4	25.7	28.8	26.6	29	23.6	29.1	12	17.6	27.7	26	27.2	27
Potassium	mg/kg	-	-	2420	2240	2370	2000	2400	2380	2410	2580	2630	3000	2570	3510	<1100	1590	2870	2330	2200	2050
Selenium	mg/kg	390	5700	<2.3	<2.4	<2.4	<2.4	<2.3	<2.3	<2.4	<2.4	<2.4	<2.4	<2.2	<2.2	<2.1	<2.3	<2.3	<2.3	<2.3	<2.3
Silver	mg/kg	390	5700	<0.58	<0.59	<0.59	<0.60	<0.58	<0.57	<0.59	<0.59	<0.59	<0.59	<0.55	<0.56	<0.54	<0.57	<0.57	0.6	<0.58	0.61
Sodium	mg/kg	-	-	<1200	<1200	<1200	<1200	<1200	<1100	<1200	<1200	<1200	<1200	<1100	<1100	<1100	<1100	<1100	<1100	<1200	<1100
Thallium	mg/kg	5	79	<1.2	<1.2	<1.2	<1.2	<1.2	<1.1	<1.2	<3.6 [c]	<1.2	<1.2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.2	<1.1
Vanadium	mg/kg	78	1100	28.6	27.9	26.4	24.3	27.3	27.5	27.3	31.3	27.7	32.3	29	32.8	16.1	29.5	32.7	30.3	31	29.6
Zinc	mg/kg	23000	110000	58.1	61.3	59.5	49.9	57.5	60.2	55	54.6	56.8	59.2	46.1	59.3	31.9	48.5	59.2	59.9	62.5	64.9

Client Sample ID:		NJ Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Default Impact to Groundwater Soil Screening (NJAC 7:26D11/13)	TK-5A	P-12RA	PD-1A	PD-2A	PD-3A
Sample Depth (ft)					6.0-6.5'	6.0-6.5'	4.0-4.5'	4.0-4.5'	4.0-4.5'
Lab Sample ID:					JC23214-9	JC23248-17	JC23248-19	JC23248-21	JC23248-23
Date Sampled:					6/29/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016
Matrix:					Soil	Soil	Soil	Soil	Soil
Metals Analysis									
Arsenic	mg/kg	19	19	19	-	-	-	-	3.5
Beryllium	mg/kg	16	140	0.7	0.5	-	-	-	-
Lead	mg/kg	400	800	90	-	11.2	13	12.3	-

Table 2
Former Hess Port Reading Complex (HC-PR)
AOC-19: QC Laboratory
750 Cliff Road, Port Reading, Middlesex County, New Jersey
June 2016 Groundwater Analytical Results

Client Sample ID:		NJ Groundwater Criteria (NJAC 7:9C 7/07)[2]	NJ Interim Groundwater Criteria (NJAC 7:9C 11/15)[3]	TW-T2-5	TW-TK-2
Lab Sample ID:				JC23248-25	JC23248-26
Date Sampled:				6/30/2016	6/30/2016
Matrix:				Ground Water	Ground Water
GC/MS Volatiles (SW846 8260C)					
Acetone	ug/l	6000	-	123	ND (3.8)
Benzene	ug/l	1	-	**560**	ND (0.14)
Bromochloromethane	ug/l	-	-	ND (1.2)	ND (0.46)
Bromodichloromethane	ug/l	1	-	ND (1.4)	ND (0.55)
Bromoform	ug/l	4	-	ND (0.85)	ND (0.34)
Bromomethane	ug/l	10	-	ND (1.2)	ND (0.46)
2-Butanone (MEK)	ug/l	300	-	11.5 J	ND (1.9)
Carbon disulfide	ug/l	700	-	ND (0.83)	ND (0.33)
Carbon tetrachloride	ug/l	1	-	ND (1.3)	ND (0.54)
Chlorobenzene	ug/l	50	-	ND (0.44)	ND (0.17)
Chloroethane	ug/l	-	5	ND (1.1)	ND (0.44)
Chloroform	ug/l	70	-	ND (0.57)	ND (0.23)
Chloromethane	ug/l	-	-	ND (2.4)	ND (0.96)
Cyclohexane	ug/l	-	-	24.5	ND (0.73)
1,2-Dibromo-3-chloropropane	ug/l	0.02	-	ND (1.7)	ND (0.69)
Dibromochloromethane	ug/l	1	-	ND (0.57)	ND (0.23)
1,2-Dibromoethane	ug/l	0.03	-	-	-
1,2-Dichlorobenzene	ug/l	600	-	ND (0.58)	ND (0.23)
1,3-Dichlorobenzene	ug/l	600	-	ND (0.48)	ND (0.19)
1,4-Dichlorobenzene	ug/l	75	-	ND (0.53)	ND (0.21)
Dichlorodifluoromethane	ug/l	1000	-	ND (1.8)	ND (0.70)
1,1-Dichloroethane	ug/l	50	-	ND (0.51)	ND (0.21)
1,2-Dichloroethane	ug/l	2	-	ND (0.98)	ND (0.39)
1,1-Dichloroethene	ug/l	1	-	ND (0.51)	ND (0.20)
cis-1,2-Dichloroethene	ug/l	70	-	ND (0.77)	ND (0.31)
trans-1,2-Dichloroethene	ug/l	100	-	ND (0.89)	ND (0.36)
1,2-Dichloropropane	ug/l	1	-	ND (0.82)	ND (0.33)
cis-1,3-Dichloropropene	ug/l	-	-	ND (0.46)	ND (0.19)
trans-1,3-Dichloropropene	ug/l	-	-	ND (0.65)	ND (0.26)
Ethylbenzene	ug/l	700	-	169	ND (0.20)
Freon 113	ug/l	-	20000	ND (2.9)	ND (1.2)
2-Hexanone	ug/l	-	300	ND (3.8)	ND (1.5)
Isopropylbenzene	ug/l	700	-	53	ND (0.16)
Methyl Acetate	ug/l	7000	-	ND (3.9)	ND (1.5)
Methylcyclohexane	ug/l	-	-	52.2	ND (0.78)
Methyl Tert Butyl Ether	ug/l	70	-	**516**	ND (0.34)
4-Methyl-2-pentanone(MIBK)	ug/l	-	-	ND (3.0)	ND (1.2)
Methylene chloride	ug/l	3	-	ND (0.88)	ND (0.35)
Styrene	ug/l	100	-	ND (0.68)	ND (0.27)
1,1,2,2-Tetrachloroethane	ug/l	1	-	ND (0.98)	ND (0.39)
Tetrachloroethene	ug/l	1	-	ND (0.58)	ND (0.23)
Toluene	ug/l	600	-	37.3	ND (0.23)
1,2,3-Trichlorobenzene	ug/l	-	-	ND (0.50)	ND (0.20)
1,2,4-Trichlorobenzene	ug/l	9	-	ND (0.62)	ND (0.25)
1,1,1-Trichloroethane	ug/l	30	-	ND (0.54)	ND (0.22)
1,1,2-Trichloroethane	ug/l	3	-	ND (0.69)	ND (0.28)
Trichloroethene	ug/l	1	-	ND (0.64)	ND (0.26)
Trichlorofluoromethane	ug/l	2000	-	ND (1.5)	ND (0.58)
Vinyl chloride	ug/l	1	-	ND (0.81)	ND (0.33)
m,p-Xylene	ug/l	-	-	556	ND (0.42)
o-Xylene	ug/l	-	-	21.9	ND (0.21)
Xylene (total)	ug/l	1000	-	578	ND (0.21)
GC/MS Volatile TIC					
Total TIC, Volatile	ug/l	-	-	4370 J	8.1 J
Total Alkanes	ug/l	-	-	0	0
GC/MS Semi-volatiles (SW846 8270D)					
Acenaphthene	ug/l	400	-	93.7	ND (0.19)
Acenaphthylene	ug/l	-	100	ND (1.5)	ND (0.14)
Acetophenone	ug/l	700	-	ND (2.3)	ND (0.21)
Anthracene	ug/l	2000	-	28	ND (0.21)
Atrazine	ug/l	3	-	ND (4.9)	ND (0.45)
Benzaldehyde	ug/l	-	-	ND (3.1)	ND (0.29)
Benzo(g,h,i)perylene	ug/l	-	100	28.9	ND (0.34)
4-Bromophenyl phenyl ether	ug/l	-	-	ND (4.4)	ND (0.41)
Butyl benzyl phthalate	ug/l	100	-	ND (5.0)	ND (0.46)
1,1'-Biphenyl	ug/l	400	-	22.1	ND (0.21)
2-Chloronaphthalene	ug/l	600	-	ND (2.6)	ND (0.24)
4-Chloroaniline	ug/l	30	-	ND (3.7)	ND (0.34)
Carbazole	ug/l	-	-	ND (2.5)	ND (0.23)
Caprolactam	ug/l	-	5000	ND (7.1)	ND (0.66)
Chrysene	ug/l	5	-	**21.1**	ND (0.18)
bis(2-Chloroethoxy)methane	ug/l	-	-	ND (3.0)	ND (0.28)
bis(2-Chloroethyl)ether	ug/l	7	-	ND (2.7)	ND (0.25)
bis(2-Chloroisopropyl)ether	ug/l	300	-	ND (4.4)	ND (0.41)
4-Chlorophenyl phenyl ether	ug/l	-	-	ND (4.0)	ND (0.37)
2,4-Dinitrotoluene	ug/l	-	-	ND (6.0)	ND (0.56)
2,6-Dinitrotoluene	ug/l	-	-	ND (5.2)	ND (0.48)
3,3'-Dichlorobenzidine	ug/l	30	-	ND (5.5)	ND (0.51)
Dibenzofuran	ug/l	-	-	ND (2.4)	ND (0.22)
Di-n-butyl phthalate	ug/l	700	-	ND (5.4)	ND (0.50)
Di-n-octyl phthalate	ug/l	100	-	ND (2.5)	ND (0.24)
Diethyl phthalate	ug/l	6000	-	ND (2.8)	ND (0.26)
Dimethyl phthalate	ug/l	-	100	ND (2.4)	ND (0.22)
bis(2-Ethylhexyl)phthalate	ug/l	3	-	**25.2**	ND (1.7)
Fluoranthene	ug/l	300	-	13.3	ND (0.17)
Fluorene	ug/l	300	-	130	ND (0.17)
Hexachlorocyclopentadiene	ug/l	40	-	ND (30)	ND (2.8)
Hexachloroethane	ug/l	7	-	ND (4.2)	ND (0.39)
Isophorone	ug/l	40	-	ND (3.0)	ND (0.28)
2-Methylnaphthalene	ug/l	-	30	**2780**	ND (0.21)
2-Nitroaniline	ug/l	-	-	ND (3.0)	ND (0.28) [a]
3-Nitroaniline	ug/l	-	-	ND (4.2)	ND (0.39)
4-Nitroaniline	ug/l	-	-	ND (4.8)	ND (0.44)
Naphthalene	ug/l	300	-	**633**	ND (0.23)
Nitrobenzene	ug/l	6	-	ND (7.0)	ND (0.65)
N-Nitroso-di-n-propylamine	ug/l	10	-	ND (5.2)	ND (0.49)
N-Nitrosodiphenylamine	ug/l	10	-	ND (2.4)	ND (0.22)
Phenanthrene	ug/l	-	-	222	ND (0.18)
Pyrene	ug/l	200	-	28.6	ND (0.22)
1,2,4,5-Tetrachlorobenzene	ug/l	-	-	ND (4.0)	ND (0.37)
GC/MS Semi-volatiles (SW846 8270D BY SIM)					
Benzo(a)anthracene	ug/l	0.1	-	**13.4**	ND (0.022)
Benzo(a)pyrene	ug/l	0.1	-	**4.48**	ND (0.023)
Benzo(b)fluoranthene	ug/l	0.2	-	**2.63**	ND (0.044)
Benzo(k)fluoranthene	ug/l	0.5	-	ND (0.36)	ND (0.033)
Dibenzo(a,h)anthracene	ug/l	0.3	-	ND (0.39)	ND (0.037)
Hexachlorobenzene	ug/l	0.02	-	ND (0.098)	ND (0.0091)
Hexachlorobutadiene	ug/l	1	-	ND (0.12)	ND (0.011)
Indeno(1,2,3-cd)pyrene	ug/l	0.2	-	ND (0.41)	ND (0.038)
1,4-Dioxane	ug/l	-	0.4	ND (0.53)	ND (0.049)
GC/MS Semi-volatile TIC					
Total TIC, Semi-Volatile	ug/l	-	-	4610 J	0
Total Alkanes	ug/l	-	-	5730 J	0
GC Volatiles (SW846-8011)					
1,2-Dibromoethane	ug/l	0.03	-	ND (0.0082)	ND (0.0082)

[a] This compound in BS is outside in house QC limits bias high.

Table 3
Former Hess Port Reading Complex (HC-PR)
AOC-19: QC Laboratory
750 Cliff Road, Port Reading, Middlesex County, New Jersey
November 2016 Soil Analtytical Results

Client Sample ID:		NJ Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Default Impact to Groundwater Soil Screening (NJAC	T2-11A	T2-11B	T2-13A	T2-13B	T2-14A	T2-14B	T2-15A	T2-15B	T2-16A	T2-16B	T2-17A	T2-17B	T2-18A	T2-18B	T2-20A	T2-20B	T2-21A	T2-21B
Sample Depth (ft)					6.0-6.5'	12.0-12.5'	6.0-6.5'	12.0-12.5'	6.5-7.0'	12.0-12.5'	6.0-6.5'	12.0-12.5'	6.0-6.5'	12.0-12.5'	6.0-6.5'	12.0-12.5'	6.0-6.5'	12.0-12.5'	6.0-6.5'	9.5-10.0'	6.0-6.5'	9.5-10.0'
Lab Sample ID:					JC31295-1	JC31295-2	JC31295-5	JC31295-6	JC31295-7	JC31295-8	JC31295-9	JC31295-10	JC31295-11	JC31295-12	JC31295-13	JC31295-14	JC31295-15	JC31295-16	JC31295-19	JC31295-20	JC31295-21	JC31295-22
Date Sampled:					11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016
Matrix:					Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
GC/MS Volatiles (SW846 8260C)																						
Acetone	mg/kg	70000	NA	19	0.0393	ND (0.32)	ND (0.34)	0.101	ND (0.32)	ND (0.0070)	ND (0.0075)	0.0506	0.0146	0.0136	0.0184	ND (0.0046)	0.0491	0.0118 J	ND (0.26)	ND (0.30)	ND (0.30)	0.13
Benzene	mg/kg	2	5	0.005	ND (0.00016)	ND (0.0076)	**0.217**	0.0016	ND (0.0076)	0.0011	ND (0.00018)	ND (0.00011)	ND (0.00010)	0.0013	ND (0.00010)	ND (0.00011)	0.00049 J	ND (0.00018)	ND (0.0063)	ND (0.0073)	**0.0344**	0.00033 J
Bromochloromethane	mg/kg	-	-	-	ND (0.00042)	ND (0.020)	ND (0.022)	ND (0.00032)	ND (0.020)	ND (0.00045)	ND (0.00048)	ND (0.00029)	ND (0.00028)	ND (0.00030)	ND (0.00027)	ND (0.00029)	ND (0.00035)	ND (0.00049)	ND (0.017)	ND (0.019)	ND (0.019)	ND (0.00039)
Bromodichloromethane	mg/kg	1	3	0.005	ND (0.00020)	ND (0.0096)	ND (0.010)	ND (0.00015)	ND (0.0097)	ND (0.00021)	ND (0.00023)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00017)	ND (0.00023)	ND (0.0079)	ND (0.0092)	ND (0.0092)	ND (0.00019)
Bromoform	mg/kg	81	280	0.03	ND (0.00035)	ND (0.017)	ND (0.018)	ND (0.00027)	ND (0.017)	ND (0.00037)	ND (0.00040)	ND (0.00024)	ND (0.00023)	ND (0.00025)	ND (0.00023)	ND (0.00024)	ND (0.00029)	ND (0.00041)	ND (0.014)	ND (0.016)	ND (0.016)	ND (0.00032)
Bromomethane	mg/kg	25	59	0.04	ND (0.00064)	ND (0.031)	ND (0.033)	ND (0.00049)	ND (0.031)	ND (0.00068)	ND (0.00072)	ND (0.00045)	ND (0.00042)	ND (0.00045)	ND (0.00041)	ND (0.00044)	ND (0.00053)	ND (0.00074)	ND (0.025)	ND (0.029)	ND (0.029)	ND (0.00059)
2-Butanone (MEK)	mg/kg	3100	44000	0.9	ND (0.0023)	ND (0.11)	ND (0.12)	ND (0.0018)	ND (0.11)	ND (0.0025)	ND (0.0026)	0.0037 J	ND (0.0015)	ND (0.0016)	ND (0.0015)	ND (0.0016)	0.0072 J	ND (0.0027)	ND (0.092)	ND (0.11)	ND (0.11)	0.0047 J
Carbon disulfide	mg/kg	7800	110000	6	0.00027 J	ND (0.011)	ND (0.012)	ND (0.00017)	ND (0.011)	ND (0.00024)	ND (0.00025)	ND (0.00016)	0.00024 J	ND (0.00016)	0.00023 J	ND (0.00015)	0.00081 J	ND (0.00026)	ND (0.0089)	ND (0.010)	ND (0.010)	0.00077 J
Carbon tetrachloride	mg/kg	0.6	2	0.005	ND (0.00022)	ND (0.010)	ND (0.011)	ND (0.00017)	ND (0.011)	ND (0.00023)	ND (0.00025)	ND (0.00015)	ND (0.00014)	ND (0.00016)	ND (0.00014)	ND (0.00015)	ND (0.00018)	ND (0.00025)	ND (0.0087)	ND (0.010)	ND (0.010)	ND (0.00020)
Chlorobenzene	mg/kg	510	7400	0.6	ND (0.00021)	ND (0.010)	ND (0.011)	ND (0.00016)	ND (0.010)	ND (0.00023)	ND (0.00024)	ND (0.00015)	ND (0.00014)	ND (0.00015)	ND (0.00014)	ND (0.00015)	ND (0.00018)	ND (0.00025)	ND (0.0084)	ND (0.0098)	ND (0.0098)	ND (0.00020)
Chloroethane	mg/kg	220	1100	NA	ND (0.00056)	ND (0.027)	ND (0.029)	ND (0.00043)	ND (0.027)	ND (0.00060)	ND (0.00064)	ND (0.00039)	ND (0.00037)	ND (0.00040)	ND (0.00036)	ND (0.00039)	ND (0.00047)	ND (0.00066)	ND (0.022)	ND (0.026)	ND (0.026)	ND (0.00052)
Chloroform	mg/kg	0.6	2	0.4	ND (0.00031)	ND (0.015)	ND (0.016)	ND (0.00024)	ND (0.015)	ND (0.00033)	ND (0.00035)	ND (0.00022)	ND (0.00021)	ND (0.00022)	ND (0.00020)	ND (0.00022)	ND (0.00026)	ND (0.00036)	ND (0.012)	ND (0.014)	ND (0.014)	ND (0.00029)
Chloromethane	mg/kg	4	12	NA	ND (0.00028)	ND (0.013)	ND (0.014)	ND (0.00021)	ND (0.013)	ND (0.00030)	ND (0.00031)	ND (0.00019)	ND (0.00018)	ND (0.00020)	ND (0.00018)	ND (0.00019)	ND (0.00023)	ND (0.00032)	ND (0.011)	ND (0.013)	ND (0.013)	ND (0.00026)
Cyclohexane	mg/kg	-	-	-	ND (0.00072)	ND (0.034)	0.637	ND (0.00055)	0.155	ND (0.00077)	ND (0.00081)	ND (0.00050)	ND (0.00047)	ND (0.00051)	ND (0.00046)	ND (0.00050)	ND (0.00060)	ND (0.00083)	ND (0.028)	ND (0.033)	0.272	ND (0.00067)
1,2-Dibromo-3-chloropropane	mg/kg	0.08	0.2	0.005	ND (0.00064)	ND (0.031)	ND (0.033)	ND (0.00049)	ND (0.031)	ND (0.00068)	ND (0.00072)	ND (0.00045)	ND (0.00042)	ND (0.00045)	ND (0.00041)	ND (0.00044)	ND (0.00053)	ND (0.00074)	ND (0.025)	ND (0.029)	ND (0.029)	ND (0.00059)
Dibromochloromethane	mg/kg	3	8	0.005	ND (0.00020)	ND (0.0095)	ND (0.010)	ND (0.00015)	ND (0.0095)	ND (0.00021)	ND (0.00022)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00017)	ND (0.00023)	ND (0.0078)	ND (0.0091)	ND (0.0091)	ND (0.00018)
1,2-Dibromoethane	mg/kg	0.008	0.04	0.005	ND (0.00032)	ND (0.015)	ND (0.016)	ND (0.00025)	ND (0.015)	ND (0.00034)	ND (0.00036)	ND (0.00022)	ND (0.00021)	ND (0.00023)	ND (0.00020)	ND (0.00022)	ND (0.00027)	ND (0.00037)	ND (0.013)	ND (0.015)	ND (0.015)	ND (0.00030)
1,2-Dichlorobenzene	mg/kg	5300	59000	17	ND (0.00022)	ND (0.011)	ND (0.012)	ND (0.00017)	ND (0.011)	ND (0.00024)	ND (0.00025)	ND (0.00016)	ND (0.00015)	ND (0.00016)	ND (0.00014)	ND (0.00016)	ND (0.00019)	ND (0.00026)	ND (0.0089)	ND (0.010)	ND (0.010)	ND (0.00021)
1,3-Dichlorobenzene	mg/kg	5300	59000	19	ND (0.00018)	ND (0.0087)	ND (0.0093)	ND (0.00014)	ND (0.0087)	ND (0.00019)	ND (0.00020)	ND (0.00013)	ND (0.00012)	ND (0.00013)	ND (0.00012)	ND (0.00012)	ND (0.00015)	ND (0.00021)	ND (0.0071)	ND (0.0083)	ND (0.0083)	ND (0.00017)
1,4-Dichlorobenzene	mg/kg	5	13	2	ND (0.00020)	ND (0.0097)	ND (0.010)	ND (0.00015)	ND (0.0097)	ND (0.00022)	ND (0.00023)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00017)	ND (0.00023)	ND (0.0080)	ND (0.0093)	ND (0.0093)	ND (0.00019)
Dichlorodifluoromethane	mg/kg	490	230000	39	ND (0.00072)	ND (0.034)	ND (0.037)	ND (0.00055)	ND (0.035)	ND (0.00077)	ND (0.00081)	ND (0.00050)	ND (0.00047)	ND (0.00051)	ND (0.00046)	ND (0.00050)	ND (0.00060)	ND (0.00083)	ND (0.028)	ND (0.033)	ND (0.033)	ND (0.00067)
1,1-Dichloroethane	mg/kg	8	24	0.2	ND (0.00025)	ND (0.012)	ND (0.013)	ND (0.00019)	ND (0.012)	ND (0.00026)	ND (0.00028)	ND (0.00017)	ND (0.00016)	ND (0.00018)	ND (0.00016)	ND (0.00017)	ND (0.00021)	ND (0.00029)	ND (0.0097)	ND (0.011)	ND (0.011)	ND (0.00023)
1,2-Dichloroethane	mg/kg	0.9	3	0.005	ND (0.00022)	ND (0.011)	ND (0.012)	ND (0.00017)	ND (0.011)	ND (0.00024)	ND (0.00025)	ND (0.00016)	ND (0.00015)	ND (0.00016)	ND (0.00014)	ND (0.00016)	ND (0.00019)	ND (0.00026)	ND (0.0089)	ND (0.010)	ND (0.010)	ND (0.00021)
1,1-Dichloroethene	mg/kg	11	150	0.008	ND (0.00020)	ND (0.0097)	ND (0.010)	ND (0.00015)	ND (0.0097)	ND (0.00022)	ND (0.00023)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00017)	ND (0.00023)	ND (0.0080)	ND (0.0093)	ND (0.0093)	ND (0.00019)
cis-1,2-Dichloroethene	mg/kg	230	560	0.3	ND (0.00058)	ND (0.028)	ND (0.030)	ND (0.00044)	ND (0.028)	ND (0.00062)	ND (0.00065)	ND (0.00040)	ND (0.00038)	ND (0.00041)	ND (0.00037)	ND (0.00040)	ND (0.00048)	ND (0.00067)	ND (0.023)	ND (0.027)	ND (0.027)	ND (0.00053)
trans-1,2-Dichloroethene	mg/kg	300	720	0.6	ND (0.00021)	ND (0.010)	ND (0.011)	ND (0.00016)	ND (0.010)	ND (0.00022)	ND (0.00024)	ND (0.00015)	ND (0.00014)	ND (0.00015)	ND (0.00013)	ND (0.00014)	ND (0.00017)	ND (0.00024)	ND (0.0082)	ND (0.0096)	ND (0.0096)	ND (0.00019)
1,2-Dichloropropane	mg/kg	2	5	0.005	ND (0.00041)	ND (0.020)	ND (0.021)	ND (0.00031)	ND (0.020)	ND (0.00043)	ND (0.00046)	ND (0.00028)	ND (0.00027)	ND (0.00029)	ND (0.00026)	ND (0.00028)	ND (0.00034)	ND (0.00047)	ND (0.016)	ND (0.019)	ND (0.019)	ND (0.00038)
cis-1,3-Dichloropropene	mg/kg	2	7	0.005	ND (0.00026)	ND (0.012)	ND (0.013)	ND (0.00020)	ND (0.012)	ND (0.00028)	ND (0.00029)	ND (0.00018)	ND (0.00017)	ND (0.00018)	ND (0.00017)	ND (0.00018)	ND (0.00022)	ND (0.00030)	ND (0.010)	ND (0.012)	ND (0.012)	ND (0.00024)
trans-1,3-Dichloropropene	mg/kg	2	7	0.005	ND (0.00029)	ND (0.014)	ND (0.015)	ND (0.00022)	ND (0.014)	ND (0.00031)	ND (0.00033)	ND (0.00020)	ND (0.00019)	ND (0.00021)	ND (0.00019)	ND (0.00020)	ND (0.00024)	ND (0.00034)	ND (0.012)	ND (0.013)	ND (0.013)	ND (0.00027)
Ethylbenzene	mg/kg	7800	110000	13	ND (0.00020)	0.0137 J	0.894	0.00094 J	0.0546 J	0.00028 J	ND (0.00022)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00013)	ND (0.00014)	0.0019	ND (0.00023)	0.0170 J	ND (0.0090)	0.0757	0.00033 J
Freon 113	mg/kg	-	-	-	ND (0.00064)	ND (0.031)	ND (0.033)	ND (0.00049)	ND (0.031)	ND (0.00068)	ND (0.00072)	ND (0.00045)	ND (0.00042)	ND (0.00045)	ND (0.00041)	ND (0.00044)	ND (0.00053)	ND (0.00074)	ND (0.025) [a]	ND (0.029) [a]	ND (0.029)	ND (0.00059)
2-Hexanone	mg/kg	-	-	-	ND (0.0018)	ND (0.088)	ND (0.094)	ND (0.0014)	ND (0.088)	ND (0.0020)	ND (0.0021)	ND (0.0013)	ND (0.0012)	ND (0.0013)	ND (0.0012)	ND (0.0013)	ND (0.0015)	ND (0.0021)	ND (0.072)	ND (0.084)	ND (0.084)	ND (0.0017)
Isopropylbenzene	mg/kg	-	-	-	ND (0.00020)	0.297	1.54	0.00062 J	0.543	0.00053 J	ND (0.00023)	0.00028 J	ND (0.00013)	0.00085 J	ND (0.00013)	ND (0.00014)	0.0023	ND (0.00024)	0.0265 J	0.0255 J	0.277	0.00050 J
Methyl Acetate	mg/kg	78000	NA	22	ND (0.0027)	ND (0.13)	ND (0.14)	ND (0.0021)	ND (0.13)	ND (0.0029)	ND (0.0030)	ND (0.0019)	ND (0.0018)	ND (0.0019)	ND (0.0017)	ND (0.0018)	ND (0.0022)	ND (0.0031)	ND (0.11)	ND (0.12)	ND (0.12)	ND (0.0025)
Methylcyclohexane	mg/kg	-	-	-	ND (0.00066)	0.705	15.3	0.0018 J	5.5	0.0018 J	ND (0.00075)	0.014	ND (0.00044)	0.0088	ND (0.00043)	ND (0.00046)	0.0036	ND (0.00077)	0.187	0.795	6.38	0.0020 J
Methyl Tert Butyl Ether	mg/kg	110	320	0.2	0.0012 J	ND (0.017)	ND (0.018)	0.02	ND (0.017)	0.0056	0.0011 J	0.0011	0.00023 J	0.0014	0.00095	0.00032 J	ND (0.00029)	0.0011 J	ND (0.014)	ND (0.016)	ND (0.016)	0.0014
4-Methyl-2-pentanone(MIBK)	mg/kg	-	-	-	ND (0.0011)	ND (0.054)	ND (0.058)	0.0175	ND (0.054)	ND (0.0012)	ND (0.0013)	ND (0.00078)	ND (0.00074)	ND (0.00079)	ND (0.00072)	ND (0.00077)	ND (0.00094)	ND (0.0013)	ND (0.044)	ND (0.052)	ND (0.052)	ND (0.0010)
Methylene chloride	mg/kg	34	97	0.01	0.0029 J	ND (0.063)	ND (0.068)	ND (0.0010)	ND (0.064)	ND (0.0014)	ND (0.0015)	ND (0.00092)	ND (0.00087)	ND (0.00094)	ND (0.00085)	ND (0.00091)	0.0011 J	ND (0.0015)	ND (0.052)	ND (0.061)	**0.0878 J**	ND (0.0012)
Styrene	mg/kg	90	260	3	ND (0.00019)	ND (0.0092)	ND (0.0098)	ND (0.00015)	ND (0.0092)	ND (0.00020)	ND (0.00022)	ND (0.00013)	ND (0.00013)	ND (0.00014)	ND (0.00012)	ND (0.00013)	ND (0.00016)	ND (0.00022)	ND (0.0076)	ND (0.0088)	ND (0.0088)	ND (0.00018)
Tert Butyl Alcohol	mg/kg	1400	11000	0.3	0.0979	ND (0.19)	**1.53 J**	2.31	ND (0.19)	0.0199 J	0.0185 J	0.023	ND (0.0026)	ND (0.0028)	0.0178 J	ND (0.0028)	0.0279 J	0.0162 J	**0.806 J**	2.36	**1.96**	6.82
1,1,2,2-Tetrachloroethane	mg/kg	1	3	0.007	ND (0.00031)	ND (0.015)	ND (0.016)	ND (0.00024)	ND (0.015)	ND (0.00034)	ND (0.00036)	ND (0.00022)	ND (0.00021)	ND (0.00022)	ND (0.00020)	ND (0.00022)	ND (0.00026)	ND (0.00037)	ND (0.012)	ND (0.015)	ND (0.015)	ND (0.00029)
Tetrachloroethene	mg/kg	2	5	0.005	ND (0.00037)	ND (0.018)	ND (0.019)	ND (0.00028)	ND (0.018)	ND (0.00039)	ND (0.00042)	ND (0.00026)	ND (0.00024)	ND (0.00026)	ND (0.00024)	ND (0.00026)	ND (0.00031)	ND (0.00043)	ND (0.015)	ND (0.017)	ND (0.017)	ND (0.00034)
Toluene	mg/kg	6300	91000	7	ND (0.00016)	ND (0.0079)	0.0378 J	ND (0.00013)	ND (0.0079)	0.00063 J	ND (0.00019)	ND (0.00012)	ND (0.00011)	0.00019 J	ND (0.00011)	ND (0.00011)	0.00068 J	ND (0.00019)	ND (0.0065)	ND (0.0076)	0.0395 J	ND (0.00015)
1,2,3-Trichlorobenzene	mg/kg	-	-	-	ND (0.00030)	ND (0.014)	ND (0.015)	ND (0.00023)	ND (0.014)	ND (0.00032)	ND (0.00034)	ND (0.00021)	ND (0.00020)	ND (0.00021)	ND (0.00019)	ND (0.00021)	ND (0.00025)	ND (0.00035)	ND (0.012)	ND (0.014)	ND (0.014)	ND (0.00028)
1,2,4-Trichlorobenzene	mg/kg	73	820	0.7	ND (0.00024)	ND (0.011)	ND (0.012)	ND (0.00018)	ND (0.012)	ND (0.00026)	ND (0.00027)	ND (0.00017)	ND (0.00016)	ND (0.00017)	ND (0.00015)	ND (0.00017)	ND (0.00020)	ND (0.00028)	ND (0.0095)	ND (0.011)	ND (0.011)	ND (0.00022)
1,1,1-Trichloroethane	mg/kg	290	4200	0.3	ND (0.00022)	ND (0.011)	ND (0.011)	ND (0.00017)	ND (0.011)	ND (0.00023)	ND (0.00025)	ND (0.00015)	ND (0.00015)	ND (0.00016)	ND (0.00014)	ND (0.00015)	ND (0.00018)	ND (0.00026)	ND (0.0087)	ND (0.010)	ND (0.010)	ND (0.00020)
1,1,2-Trichloroethane	mg/kg	2	6	0.02	ND (0.00042)	ND (0.020)	ND (0.022)	ND (0.00033)	ND (0.021)	ND (0.00045)	ND (0.00048)	ND (0.00030)	ND (0.00028)	ND (0.00030)	ND (0.00027)	ND (0.00029)	ND (0.00036)	ND (0.00049)	ND (0.017)	ND (0.020)	ND (0.020)	ND (0.00039)
Trichloroethene	mg/kg	7	20	0.01	ND (0.00025)	ND (0.012)	ND (0.013)	ND (0.00019)	ND (0.012)	ND (0.00027)	ND (0.00028)	ND (0.00017)	ND (0.00017)	ND (0.00018)	ND (0.00016)	ND (0.00017)	ND (0.00021)	ND (0.00029)	ND (0.0099)	ND (0.012)	ND (0.012)	ND (0.00023)
Trichlorofluoromethane	mg/kg	23000	340000	34	ND (0.00083)	ND (0.040)	ND (0.043)	ND (0.00064)	ND (0.040)	ND (0.00088)	ND (0.00094)	ND (0.00058)	ND (0.00055)	ND (0.00059)	ND (0.00053)	ND (0.00057)	ND (0.00069)	ND (0.00096)	ND (0.033)	ND (0.038)	ND (0.038)	ND (0.00077)
Vinyl chloride	mg/kg	0.7	2	0.005	ND (0.00027)	ND (0.013)	ND (0.014)	ND (0.00020)	ND (0.013)	ND (0.00028)	ND (0.00030)	ND (0.00019)	ND (0.00018)	ND (0.00019)	ND (0.00017)	ND (0.00018)	ND (0.00022)	ND (0.00031)	ND (0.011)	ND (0.012)	ND (0.012)	ND (0.00025)
m,p-Xylene	mg/kg	12000	170000	19	ND (0.00029)	ND (0.014)	1.43	0.00072 J	0.0694	0.0017	ND (0.00033)	ND (0.00020)	ND (0.00019)	ND (0.00020)	ND (0.00019)	ND (0.00020)	0.0010 J	ND (0.00033)	0.0249 J	ND (0.013)	0.0937	0.0014
o-Xylene	mg/kg	12000	170000	19	ND (0.00027)	ND (0.013)	0.0567 J	ND (0.00020)	0.0315 J	0.00072 J	ND (0.00030)	ND (0.00019)	ND (0.00018)	ND (0.00019)	ND (0.00017)	ND (0.00018)	0.0013	ND (0.00031)	ND (0.011)	ND (0.012)	0.0222 J	0.00087 J
Xylene (total)	mg/kg	12000	170000	19	ND (0.00027)	ND (0.013)	1.49	0.00072 J	0.101	0.0024	ND (0.00030)	ND (0.00019)	ND (0.00018)	ND (0.00019)	ND (0.00017)	ND (0.00018)	0.0023	ND (0.00031)	0.0249 J	ND (0.012)	0.116	0.0023
Total TIC, Volatile	mg/kg	-	-	-	0.1252 J	96.6 J	121 J	0.1106 J	140.3 J	0	0	0.16 J	0	0	0	0	0.6 J	0.0079 J	35.6 J	18.4 J	58.4 J	0.367 J
Total Alkanes	mg/kg	-	-	-	0.0687 J	91.5 J	99 J	0	77.5 J	0	0	1.677 J	0	0	0	0.0089 J	0.409 J	0.01 J	20 J	22.2 J	19.5 J	0

Table 4
Former Hess Port Reading Complex (HC-PR)
AOC-19: QC Laboratory
750 Cliff Road, Port Reading, Middlesex County, New Jersey
Remediation Verification Soil Analytical Results

Client Sample ID:		NJ Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Non-Residential Direct Contact Soil (NJAC 7:26D 5/12)	NJ Default Impact to Groundwater Soil Screening (NJAC	T2-1B	T2-2B	T2-3A	T2-3B	T2-4B	T2-5B	T2-10A	T2-11A	T2-11B	T2-13B	T2-14A	T2-14B	T2-18A	T2-18B	T2-22A
Sample Depth (ft)					12.0-12.5'	12.0-12.5'	6.0-6.5'	12.0-12.5'	12.0-12.5'	12.0-12.5'	6.0-6.5'	6.0-6.5'	12.0-12.5'	12.0-12.5'	6.5-7.0'	12.0-12.5'	6.0-6.5'	12.0-12.5'	6.0-6.5'
Lab Sample ID:					JC23214-15A	JC23248-2A	JC23248-4	JC23248-5A	JC23248-8A	JC23214-17A	JC23248-13	JC31295-1	JC31295-2	JC31295-6	JC31295-7	JC31295-8	JC31295-15	JC31295-16	JC32432-1
Date Sampled:					6/29/2016	6/30/2016	6/30/2016	6/30/2016	6/30/2016	6/29/2016	6/30/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/7/2016	11/28/2016
Matrix:					Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
GC/MS Volatiles (SW846 8260C)																			
Acetone	mg/kg	70000	NA	19	0.0878	0.0541	0.033	ND (0.0021)	0.0052 J	ND (0.12)	0.0124	0.0393	ND (0.32)	0.101	ND (0.32)	ND (0.0070)	0.0491	0.0118 J	ND (0.28)
Benzene	mg/kg	2	5	0.005	0.0067	0.0028	0.00098	ND (0.00013)	ND (0.00014)	1.6	ND (0.00012)	ND (0.00016)	ND (0.0076)	0.0016	ND (0.0076)	0.0011	0.00049 J	ND (0.00018)	ND (0.0068)
Bromochloromethane	mg/kg	-	-	-	ND (0.00035)	ND (0.00035)	ND (0.00035)	ND (0.00035)	ND (0.00038)	ND (0.020)	ND (0.00032)	ND (0.00042)	ND (0.020)	ND (0.00032)	ND (0.020)	ND (0.00045)	ND (0.00035)	ND (0.00049)	ND (0.018)
Bromodichloromethane	mg/kg	1	3	0.005	ND (0.00017)	ND (0.00017)	ND (0.00017)	ND (0.00017)	ND (0.00018)	ND (0.0095)	ND (0.00015)	ND (0.00020)	ND (0.0096)	ND (0.00015)	ND (0.0097)	ND (0.00021)	ND (0.00017)	ND (0.00023)	ND (0.0086)
Bromoform	mg/kg	81	280	0.03	ND (0.00029)	ND (0.00029)	ND (0.00029)	ND (0.00029)	ND (0.00032)	ND (0.017)	ND (0.00027)	ND (0.00035)	ND (0.017)	ND (0.00027)	ND (0.017)	ND (0.00037)	ND (0.00029)	ND (0.00041)	ND (0.015)
Bromomethane	mg/kg	25	59	0.04	ND (0.00053)	ND (0.00054)	ND (0.00053)	ND (0.00053)	ND (0.00058)	ND (0.030)	ND (0.00049)	ND (0.00064)	ND (0.031)	ND (0.00049)	ND (0.031)	ND (0.00068)	ND (0.00053)	ND (0.00074)	ND (0.028)
2-Butanone (MEK)	mg/kg	3100	44000	0.9	ND (0.0019)	ND (0.0020)	ND (0.0019)	ND (0.0019)	ND (0.0021)	ND (0.11)	ND (0.0018)	ND (0.0023)	ND (0.11)	ND (0.0018)	ND (0.11)	ND (0.0025)	0.0072 J	ND (0.0027)	ND (0.10)
Carbon disulfide	mg/kg	7800	110000	6	0.00033 J	ND (0.00019)	0.0011 J	ND (0.00019)	ND (0.00020)	ND (0.011)	0.00050 J	0.00027 J	ND (0.011)	ND (0.00017)	ND (0.011)	ND (0.00024)	0.00081 J	ND (0.00026)	ND (0.0096)
Carbon tetrachloride	mg/kg	0.6	2	0.005	ND (0.00018)	ND (0.00018)	ND (0.00018)	ND (0.00018)	ND (0.00020)	ND (0.010)	ND (0.00017)	ND (0.00022)	ND (0.010)	ND (0.00017)	ND (0.011)	ND (0.00023)	ND (0.00018)	ND (0.00025)	ND (0.0094)
Chlorobenzene	mg/kg	510	7400	0.6	ND (0.00018)	ND (0.00018)	ND (0.00018)	ND (0.00018)	ND (0.00019)	ND (0.010)	ND (0.00016)	ND (0.00021)	ND (0.010)	ND (0.00016)	ND (0.010)	ND (0.00023)	ND (0.00018)	ND (0.00025)	ND (0.0092)
Chloroethane	mg/kg	220	1100	NA	ND (0.00047)	ND (0.00048)	ND (0.00047)	ND (0.00047)	ND (0.00051)	ND (0.027)	ND (0.00043)	ND (0.00056)	ND (0.027)	ND (0.00043)	ND (0.027)	ND (0.00060)	ND (0.00047)	ND (0.00066)	ND (0.024)
Chloroform	mg/kg	0.6	2	0.4	ND (0.00026)	ND (0.00026)	ND (0.00026)	ND (0.00026)	ND (0.00028)	ND (0.015)	ND (0.00024)	ND (0.00031)	ND (0.015)	ND (0.00024)	ND (0.015)	ND (0.00033)	ND (0.00026)	ND (0.00036)	ND (0.013)
Chloromethane	mg/kg	4	12	NA	ND (0.00023)	ND (0.00023)	ND (0.00023)	ND (0.00023)	ND (0.00025)	ND (0.013)	ND (0.00021)	ND (0.00028)	ND (0.013)	ND (0.00021)	ND (0.013)	ND (0.00030)	ND (0.00023)	ND (0.00032)	ND (0.012)
Cyclohexane	mg/kg	-	-	-	0.0023	0.0036	0.0063	ND (0.00060)	ND (0.00065)	2.32	ND (0.00055)	ND (0.00072)	ND (0.034)	ND (0.00055)	0.155	ND (0.00077)	ND (0.00060)	ND (0.00083)	ND (0.031)
1,2-Dibromo-3-chloropropane	mg/kg	0.08	0.2	0.005	ND (0.00053)	ND (0.00054)	ND (0.00053)	ND (0.00053)	ND (0.00058)	ND (0.030)	ND (0.00048)	ND (0.00064)	ND (0.031)	ND (0.00049)	ND (0.031)	ND (0.00068)	ND (0.00053)	ND (0.00074)	ND (0.027)
Dibromochloromethane	mg/kg	3	8	0.005	ND (0.00017)	ND (0.00017)	ND (0.00016)	ND (0.00016)	ND (0.00018)	ND (0.0094)	ND (0.00015)	ND (0.00020)	ND (0.0095)	ND (0.00015)	ND (0.0095)	ND (0.00021)	ND (0.00017)	ND (0.00023)	ND (0.0085)
1,2-Dibromoethane	mg/kg	0.008	0.04	0.005	ND (0.00027)	ND (0.00027)	ND (0.00026)	ND (0.00027)	ND (0.00029)	ND (0.015)	ND (0.00024)	ND (0.00032)	ND (0.015)	ND (0.00025)	ND (0.015)	ND (0.00034)	ND (0.00027)	ND (0.00037)	ND (0.014)
1,2-Dichlorobenzene	mg/kg	5300	59000	17	ND (0.00019)	ND (0.00019)	ND (0.00019)	ND (0.00019)	ND (0.00020)	ND (0.011)	ND (0.00017)	ND (0.00022)	ND (0.011)	ND (0.00017)	ND (0.011)	ND (0.00024)	ND (0.00019)	ND (0.00026)	ND (0.0097)
1,3-Dichlorobenzene	mg/kg	5300	59000	19	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00016)	ND (0.0085)	ND (0.00014)	ND (0.00018)	ND (0.0087)	ND (0.00014)	ND (0.0087)	ND (0.00019)	ND (0.00015)	ND (0.00021)	ND (0.0078)
1,4-Dichlorobenzene	mg/kg	5	13	2	ND (0.00017)	ND (0.00017)	ND (0.00017)	ND (0.00017)	ND (0.00018)	ND (0.0095)	ND (0.00015)	ND (0.00020)	ND (0.0097)	ND (0.00015)	ND (0.0097)	ND (0.00022)	ND (0.00017)	ND (0.00023)	ND (0.0087)
Dichlorodifluoromethane	mg/kg	490	230000	39	ND (0.00060)	ND (0.00060)	ND (0.00059)	ND (0.00060)	ND (0.00065)	ND (0.034)	ND (0.00055)	ND (0.00072)	ND (0.034)	ND (0.00055)	ND (0.035)	ND (0.00077)	ND (0.00060)	ND (0.00083)	ND (0.031)
1,1-Dichloroethane	mg/kg	8	24	0.2	ND (0.00021)	ND (0.00021)	ND (0.00020)	ND (0.00021)	ND (0.00022)	ND (0.012)	ND (0.00019)	ND (0.00025)	ND (0.012)	ND (0.00019)	ND (0.012)	ND (0.00026)	ND (0.00021)	ND (0.00029)	ND (0.011)
1,2-Dichloroethane	mg/kg	0.9	3	0.005	ND (0.00019)	ND (0.00019)	ND (0.00019)	ND (0.00019)	ND (0.00020)	ND (0.011)	ND (0.00017)	ND (0.00022)	ND (0.011)	ND (0.00017)	ND (0.011)	ND (0.00024)	ND (0.00019)	ND (0.00026)	ND (0.0097)
1,1-Dichloroethene	mg/kg	11	150	0.008	ND (0.00017)	ND (0.00017)	ND (0.00017)	ND (0.00017)	ND (0.00018)	ND (0.0095)	ND (0.00015)	ND (0.00020)	ND (0.0097)	ND (0.00015)	ND (0.0097)	ND (0.00022)	ND (0.00017)	ND (0.00023)	ND (0.0087)
cis-1,2-Dichloroethene	mg/kg	230	560	0.3	ND (0.00048)	ND (0.00049)	ND (0.00048)	ND (0.00048)	ND (0.00052)	ND (0.027)	ND (0.00044)	ND (0.00058)	ND (0.028)	ND (0.00044)	ND (0.028)	ND (0.00062)	ND (0.00048)	ND (0.00067)	ND (0.025)
trans-1,2-Dichloroethene	mg/kg	300	720	0.6	ND (0.00017)	ND (0.00018)	ND (0.00017)	ND (0.00017)	ND (0.00019)	ND (0.0099)	ND (0.00016)	ND (0.00021)	ND (0.010)	ND (0.00016)	ND (0.010)	ND (0.00022)	ND (0.00017)	ND (0.00024)	ND (0.0090)
1,2-Dichloropropane	mg/kg	2	5	0.005	ND (0.00034)	ND (0.00034)	ND (0.00034)	ND (0.00034)	ND (0.00037)	ND (0.019)	ND (0.00031)	ND (0.00041)	ND (0.020)	ND (0.00031)	ND (0.020)	ND (0.00043)	ND (0.00034)	ND (0.00047)	ND (0.018)
cis-1,3-Dichloropropene	mg/kg	2	7	0.005	ND (0.00022)	ND (0.00022)	ND (0.00021)	ND (0.00022)	ND (0.00023)	ND (0.012)	ND (0.00020)	ND (0.00026)	ND (0.012)	ND (0.00020)	ND (0.012)	ND (0.00028)	ND (0.00022)	ND (0.00030)	ND (0.011)
trans-1,3-Dichloropropene	mg/kg	2	7	0.005	ND (0.00024)	ND (0.00024)	ND (0.00024)	ND (0.00024)	ND (0.00026)	ND (0.014)	ND (0.00022)	ND (0.00029)	ND (0.014)	ND (0.00022)	ND (0.014)	ND (0.00031)	ND (0.00024)	ND (0.00034)	ND (0.013)
Ethylbenzene	mg/kg	7800	110000	13	0.00017 J	0.0129	0.0229	ND (0.00016)	ND (0.00018)	12.7	ND (0.00015)	ND (0.00020)	0.0137 J	0.00094 J	0.0546 J	0.00028 J	0.0019	ND (0.00023)	ND (0.0085)
Freon 113	mg/kg	-	-	-	ND (0.00053)	ND (0.00054)	ND (0.00053)	ND (0.00053)	ND (0.00058)	ND (0.030)	ND (0.00048)	ND (0.00064)	ND (0.031)	ND (0.00049)	ND (0.031)	ND (0.00068)	ND (0.00053)	ND (0.00074)	ND (0.027) [a]
2-Hexanone	mg/kg	-	-	-	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0017)	ND (0.087)	ND (0.0014)	ND (0.0018)	ND (0.088)	ND (0.0014)	ND (0.088)	ND (0.0020)	ND (0.0015)	ND (0.0021)	ND (0.079)
Isopropylbenzene	mg/kg	-	-	-	0.0055	0.0042	0.015	ND (0.00017)	ND (0.00018)	2.81	ND (0.00015)	ND (0.00020)	0.297	0.00062 J	0.543	0.00053 J	0.0023	ND (0.00024)	ND (0.0087)
Methyl Acetate	mg/kg	78000	NA	22	ND (0.0022)	ND (0.0023)	ND (0.0022)	ND (0.0022)	ND (0.0024)	ND (0.13)	ND (0.0020)	ND (0.0027)	ND (0.13)	ND (0.0021)	ND (0.13)	ND (0.0029)	ND (0.0022)	ND (0.0031)	ND (0.12)
Methylcyclohexane	mg/kg	-	-	-	0.022	0.0431	0.0336	ND (0.00056)	ND (0.00060)	14	ND (0.00051)	ND (0.00066)	0.705	0.0018 J	5.5	0.0018 J	0.0036	ND (0.00077)	ND (0.029)
Methyl Tert Butyl Ether	mg/kg	110	320	0.2	0.0174	0.0024	0.0073	0.0442	0.0542	0.0799	0.00062 J	0.0012 J	ND (0.017)	0.02	ND (0.017)	0.0056	ND (0.00029)	0.0011 J	ND (0.015)
4-Methyl-2-pentanone(MIBK)	mg/kg	-	-	-	ND (0.00094)	ND (0.00094)	ND (0.00092)	ND (0.00093)	ND (0.0010)	ND (0.053)	ND (0.00085)	ND (0.0011)	ND (0.054)	0.0175	ND (0.054)	ND (0.0012)	ND (0.00094)	ND (0.0013)	ND (0.048)
Methylene chloride	mg/kg	34	97	0.01	ND (0.00038)	0.0031 J	ND (0.00037)	ND (0.00038)	ND (0.00041)	ND (0.021)	ND (0.00034)	0.0029 J	ND (0.063)	ND (0.0010)	ND (0.064)	ND (0.0014)	0.0011 J	ND (0.0015)	ND (0.057)
Styrene	mg/kg	90	260	3	ND (0.00016)	ND (0.00016)	ND (0.00016)	ND (0.00016)	ND (0.00017)	ND (0.0090)	ND (0.00015)	ND (0.00019)	ND (0.0092)	ND (0.00015)	ND (0.0092)	ND (0.00020)	ND (0.00016)	ND (0.00022)	ND (0.0082)
Tert Butyl Alcohol	mg/kg	1400	11000	0.3								0.0979	ND (0.19)	2.31	ND (0.19)	0.0199 J	0.0279 J	0.0162 J	ND (0.17)
1,1,2,2-Tetrachloroethane	mg/kg	1	3	0.007	ND (0.00026)	ND (0.00026)	ND (0.00026)	ND (0.00026)	ND (0.00029)	ND (0.015)	ND (0.00024)	ND (0.00031)	ND (0.015)	ND (0.00024)	ND (0.015)	ND (0.00034)	ND (0.00026)	ND (0.00037)	ND (0.014)
Tetrachloroethene	mg/kg	2	5	0.005	ND (0.00031)	ND (0.00031)	ND (0.00031)	ND (0.00031)	ND (0.00034)	ND (0.018)	ND (0.00028)	ND (0.00037)	ND (0.018)	ND (0.00028)	ND (0.018)	ND (0.00039)	ND (0.00031)	ND (0.00043)	ND (0.016)
Toluene	mg/kg	6300	91000	7	0.00040 J	0.00087 J	0.00038 J	ND (0.00014)	ND (0.00015)	1.06	ND (0.00013)	ND (0.00016)	ND (0.0079)	ND (0.00013)	ND (0.0079)	0.00063 J	0.00068 J	ND (0.00019)	ND (0.0071)
1,2,3-Trichlorobenzene	mg/kg	-	-	-	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00027)	ND (0.014)	ND (0.00023)	ND (0.00030)	ND (0.014)	ND (0.00023)	ND (0.014)	ND (0.00032)	ND (0.00025)	ND (0.00035)	ND (0.013)
1,2,4-Trichlorobenzene	mg/kg	73	820	0.7	ND (0.00020)	ND (0.00020)	ND (0.00020)	ND (0.00020)	ND (0.00022)	ND (0.011)	ND (0.00018)	ND (0.00024)	ND (0.011)	ND (0.00018)	ND (0.012)	ND (0.00026)	ND (0.00020)	ND (0.00028)	ND (0.010)
1,1,1-Trichloroethane	mg/kg	290	4200	0.3	ND (0.00018)	ND (0.00019)	ND (0.00018)	ND (0.00018)	ND (0.00020)	ND (0.010)	ND (0.00017)	ND (0.00022)	ND (0.011)	ND (0.00017)	ND (0.011)	ND (0.00023)	ND (0.00018)	ND (0.00026)	ND (0.0095)
1,1,2-Trichloroethane	mg/kg	2	6	0.02	ND (0.00036)	ND (0.00036)	ND (0.00035)	ND (0.00036)	ND (0.00039)	ND (0.020)	ND (0.00032)	ND (0.00042)	ND (0.020)	ND (0.00033)	ND (0.021)	ND (0.00045)	ND (0.00036)	ND (0.00049)	ND (0.018)
Trichloroethene	mg/kg	7	20	0.01	ND (0.00021)	ND (0.00021)	ND (0.00021)	ND (0.00021)	ND (0.00023)	ND (0.012)	ND (0.00019)	ND (0.00025)	ND (0.012)	ND (0.00019)	ND (0.012)	ND (0.00027)	ND (0.00021)	ND (0.00029)	ND (0.011)
Trichlorofluoromethane	mg/kg	23000	340000	34	ND (0.00069)	ND (0.00070)	ND (0.00068)	ND (0.00069)	ND (0.00075)	ND (0.039)	ND (0.00063)	ND (0.00083)	ND (0.040)	ND (0.00064)	ND (0.040)	ND (0.00088)	ND (0.00069)	ND (0.00096)	ND (0.036)
Vinyl chloride	mg/kg	0.7	2	0.005	ND (0.00022)	ND (0.00022)	ND (0.00022)	ND (0.00022)	ND (0.00024)	ND (0.013)	ND (0.00020)	ND (0.00027)	ND (0.013)	ND (0.00020)	ND (0.013)	ND (0.00028)	ND (0.00022)	ND (0.00031)	ND (0.011) [a]
m,p-Xylene	mg/kg	12000	170000	19	0.0064	0.0357	0.0035	ND (0.00024)	ND (0.00026)	42.3	ND (0.00022)	ND (0.00029)	ND (0.014)	0.00072 J	0.0694	0.0017	0.0010 J	ND (0.00033)	ND (0.012)
o-Xylene	mg/kg	12000	170000	19	ND (0.00022)	0.0025	0.00058 J	ND (0.00022)	ND (0.00024)	2.79	ND (0.00020)	ND (0.00027)	ND (0.013)	ND (0.00020)	0.0315 J	0.00072 J	0.0013	ND (0.00031)	ND (0.011)
Xylene (total)	mg/kg	12000	170000	19	0.0066	0.0382	0.0041	ND (0.00022)	ND (0.00024)	45.1	ND (0.00020)	ND (0.00027)	ND (0.013)	0.00072 J	0.101	0.0024	0.0023	ND (0.00031)	ND (0.011)
GC/MS Volatile TIC																			
Total TIC, Volatile	mg/kg	-	-	-	0.456 J	0.403 J	1.301 J	0.039 J	0.039 J	28.6 J	0	0.1252 J	96.6 J	0.1106 J	140.3 J	0	0.6 J	0.0079 J	27.7 J
Total Alkanes	mg/kg	-	-	-	0.025 J	0.094 J	0	0	0	169.9 J	0.0821 J	0.0687 J	91.5 J	0	77.5 J	0	0.409 J	0.01 J	7.8 J

Table 5
Former Hess Port Reading Complex (HC-PR)
AOC-19: QC Laboratory
750 Cliff Road, Port Reading, Middlesex County, New Jersey
Groundwater Analytical Results

Client Sample ID:		NJ Groundwater	NJ Interim	PER-6R	MW-1	MW-2	MW-3	MW-1	MW-2	MW-3	MW-4	MW-4
Lab Sample ID:		Criteria (NJAC	Groundwater	JC31999-7	JC25088-1	JC25088-2	JC25088-3	JC35066-1	JC35066-2	JC35066-3	JC35066-4	JC36917-1
Date Sampled:		7:9C 7/07)[1]	Criteria (NJAC	11/17/2016	8/2/2016	8/2/2016	8/2/2016	1/9/2017	1/9/2017	1/9/2017	1/9/2017	2/8/2017
Matrix:			7:9C 11/15)[2]	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
GC/MS Volatiles (SW846 8260C)												
Acetone	ug/l	6000	-	ND (5.0)	ND (3.8)	ND (3.8)	ND (3.8)	ND (5.0)	ND (5.0)	ND (5.0)	105	54.3
Benzene	ug/l	1	-	ND (0.14)	0.25 J	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	**1.2**	0.59
Bromochloromethane	ug/l	-	-	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)
Bromodichloromethane	ug/l	1	-	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)
Bromoform	ug/l	4	-	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)
Bromomethane	ug/l	10	-	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)
2-Butanone (MEK)	ug/l	300	-	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	4.7 J	4.3 J
Carbon disulfide	ug/l	700	-	ND (0.33)	ND (0.33) [a]	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	0.48 J	0.40 J
Carbon tetrachloride	ug/l	1	-	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)	ND (0.54)
Chlorobenzene	ug/l	50	-	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)
Chloroethane	ug/l	-	5	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)
Chloroform	ug/l	70	-	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
Chloromethane	ug/l	-	-	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)
Cyclohexane	ug/l	-	-	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	2.7 J	0.76 J
1,2-Dibromo-3-chloropropane	ug/l	0.02	-	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)
Dibromochloromethane	ug/l	1	-	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
1,2-Dichlorobenzene	ug/l	600	-	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
1,3-Dichlorobenzene	ug/l	600	-	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)
1,4-Dichlorobenzene	ug/l	75	-	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
Dichlorodifluoromethane	ug/l	1000	-	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)
1,1-Dichloroethane	ug/l	50	-	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
1,2-Dichloroethane	ug/l	2	-	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)
1,1-Dichloroethene	ug/l	1	-	ND (0.20)	ND (0.20) [a]	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
cis-1,2-Dichloroethene	ug/l	70	-	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)	ND (0.31)
trans-1,2-Dichloroethene	ug/l	100	-	ND (0.36)	ND (0.36)	ND (0.36)	ND (0.36)	ND (0.36)	ND (0.36)	ND (0.36)	ND (0.36)	ND (0.36)
1,2-Dichloropropane	ug/l	1	-	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)
cis-1,3-Dichloropropene	ug/l	-	-	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)
trans-1,3-Dichloropropene	ug/l	-	-	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)
Ethylbenzene	ug/l	700	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	8.6	4
Freon 113	ug/l	-	20000	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)
2-Hexanone	ug/l	-	300	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)
Isopropylbenzene	ug/l	700	-	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	ND (0.16)	2.6	1.5
Methyl Acetate	ug/l	7000	-	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)
Methylcyclohexane	ug/l	-	-	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	15.8	5.4
Methyl Tert Butyl Ether	ug/l	70	-	ND (0.34)	ND (0.34)	5.7	ND (0.34)	ND (0.34)	3.8	ND (0.34)	13	8.7
4-Methyl-2-pentanone(MIBK)	ug/l	-	-	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)
Methylene chloride	ug/l	3	-	ND (1.0)	ND (0.35)	ND (0.35)	ND (0.35)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Styrene	ug/l	100	-	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)	ND (0.27)
1,1,2,2-Tetrachloroethane	ug/l	1	-	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)
Tetrachloroethene	ug/l	1	-	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
Toluene	ug/l	600	-	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	1.5	0.91 J
1,2,3-Trichlorobenzene	ug/l	-	-	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
1,2,4-Trichlorobenzene	ug/l	9	-	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
1,1,1-Trichloroethane	ug/l	30	-	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)
1,1,2-Trichloroethane	ug/l	3	-	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)
Trichloroethene	ug/l	1	-	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)
Trichlorofluoromethane	ug/l	2000	-	ND (0.58)	ND (0.58)	ND (0.58)	ND (0.58)	ND (0.58)	ND (0.58)	ND (0.58)	ND (0.58)	ND (0.58)
Vinyl chloride	ug/l	1	-	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)	ND (0.33)
m,p-Xylene	ug/l	-	-	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	ND (0.42)	14.4	6
o-Xylene	ug/l	-	-	ND (0.21)	0.27 J	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	2.5	1.5
Xylene (total)	ug/l	1000	-	ND (0.21)	0.27 J	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	16.9	7.5
GC/MS Volatile TIC												
Total TIC, Volatile	ug/l	-	-	0	72 J	0	0	0	0	0	287 J	173.6 J
Total Alkanes	ug/l	-	-	0	0	11 J	0	0	5.1 J	0	25 J	0
GC/MS Semi-volatiles (SW846 8270D)												
Acenaphthene	ug/l	400	-	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)
Acenaphthylene	ug/l	-	100	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)	ND (0.14)
Acetophenone	ug/l	700	-	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
Anthracene	ug/l	2000	-	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
Atrazine	ug/l	3	-	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)	ND (0.45)
Benzaldehyde	ug/l	-	-	ND (0.29)	ND (0.29)	ND (0.29)	ND (0.29)	ND (0.29)	ND (0.29)	ND (0.29)	ND (0.29)	ND (0.29)
Benzo(g,h,i)perylene	ug/l	-	100	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)
4-Bromophenyl phenyl ether	ug/l	-	-	ND (0.41)	ND (0.41)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
Butyl benzyl phthalate	ug/l	100	-	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)	ND (0.46)
1,1'-Biphenyl	ug/l	400	-	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)
2-Chloronaphthalene	ug/l	600	-	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)
4-Chloroaniline	ug/l	30	-	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)	ND (0.34)
Carbazole	ug/l	-	-	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
Caprolactam	ug/l	-	5000	ND (0.66)	ND (0.66)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)	ND (0.65)
Chrysene	ug/l	5	-	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)
bis(2-Chloroethoxy)methane	ug/l	-	-	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)
bis(2-Chloroethyl)ether	ug/l	7	-	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)
bis(2-Chloroisopropyl)ether	ug/l	300	-	ND (0.41)	ND (0.41)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
4-Chlorophenyl phenyl ether	ug/l	-	-	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)
2,4-Dinitrotoluene	ug/l	-	-	ND (0.56)	ND (0.56)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)
2,6-Dinitrotoluene	ug/l	-	-	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)
3,3'-Dichlorobenzidine	ug/l	30	-	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)	ND (0.51)
Dibenzofuran	ug/l	-	-	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)
Di-n-butyl phthalate	ug/l	700	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
Di-n-octyl phthalate	ug/l	100	-	ND (0.24)	ND (0.24)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)
Diethyl phthalate	ug/l	6000	-	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)
Dimethyl phthalate	ug/l	-	100	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)
bis(2-Ethylhexyl)phthalate	ug/l	3	-	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)
Fluoranthene	ug/l	300	-	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)
Fluorene	ug/l	300	-	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	ND (0.17)	0.49 J	ND (0.17)
Hexachlorocyclopentadiene	ug/l	40	-	ND (2.8)	ND (2.8)	ND (2.8)	ND (2.8)	ND (2.8)	ND (2.8)	ND (2.8)	ND (2.8)	ND (2.8)
Hexachloroethane	ug/l	7	-	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)
Isophorone	ug/l	40	-	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)
2-Methylnaphthalene	ug/l	-	30	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	9.2	4.5
2-Nitroaniline	ug/l	-	-	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)
3-Nitroaniline	ug/l	-	-	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.39)
4-Nitroaniline	ug/l	-	-	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)
Naphthalene	ug/l	300	-	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	ND (0.23)	2	ND (0.23)
Nitrobenzene	ug/l	6	-	ND (0.65)	ND (0.65)	ND (0.64)	ND (0.64)	ND (0.64)	ND (0.64)	ND (0.64)	ND (0.64)	ND (0.64)
N-Nitroso-di-n-propylamine	ug/l	10	-	ND (0.49)	ND (0.49)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)
N-Nitrosodiphenylamine	ug/l	10	-	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)
Phenanthrene	ug/l	-	-	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	0.44 J	ND (0.18)
Pyrene	ug/l	200	-	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)
1,2,4,5-Tetrachlorobenzene	ug/l	-	-	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)	ND (0.37)
GC/MS Semi-volatiles (SW846 8270D BY SIM)												
Benzo(a)anthracene	ug/l	0.1	-	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.023)
Benzo(a)pyrene	ug/l	0.1	-	ND (0.034)	ND (0.034)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)
Benzo(b)fluoranthene	ug/l	0.2	-	ND (0.044)	ND (0.044)	ND (0.043)	ND (0.043)	ND (0.043)	ND (0.043)	ND (0.043)	ND (0.043)	ND (0.043)
Benzo(k)fluoranthene	ug/l	0.5	-	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)	ND (0.033)
Dibenzo(a,h)anthracene	ug/l	0.3	-	ND (0.037)	ND (0.037)	ND (0.036)	ND (0.036)	ND (0.036)	ND (0.036)	ND (0.036)	ND (0.036)	ND (0.036)
Hexachlorobenzene	ug/l	0.02	-	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)
Hexachlorobutadiene	ug/l	1	-	ND (0.018)	ND (0.018)	ND (0.018)	ND (0.018)	ND (0.018)	ND (0.018)	ND (0.018)	ND (0.018)	ND (0.018)
Indeno(1,2,3-cd)pyrene	ug/l	0.2	-	ND (0.038)	ND (0.038)	ND (0.038)	ND (0.038)	ND (0.038)	ND (0.038)	ND (0.038)	ND (0.038)	ND (0.038)
1,4-Dioxane	ug/l	-	0.4	ND (0.049)	0.106	ND (0.049)	ND (0.049)	ND (0.049)	ND (0.049)	ND (0.049)	ND (0.049)	ND (0.049)
GC/MS Semi-volatile TIC												
Total TIC, Semi-Volatile	ug/l	-	-	0	12.5 J	0	0	0	0	0	275.2 J	161.1 J
Total Alkanes	ug/l	-	-	0	0	0	0	0	0	0	0	0
Metals Analysis												
Aluminum	ug/l	200	-	**494**	**4240**	<200	**1770**	**1760**	**521**	**2230**	**2080**	**2620**
Antimony	ug/l	6	-	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Arsenic	ug/l	3	-	<3.0	<3.0	<3.0	**16.9**	<3.0	**3.5**	<3.0	**10.7**	**9.4**
Barium	ug/l	6000	-	<200	<200	588	<200	<200	261	<200	<200	<200
Beryllium	ug/l	1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cadmium	ug/l	4	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Calcium	ug/l	-	-	76900	109000	63900	12000	98100	30100	11000	107000	83400
Chromium	ug/l	70	-	<10	21.1	<10	<10	10.7	<10	<10	<10	<10
Cobalt	ug/l	-	100	<50	<50	<50	<50	<50	<50	<50	<50	<50
Copper	ug/l	1300	-	15.3	30.9	<10	<10	<10	<10	<10	21.7	<10
Iron	ug/l	300	-	**438**	<100	**3770**	**15100**	150	**764**	**6180**	**547**	**1410**
Lead	ug/l	5	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Magnesium	ug/l	-	-	8590	<5000	28200	<5000	<5000	12600	<5000	<5000	<5000
Manganese	ug/l	50	-	<15	<15	**8580**	**1980**	<15	**3850**	**1860**	<15	19.2
Mercury	ug/l	2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Nickel	ug/l	100	-	<10	<10	26.2	<10	<10	14.6	<10	<10	<10
Potassium	ug/l	-	-	21000	69300	<10000	<10000	37000	<10000	<10000	30600	21100
Selenium	ug/l	40	-	<10	<10	<10	<10	<10	<10	<10	<10	<10
Silver	ug/l	40	-	<10	<10	<10	<10	<10	<10	<10	<10	<10
Sodium	ug/l	50000	-	**63300**	**94800**	**273000**	**53400**	49000	**197000**	46600	**60000**	43000
Thallium	ug/l	2	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	ug/l	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50
Zinc	ug/l	2000	-	<20	<20	<20	<20	<20	<20	20.7	<20	<20

APPENDIX A:
RECEPTOR EVALUATION

New Jersey Department of Environmental Protection
Site Remediation Program

RECEPTOR EVALUATION (RE) FORM

Date Stamp
(For Department use only)

SECTION A. SITE

Site Name: AOC-19: QC Laboratory, Hess Corporation - Former Port Reading Complex (HC-PR)

Program Interest (PI) Number(s): 006148

Case Tracking Number(s) for this submission: E20130449

This form must be attached to the Cover/Certification Form
if not submitted through a Remedial Phase Online Service

Indicate the type of submission:

☐ Initial RE Submission

☒ Updated RE Submission

Indicate the reason for submission of an updated RE form

☐ Submission of an Immediate Environmental Concern (IEC) source control report;
☒ Submission of a Remedial Investigation Report;
☒ Submission of a Remedial Action Report;

Check if included in updated RE

☐ The known concentration or extent of contamination in any medium has increased;
☐ A new AOC has been identified;
☐ A new receptor is identified;
☐ A new exposure pathway has been identified.

SECTION B. ON SITE AND SURROUNDING PROPERTY USE

1. Identify any sensitive populations/uses that are currently on-site or surrounding property usage within 200 feet of the site boundary (check all that apply):

	On-site	Off-site
None of the following	☒	☐
Residences or residential property	☐	☒
Public or Private Schools grades K-12	☐	☐
Child care centers	☐	☐
Public parks, playgrounds or other recreation areas	☐	☐
Other sensitive population use(s) Explain _____	☐	☐

If any of the above applies, attach a list of addresses, facility names, type of use, and a map depicting each location relative to the site.

2. Current site uses (check all that apply):

☒ Industrial ☐ Residential ☐ Commercial ☐ Agricultural
☐ School or child care ☐ Government ☐ Park or recreational use
☒ Vacant ☐ Other: _____

3. Planned future site uses and off-site use within 200 ft of site boundary (check all that apply):

☒ Industrial ☒ Residential ☐ Commercial ☐ Agricultural
☐ School or child care ☐ Government ☐ Park or recreational use
☐ Vacant ☐ Other: _____

Provide a map depicting the location of the proposed changes in land use. **No proposed land use changes.**

SECTION C. DESCRIPTION OF CONTAMINATION

1. Identify if any of the following exist at the site (check all that apply):
   - ☐ Free product [N.J.A.C. 7:26E-1.8] identified is ☐ LNAPL* or ☐ DNAPL**. Date identified: _____
   - ☐ Residual product [N.J.A.C. 7:26E-1.8]
   - ☐ Other high concentration source materials not identified above (e.g., buried drums, containers, unsecured friable asbestos)

     Explain: _____

   * LNAPL – measured thickness of .01 feet or more

   **DNAPL – See US EPA DNAPL Overview

2. Soil Migration Pathway

   Has soil contamination been delineated to the applicable Direct Contact Soil Remediation Standard? ..... ☒ Yes ☐ No

   Are all soils either below the applicable Direct Contact Criteria or under an institutional control (i.e. deed notice)? ..... ☒ Yes ☐ No

3. If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section D. Otherwise attach a brief summary of all currently available data and information to be included in the site investigation or remedial investigation report.

SECTION D. GROUND WATER USE

1. Has the requirement for ground water sampling been triggered? ..... ☒ Yes ☐ No ☐ Unknown
   If "No," proceed to Section F. If "Unknown," explain:

   _____

2. Is Ground water contaminated above the Ground Water Remediation Standards [N.J.A.C.7:9C]? ..... ☒ Yes ☐ No ☐ Unknown

   Or ☐ Awaiting laboratory data with the expected due date: _____

   If "Yes," provide the date that the laboratory data was available and confirmed contamination above the Ground Water Remediation Standards. Date: 08/02/2016

   If "Unknown," explain: _____

   If "No," or awaiting laboratory data proceed to Section F.

3. Has ground water contamination been delineated to the applicable Remediation Standard? ..... ☐ Yes ☐ No
4. Has a well search been completed? ..... ☒ Yes ☐ No

   Date of most recent or updated well search: 09/24/2015

   Identify if any of the following conditions exist based on the well search [N.J.A.C.7:26E-1.14(a)] (check all that apply):
   - ☐ Potable wells located within 500 feet from the downgradient edge of the currently known extent of contamination.
   - ☐ Potable well located 250 feet upgradient or 500 feet side gradient of the currently known extent of contamination.
   - ☐ Ground water contamination is located within a Tier 1 wellhead protection area (WHPA).

5. Is a completed Well Search Spreadsheet or historical well search table attached and has an electronic copy of the spreadsheet been submitted to srpgis_wrs@dep.state.nj.us. ..... ☒ Yes ☐ No

   If "No," explain: _____

6. Are any private potable or irrigation wells located within ½ mile of the currently known extent of contamination? ..... ☒ Yes ☐ No

   If "Yes," was a door to door survey completed? ..... ☐ Yes ☒ No

   If survey was not completed explain: **Only one potable well was located approximately 2400 feet from the known extent of contamination. The NJ Turnpike is located between the Site and the potable well.**

7. Has sampling been conducted of ☐ potable well(s) and /or ☐ non-potable use well(s)? ..... ☐ Yes ☒ No

   If "No," provide justification then proceed to Section E.

   _____

8 Has contamination been identified in potable well(s) above Ground Water Remediation Standards that is not suspected to be from the site? (If "Yes," provide justification) ..... ☐ Yes ☐ No

_____

9 Has contamination been identified in potable well(s) that is above the Ground Water Remediation Standards or Federal Drinking Water Standards? ..... ☐ Yes ☐ No

Provide date laboratory data was received: _____

Or ☐ awaiting laboratory data with the expected due date: _____

If "Yes" for potable well contamination **not attributable to background**, follow the IEC Guidance Document at http://www.nj.gov/dep/srp/guidance/index.html#iec for required actions and answer the following:

Has an engineered system response action been completed on all receptors? ..... ☐ Yes ☐ No
Provide a brief narrative description:

Date completed: _____ NJDEP Case Manager: _____

10. Were Non-potable use well(s) sampled and results were above Class II Ground Water Remediation Standards? ..... ☐ Yes ☐ No

Provide date laboratory data was received: _____
Or ☐ awaiting laboratory data with the expected due date: _____

11. Has the ground water use evaluation been completed? ..... ☐ Yes ☐ No

SECTION E. VAPOR INTRUSION (VI)

1. Contaminants present in ground water exceed the Vapor Intrusion Ground Water Screening Levels that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance). ... ☐ Yes ☒ No ☐ Unknown

Or ☐ Awaiting laboratory data and the expected due date: _____

Provide the date that the laboratory data was available and confirmed contamination above the Vapor Intrusion Trigger Levels. Date: _____

2. Other existing conditions that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance)

☐ Wet basement or sump containing free product or ground water containing volatile organics
☐ Methane generating conditions causing oxygen deficient or explosion concern
☐ Other human or safety concern from the VI pathway (i.e. elemental mercury, unsaturated contamination, elevated soil gas or indoor vapor (explain):

If you answered "No," or awaiting laboratory data to Question 1., *and* did not check any boxes in Question 2, proceed to Section F, "Ecological Receptors", otherwise complete the rest of this section.

3. Has ground water contamination been delineated to the applicable Ground Water Vapor Screening Level? ..... ☐ Yes ☐ No

4. Was a site specific screening level, modeling or other alternative approach employed for the VI pathway? ..... ☐ Yes ☐ No

5. Identify and locate on a scaled map any buildings/sensitive populations that exist within the following distances from ground water contamination with concentrations above the Vapor Intrusion Ground Water Screening Levels or specific threats (check all that apply):

☐ 30 feet of petroleum free product or dissolved petroleum hydrocarbon contamination in ground water
☐ 100 feet of any non-petroleum free product or any non-petroleum dissolved volatile organic ground water contamination
☐ No buildings exist within the specified distances

6. The vapor intrusion pathway is a concern at or adjacent to the site (if "No," attach justification) ..... ☐ Yes ☐ No

7. Has soil gas sampling of the building(s) been conducted? ☐ Yes ☐ No ☐ N/A
If "No," or "N/A," proceed to #12

8. Has indoor air sampling been conducted at the identified building(s)? ☐ Yes ☐ No
If "No," proceed to #12

9 Has indoor air contamination been identified but not suspected to be from the site?
(if "Yes," attach justification) ☐ Yes ☐ No

10. Indoor air results were above the NJDEP's Rapid Action Levels. ☐ Yes ☐ No

Provide the date that the laboratory data was available. Date: _____

Or ☐ Awaiting laboratory data with the expected due date: _____

If "Yes" to #10 above, follow the IEC Guidance Document at
http://www.nj.gov/dep/srp/guidance/index.html#iec **for required actions.**

The IEC engineering system response for control was implemented for all
identified structures ☐ Yes ☐ No

Date: _____ NJDEP Case Manager: _____

11. Indoor air sampling was conducted and results were above the NJDEP's Indoor Air Screening
Levels but at or below the Rapid Action Levels ☐ Yes ☐ No

Provide the date that the laboratory data was available. Date: _____

Or ☐ Awaiting laboratory data with the expected due date: _____

If "Yes" to #11 above, answer the following:

Has the Vapor Concern (VC) Response Action Form notifying the NJDEP of the exceedances
been submitted? ☐ Yes ☐ No

Date: _____

Has a plan to mitigate and monitor the exposure been submitted? ☐ Yes ☐ No

Date: _____

Has the Mitigation Response Action Report been submitted? ☐ Yes ☐ No

Date: _____

12. Has the vapor intrusion investigation been completed? ☐ Yes ☐ No
If "No", is the vapor intrusion investigation stepping out as part of the site
investigation or remedial investigation. (If "No," attach justification) ☐ Yes ☐ No

SECTION F. ECOLOGICAL RECEPTORS

1. Has an Ecological Evaluation (EE) has been conducted? [N.J.A.C. 7:26E-1.16] ☐ Yes ☒ No

Date conducted: _____

2. Do the results of an EE trigger a remedial investigation of ecological receptors? [N.J.A.C. 7:26E-4.8] ☐ Yes ☒ No

3. Has a remedial investigation of ecological receptors been conducted? ☐ Yes ☒ No

Date conducted: _____

4. Provide the following information for any surface water body on or within 200 feet of the site:

Surface Water Body Name	Stream Classification	Antidegradation Designation	Trout Production	Trout Maintenance
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐

5. Does the site contain any features regulated by the Land Use Regulation Program (LURP)? (e.g. wetlands, flood hazard area, tidelands, etc.). ..... ☐ Yes ☒ No

   If "Yes," identify the type(s) of features: _____

6. Have any formal LURP jurisdiction letters or approvals been issued for the site? ..... ☐ Yes ☒ No

   If "Yes," what is the LURP Program Interest (PI) number(s) for the site? _____

7. Have any applications for formal LURP jurisdiction letters or approvals been submitted the NJDEP?..... ☐ Yes ☒ No

   If "Yes," what is the LURP Program Interest (PI) number(s) for the site? _____

8. Is free product or residual product located within 100 feet from an ecological receptor?..... ☐ Yes ☒ No

9. Does available data indicate an impact on Ecological receptor(s), Surface water, or Sediment?..... ☐ Yes ☒ No

   If "Yes,"

   a) Check all that apply:

      ☐ Ecological receptor(s) ☐ Surface water ☐ Sediment

   b) Submit with this evaluation either a technical document that includes contaminant summary information, or a description of the type of contamination, a schedule, and a description of all actions to be taken to mitigate exposure.

Completed forms should be sent to the municipal clerk, designate health department, and:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

Block 665, Lot 35
Anna Arroyo
874 West Ave

Block 665, Lot 34
Clem Kenjorski
870 West Ave

Block 666, Lot 31
Peter & Elizabeth Boehm
834 West Ave

Block 666, Lot 32
Dorothy Murphy
930 West Ave

LEGEND

- Site Parcel Boundary
- 200' Boundary
- Residential Properties

BLOCK
LOT

N

1 inch = 125 feet

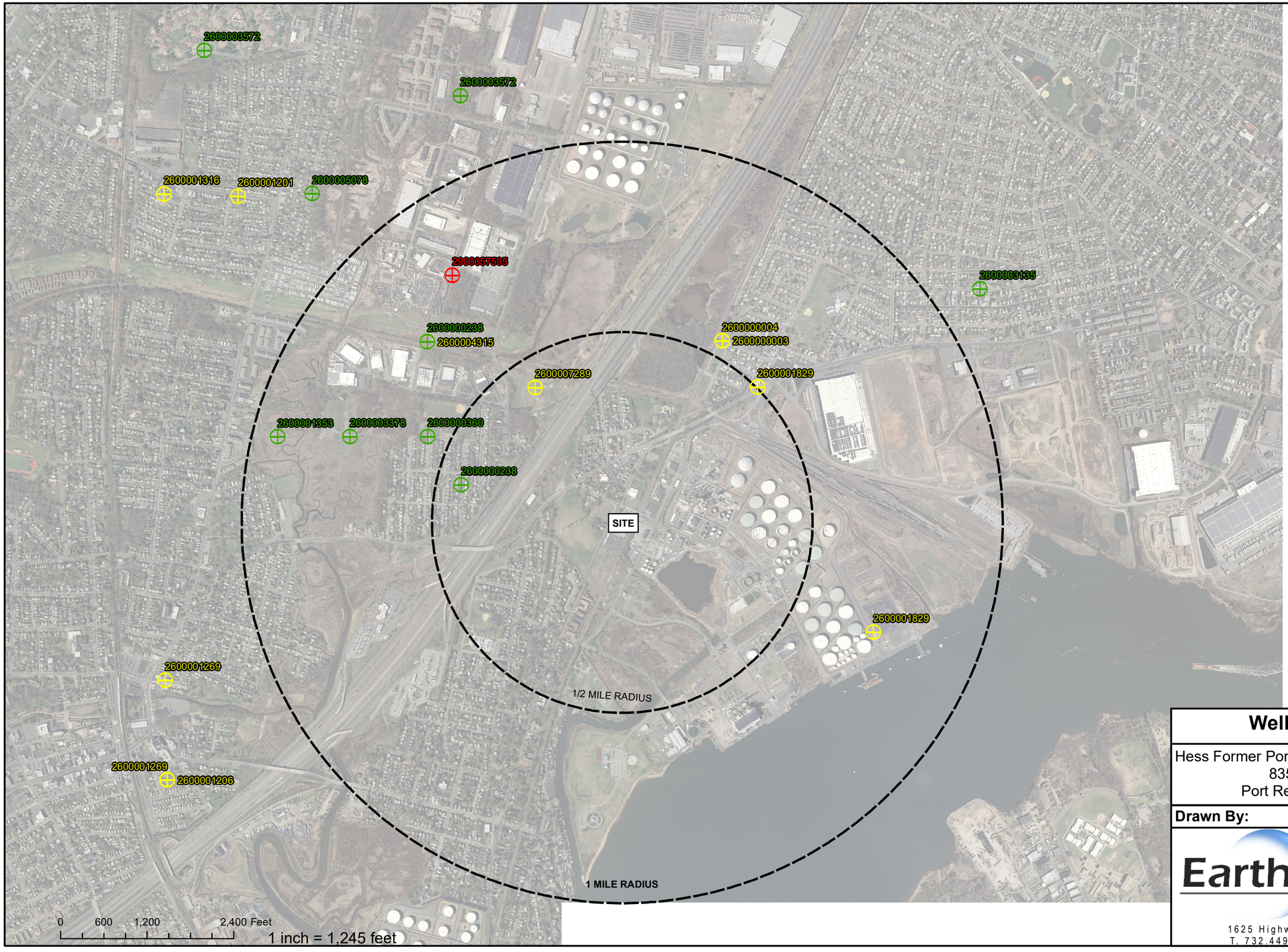
0 62.5 125 250 Feet

RE Property Use Map

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By:	RC	Date :	06/02/2017

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.449.0077 | F. 732.449.5810



LEGEND

Well Type

- Domestic
- Industrial
- Irrigation

N

Well Search Map

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By:	RC	**Date :**	4/25/2017

Earth Systems
Environmental Engineering

1625 Highway 71, Belmar, NJ 07719
T. 732.449.0077 | F. 732.449.5810

SITE NAME	AOC 19: QC Laboratory, Hess Corporation - Former Port Reading Complex (HC-PR)	Enter no information beyond column B
SITE STREET ADDRESS	835 West Avenue	
SITE COUNTY (select)	Essex	
SITE MUNICIPALITY (select)	Newark City	
PROGRAM INTEREST (PI) ID # :	006148	
SOURCE COORDINATE X	560832	
SOURCE COORDINATE Y	630273	
GROUNDWATER FLOW DIRECTION USED (if any)	SE	
WERE APPLICABLE WELL TYPES FOUND? (Yes/No)	Yes	
IS THIS SUBMISSION AN UPDATE? (Yes/No)	Yes	
AUTHOR (name of company)	Earth Systems	
AUTHOR STREET ADDRESS (include town and zip code)	1625 Route 71, Belmar NJ 07719	
LSRP LICENSE NUMBER OVERSEEING WORK	576297	
LSRP NAME OVERSEEING WORK	John Virgie	
PROFESSIONAL WHO PREPARED SUBMISSION	Bill Williams	
EMAIL CONTACT	Bwilliams@Earthsys.net	
PHONE CONTACT	732-739-6444	

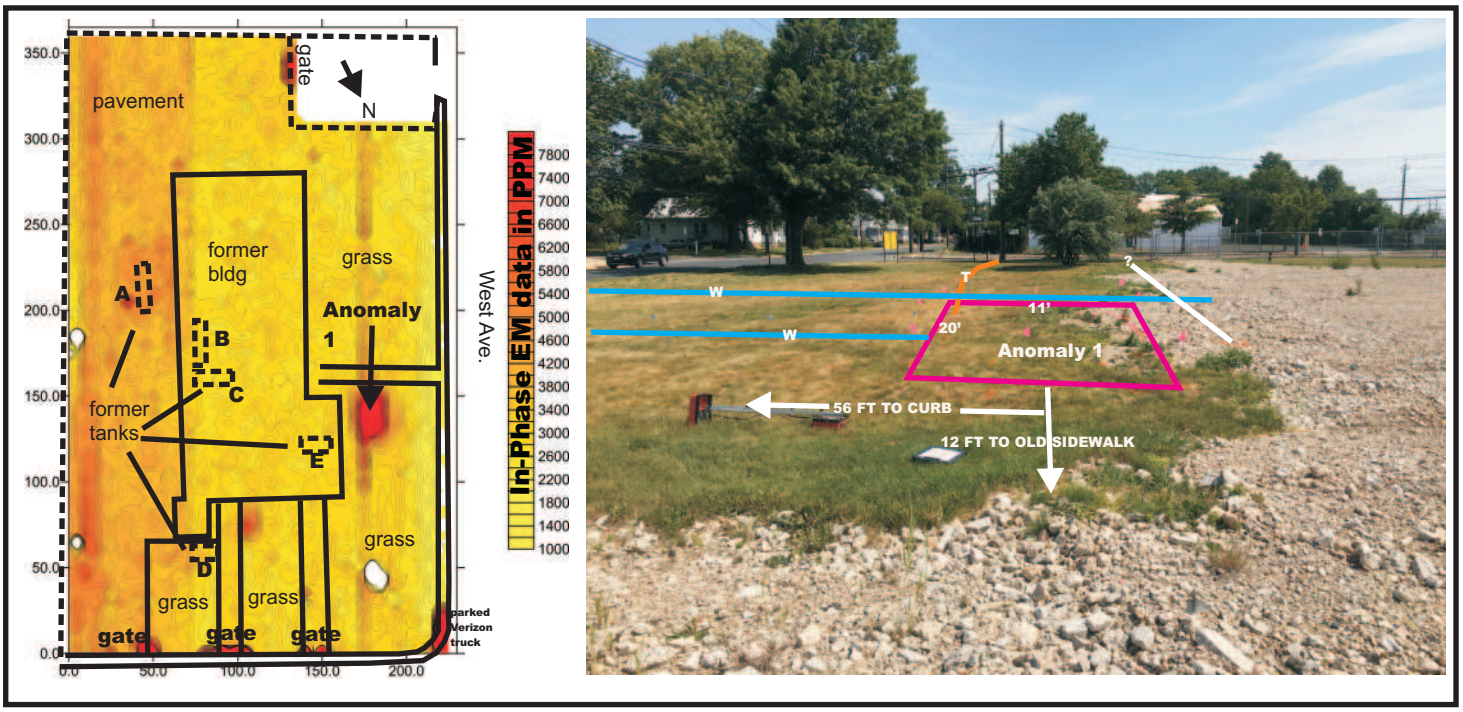
Download_Documer	Permit_Number	Well_Use	Potentially_Potable	Document	Date (permitted/drille	Physical_Address	County	Municipality	Block	Lot	Location_Method	Easting_X	Northing_Y	Distance_(feet)	Depth (feet)	Capacity (gal/min)
	A1509042	Domestic	Yes	Decommissioning	9/23/2015	131 Seventh Ave	Middlesex	Woodbridge Twp	611	6	GPS	557253	631740	3888		
	2900057595	Irrigation	Yes	Record	6/18/2008	139 AVENUE OF TWO RIVERS	Monmouth	Rumson Boro	87	45	GPS	558480	633698	4155	182	20
	2600007289	Industrial	Yes	Record	1/18/1985	MAPLEWOOD AVE	Middlesex	Woodbridge Twp	918A	1	Prop Loc - Dig Image	559631	632139	2219	560	8
	2600005078	Domestic	Yes	Record	5/28/1981	RAHWAY AVE	Middlesex	Woodbridge Twp	1006	24	Prop Loc - Dig Image	556537	634829	6262	300	10
	2600004315	Industrial	Yes	Permit	11/5/1969		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	558137	632776		200	69
	2600004315	Industrial	Yes	Record	11/21/1969	100 MARKLEY ST	Middlesex	Woodbridge Twp	603	11	Prop Loc - Hard Copy	558137	632776		600	0
	2600003572	Domestic	Yes	Permit	10/25/1965		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	555040	636815		100	10
	2600003572	Domestic	Yes	Record	8/18/1965	184 EDGARTON BLVD	Middlesex	Woodbridge Twp			Prop Loc - Dig Image	558591	636184	6322	100	9
	2600003382	Domestic	Yes	Permit	8/4/1965		Essex	Nutley Twp			Prop Loc - Hard Copy	557060	631458		200	10
	2600003378	Domestic	Yes	Permit	8/4/1965		Essex	Nutley Twp			Prop Loc - Hard Copy	557060	631458		200	10
	2600003135	Domestic	Yes	Record	4/28/1965	117 LARCH ST.	Middlesex	Woodbridge Twp			Prop Loc - Dig Image	555800	633506	5927	100	8
	2600001829	Industrial	Yes	Record	5/28/1958	PORT READING AVE	Middlesex	Woodbridge Twp			Prop Loc - Dig Image	562717	632148	2659	168	0
	2600001829	Industrial	Yes	Permit	4/24/1958		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	564322	628746		100	50
	2600001353	Domestic	Yes	Permit	1/26/1956		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	556057	631455		100	10
	2600001316	Industrial	Yes	Record	2/15/1957	AVENEL ST	Middlesex	Woodbridge Twp			Prop Loc - Dig Image	564479	634824	7815	614	30
	2600001269	Industrial	Yes	Decommissioning	9/7/1969	RAHWAY AVE	Middlesex	Woodbridge Twp	551	1-G	Prop Loc - Dig Image	554496	628078	6705	200	70
	2600001269	Industrial	Yes	Record	2/1/1956	RAHWAY AVE	Middlesex	Woodbridge Twp			Prop Loc - Dig Image	554496	628078	6705	200	70
	2600001269	Industrial	Yes	Permit	8/25/1955		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	554526	626695		300	65
	2600001226	Industrial	Yes	Permit	6/10/1955		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	554526	626695		200	100
	2600001201	Industrial	Yes	Permit	6/6/1955		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	555508	634793		200	60
	2600000360	Domestic	Yes	Permit	8/25/1951		Union	Rahway City			Prop Loc - Hard Copy	558140	631451		90	15
	2600000238	Domestic	Yes	Record	12/30/1950	72 2ND AVE	Middlesex	Woodbridge Twp	632	104	Prop Loc - Dig Image	558805	630787	2285	146	4
	2600000238	Domestic	Yes	Permit	12/20/1950		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	558137	632776		300	5
	2600000004	Industrial	Yes	Record	4/23/1948	UNKNOWN	Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	562227	632787		41	60
	2600000004	Industrial	Yes	Permit	11/19/1947		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	562227	632787		100	6
	2600000003	Industrial	Yes	Record	5/15/1948	UNKNOWN	Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	562227	632787		41	45
	2600000003	Industrial	Yes	Permit	11/19/1947		Middlesex	Woodbridge Twp			Prop Loc - Hard Copy	562227	632787		100	6

APPENDIX B:
GPR SURVEY REPORT

EnviroPhysics, Inc.
Subsurface Delineation Report

Date	6/27/2016	**Client**	Earth Systems
Location	835 West Ave., Port Reading, NJ	**Geophysicist**	Philip Duran

Equipment Used **Schoenstadt GA72CD fluxgate magnetometer, Fisher TW-6 metal detector GSSI SIR-3000 radar system with 200 mhz antenna, Geophex GEM-2 EM conductivity meter, Radiodetection RD-8000 line tracer**



Electromagnetic (EM) metal detection data were collected throughout the accessible portions of the main study area along parallel transects separated by five feet in an effort to detect buried steel fuel tanks and other electrically conductive buried targets. This was followed by radar, metal detection and magnetometry data collection over all detected anomalies. In addition, radar surveys were done in an effort to detect the former locations of tanks A, B, C and D as shown above.

The former locations of tanks A to D were delineated by radar and marked on the ground with spray paint. In-Phase EM data (see above) indicated the presence of only one potentially significant area of buried metal (Anomaly 1). When this anomaly was re-surveyed with metal detection and radar equipment it was found to be approximately 20 by 11 feet in size. The radar data collected over this anomaly was inconclusive, but the line tracing data collected here suggested that several utilities are associated with it. The most likely explanation is that this anomaly represents a utility vault made of reinforced concrete or steel that may be related to water, phone, sewer or other utilities associated with the former building at this site.

NOTICE: The methods used at this site have been used successfully at many sites to locate buried targets. There can be no guarantee, however, that every target will be detected at a particular site. Sub-surface conditions may prevent some or all geophysical methods from detecting a particular buried target. This is particularly true for non-metallic or deep targets (such as sewer lines) and areas paved with steel-reinforced concrete. Target locations should be considered accurate to one foot on each side for targets defined by radar, and two feet per end for targets defined by other means.

EnviroPhysics, Inc. 546 Keefe Rd. Lawrenceville, NJ 08648 609 844-9844 Fax 844-9845

APPENDIX C:
SOIL BORING LOGS

Earth Systems, Inc.				Boring Log T2-1			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-1			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/29/16			Date Completed: 6/29/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-3' Crushed concrete/debris
2			0				
3			0				
4			0				GW @ 3.5' 3-5' Dark brown sandy silt odor
5			0				
6	T2-1A (6-6.5')		7.1				5-6' Dark brown/red sandy silt with cobbles
7			0				6-10' Brown/black sandy silt trace of tan sand
8			0				
9			0				
10			0				10-11' Dark gray/tan/brown sandy silt
11			80.5				
12	T2-1B (12-12.5')		210.8				11-14' Red brown sandy clay
13			0				
14			0				14-15' Red clay
15	T2-1C (14.5-15')		0				End of boring @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-2	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: T2-2	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/28/16	Date Completed: 6/30/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
1			0		0-2' Debris/ large rubble/gravel
2			0		
3			0		2-3.5' Brown sandy silt - odor GW @ 3'
4			0		3.5-4.5' Dark brown/red/gray silty clay - odor
5			0		4.5-5' Dark red sandy (10%), silty (70%) clay (20%)
6	T2-2A (6-6.5')		535.8		5-7' Dark brown/black sandy silt - saturated with red silty clay
7			0		
8			0		7-13' Red/brown sandy clay with gravel/cobble
9			0		
10			28.4		
11			0		
12	T2-2B (12-12.5')		0		
13			0		13-15' Red clay with shale
14			0		
15	T2-2C (14.5-15')		0		End of boring @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-3		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: T2-3		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16		Date Completed: 6/30/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-1.5' Gravel/debris - large rubble
2			0				1.5-3.5' Brown sand - medium coarse
3			0				
4			0				3.5-4.5' Dark brown/dark red silty clay GW @ 4'
5			0				4.5-5' Dark gray/red sandy silt - moist, odor
6	T2-3A (6-6.5')		178				5-6.5' Gray/brown sand - saturated with mixed silty clay
7			0				
8			0				
9			0				
10			0				7-15' Red sandy clay with cobble
11			0				
12	T2-3B (12-12.5')		0				
13			0				
14			0				
15	T2-3C (14.5-15')		0				End of boring @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-4		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: T2-4		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16		Date Completed: 6/30/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-1.5' Gravel/debris
2			0				1.5-3.5' Brown sand - medium coarse GW @ 3.5'
3			0				
3.5-3.6'							Black peat/fibris layer, silty clay
4			0				3.6-5' Dark brown/dark red silty clay
5			0				
6	T2-4A (6-6.5')		0				5-7' Red/gray sandy clay - saturated
7			0				
8			0				7-10' Red clay with mixed gravel/shale
9			0				
10			0				
11			0				10-15' Red clay with mixed cobble/gravel/shale at 13.5'
12	T2-4B (12-12.5')		0				
13			0				
14			0				
15	T2-4C (14.5-15')		0				
							End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-5	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: T2-5	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16	Date Completed: 6/29/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
					0-2' Debris/ large rubble/gravel
1			0		
2			0		
					2-3.5' Brown sandy silt - odor GW @ 3'
3			0		
					3.5-4.5' Dark brown/red/gray silty clay - odor
4			0		
					4.5-5' Dark red sandy (10%), silty (70%) clay (20%)
5			0		
6			0		5-10' No Recovery
7			0		
8			0		
9			0		
10			435		
					10-10.5' Dark black/brown sand
11			0		
12	T2-5B (12-12.5')		495.5		10.5-13' Dark red sandy clay with cobble
13			0		
					13-14' Dark red clay
14			168.1		
					14-15' Dry, dark red clay
15	T2-5C (14.5-15')		3		
					End of boring @ 15'
					Logged by: Scott Mayes

Earth Systems, Inc.				Well Log TWT2-5 (Temp Well)	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: TWT2-5	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: Same boring hole as T2-5
Slot Size	NA			Date Started: 6/27/16	Date Completed: 6/29/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
1			0	SAND	0-2' Debris/ large rubble/gravel
2			0		
3			0		2-3.5' Brown sandy silt - odor GW @ 3'
4			0	SAND	3.5-4.5' Dark brown/red/gray silty clay - odor
5			0		4.5-5' Dark red sandy (10%), silty (70%) clay (20%)
6			0		5-10' No Recovery
7			0		
8			0	SAND	
9			0		
10			435	SAND	10-10.5' Dark black/brown sand
11			0		10.5-13' Dark red sandy clay with cobble
12	T2-5B (12-12.5')		495.5		
13			0	SAND	13-14' Dark red clay
14			168.1		14-15' Dry, dark red clay
15	T2-5C (14.5-15')		3		
				WELL BOTTOM @ 15'	Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-6			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-6			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/29/16			Date Completed: 6/29/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				
2			0				0-3' Crushed concrete/debris
3			0				GW @ 3'
4			0				3-5' Dark brown sandy silt, odor
5			0				
6	T2-6A (6-6.5')		0				
7			0				5-10' Dark brown sandy silt, trace of red clay and cobble
8			33.5				
9			0				
10			0				
11			45.5				
12	T2-6B (12-12.5')		0				10-15' Dark brown/red sandy clay with cobble
13			0				
14			0				
15	T2-6C (14.5-15')		3.2				
							End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-7	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: T2-7	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/29/16	Date Completed: 6/30/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
1			0		
2			0		0-3' Crushed concrete/debris
3			0		GW @ 3'
4			0		3-5' Dark brown sandy silt, odor
5			0		
6	T2-7A (6-6.5')		350.7		5-6' Tan/brown sandy silt
7			0		
8			496.3		6-10' Black/red sandy silty clay
9			0		
10			0		
11			0		
12	T2-7B (12-12.5')		56.5		10-13' Red/gray sandy clay
13			0		
14			0		13-15' Red clay with cobble and shale
15	T2-7C (14.5-15')		0		
					End of boring @ 15'
					Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-8			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-8			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/29/16			Date Completed: 6/29/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-3' Crushed concrete/debris
2			0				
3			0				
4			0				GW @ 3.5' 3-5' Dark brown sandy silt odor
5			0				
6	T2-8A (6-6.5')		180				5-8' Red/brown/gray sandy silt - saturated
7			0				
8			0				
9			0				8-11' Red/tan hard clay with cobble
10			0				
11			0				11-12' Gray/red sandy clay with shale layer
12	T2-8B (12-12.5')		0				12-13' Soft red/brown sandy clay
13			13.8				
14			0				13-15' Hard red clay with shale layer
15	T2-8C (14.5'-15')		0				
							End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-9			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-9			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/29/16			Date Completed: 6/29/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				
2			0				0-3' Crushed concrete/debris
3			0				GW @ 3'
4			0				3-5' Dark brown sandy silt, odor
5			0				
6	T2-9A (6-6.5')		30.8				5-8' Red/gray sandy silt - saturated
7			0				
8			0				
9			0				8-10' Red clay with cobble
10			0				
11			0				
12	T2-9B (12-12.5')		0				10-15' Red clay
13			0				
14			0				
15	T2-9C (14.5'-15')		0				
							End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-10	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: T2-10	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/29/16	Date Completed: 6/30/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
1			0		0-3' Crushed concrete
2			0		
3			0		
4			0		3-5' GW @ 4' Brown sandy silt, saturated
5			0		
6	T2-10A (6-6.5')		0.5		5-7' Red/gray sandy clay
7			0		
8			0		7-15' Red clay with shale layers @14.5'
9			0		
10			0		
11			0		
12	T2-10B (12-12.5')		0		
13			0		
14			0		
15	T2-10C (14.5'-15')		0		End of boring @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T3-1	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: T3-1	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments:
Slot Size	NA			Date Started: 6/27/16	Date Completed: 6/28/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
1			0		0-1.5' Gravel, Debris Pre-cleared to 5'
2			0		1.5-4' Dark brown sandy silt, slight odor
3			0		GW @ 3.5'
4			0		4-5' Dark red/brown silty clay/moist odor
5			0		5-6' Dark red/brown sandy silt
6	T3-1A (6-6.5)		175		
7			0		6-10' Red sandy clay
8			0		
9			0		
10			0		
11			0		
12	T3-1B (12-12.5')		0		10-15' red sandy clay with cobble - trace of tan sand
13			0		
14			0		
15	T3-1C (14.5-15')		0		End of boring @ 15'
					Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T3-2			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T3-2			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16			Date Completed: 6/28/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-2' Gravel/debris/rock
2			0				
3			0				2-3' Brown Sand - odor GW @ 3'
4			0				3-4' Dark brown sandy silt
5			0				
6	T3-2A (6-6.5')		215				4-10' Dark red/brown sandy silt
7			0				
8			0				
9			0				
10			0				
11			0				
12	T3-2B (12-12.5')		0				10-15' Red sandy clay with cobble
13			0				
14			0				
15	T3-2C (14.5-15')		0				End of boring @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T3-3			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T3-3			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/28/16			Date Completed: 6/28/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-2' Debris/stone/gravel
2			0				
3			0				2-4' Light brown sand/fill - medium coarse GW @ 3.5'
4			0				
5			0				4-5' Dark brown/red sandy (10%), silty (70%) clay (20%)
6			0				5-6' Brown sand, medium coarse
7			0				6-10' Red sandy clay
8			0				
9			0				
10			0				
11			0				
12	T3-3B (12-12.5')		0				10-15' Red sandy clay with cobbles
13			0				
14			0				
15	T3-3C (14.5-15')		0				End of boring @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T3-4			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T3-4			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16			Date Completed: 6/28/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-1.5' Gravel/debris
2			0				1.5-2' Asphalt layer
3			0				2-4' Brown sand, red sandy silt GW @ 3'
4			0				4-5' Dark brown sandy silt
5			0				
6			0				
7			0				5-10' Red sandy clay
8			0				
9			0				
10			0				
11			0				
12	T3-4B (12-12.5')		0				10-15' Red sandy clay with cobble
13			0				
14			0				
15	T3-4C (14.5-15')		0				End of boring @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T3-5		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: T3-5		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments:
Slot Size	NA			Date Started: 6/27/16		Date Completed: 6/28/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
							0-1.5' Gravel, Debris Pre-cleared to 5'
1			0				
2			0				1.5-4' Brown Sand GW @ 3'
3			0				
4			0				4-5' Dark brown silty clay
5			0				
6			0				5-10' Red sandy (20%) clay with mixed cobble
7			0				
8			0				
9			0				
10			0				
11			0				10-15' Red sandy (20%) clay (80%) with cobble, trace of brown/tan sand - medium/coarse
12	T3-5B (12-12.5')		0				
13			0				
14			0				
15	T3-5C (14.5-15')		0				End of boring @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T3-6		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: T3-6		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16		Date Completed: 6/28/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-1.5' Gravel/debris
2			0				1.5-4' Brown Sand
3			0				GW @ 3'
4			0				4-5' Dark red/brown sandy silt
5			0				
6			0				
7			0				5-10' Red Sandy Clay
8			0				
9			0				
10			0				
11			0				
12			0				10-15' Red sandy clay with cobble and gravel
	T3-6B (12-12.5')						
13			0				
14			0				
15	T3-6C (14.5-15')		0				End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T4-1			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T4-1			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16			Date Completed: 6/28/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
							0-0.5' Grass/topsoil
1			0				
2			0				0.5-3.5' Brown sand, cobble
3			0				GW @ 3'
4			0				3.5-4.5' Dark brown/dark red silty clay - moist
5			0				4.5-5' Gray clay
6			0				5-7' Gray saturated silty clay
7			0				
8			0				7-9' Dark red sandy clay with cobble
9			0				
10			0				9-10' Tan/brown sand with mixed red sandy clay
11			0				
12	T4-1B (12-12.5')		0				
13			0				10-15' Red sandy clay with cobble
14			0				
15	T4-1C (14.5-15')		0				
							End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T4-2		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: T4-2		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16		Date Completed: 6/28/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction		Description
1			0			0-0.5' Grass/topsoil
2			0			0.5-3' Brown Sand, cobble
3			0			GW @ 3'
4			0			3-4.5' Tan/brown, medium coarse, sandy silt
5			0			4.5-5' Brown sandy (10%), silty (70%), clay (20%)
6			0			5-7' Black/brown sand, moist/saturated
7			0			
8			0			
9			0			7-11' Tan/brown sand, saturated
10			0			
11			0			
	T4-2B (11-11.5)					11-12' Gray/dry concrete (sampled above concrete)
12			0			
						Refusal @ 12'
						Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T4-3	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: T4-3	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16	Date Completed: 6/28/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
1			0		0-2' Gravel/debris
2			0		
3			0		2-4' Brown sand/cobble, medium coarse GW @ 4'
4			0		
5			0		4-5' Dark brown/black sandy silt - moist 4.9-5' - trace of red clay
6			0		5-6' Dark gray/red, saturated, sandy silt medium coarse
7			0		
8			0		
9			0		
10			0		6-15' Dark gray/red sandy clay
11			0		
12	T4-3B (12-12.5')		0		
13			0		
14			0		
15	T4-3C (14.5-15')		0		
					End of boring @ 15'
					Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T4-4	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: T4-4	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/27/16	Date Completed: 6/28/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
					0-0.5' Grass/topsoil
1			0		0.5-3' Brown sand/ medium coarse
2			0		
3			0		
4			0		3-5' GW @ 3.5' Dark brown, sandy silt/gravel, moist
5			0		
6			0		5-6' Dark gray sandy silt with cobble
7			0		6-10' Saturated tan/gray sand with cobble
8			0		
9			0		
10			0		
11	T4-4B (11-11.5')		0		10-12' Gray/dry concrete (sampled above concrete)
12			0		Refusal @ 12'
					Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log TK-1	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: TK-1	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/28/16	Date Completed: 6/29/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
1			0		0-2' Asphalt/gravel/fill
2			0		
3			0		2-4' Gravel/cobble/fill GW @ 3.5'
4			0		
5			0		4-5' Cobble/fill
6			0		5-7' Dark red sandy silt - saturated
7			0		
8			0		
9			0		
10			0		
11			0		7-15' Red sandy clay with cobble and gravel
12	TK-1B (12-12.5')		0		
13			0		
14			0		
15	TK-1C (14.5-15')		0		
					End of boring @ 15'
					Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log TK-2		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: TK-2		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/28/16		Date Completed: 6/29/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
							0-1' Asphalt layer, gravel
1			0				
							1-3' Tan/brown fill/sand/cobble
2			0				
3			0				GW @ 3'
							3-4' Dark brown sandy silt
4			0				
							4-5' Dark red/brown sandy clay
5			0				
6			0				
							5-9' Dark red sandy (80%) silt (20%)
7			0				
8			0				
9			0				
10			0				
11			0				
							9-15' Red sandy clay - saturated
12	TK-2B (12-12.5')		0				
13			0				
14			0				
15	TK-2C (14.5-15')		0				
							End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log TWTK-2 (Temp Well)	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: TWTK-2	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: Same boring hole as TK-2
Slot Size	NA			Date Started: 6/28/16	Date Completed: 6/29/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
					0-1'
					Asphalt layer, gravel
1			0		
					1-3'
2			0		Tan/brown fill/sand/cobble
3			0		GW @ 3'
					3-4'
					Dark brown sandy silt
4			0		
					4-5'
5			0		Dark red/brown sandy clay
6			0		
					5-9'
7			0		Dark red sandy (80%) silt (20%)
8			0		
9			0		
10			0		
11			0		9-15'
					Red sandy clay - saturated
12	TK-2B (12-12.5')		0		
13			0		
14			0		
15	TK-2C (14.5-15')		0		
				WELL BOTTOM @ 15'	
					Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log TK-3		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: TK-3		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/28/16		Date completed: 6/29/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction		Description
1			0			0-1' Asphalt layer, gravel
2			0			1-3' Tan/brown fill/sand/cobble
3			0			GW @ 3'
4			0			3-4' Dark brown sandy silt
5			0			4-5' Dark red/brown sandy clay
6			0			5-9' Dark red sandy silt- saturated
7			0			
8			0			
9			0			
10			0			9-13' Red sandy clay
11			0			
12	TK-3B (12-12.5')		0			
13			0			13-13.5' Dark purple clay
14			0			13.5-15' Red clay layer with shale layer
15	TK-3C (14.5-15')		0			
						End of boring @ 15'
						Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log TK-4		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: TK-4		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/28/16		Date Completed: 6/29/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-2' Asphalt/gravel/fill
2			0				
3			0				2-4' Gravel/cobble/fill GW @ 3.5'
4			0				
5			0				4-5' Cobble/fill
6			0				5-10' No recovery
7			0				
8			0				
9			0				
10			0				
11			0				10-12' No recovery cobble, stone, fill - saturated
12	TK-4B (12-12.5')		0				
13			0				12-15' Red sandy clay with cobble/gravel
14			0				
15	TK-4C (14.5-15')		0				
							End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log TK-5		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: TK-5		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/28/16		Date Completed: 6/29/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-2' Asphalt/gravel/fill
2			0				
3			0				2-4' Gravel/cobble/fill GW @ 3'
4			0				
5			0				4-5' Cobble/fill
6	TK-5A (6-6.5')		0				
7			0				5-10' Brown sandy (80%) silt (20%) saturated, cobble
8			0				
9			0				
10			0				
11			0				
12	TK-5B (12-12.5')		0				10-15' Dark red sandy clay
13			0				
14			0				
15	TK-5C (14.5-15)		0				End of boring @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log TK-6			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: TK-6			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/28/16			Date Completed: 6/29/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-2' Asphalt/gravel/fill
2			0				
3			0				2-4' Gravel/cobble/fill GW @ 3'
4			0				
5			0				4-5' Cobble/fill
6			0				5-10' Red/gray saturated sandy clay
7			0				
8			0				
9			0				
10			0				
11			0				
12	TK-6B (12-12.5')		0				10-15' Red sandy clay with cobble, trace tan, medium sand
13			0				
14			0				
15	TK-6C (14.5-15')		0				End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log TK-7		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: TK-7		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/28/16		Date Completed: 6/29/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				0-2' Asphalt/gravel/fill
2			0				
3			0				2-4' Gravel/cobble/fill GW @ 3'
4			0				
5			0				4-5' Cobble/fill
6			0				5-10' Stone/cobble/sand, possible backfill material
7			0				
8			0				
9			0				
10			0				
11			0				10-11' Sandy silty clay, dark red - saturated
12	TK-7B (12-12.5')		0				11-13' Dark red/brown, medium coarse sand
13			0				
14			0				13-15' Red clay - hard with cobble
15	TK-7C (14.5-15')		0				
							End of boring @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log PD-1		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: PD-1		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/30/16		Date Completed: 6/30/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				
2			0				0-3' Crushed concrete
3			0				GW @ 3'
4	PD-1A (4-4.5')		0				3-5' Brown sandy silt, saturated
5			0				
6	PD-1A (6-6.5')		0				
7			0				5-10' Red/gray sandy clay with cobble
8			0				
9			0				
10			0				End of boring @ 10'

Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log PD-2		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: PD-2		Driller: Unitech
Diameter	NA	NA		Depth to Water:		Permit Number:
Length	NA	NA		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/29/16		Date Completed: 6/30/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction		Description
1			0			
2			0			0-3' Crushed concrete
3			0			GW @ 3'
4	PD-2A (4-4.5')		0			3-6' Brown/gray sandy silt, saturated
5			0			
6	PD-2B (6-6.5')		0			
7			0			
8			0			6-10' Red clay with gravel/cobble
9			0			
10			0			
						End of boring @ 10'
						Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log PD-3	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: PD-3	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/30/16	Date Completed: 6/30/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
1			0		
2			0		0-3' Crushed concrete
3			0		GW @ 3'
4	PD-3A (4-4.5')		0		3-5' Brown/black sandy silt - saturated
5			0		
6	PD-3B (6-6.5')		0		5-8' Red sandy silt
7			0		
8			0		
9			0		8-10' Red sandy clay with gravel/shale
10			0		
					End of boring @ 10'
					Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-11	Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data	Casing:
Type	NA	NA	NA	Boring Number: T2-11	Driller: Unitech
Diameter	NA	NA		Depth to Water:	Permit Number:
Length	NA	NA		Date Measured:	Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16	Date Completed: 11/7/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction	Description
1			0		1.0-3.0' Brown sand, med/coarse
2			0		
3			19.5		GW @ 3'
					3.0-5.0' Black silty/sand, med/coarse, odor
4			0		
5			23.1		5.0-6.0' Tan/brown sandy silt, med/coarse, odor
6	T2-11A (6-6.5')		1.8		
7			0		6.0-10.0' Grey/red silty clay, med/fine
8			0		
9			0		
10			1.7		
					10.0-11.0' Grey silty clay
11			2.6		
12	T2-11B (12-12.5')		35.9		11.0-15.0' Red/brown silty clay, med fine, odor @ 12.5 ft.
13			29.3		
14			0		
15			2.4		
					BOTTOM @ 15'
					Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-12			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-12			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				GW @ 3' 3.0-5.0' Black silty/sand, med/coarse, odor
4			0				
5			73.5				5.0-6.0' Dark brown, silty sand, med/fine
6			61.2				
7			0				6.0-7.0' Dark brown silty clay/sand
8	T2-12A (7.5-8')		358.6				7.0-8.0' Dark, red/brown/black silty clay, odor
9			0				9' Grey concrete layer
10			2.5				9.0-10.0' Red/brown silty clay
11			0.5				
12	T2-12B (12-12.5')		0				10.0-15.0' Red/tan/grey silty clay, medium fine
13			0.3				
14			0				
15			0.4				
							BOTTOM @ 15' Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-13			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-13			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				GW @ 3.5' 3.0-5.0' Black silty/sand, med/coarse
4			0				
5			63.5				5.0-7.0' Dark brown/red sandy silt, odor @ 6'
6	T2-13A (6-6.5')		0				
7			531.2				
8			310.8				7.0-10.0' Red, sandy clay, med/fine
9			0				
10			59.9				
11			1.5				10.0-15.0' Red/brown silty clay, fine, Shale layer @ 13'
12	T2-13B (12-12.5')		0				
13			0.3				
14			0				
15			1.2				BOTTOM @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-14			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-14			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				GW @ 3.5' 3.0-5.0' Black silty/sand, med/coarse
4			0				
5			5.5				5.0-7.0' Dark red/brown sandy silt, medium/coarse, odor
6	T2-14A (6.5-7.0')		223.1				
7			625				
8			0				7.0-10.0' Red silty clay, medium/fine, shale at 8.5'
9			0				
10			42				
11			0				10.0-15.0' Red silty clay, medium/fine
12	T2-14B (12.0-12.5')		2.3				
13			0				
14			0				
15			2.3				BOTTOM @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-15			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-15			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				3.0-5.0' Black silty/sand, med/coarse GW @ 4'
4			0				
5			0.2				5.0-6.0' Tan/brown sandy silt, medium/coarse
6	T2-15A (6.0-6.5')		0.3				
7			0				6.0-10.0' Red silty clay, medium/fine
8			0.3				
9			0				
10			0.2				
11			2.3				
12	T2-15B (12.0-12.5')		34.2				
13			0				10.0-15.0' Red silty clay
14			6.1				
15			1				
							BOTTOM @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-16			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-16			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				GW @ 3' 3.0-5.0' Black silty/sand, med/coarse
4			0				
5			0.2				5.0-6.0' Saturated gravel, grey/brown, sand/cobble, coarse
6	T2-16A (6.0-6.5')		0				
7			0.1				6.0-10.0' Red/grey silty clay, medium/fine
8			0				
9			0.1				
10			0.3				
11			0				10.0-12.0' Grey/red silty clay
12	T2-16B (12.0-12.5')		0.4				
13			0				12.0-15.0' Red silty clay, fine, shale/cobble @ 14.0-14.5'
14			0				
15			0.2				BOTTOM @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-17			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-17			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				GW @ 3' 3.0-5.0' Black silty/sand, med/coarse
4			0				
5	T2-17A (6.0-6.5')		0				5.0-6.0' Dark brown/tan sandy silt with gravel
6			3.2				
7			0.4				6.0-7.0' Dark brown/red silty clay, medium/fine
8			0				7.0-10.0' Red silty clay, medium/fine
9			0.3				
10			0.1				
11			0.3				
12	T2-17B (12.0-12.5')		0				10.0-15.0' Red silty clay, medium/fine with shale mix
13			0.2				
14			0				
15			0.2				BOTTOM @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-18			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-18			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				GW @ 3' 3.0-5.0' Black silty/sand, med/coarse
4			0				
5			23.2				5.0-6.0' Tan/brown sand, med/coarse
6	T2-18A (6.0-6.5')		630.5				6.0-6.5' Dark black silty sand, odor
7			15.9				6.5-8.0' Grey silty clay, medium fine
8			0				
9			1.3				8.0-10.0' Red/grey silty clay
10			4.5				
11			3.5				10.0-15.0' Red silty clay with shale at 12.0'
12	T2-18B (12.0-12.5')		0				
13			1.5				
14			0				
15			1.5				BOTTOM @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-19			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-19			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				GW @ 3.5' 3.0-5.0' Black silty/sand, med/coarse
4			0				
5			0				5.0-5.5' Tan sand/brick/wood layer
6	T2-19A (6.0-6.5')		0				5.5-6.5' Brown/red silty clay
7			0				6.5-10.0' Brown/red silty clay
8			0				
9			0				
10			0				
11			0				
12	T2-19B (12.0-12.5')		0				10.0-15.0' Red silty clay, medium/fine with mixed shale layers
13			0				
14			0				
15			0				
							BOTTOM @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-20			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-20			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				GW @ 3.5' 3.0-5.0' Black silty/sand, med/coarse
4			0				
5			25.2				5.0-6.0' Tan sandy silt, coarse, with cobble
6	T2-20A (6-6.5')		80.1				
7			0				6.0-7.0' Red/brown sandy clay, medium, with cobble
8			56.6				7.0-9.0' Red/brown silty sand, medium
9			220.3				
10	T2-20B (9.5-10.0')		121				9.0-10.5' Tan/grey sandy silt, odor
11			5.6				
12			2.3				11.0-15.0' Red/brown silty clay with mixed shale
13			0				
14			1.5				
15			0				
							BOTTOM @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Boring Log T2-21			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: T2-21			Driller: Unitech
Diameter	NA	NA		Depth to Water:			Permit Number:
Length	NA	NA		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 11/7/16			Date Completed: 11/7/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0				1.0-3.0' Brown sand, med/coarse
2			0				
3			0				GW @ 3.5' 3.0-5.0' Black silty/sand, med/coarse
4			0				
5			0				5.0-6.0' Red/brown sandy silt with mixed gravel
6	T2-21A (6.0-6.5')		19				
7			110				6.0-10.0' Tan/brown sand/silt, odor @ 9.5-10.0'
8			71.2				
9	T2-21B (9.5-10.0')		352				
10			125				
11			338.9				10.0-11.0' Tan/brown sandy silt, odor
12			5.4				11.0-15.0' Red silty clay with shale layer @12.5'
13			3.3				
14			2.4				
15			0.9				BOTTOM @ 15'
							Logged by: Scott Mayes

Earth Systems, Inc.				Well Log MW-1		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: MW-1		Driller: Unitech
Diameter	2"	2"		Depth to Water:		Permit Number: E201607933
Length	10'	3'		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/30/16		Date Completed: 6/30/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction		Description
1			0	GROUT	GROUT	0-2' Concrete
2			0			
3			0			2-5'
4			0	SAND	SAND	Brown sandy silt GW @ 4.5'
5			0			
6			0			
7			0			5-10'
				SAND	SAND	No recovery cobble/crushed debris
8			0			
9			0			
10			60.8			10-11'
						Red brown sandy silt with gravel
11			0			
				SAND	SAND	
12			5			11-15'
						Red sandy clay
13			0			
14			0			
15			0			
				WELL BOTTOM @ 13'		`
						Logged by: Scott Mayes

Earth Systems, Inc.				Well Log MW-2		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number: MW-2		Driller: Unitech
Diameter	2"	2"		Depth to Water:		Permit Number: E201607934
Length	10'	3'		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/30/16		Date Completed: 6/30/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction		Description
1			0	GROUT	GROUT	0-1' Asphalt
2			0			1-1.5' Gravel
3			0			1.5-5' Brown sandy silt - saturated
4			0	SAND	SAND	GW @ 4.5'
5			0			
6			0			
7			0	SAND	SAND	5-10' Red/brown sandy clay shale @ 7'
8			0			
9			0			
10			0	SAND	SAND	
11			0			
12			0			10-15' Red/brown clay shale layer @ 14'
13			0			
				WELL BOTTOM @ 13'		`
						Logged by: Scott Mayes

Earth Systems, Inc.				Well Log MW-3		Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data		Casing:
Type	NA	NA	NA	Boring Number:	MW-3	Driller: Unitech
Diameter	2"	2"		Depth to Water:		Permit Number: E201607935
Length	10'	3'		Date Measured:		Comments: pre-cleared to 5'
Slot Size	NA			Date Started:	6/30/16	Date Completed: 6/30/16

Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
				GROUT		GROUT	0-1' Asphalt
1			0				
							1-1.5' Gravel
2			0	SAND		SAND	
							1.5-4' Brown sandy silt - saturated GW @ 3'
3			0				
4			0				
5			0				
6			0				
7			0	SAND		SAND	4-10' Red/brown sandy silt
8			0				
9			0				
10			0	SAND		SAND	
11			0				10-13' Red sandy clay
12			0				
13			0				
14			0	WELL BOTTOM @ 13'			13-15' Red hard clay with shale/gravel
15			0				
							Logged by: Scott Mayes

Earth Systems, Inc.				Well Log MW-4			Project: QC Lab - Port Reading 835 West Ave., Port Reading, NJ
	Screen	Riser	Sand Pack	Groundwater Data			Casing:
Type	NA	NA	NA	Boring Number: MW-4			Driller: Unitech
Diameter	2"	2"		Depth to Water:			Permit Number: E201615028
Length	12'	3'		Date Measured:			Comments: pre-cleared to 5'
Slot Size	NA			Date Started: 6/30/16			Date Completed: 6/30/16
Depth (feet)	Sample ID	Blow Counts	PID/FID (ppm)	Well Construction			Description
1			0	GROUT		GROUT	0-3' Overburden
2			0	SAND		SAND	
3			0				0-12' Sand/fill material/mixed materials
4			0				
5			0				
6			0				
7			0				
8			0				
9			0				
10			0	SAND		SAND	
11			0				
12			0				
13			0	SAND		SAND	12-15' Fine red clay
14			0				
15			0				
				WELL BOTTOM @ 15'			Logged by: Scott Mayes

APPENDIX D:
GROUNDWATER PURGE SHEETS

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: QC LAB - HCPR
DATE: 8/2/16
WEATHER: CLOUDY 75°F

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SCOTT M.
CERTIFICATION #: 13040

MONITOR WELL #: MW-1
WELL PERMIT #:
WELL DEPTH: 16.5
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL:

PID/FID READINGS (ppm):
BACKGROUND: -
BENEATH OUTER CAP: -
BENEATH INNER CAP: 19.8

PUMP INTAKE DEPTH: 14 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.5 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:45	X		12.20	NA	2.22	NA	-71	NA	8.30	NA	1.9	NA	24.30	NA	300	6.50
10:50	X		12.26	0.06	2.16	0.08	-68	3.0	7.30	1.00	1.3	0.6	24.00	0.30		7.75
10:55	X		12.23	0.03	2.10	0.06	-64	4.0	6.30	1.00	1.9	0.6	23.95	0.05		8.65
11:00	X		12.22	0.01	2.01	0.09	-65	1.0	6.25	0.05	1.95	0.05	23.85	0.10		9.50
11:05	X		12.24	0.02	1.98	0.03	-64	1.0	6.20	0.05	1.95	0.00	23.84	0.01		9.65
11:10	X		12.26	0.02	1.90	0.08	-62	2.0	6.18	0.02	1.92	0.03	23.80	0.04		9.75
11:15	X		12.27	0.01	1.85	0.05	-59	3.0	6.10	0.08	1.92	0.00	23.78	0.02		9.80
11:20		X														

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: QC LAB: HC-PR
DATE: 8/2/16
WEATHER: CLOUDY 75°F

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SCOTT M.
CERTIFICATION #: 13040

MONITOR WELL #: MW-2
WELL PERMIT #:
WELL DEPTH: 12.5
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL:

PID/FID READINGS (ppm):
BACKGROUND: –
BENEATH OUTER CAP: –
BENEATH INNER CAP: 88.9

PUMP INTAKE DEPTH: 10 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.3 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
11:40	X		7.40	NA	1.86	NA	-40	NA	0.00	NA	56.9	NA	25.69	NA	300	4.40
11:45	X		7.20	0.20	1.93	0.07	-70	30.0	0.00	–	17.9	39.0	26.70	1.11		5.50
11:50	X		7.00	0.20	1.89	0.04	-39	31.0	0.00	0.0	12.8	5.1	25.10	1.60		6.80
11:55	X		6.80	0.20	1.90	0.01	15		0.00	0.0	32.8	20.0	24.00	1.10		7.30
12:00	X		6.60	0.20	1.95	0.05	17	2.0	0.00	0.0	33.5	0.8	23.95	0.05		7.90
12:05	X		6.53	0.07	1.98	0.03	20	3.0	0.00	0.0	33.0	0.5	23.90	0.05		8.10
12:10	X		6.48	0.06	1.99	0.01	23	3.0	0.00	0.0	29.5	0.5	23.91	0.01		8.30
12:15	X		6.40	0.08	2.01	0.03	25	2.0	0.00	0.0	28.8	0.7	23.91	0.00		8.50
12:20		X														

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE:	QC LAB = MC-PR	CONSULTING FIRM:	EARTH SYSTEMS
DATE:	8/2/16	FIELD PERSONNEL:	SCOTT M.
WEATHER:	CLOUDY 75°F	CERTIFICATION #:	13040

MONITOR WELL #: MW-3 WELL DEPTH: 12.5 SCREENED/OPEN INTERVAL:
WELL PERMIT #: WELL DIAMETER: 2 Inches

PID/FID READINGS (ppm): BACKGROUND: -
BENEATH OUTER CAP: -
BENEATH INNER CAP: 2.5

PUMP INTAKE DEPTH: 10 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION : 2.1 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
12:45	X		6.76	NA	0.301	NA	-47	NA	0.90	NA	875	NA	26.87	NA	300	2.10
12:50	X		6.75	0.01	0.298	0.003	-54	7.0	0.00	0.90	820	55.0	26.95	0.08		2.15
12:55	X		6.74	0.01	0.294	0.004	-59	5.0	0.00	0.00	650	170.0	26.86	0.09		2.20
13:00	X		6.75	0.01	0.292	0.002	-61	2.0	0.00	0.00	350	300.0	26.78	0.08		2.30
13:05	X		6.73	0.02	0.294	0.002	-68	7.0	0.00	0.00	347	3.0	26.70	0.08		2.40
13:10	X		6.73	0.00	0.298	0.004	-70	2.0	0.00	0.00	345	2.0	26.65	0.05		2.45
13:15	X		6.72	0.01	0.300	0.002	-75	5.0	0.00	0.00	343	2.0	26.61	0.04		2.50
13:20		X														

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: QC LAB PORT READING
DATE: 1/9/17
WEATHER: SNOW 15°F

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SCOTT M.
CERTIFICATION #: 13040

MONITOR WELL #: MW-1
WELL PERMIT #:
WELL DEPTH:
WELL DIAMETER: 2 inches
SCREENED/OPEN INTERVAL:

PID/FID READINGS (ppm): BACKGROUND:
BENEATH OUTER CAP: 1
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 12 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 7.01 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mv) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/l) (SM 4500OG) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) (EPA 180.1) READING	TURBIDITY CHANGE*	TEMPERATURE (degrees C) (SM 2550) READING	TEMPERATURE CHANGE*	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
10:30	X		11.88	NA	1.23	NA	-267	NA	9.11	NA	25.1	NA	7.98	NA	250	8.00
10:35	X		11.95	0.07	1.24	0.01	-272	5	9.40	0.29	2.1	23.0	7.68	0.30		8.15
10:40	X		11.97	0.02	1.20	0.04	-273	1	9.10	0.30	0.0	2.1	7.70	0.02		8.20
10:45	X		11.93	0.04	1.15	0.05	-271	2	6.10	3.00	0.0	0.0	7.85	0.15		8.40
10:50	X		11.94	0.01	1.11	0.04	-270	1	6.11	0.01	0.0	0.0	7.99	0.14		8.65
10:55	X		11.97	0.03	1.10	0.01	-270	0	6.15	0.04	0.0	0.0	8.05	0.06		8.80
11:00	X		11.96	0.02	1.08	0.02	-272	2	6.20	0.05	0.0	0.0	8.11	0.06		8.95
11:05		X														

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: QC LAB PORT READING
DATE: 1/9/17
WEATHER: SNOW 15°F

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SCOTT M.
CERTIFICATION #: 13040

MONITOR WELL #: MW-2
WELL PERMIT #:
WELL DEPTH: 15
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL:

PID/FID READINGS (ppm): BACKGROUND: /
BENEATH OUTER CAP:
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 12 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 4.55 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
11:30	X		7.75	NA	0.942	NA	-47	NA	6.29	NA	110	NA	11.95	NA	250	5.25
11:35	X		6.75	1.00	0.960	0.018	8	—	6.10	0.19	85.0	25	11.40	0.55		5.60
11:40	X		6.76	0.01	0.967	0.007	9	1	6.05	0.05	30.0	55	11.39	0.01		5.85
11:45	X		6.74	0.02	0.970	0.003	110	101	5.90	0.15	24.0	6	11.35	0.04		6.05
11:50	X		6.71	0.03	0.973	0.003	119	9	5.85	0.05	20.0	4	11.30	0.05		6.25
11:55	X		6.69	0.01	0.971	0.002	125	6	5.79	0.06	19.2	0.8	11.39	0.09		6.38
12:00	X		6.64	0.05	0.977	0.006	131	6	5.70	0.09	19.0	0.2	11.41	0.03		6.50
12:05	X		6.60	0.04	0.969	0.008	134	3	5.71	0.01	18.2	0.8	11.41	0.00		6.70
12:10		X														

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: QC LAB PORT READING
DATE: 1/9/17
WEATHER: SNOW 15°F

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SCOTT M.
CERTIFICATION #: 13040

MONITOR WELL #: MW-3
WELL PERMIT #:
WELL DEPTH: 15
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL:

PID/FID READINGS (ppm): BACKGROUND:
BENEATH OUTER CAP: /
BENEATH INNER CAP: 0.0

PUMP INTAKE DEPTH: 12 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 2.5 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
13:45	X		7.02	NA	0.330	NA	46	NA	0.75	NA	250	NA	7.26	NA	250	3.00
13:50	X		6.75	0.27	0.334	0.004	66	20	0.00	0.75	245	5	7.46	0.20		3.10
13:55	X		6.50	0.25	0.332	0.002	66	0	0.00	0.00	150	95	7.90			3.25
14:00	X		6.39	0.11	0.330	0.002	62	4	0.00	0.00	50.0	100	8.50	0.60		3.28
14:05	X		6.36	0.03	0.329	0.001	61	1	0.00	0.00	40.0	10	8.59	0.09		3.31
14:10	X		6.34	0.02	0.327	0.002	60	1	0.00	0.00	34.0	6.0	8.65	0.06		3.35
14:15	X		6.34	0.00	0.325	0.002	63	3	0.00	0.00	32.0	2.0	8.71	0.06		3.40
14:20	X		6.33	0.01	0.323	0.002	64	1	0.00	0.00	31.2	0.8	8.73	0.02		3.40
14:25		X														

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

609-664-6647

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: QC LAB PORT READING
DATE: 1/9/17
WEATHER: SNOW 15°F

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: Scott M.
CERTIFICATION #: 13040

MONITOR WELL #: MW-4
WELL PERMIT #:
WELL DEPTH: 15
WELL DIAMETER: 2 inches
SCREENED/OPEN INTERVAL:

PID/FID READINGS (ppm):
BACKGROUND:
BENEATH OUTER CAP: /
BENEATH INNER CAP: 21.5

PUMP INTAKE DEPTH: 12 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION: 5.5 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
14:35	X		11.47	NA	0.981	NA	-55	NA	3.92	NA	350	NA	8.84	NA	250	6.10
14:40	X		11.49	0.02	1.05	—	-61	6	3.99	0.07	250	100	8.30	0.54		6.20
14:45	X		11.59	0.10	1.10	0.05	-69	8	4.80	0.81	130	120	8.29	0.01		6.45
14:50	X		11.59	0.00	1.10	0.00	-70	1	5.05	0.25	80.0	50	8.25	0.04		6.52
14:55	X		11.60	0.01	1.12	0.02	-72	2	5.10	0.05	16.0	44	8.24	0.01		6.65
15:00	X		11.62	0.02	1.11	0.01	-75	3	3.99	1.11	7.0	9.0	8.29	0.05		6.70
15:05	X		11.64	0.02	1.13	0.02	-77	2	3.95	0.04	6.5	0.5	8.31	0.03		6.71
15:10	X		11.65	0.01	1.16	0.03	-78	1	3.92	0.03	5.0	1.5	8.37	0.06		6.75
15:15	X		11.68	0.08	1.16	0.00	-79	1	3.96	0.04	4.8	0.2	8.39	0.02		6.78
15:20		X														

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Earth Systems
Environmental Engineering

LOW FLOW SAMPLING DATA SHEET

SHEET 1 OF 1

SITE: QC LAB - FORMER HESS PORT READING
DATE: 2/8/17
WEATHER: SUNNY 50°F

CONSULTING FIRM: EARTH SYSTEMS
FIELD PERSONNEL: SCOTT M.
CERTIFICATION #: 13040

MONITOR WELL #: MW-4
WELL PERMIT #:
WELL DEPTH: 15
WELL DIAMETER: 2 Inches
SCREENED/OPEN INTERVAL:

PID/FID READINGS (ppm):
BACKGROUND: 0.0
BENEATH OUTER CAP: 0.0
BENEATH INNER CAP: 10.1

PUMP INTAKE DEPTH: 8-10 ft below TOC
DEPTH TO WATER BEFORE PUMP INSTALLATION 6.08 ft below TOC

TIME	PURGING	SAMPLING	pH (pH units) (SM 4500H+B)		SPECIFIC CONDUCTIVITY (mS/cm) (EPA 120.1)		REDOX POTENTIAL (mv)		DISSOLVED OXYGEN (mg/l) (SM 4500OG)		TURBIDITY (NTU) (EPA 180.1)		TEMPERATURE (degrees C) (SM 2550)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
11:50	X		11.85	NA	0.579	NA	26	NA	0.00	NA	177	NA	8.31	NA	250	6.25
11:55	X		11.70	0.15	0.493	0.086	18	8	0.00	0.00	111	66	8.13	0.18		6.45
12:00	X		11.90	0.20	0.620	0.127	0	18	0.00	0.00	82.5	28.5	9.00	0.87		6.70
12:05	X		12.20	0.30	0.890	0.27	-44	44	0.00	0.00	55.5	27	9.40	0.40		6.93
12:10	X		12.24	0.04	0.900	0.010	-48	4	0.00	0.00	54.0	1.5	9.38	0.02		6.95
12:15	X		12.31	0.07	0.911	0.011	-55	7	0.00	0.00	52.1	1.9	9.35	0.03		6.95
12:20	X		12.36	0.05	0.921	0.010	-62	7	0.00	0.00	50.2	1.9	9.36	0.01		7.02
12:25		X	12.30	0.06	0.930	0.009	-69	7	0.00	0.00	48.0	2.2	9.40	0.06		7.05

COMMENTS:

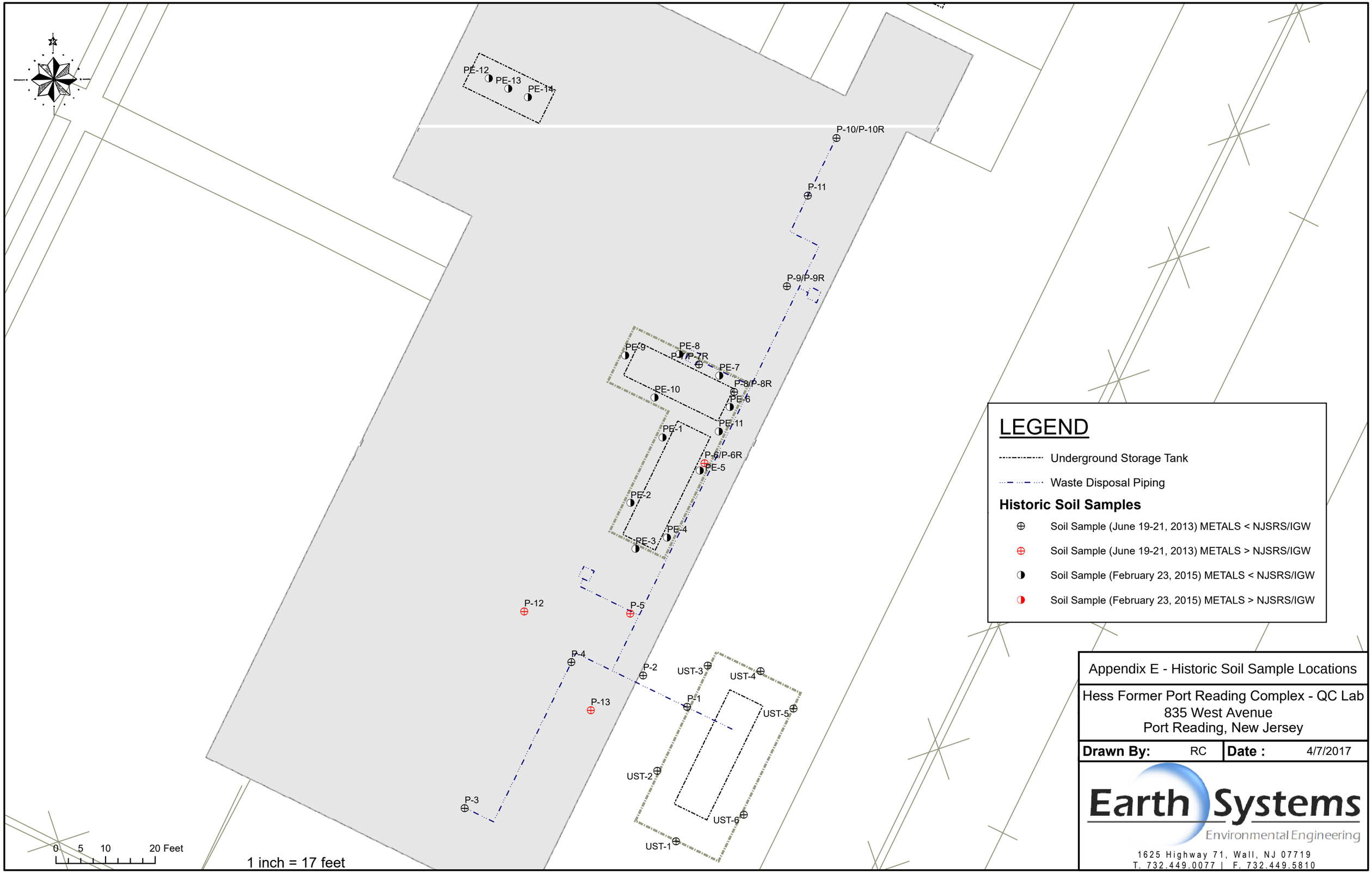
*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

APPENDIX E:
ProUCL DOCUMENTATION

Appendix E
Hess Corporation Former Port Reading Complex - QC Laboratory
835 West Avenue
Port Reading, NJ

Soil Analytical Results - Metals

Sample ID	Sample Date	Depth	Arsenic **IGW Standard 19 ppm**	Beryllium **IGW Standard 0.7 ppm**	Lead **IGW Standard 90 ppm**
P-1	**6/19/2013**	**3-3.5'**	4.8	0.61	12.4
P-12	**12/17/2013**	**2-2.5'**	3.8	0.36	4.9
P-12	**12/17/2013**	**4-4.5'**	8.6	0.65	97.7
P-13	**12/17/2013**	**2-2.5'**	78.7	0.68	7
P-13	**12/17/2013**	**4-4.5'**	13.3	0.81	36.7
P-6	**6/20/2013**	**2-2.5'**	15.9	0.99	9
P-7	**6/20/2013**	**2-2.5'**	5.8	0.58	13.8
P-8	**6/20/2013**	**2-2.5'**	7.6	0.58	17.2
P-9	**6/20/2013**	**2-2.5'**	4	0.34	4.7
P-10	**6/20/2013**	**2-2.5'**	7.7	0.46	10.3
P2	**6/21/2013**	**2-2.5'**	2.5	0.51	14.5
P3	**6/21/2013**	**2-2.5'**	2.5	0.58	5.8
P4	**6/21/2013**	**2-2.5'**	4.4	0.66	13.3
P5	**6/21/2013**	**2-2.5'**	2.6	0.51	127
P11	**6/21/2013**	**2-2.5'**	6.2	0.56	7.9
PD-1A	**6/30/2016**	**4-4.5'**	NA	NA	13
PD-2A	**6/30/2016**	**4-4.5'**	NA	NA	12.3
PD-2A	**6/30/2016**	**4-4.5'**	3.5	NA	NA



Appendix E - Historic Soil Sample Locations

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By: RC **Date :** 4/7/2017

Earth Systems
Environmental Engineering

1625 Highway 71, Wall, NJ 07719
T. 732.449.0077 | F. 732.449.5810

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.15/10/2017 4:24:00 PM								
5	From File			arsenic ab.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	arsenic											
12												
13	General Statistics											
14	Total Number of Observations					16	Number of Distinct Observations					15
15							Number of Missing Observations					0
16	Minimum					2.5	Mean					10.74
17	Maximum					78.7	Median					5.3
18	SD					18.52	Std. Error of Mean					4.63
19	Coefficient of Variation					1.724	Skewness					3.726
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic					0.442	Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value					0.887	Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic					0.359	Lilliefors GOF Test					
25	5% Lilliefors Critical Value					0.213	Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL					18.86	95% Adjusted-CLT UCL (Chen-1995)					22.97
31							95% Modified-t UCL (Johnson-1978)					19.58
32												
33	Gamma GOF Test											
34	A-D Test Statistic					1.627	Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value					0.762	Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.268	Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value					0.221	Data Not Gamma Distributed at 5% Significance Level					
38	Data Not Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)					1.06	k star (bias corrected MLE)					0.903
42	Theta hat (MLE)					10.13	Theta star (bias corrected MLE)					11.9
43	nu hat (MLE)					33.92	nu star (bias corrected)					28.9
44	MLE Mean (bias corrected)					10.74	MLE Sd (bias corrected)					11.31
45							Approximate Chi Square Value (0.05)					17.63
46	Adjusted Level of Significance					0.0335	Adjusted Chi Square Value					16.63
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))					17.61	95% Adjusted Gamma UCL (use when n<50)					18.67
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic					0.854	Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value					0.887	Data Not Lognormal at 5% Significance Level					

54					Lilliefors Test Statistic	0.17		Lilliefors Lognormal GOF Test				
55					5% Lilliefors Critical Value	0.213		Data appear Lognormal at 5% Significance Level				
56					Data appear Approximate Lognormal at 5% Significance Level							
57												
58					Lognormal Statistics							
59					Minimum of Logged Data	0.916		Mean of logged Data				1.833
60					Maximum of Logged Data	4.366		SD of logged Data				0.875
61												
62					Assuming Lognormal Distribution							
63					95% H-UCL	16.19		90% Chebyshev (MVUE) UCL				15.19
64					95% Chebyshev (MVUE) UCL	18.05		97.5% Chebyshev (MVUE) UCL				22.01
65					99% Chebyshev (MVUE) UCL	29.8						
66												
67					Nonparametric Distribution Free UCL Statistics							
68					Data appear to follow a Discernible Distribution at 5% Significance Level							
69												
70					Nonparametric Distribution Free UCLs							
71					95% CLT UCL	18.36		95% Jackknife UCL				18.86
72					95% Standard Bootstrap UCL	18.05		95% Bootstrap-t UCL				46.28
73					95% Hall's Bootstrap UCL	45.4		95% Percentile Bootstrap UCL				19.58
74					95% BCA Bootstrap UCL	24.38						
75					90% Chebyshev(Mean, Sd) UCL	24.63		95% Chebyshev(Mean, Sd) UCL				30.92
76					97.5% Chebyshev(Mean, Sd) UCL	39.66		99% Chebyshev(Mean, Sd) UCL				56.81
77												
78					Suggested UCL to Use							
79					95% H-UCL	16.19						
80												
81					Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.							
82					Recommendations are based upon data size, data distribution, and skewness.							
83					These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).							
84					However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.							
85												
86					ProUCL computes and outputs H-statistic based UCLs for historical reasons only.							
87					H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.							
88					It is therefore recommended to avoid the use of H-statistic based 95% UCLs.							
89					Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.							
90												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.15/10/2017 4:24:58 PM								
5	From File			berylium ab.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	beryllium											
12												
13	General Statistics											
14	Total Number of Observations					15	Number of Distinct Observations					12
15							Number of Missing Observations					0
16	Minimum					0.34	Mean					0.592
17	Maximum					0.99	Median					0.58
18	SD					0.163	Std. Error of Mean					0.0421
19	Coefficient of Variation					0.275	Skewness					0.813
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic					0.936	Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value					0.881	Data appear Normal at 5% Significance Level					
24	Lilliefors Test Statistic					0.161	Lilliefors GOF Test					
25	5% Lilliefors Critical Value					0.22	Data appear Normal at 5% Significance Level					
26	Data appear Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL					0.666	95% Adjusted-CLT UCL (Chen-1995)					0.671
31							95% Modified-t UCL (Johnson-1978)					0.668
32												
33	Gamma GOF Test											
34	A-D Test Statistic					0.333	Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value					0.736	Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.132	Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value					0.221	Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)					14.56	k star (bias corrected MLE)					11.69
42	Theta hat (MLE)					0.0407	Theta star (bias corrected MLE)					0.0506
43	nu hat (MLE)					436.8	nu star (bias corrected)					350.8
44	MLE Mean (bias corrected)					0.592	MLE Sd (bias corrected)					0.173
45							Approximate Chi Square Value (0.05)					308.4
46	Adjusted Level of Significance					0.0324	Adjusted Chi Square Value					303.5
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))					0.673	95% Adjusted Gamma UCL (use when n<50)					0.684
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic					0.959	Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value					0.881	Data appear Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
54					Lilliefors Test Statistic	0.138	Lilliefors Lognormal GOF Test					
55					5% Lilliefors Critical Value	0.22	Data appear Lognormal at 5% Significance Level					
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59					Minimum of Logged Data	-1.079			Mean of logged Data			-0.559
60					Maximum of Logged Data	-0.0101			SD of logged Data			0.274
61												
62	Assuming Lognormal Distribution											
63					95% H-UCL	0.68			90% Chebyshev (MVUE) UCL			0.719
64					95% Chebyshev (MVUE) UCL	0.777			97.5% Chebyshev (MVUE) UCL			0.857
65					99% Chebyshev (MVUE) UCL	1.013						
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71					95% CLT UCL	0.661			95% Jackknife UCL			0.666
72					95% Standard Bootstrap UCL	0.659			95% Bootstrap-t UCL			0.678
73					95% Hall's Bootstrap UCL	0.718			95% Percentile Bootstrap UCL			0.662
74					95% BCA Bootstrap UCL	0.667						
75					90% Chebyshev(Mean, Sd) UCL	0.718			95% Chebyshev(Mean, Sd) UCL			0.775
76					97.5% Chebyshev(Mean, Sd) UCL	0.855			99% Chebyshev(Mean, Sd) UCL			1.011
77												
78	Suggested UCL to Use											
79					95% Student's-t UCL	0.666						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.15/10/2017 4:22:52 PM								
5	From File			lead ab.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	lead											
12												
13	General Statistics											
14	Total Number of Observations					17	Number of Distinct Observations					17
15							Number of Missing Observations					0
16	Minimum					4.7	Mean					23.97
17	Maximum					127	Median					12.4
18	SD					34.44	Std. Error of Mean					8.353
19	Coefficient of Variation					1.437	Skewness					2.52
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic					0.557	Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value					0.892	Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic					0.401	Lilliefors GOF Test					
25	5% Lilliefors Critical Value					0.207	Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL					38.55	95% Adjusted-CLT UCL (Chen-1995)					43.17
31							95% Modified-t UCL (Johnson-1978)					39.41
32												
33	Gamma GOF Test											
34	A-D Test Statistic					1.873	Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value					0.765	Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.32	Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value					0.215	Data Not Gamma Distributed at 5% Significance Level					
38	Data Not Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)					1.058	k star (bias corrected MLE)					0.91
42	Theta hat (MLE)					22.66	Theta star (bias corrected MLE)					26.33
43	nu hat (MLE)					35.96	nu star (bias corrected)					30.95
44	MLE Mean (bias corrected)					23.97	MLE Sd (bias corrected)					25.12
45							Approximate Chi Square Value (0.05)					19.24
46	Adjusted Level of Significance					0.0346	Adjusted Chi Square Value					18.28
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))					38.56	95% Adjusted Gamma UCL (use when n<50)					40.59
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic					0.849	Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value					0.892	Data Not Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
54					Lilliefors Test Statistic	0.248	Lilliefors Lognormal GOF Test					
55					5% Lilliefors Critical Value	0.207	Data Not Lognormal at 5% Significance Level					
56	Data Not Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59					Minimum of Logged Data	1.548			Mean of logged Data			2.635
60					Maximum of Logged Data	4.844			SD of logged Data			0.929
61												
62	Assuming Lognormal Distribution											
63					95% H-UCL	38.98			90% Chebyshev (MVUE) UCL			36.09
64					95% Chebyshev (MVUE) UCL	43.04			97.5% Chebyshev (MVUE) UCL			52.69
65					99% Chebyshev (MVUE) UCL	71.64						
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data do not follow a Discernible Distribution (0.05)											
69												
70	Nonparametric Distribution Free UCLs											
71					95% CLT UCL	37.71			95% Jackknife UCL			38.55
72					95% Standard Bootstrap UCL	37.01			95% Bootstrap-t UCL			80.74
73					95% Hall's Bootstrap UCL	93.88			95% Percentile Bootstrap UCL			37.97
74					95% BCA Bootstrap UCL	44.29						
75					90% Chebyshev(Mean, Sd) UCL	49.03			95% Chebyshev(Mean, Sd) UCL			60.38
76					97.5% Chebyshev(Mean, Sd) UCL	76.14			99% Chebyshev(Mean, Sd) UCL			107.1
77												
78	Suggested UCL to Use											
79					95% Chebyshev (Mean, Sd) UCL	60.38						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												

APPENDIX F:
SOIL DISPOSAL MANIFESTS & CLEAN FILL DOCUMENTATION

Former Hess Port Reading Complex (HC-PR)

Soil Disposal Summary Table

AOC-19: QC Laboratory

835 West Avenue, Port Reading,

Middlesex County, New Jersey

Disposal Date	Disposal Time	Waste Quantity (tons)
11/28/2016	15:01	28.01
11/28/2016	13:58	28.75
11/28/2016	12:59	28.36
11/28/2016	11:48	27.5
11/28/2016	10:41	25.99
11/28/2016	9:32	29.63
11/28/2016	15:21	23.9
11/28/2016	14:30	26.71
11/28/2016	13:35	28.32
11/28/2016	12:20	28.88
11/28/2016	11:02	28.48
11/28/2016	9:45	31.29
11/28/2016	11:25	28.53
11/28/2016	10:26	30
11/28/2016	9:25	29.88
11/29/2016	15:47	26.02
11/29/2016	15:51	28.51
Total:		478.76

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749876
Date: 11/28/2016
Time: 15:01:21 - 15:01:26

			Scale
Gross:	84440 lb	In	Scale 1
Tare:	28420 lb		P.T.
Net:	56020 lb		

Customer: DISPOSAL SYSTEMS INC/BGM0190
PO BOX 6696
FREEHOLD, NJ 07728

Truck: AM748F

CUYDs: 25

License: AM748F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX

Remaining: 0.00 TN

Comment:

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	28.01	Tons

THE ABOVE IS CORRECT AND NON HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Joe B

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749759
Date: 11/28/2016
Time: 13:58:14 - 13:58:17

Customer: DISPOSAL SYSTEMS INC/DSM0190
PO BOX 6696
FREEHOLD, NJ 07728

Gross: 85920 lb In Scale 1
Tare: 28420 lb P.T.
Net: 57500 lb

Truck: AM748F
CUYDs: 25
License: AM748F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Remaining: 0.00 TN
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	28.75	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749652
Date: 11/28/2016
Time: 12:59:02 - 12:59:07

			Scale
Gross:	85140 lb	In	Scale 2
Tare:	28420 lb		P.T.
Net:	56720 lb		

Customer: DISPOSAL SYSTEMS INC/BSM0190
PO BOX 6696
FREEHOLD, NJ 07728-

Truck: AM748F

CUYDs: 25

License: AM748F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Remaining: 0.00 TN
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comments:

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	ID27 PCS	28.36	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Rich

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749520
Date: 11/28/2016
Time: 11:48:25 - 11:48:31

			Scale
Gross:	83420 lb	In	Scale 1
Tare:	28420 lb		P.T.
Net:	55000 lb		

Customer: DISPOSAL SYSTEMS INC/DSM0190
PO BOX 6696
FREEHOLD, NJ 07728

Truck: AM740F

CUYDs: 25

License: AM740F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Consent:

Remaining: 0.00 IN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	27.50	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Jos S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749401
Date: 11/28/2016
Time: 10:41:23 - 10:41:27

			Scale
Gross:	80400 lb	In	Scale 1
Tare:	28420 lb		P.T.
Net:	51980 lb		

Customer: DISPOSAL SYSTEMS INC/BSM0190
PO BOX 6696
FREEHOLD, NJ 07728-

Truck: AM748F

CUYDs: 25

License: AM748F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Remaining: 0.00 TN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027-RCS	25.99	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749278
Date: 11/28/2016
Time: 09:32:41 - 09:32:43

Customer: DISPOSAL SYSTEMS INC/DSM0190
PO BOX 6696.
FREEHOLD, NJ 07728

			Scale
Gross:	87680 lb	In	Scale 1
Tare:	20420 lb		P.T.
Net:	59260 lb		

Truck: AM748F

CUYDs: 25

License: AM748F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Remaining: 0.00 TN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	29.63	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749897
Date: 11/28/2016
Time: 15:21:15 - 15:21:18

			Scale
Gross:	73720 lb	In	Scale 1
Tare:	25920 lb		P.T.
Net:	47800 lb		

Customer: DISPOSAL SYSTEMS INC/BSN0190
PO BOX 6696
FREEHOLD, NJ 07728-

Truck: AM534F

CUYDs: 25

License: AM534F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Remaining: 0.00 TN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	23.90	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver:

Weighmaster: Joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749023
Date: 11/28/2016
Time: 14:30:14 - 14:30:16

			Scale
Gross:	79340 lb	In	Scale 1
Tare:	25920 lb		P.T.
Net:	53420 lb		

Customer: DISPOSAL SYSTEMS INC/BSH0190
PO BOX 6696
FREEHOLD, NJ 07728

Truck: AM534F

CUYDs: 25

License: AM534F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1583/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Remaining: 0.00 TN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCB	26.71	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver:

Weighmaster: Joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749729
Date: 11/28/2016
Time: 13:35:38 - 13:39:42

Customer: DISPOSAL SYSTEMS INC/BSH0190
PO BOX 6696
FREEHOLD, NJ 07728-

Truck: AM534F

			Scale
Gross:	82560 lb	In	Scale 1
Tare:	25920 lb		P.T.
Net:	56640 lb.		

CUYDs: 25
License: AM534F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Remaining: 0.00 TN
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	28.32	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver:

Weighmaster: Alec

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749582
Date: 11/20/2016
Time: 12:20:13 - 12:20:19

			Scale
Gross:	83680 lb	In	Scale 1
Tare:	25920 lb		P.T.
Net:	57760 lb		

Customer: DISPOSAL SYSTEMS INC/DSM0190
PO BOX 6696
FREEHOLD, NJ 07728-

Truck: AM534F

CUYDs: 25

License: AM534F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1505/HESS CORP. FORMER PORT READING COMPLEX
Remaining: 0.00 TN
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	ID27 BCS	28.88	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749435
Date: 11/28/2016
Time: 11:02:17 - 11:02:20

Customer: DISPOSAL SYSTEMS INC/BSM0190
PO BOX 6696
FREEHOLD, NJ 07728

Truck: AM534F

			Scale
Gross:	82880 lb	In	Scale 1
Tare:	25920 lb		P.T.
Net:	56960 lb		

CUYDs: 25

License: AM534F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Remaining: 0.00 TN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	ID27 PCS	28.48	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 74930
Date: 11/28/2016
Time: 09:45:10 03:45:14

Customer: DISPOSAL SYSTEMS INC/BSM0190
PO BOX 6696
FREEHOLD, NJ 07728-

Truck: AM534F

CUYDs: 25

		Scale
Gross:	88500 lb	In Scale 1
Tare:	25920 lb	P.T.
Net:	62580 lb	

Licensee: AM534F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Remaining: 0.00 TN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	31.29	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749472
Date: 11/28/2016
Time: 11:25:03 - 11:25:06

Customer: DISPOSAL SYSTEMS INC/BSM0190
PO BOX 6696
FREEHOLD, NJ 07728

Truck: AS100K

Gross: 83000 lb In Scale 1
Tare: 25940 lb P.T.
Net: 57060 lb
CUYDs: 20
License: AS100K
Truck Type: TANDEM

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Remaining: 0.00 TN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1D07 PCS	28.53	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749380
Date: 11/28/2016
Time: 10:26:14 - 10:26:18

			Scale
Gross:	85940 lb	In	Scale 1
Tare:	25940 lb		P.T.
Net:	60000 lb		

Customer: DISPOSAL SYSTEMS INC/BSM0190
PO BOX 6696
FREEHOLD, NJ 07728

Truck: AS100K

CUYDs: 20

License: AS100K
Truck Type: TANDEM

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585-HESS CORP. FORMER PORT READING COMPLEX
Remaining: 0.00 TN
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	30.00	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Joe S

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 749264
Date: 11/28/2016
Time: 09:25:41 - 09:25:47

			Scale
Gross:	85700 lb	In	Scale 1
Tare:	25940 lb		P.T.
Net:	59760 lb		

Customer: DISPOSAL SYSTEMS INC/BSM0190
PO BOX 6696
FREEHOLD, NJ 07728

Truck: AS100K

CUYDs: 20

License: AS100K
Truck Type: TANDEM

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1505/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Remainings: 0.00 TN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	29.88	Tons

THE ABOVE IS CORRECT AND NON HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Joe S.

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM# 2716-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: Hess Corporation, Trenton Water Airport, 601 Jack Stephens Way, West Trenton, NJ 08628

Generator's Site Address (if different than mailing address): Hess Corporation, 835 West Ave, Port Reading, NJ

Generator's Phone: 609-406-3969

6. Transporter 1 Company Name: Disposal Systems, Inc — U.S. EPA ID Number: NJD 156163438

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Bayshore Soil Management, LLC, 75 Crows Mill Rd, Keasbey, NJ 08832 — U.S. EPA ID Number: NJ 1225001522

Facility's Phone: 732-738-6000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON HAZ PC Soils	1	Tri Axle	20	YDS
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information

Plate# NM 748F

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: X Scott Mayes - Earth Systems — Signature: X [signature] - As Agent for Hess Corp. — Month 11 Day 28 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: John J. Sheulino — Signature: [signature] — Month 11 Day 28 Year 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 749876

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month Day Year

GENERATOR — TRANSPORTER INT'L — TRANSPORTER — DESIGNATED FACILITY

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TRANSPORTER #2

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM# 2716-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: Hess Corporation, Trenton-Mercer Airport, 60 Jack Stephens Way, West Trenton, NJ 08628.
Generator's Phone: 609-406-3969

Generator's Site Address (if different than mailing address): Hess Corporation, 835 West Ave, Port Reading, NJ

6. Transporter 1 Company Name: Disposal Systems Inc
U.S. EPA ID Number: NJD156163438

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: Bayshore Soil Management, LLC, 75 Crow Mill Rd, Keasbey NJ 08832
Facility's Phone: 732-738-6000
U.S. EPA ID Number: NJ1225001522

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. NON HAZ PC soils	1	Tri Axle	20	yds³	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: J Scott Mayes - Earth Systems
Signature: [signature] As Agent for Hess Corp
Month 11 Day 28 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter Signature (for exports only):
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brad J. Strubinc
Signature: [signature]
Month 11 Day 28 Year 16

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 19759

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

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COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM#2716-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: Hess Corporation, Trenton-Mercer Airport, 601 Jack Stephenway, West Trenton, NJ 08628

Generator's Site Address (if different than mailing address): Hess Corporation, 835 West Ave, Port Reading, NJ

Generator's Phone: 609-406-3469

6. Transporter 1 Company Name: Disposal Systems Inc — U.S. EPA ID Number: NJD156163438

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Bayshore Soil Management, LLC, 75 Crows Mill Rd, Keasbey, NJ 08832 — U.S. EPA ID Number: NJ 1225001522

Facility's Phone: 732-738-6000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON HAZ PC Soils	1	Tri Axle	20	YDS
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: SCOTT MAYES - EARTH SYSTEMS — Signature: AS AGENT FOR HESS CORP. — Month 11 Day 23 Year 16

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: John J. Sheehan — Signature: — Month 11 Day 23 Year 16

Transporter 2 Printed/Typed Name — Signature: — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 7116132

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month 11 Day 23 Year 16

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TRANSPORTER #2

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM# 2716-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: Hess Corporation, Trenton Mercer Airport, 601-Jack Stephens Way, West Trenton, NJ 08628

Generator's Site Address (if different than mailing address): Hess Corporation, 835 West Ave, Port Reading, NJ

Generator's Phone: 609-406-3969

6. Transporter 1 Company Name: Disposal Systems Inc.
U.S. EPA ID Number: NJD 156163438

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: Bayshore Soil Management, LLC, 75 Crows Mill Rd, Keasbey, NJ 08832
U.S. EPA ID Number: NJ 1225001522

Facility's Phone: 732-738-6000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1.				
	2.				
	3.				
	4.				

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: X Scott Mayes - Earth Systems
Signature: - As Agent for Hess Corp.
Month 11 Day 28 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter Signature (for exports only):
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: John J. Sheuli
Signature:
Month 11 Day 28 Year 16

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month Day Year

GENERATOR

TRANSPORTER INTL

TRANSPORTER

DESIGNATED FACILITY

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TRANSPORTER #2

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM#2716-1585

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

5. Generator's Name and Mailing Address: Hess Corporation, Trenton-Mercer Airport, 601 Jack Stephen Way, West Trenton, NJ

Generator's Phone: 609-406-3964

Generator's Site Address (if different than mailing address): Hess Corporation, 835 West Ave, Port Reading, NJ

6. Transporter 1 Company Name: Disposal Systems Inc

U.S. EPA ID Number: NJD156163438

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address: Bayshore Soil Management, LLC, 75 Crow Mill Rd, Keasbey, NJ 08832

Facility's Phone: 732-738-6000

U.S. EPA ID Number: NJT122500152 2

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non Haz PC Soils	1	Tri Axle	20	Yds	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: X Scott Mayes - Earth Systems

Signature: X [signature] - As Agent for Hess Corp.

Month 11 Day 28 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: John J. Sheulino

Signature: [signature]

Month 11 Day 28 Year 16

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 7/9401

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month 11 Day 28 Year 16

GENERATOR

INTL TRANSPORTER

TRANSPORTER

DESIGNATED FACILITY

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COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSMM2716-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: HESS CORPORATION, TRENTON-MERCER AIRPORT, 601 JACK STEWART WAY, WEST TRENTON, NJ 08628

Generator's Site Address (if different than mailing address): HESS CORPORATION, 835 WEST AVENUE, PORT REPUBLIC, NJ

Generator's Phone: 609-406-3969

6. Transporter 1 Company Name: DISPOSAL SYSTEMS, INC.
U.S. EPA ID Number: NJD156163438

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: BAYSHORE SOIL MANAGEMENT, LLC, 75 CROWS MILL RD., KEASBEY, NJ 08832
U.S. EPA ID Number: NJ122500152

Facility's Phone: 732-738-6000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. NON HAZ PC SOILS	1	TRI AXLE	20	YDS	3
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: X SCOTT MAYES - EARTH SYSTEMS
Signature: X [signature] - AS AGENT FOR HESS CORP.
Month 11 Day 28 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: John J. Sheulini
Signature: [signature]
Month 11 Day 28 Year 16

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month Day Year 11 28 16

GENERATOR

TRANSPORTER INTL

TRANSPORTER

DESIGNATED FACILITY

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COPY

ARDOUS ANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	BSM# 2716-1585			

.Name and Mailing Address: HESS CORPORATION, Trenton Mercer Airport, 601 Jack Stephens Way, West Trenton, NJ 08628

Generator's Site Address (if different than mailing address): HESS CORPORATION, 835 West Ave, Port Reading, NJ

s Phone: 609-3169

orter 1 Company Name: Disposal Systems, Inc. — U.S. EPA ID Number: NJD-156163438

nsporter 2 Company Name — U.S. EPA ID Number:

Designated Facility Name and Site Address: BayShore Soil Management, LLC, 75 Crows Mill Rd, Keasbey, NJ 08628 — U.S. EPA ID Number: NJ 1225001522

Facility's Phone: 732 738 6000

GENERATOR

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. NON HAZ PC soils	1	Tri Axle	20	YDS
	2.				
	3.				
	4.				

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Mayes - Earth Systems — Signature: [signature] - As Agent for Hess Corp. — Month 11 Day 28 Year 16

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Juan Manager — Signature: [signature] — Month 11 Day 28 Year 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 11582

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month Day Year 11 28 16

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COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM# 2716-1585

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

5. Generator's Name and Mailing Address: Hess corporation, Trenton Mercer Airport, 601 Jack stephens way, West Trenton, NJ 08628

Generator's Site Address (if different than mailing address): Hess corporation, 835 west ave, Port Reading NJ

Generator's Phone: 609-406-3969

6. Transporter 1 Company Name: Disposal systems INC

U.S. EPA ID Number: NJD-156163438

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address: Bayshore soil management, LLC, 75 Crows mill Rd, Keasbey, NJ 08832

U.S. EPA ID Number: NJ 1225001522

Facility's Phone: 732-738-6000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZ PC soils	1	Tri axle	20	YDS	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: SCOTT MAYES - EARTH SYSTEMS

Signature: AS AGENT FOR HESS CORP.

Month: 11 Day: 28 Year: 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Juan Morales

Signature

Month: 11 Day: 28 Year: 16

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 7497729

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month: 11 Day: 30 Year: 16

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

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COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM# 2 716-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: HESS CORPORATION, TRENTON MERCER AIRPORT, 601 JACK STREHLIN WAY, WEST TRENTON, NJ 08628

Generator's Site Address (if different than mailing address): HESS CORPORATION, 135 WEST AVENUE, PORT REPUBLIC, NJ

Generator's Phone: 609-406-3769

6. Transporter 1 Company Name: DISPOSAL SYSTEMS, INC
U.S. EPA ID Number: NJD156163438

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: BAYSIDE SOIL MANAGEMENT, LLC, 75 CROWS MILL RD., KEASBEY, NJ 08832
U.S. EPA ID Number: NJ1225001522

Facility's Phone: 732-738-6000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. NON HAZ PC SOILS	1	TRI AXLE	20	YDS	3
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: SCOTT MATIES - EARTH SYSTEMS
Signature: [signature] - AS AGENT FOR HESS CORP
Month: 11 Day: 28 Year: 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name
Signature
Month Day Year

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 8/06)

COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM#2 116-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: Hess corporation, Trenton Mercer Airport, 601 Jack Stephens Way, West Trenton, NJ 08628

Generator's Site Address (if different than mailing address): Hess corporation, 835 West Ave, Port Reading NJ

Generator's Phone: 609-406-3969

6. Transporter 1 Company Name: Disposal Systems Inc — U.S. EPA ID Number: NJD156163438

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Bayshore Soil Management, 75 Crow Mill Rd, Keasbey, NJ 08832 — U.S. EPA ID Number: NJ1225001522

Facility's Phone:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON HAZ PC Soils	1	Tri Axle	20	YDS
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: SCOTT MAYES - EARTH SYSTEMS — Signature: AS AGENT FOR HESS CORP. — Month 11 Day 28 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Juan Amador — Signature — Month 11 Day 28 Year 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month Day Year

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 8/06)

TRANSPORTER #2

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM#2716-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: Hess corporation, Trenton-mercer Airport, 601 Jack Stephen WAY, West Trenton NJ 08628
Generator's Phone: 609 406 3469

Generator's Site Address (if different than mailing address): Hess corporation, 835 west Ave, Port Reading NJ

6. Transporter 1 Company Name: Disposal systems, Inc
U.S. EPA ID Number: NJD 156163438

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: Bayshore soil management LLC, 75 crows mill Rd, Keasbey NJ 08832
Facility's Phone: 732-738-6000
U.S. EPA ID Number: NJ 122 5001522

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. NON HAZ PC soils	1	Tri Axle	20	YDS
	2.				
	3.				
	4.				

13. Special Handling Instructions and Additional Information

Hoz 34/+
Plate #

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Mayes - Earth Systems
Signature: SMM - As agent for Hess corp
Month 11 Day 28 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Tim Hinrichs
Signature
Month 11 Day 28 Year 16

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 11/9/97

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month Day Year 11 08 16

GENERATOR

INTL

TRANSPORTER

DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 8/06)

TRANSPORTER #2

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM# 2716-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: HESS CORPORATION, Trenton River Airport, 601 Jackson Highway, West Trenton NJ 08628
Generator's Phone: 609-406-3969

Generator's Site Address (if different than mailing address): HESS CORPORATION, 835 West Ave, Port Reading, NJ

6. Transporter 1 Company Name: Disposal Systems Inc
U.S. EPA ID Number: NJD 156163438

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: Bayshore Soil Management, LLC, 75 Crows Mill Rd, Keasbey, NJ 08832
Facility's Phone: 732-738-6000
U.S. EPA ID Number: NJ 1225001522

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. NON HAZ PC soils	1	Tri Axle	20	yds	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: SCOTT MAYES - EARTH SYSTEMS
Signature: AS AGENT FOR HESS CORP.
Month: 11 Day: 28 Year: 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 7149922

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name | Signature | Month | Day | Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 8/06)

COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NJM 2716-1585
2. Page 1 of
3. Emergency Response Phone: 609-279-6340
4. Waste Tracking Number:

5. Generator's Name and Mailing Address: Hess Corporation, Trenton Mercer Airport, 601 Jack Stephen Way, West Trenton NJ 08628
Generator's Site Address (if different than mailing address): Hess Corp. 835 West Ave, Port Reading NJ
Generator's Phone:

6. Transporter 1 Company Name: Disposal Systems Inc
U.S. EPA ID Number: NJD 156163438

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Bayshore Soil Management, 7 Crows Mill Rd, Keasby NJ 08832
U.S. EPA ID Number: NJ 122500 1522
Facility's Phone:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non Haz PC Soils	1	Tri Axle	100%	
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
License plate
AS-100 Kg

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Signature: Month Day Year

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: David Saldaini Signature: Month 11 Day 28 Year 16
Transporter 2 Printed/Typed Name: Signature: Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number: 7449264
17b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Signature: Month 11 Day 28 Year 16

GENERATOR
INT'L
TRANSPORTER
DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 8/06)

TRANSPORTER #2

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: DSM#2716-1585
2. Page 1 of
3. Emergency Response Phone: 609-257-6340
4. Waste Tracking Number:

5. Generator's Name and Mailing Address: Hess Corporation, Trenton-Mercer-Air Port, 601 Jack Stephen Way, West Trenton, NJ 08628
Generator's Phone: 609-406-3969

Generator's Site Address (if different than mailing address): Hess Corporation, 835 West Ave, Port Reading, NJ

6. Transporter 1 Company Name: Disposal Systems Inc
U.S. EPA ID Number: NJD156163438

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Bayshore Soil Management, 75 Crows Mill Rd, Keasbey, NJ 08832
Facility's Phone: 732-738-6000
U.S. EPA ID Number: NJ 122500 1522

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. NON HAZ PC soils	1	Tri axle	20	yds
	2.				
	3.				
	4.				

13. Special Handling Instructions and Additional Information
AS-100K
License plate #

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: SCOTT MAYES - EARTH SYSTEMS
Signature: [signature] - AS AGENT FOR HESS CORP
Month Day Year: 11 28 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: David Saldarini
Signature: [signature]
Month Day Year: 11 28 16

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☑ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 74930

17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name:
Signature:
Month Day Year: 11 28 16

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 8/06)

TRANSPORTER #2

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM#2716-1585
2. Page 1 of
3. Emergency Response Phone: 609-397-6340
4. Waste Tracking Number:

5. Generator's Name and Mailing Address: HESS CORPORATION, TRENTON-MERCER AIRPORT, 601 JACK STEPHAN WAY, WEST TRENTON, NJ 08628

Generator's Site Address (if different than mailing address): HESS CORPORATION, 835 WEST AVENUE, PERTH AMBOY, NJ

Generator's Phone:

6. Transporter 1 Company Name: DISPOSAL SYSTEMS, INC. — U.S. EPA ID Number: NJD156163438

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: BAYSHORE SOIL MANAGEMENT, LLC, 75 CROWS MILL RD., KEASBEY, NJ 08832 — U.S. EPA ID Number: NJ1225001522

Facility's Phone: 732-738-6000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. NON-HAZ PC SOILS	1	TRI AXLE	100%	YDS³	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

License plate

A-100K

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: SCOTT MATHES - EARTH SYSTEMS — Signature: AS AGENT FOR HESS CORP. — Month: 11 Day: 28 Year: 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: David Soldani — Signature — Month: 11 Day: 28 Year: 16

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month — Day — Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 8/06)

COPY

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 132397

Ticket: 750767
Date: 11/29/2016
Time: 15:47:44 - 15:50:06

			Scale
Gross:	77960 lb	In	Scale 1
Tare:	25920 lb		P.T.
Net:	52040 lb		

Customer: DISPOSAL SYSTEMS INC/BSM0190
PO BOX 6696
FREEHOLD, NJ 07728-

Truck: AM534F

CUYDs: 25

License: AM534F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP: FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX

Remaining: 0.00 TN

Comment:

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	ID27 PCS	26.02	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Rich

Bayshore Recycling Corp.
75 Crows Mill Rd
PO Box 290
Keasbey, NJ 08832

Facility ID: 138397

Ticket: 750768
Date: 11/29/2016
Time: 15:51:26 - 15:51:32

			Scale
Gross:	85440 lb	In	Scale 2
Tare:	28420 lb		P.T.
Net:	57020 lb		

Customer: DISPOSAL SYSTEMS INC/BSM0190
PO BOX 6696
FREEHOLD, NJ 07728-

Truck: AM748F

CU/Dg: 25

License: AM748F
Truck Type: TRIAXLE

Carrier: DISPOSAL SYSTEMS INC
Profile: 2716-1585/HESS CORP. FORMER PORT READING COMPLEX
Generator: HESS CORP. FORMER PORT READING COMPLEX
Comment:

Remaining: 0.00 TN

Origin	Materials & Services	Quantity	Unit
Woodbridge Twp.	1027 PCS	28.51	Tons

THE ABOVE IS CORRECT AND NON-HAZARDOUS TO THE BEST OF MY KNOWLEDGE

Driver: _____

Weighmaster: Rich

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM 12716-1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: Hess Corporation, Trenton Mercer Airport, 601 Jack Stephenson Way, West Trenton, NJ 08628

Generator's Site Address (if different than mailing address): Hess Corporation, 825 West Ave, Port Reading, NJ

Generator's Phone: 609-406-3969

6. Transporter 1 Company Name: Disposal Systems Inc — U.S. EPA ID Number: NJD156163438

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Bayshore Soil Management, LLC, 75 Crows Mill Rd, Keasbey NJ 08832 — U.S. EPA ID Number: NJ 122500522

Facility's Phone: 732-738-6000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON HAZ PC Soils	1	Tri Axle	20	YDS
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Wase.

Generator's/Offeror's Printed/Typed Name: SCOTT MAYES - EARTH SYSTEMS — Signature: AS AGENT FOR HESS CORP. — Month 11 Day 29 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Mark Altman — Signature — Month Day Year

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month Day Year

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 8/06)

TRANSPORTER #2

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: BSM# 2716 1585
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address: HESS corporation, Trenton Mercer Airport, 601 Jack Stephen WAY, West Trenton NJ
Generator's Phone: 609 406 3969

Generator's Site Address (if different than mailing address): HESS corporation, 835 West Ave, Port Reading NJ

6. Transporter 1 Company Name: Disposal Systems Inc
U.S. EPA ID Number: NJD 156163438

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: Bayshore Soil management, LLC, 75 Crows Mill Rd, Keasbey NJ 08832
Facility's Phone: 732-738 6000
U.S. EPA ID Number: NJ 122500 1522

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON HAZ PC Soils	1	Tri Axle	20	YDS
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
Plate# AM534F

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: SCOTT MAYES - EARTH SYSTEMS
Signature: AS AGENT FOR HESS CORP.
Month 11 Day 28 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Juan Amador
Signature
Month 11 Day 29 Year 16

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number: 750187

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month 11 Day 28 Year 16

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 8/06)

TRANSPORTER #2

FRENCH & PARRELLO ASSOCIATES

Corporate Office
1800 Route 34, Suite 101
Wall, NJ 07719

Regional Offices
Hackettstown, NJ
New York, NY

August 10, 2016

Mr. Frank Rosano
ROSANO TRUCKING, INC.
26 Maple Avenue
Oceanport, NJ 07757

Re: Analytical Results (EH-5)
Rosano Quarry
Block 930, Lot 1
Wall Township, New Jersey
FPA No. 5286.002

Dear Mr. Rosano:

French & Parrello Associates, P.A. (FPA) is pleased to present the analytical results for a soil sample collected at the Rosano Quarry in Wall Township, New Jersey. On July 26, 2016 FPA personnel arrived at the site to collect a discrete sample of the material that is mined from the site for sale to your clients to comply with the New Jersey Department of Environmental Protection's (NJDEP) Clean Fill Certification.

A discrete sample of sand was collected, placed into laboratory supplied glassware and transported under chain of custody to Alpha Analytical, a New Jersey certified laboratory (MA 935). The sample collected, identified as EH-5 was analyzed for Extractable Petroleum Hydrocarbons (EPH) Category I, Target Compound List (TCL) parameters including volatile and semi volatile organic compounds with a forward library search (VO+10, BN+20), pesticides, polychlorinated biphenyls (PCBs), and Target Analyte List (TAL) metals including cyanide and hexavalent chromium.

ANALYTICAL RESULTS

The analytical results for sample EH-5 were compared to the NJDEP's Residential Direct Contact Soil Remediation Standards (RDCSRS) and the Impact to Ground Water Soil Screening Levels (IGWSSL). According to analytical results for sample EH-5, EPH and targeted TCL/TAL compounds were either not detected or detected below the RDCSRS and IGWSSL. The laboratory data package is attached.

CLOSING

Thank you for the opportunity to work with you on this project. If you have any questions, please do not hesitate to call me at 732-312-9820.

Very truly yours,

FRENCH & PARRELLO ASSOCIATES, PA

Ed Hamilton, PG
Senior Project Manager
Construction Engineering Group

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 74

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Dunkin System Inc
21-26 Tuckerton NJ

DATE 11/23/16 20

	Loads Topsoil
	Yds. Topsoil
✓	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
✓	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 057476

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 74

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Dunkin System Inc
21-26 Tuckerton NJ

DATE 11/23 20 16

	Loads Topsoil
	Yds. Topsoil
✓	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
✓	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 60707

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 21

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DST

DATE 11-23 20 16

	Loads Topsoil
	Yds. Topsoil
✓	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
✓	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 057246

Phone (732) 542-5009 HESI
Fax (732) 542-5014

TRUCK NO. 69

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal System Inc
Rt 526 Imlaystown NJ

DATE November 29 20 16

	Loads Topsoil
	Yds. Topsoil
✓	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
✓	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 057081

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 21

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DSI

DATE 11-23 20 16

	Loads Topsoil
	Yds. Topsoil
1	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
1	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 057263

Phone (732) 542-5009
Fax (732) 542-5014

Shop

TRUCK NO. 69

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal System Inc
Rt 526 Imlaystown NJ

DATE 11/29 20 16

	Loads Topsoil
	Yds. Topsoil
✓	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
✓	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 61078

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 21

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DSI

DATE 11 29 20 16

	Loads Topsoil
	Yds. Topsoil
1	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
1	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 057265

Phone (732) 542-5009 HESS
Fax (732) 542-5014

TRUCK NO. 69

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal System Inc
Rt 526 Imlaystown NJ

DATE November 29 20 16

	Loads Topsoil
	Yds. Topsoil
✓	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
✓	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 61077

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 21

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DSI

DATE 11·29 20 16

	Loads Topsoil
	Yds. Topsoil
	Loads Fill
1	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 057250

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 74

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal Systems Inc
26 Imlaytown

DATE [illegible] 20 16

	Loads Topsoil
	Yds. Topsoil
1	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
1	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By [signature]

Not Responsible Beyond Curb

№ 61190

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 21

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DSI
29

DATE 11-[illegible]16 20 16

	Loads Topsoil
	Yds. Topsoil
1	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
1	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By [signature]

Not Responsible Beyond Curb

№ 057249

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 74

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal Systems Inc
26 Imlaytown

DATE 11-22-16 20

	Loads Topsoil
	Yds. Topsoil
1	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
1	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By [signature]

Not Responsible Beyond Curb

№ 60706

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 69

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal System Inc
Rt 526 Imlaystown NJ

DATE 11/30 20 16

	Loads Topsoil
	Yds. Topsoil
✓	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
✓	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 61176

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 69

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal System Inc
Rt 526 Imlaystown NJ

DATE November 30 20 16

	Loads Topsoil
	Yds. Topsoil
✓	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
✓	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 61177

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 69

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal System Inc
Rt 526 Imlaystown NJ

DATE 11/30 20 16

	Loads Topsoil
	Yds. Topsoil
✓	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
✓	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 61079

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 21

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DSI

DATE 11-30 20 16

	Loads Topsoil
	Yds. Topsoil
1	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
1	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 61185

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 21

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DSI

DATE 11-30 20 16

	Loads Topsoil
	Yds. Topsoil
1	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
1	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 61187

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 21

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DSI

DATE 11-30 20 16

	Loads Topsoil
	Yds. Topsoil
1	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
1	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 045743

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 927

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DISPOSAL SERVICES
WEST ME PORT READING

DATE 12-1 20 16

	Loads Topsoil
BANK RUN	Yds. Topsoil
	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
FULL LOAD	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 059857

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 728

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DISPOSOL SERVICES
PORT READING BANKRUN

DATE 12-1 20 16

	Loads Topsoil
	Yds. Topsoil
	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 057978

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 933

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DISPOSAL SERVICES
PORT READING

DATE 12-1 20 16

	Loads Topsoil
	Yds. Topsoil
	Loads Fill BANK RUN
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 60801

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 929

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal Services
Port Reading

DATE 12-1-16 20

	Loads Topsoil
	Yds. Topsoil
	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
25	Tons Screened Sand
	Tandem
	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 60656

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. SUTTON 935

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DISPOSAL SERVICES
PORT READING

DATE 12/1/16 20

	Loads Topsoil
	Yds. Topsoil
BANK RUN	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
FULL LOAD	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 60665

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 921

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

Disposal Services

DATE 12/1/ 20 16

	Loads Topsoil
	Yds. Topsoil
Bank Run	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 60819

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 74

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

TO - Port - Reading

DATE 12/5/16 20

	Loads Topsoil
	Yds. Topsoil
	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 61191

Phone (732) 542-5009
Fax (732) 542-5014

TRUCK NO. 74

Rosano Trucking Inc.

26 Maple Ave., Oceanport, New Jersey 07757

DST

TO Port Reading

DATE 12/5/16 20

	Loads Topsoil
	Yds. Topsoil
	Loads Fill
	Yds. Fill
	Loads Road Gravel
	Yds. Road Gravel
	Tons Road Gravel
	Hrs. Truck Service
	Tons Screened Sand
	Tandem
	Tri-Axle

All materials delivered are not the property of the buyer until paid for in full and are subject to a pickup at the seller's discretion.

Rec'd By

Not Responsible Beyond Curb

№ 61192

APPENDIX G:
MONITORING WELL DOCUMENTATION

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201607933

MONITORING WELL RECORD

PROPERTY OWNER: N/A N/A

Company/Organization: Hess Corporation

Address: Trenton-Mercer Airport 601 Jack Stephan Way West Trenton, New Jersey 08628

WELL LOCATION: AOC-19 FORMER QC LAB

Address: 835 West Avenue

County: Middlesex Municipality: Woodbridge Twp Lot: 1.01 Block: 664.01

Easting (X): 560852 Northing (Y): 630310
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: July 5, 2016
DATE WELL COMPLETED: July 5, 2016

WELL USE: MONITORING

Other Use(s):

Local ID: MW-1

WELL CONSTRUCTION

Total Depth Drilled (ft.): 13 Finished Well Depth (ft.): 13 Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	13	6		
Casing	0	3	2	PVC	Sch 40
Screen	3	13	2	PVC	0.10

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	6	2		14	1
Gravel Pack	1	13	6	2	#1 sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 6 ft. below land surface
Water Level Measure Tool: m-scope
Well Development Period: .5 hrs.
Method of Development: sub pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: 6712dt
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 5: brown OT - Other fill

5 - 13: brown OL - Organic silts and organic silty clays of low plasticity

ADDITIONAL INFORMATION:

Driller of Record: Robert Hough, JOURNEYMAN LICENSE # 0013756 Company: UNI-TECH DRILLING CO INC

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201607934

MONITORING WELL RECORD

PROPERTY OWNER: N/A N/A

Company/Organization: Hess Corporation

Address: Trenton-Mercer Airport 601 Jack Stephan Way West Trenton, New Jersey 08628

WELL LOCATION: AOC-19 FORMER QC LAB

Address: 835 West Avenue

County: Middlesex Municipality: Woodbridge Twp Lot: 1.01 Block: 664.01

Easting (X): 560935 Northing (Y): 630229
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: July 5, 2016
DATE WELL COMPLETED: July 5, 2016

WELL USE: MONITORING

Other Use(s):

Local ID: MW-2

WELL CONSTRUCTION

Total Depth Drilled (ft.): 13 Finished Well Depth (ft.): 13 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	13	6		
Casing	0	3	2	PVC	Sch 40
Screen	1	13	2	PVC	0.10

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	6	2		14	1
Gravel Pack	1	13	6	2	#1 sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: No
Static Water Level: 6 ft. below land surface
Water Level Measure Tool: m-scope
Well Development Period: .5 hrs.
Method of Development: sub pum
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: 6712dt
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG
0 - 5: brown OT - Other fill
5 - 13: brown OL - Organic silts and organic silty clays of low plasticity

ADDITIONAL INFORMATION:

Driller of Record: Robert Hough, JOURNEYMAN LICENSE # 0013756 Company: UNI-TECH DRILLING CO INC

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201607935

MONITORING WELL RECORD

PROPERTY OWNER: N/A N/A

Company/Organization: Hess Corporation

Address: Trenton-Mercer Airport 601 Jack Stephan Way West Trenton, New Jersey 08628

WELL LOCATION: AOC-19 FORMER QC LAB

Address: 835 West Avenue

County: Middlesex Municipality: Woodbridge Twp Lot: 1.01 Block: 664.01

Easting (X): 560891 Northing (Y): 630185
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: July 5, 2016
DATE WELL COMPLETED: July 5, 2016

WELL USE: MONITORING

Other Use(s):

Local ID: MW-3

WELL CONSTRUCTION

Total Depth Drilled (ft.): 13 Finished Well Depth (ft.): 13 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	13	6		
Casing	0	3	2	PVC	Sch 40
Screen	3	13	2	PVC	0.10

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	6	2		14	1
Gravel Pack	1	13	6	2	#1 sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: No
Static Water Level: 6 ft. below land surface
Water Level Measure Tool: m-scope
Well Development Period: .5 hrs.
Method of Development: sub pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: 6712dt
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG
0 - 5: brown OT - Other fill
5 - 13: brown OL - Organic silts and organic silty clays of low plasticity

ADDITIONAL INFORMATION:

Driller of Record: Robert Hough, JOURNEYMAN LICENSE # 0013756 Company: UNI-TECH DRILLING CO INC

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201615028

MONITORING WELL RECORD

PROPERTY OWNER: HESS CORPORATION HESS CORPORATION

Company/Organization: Hess Corporation

Address: Trenton-Mercer Airport 601 Jack Stephan Way West Trenton, New Jersey 08628

WELL LOCATION: Former Hess Port Reading - QC Lab

Address: West Ave

County: Middlesex Municipality: Woodbridge Twp Lot: 1.01 Block: 664.01

Easting (X): 560877 Northing (Y): 630270
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: December 22, 2017
DATE WELL COMPLETED: December 22, 2017

WELL USE: MONITORING

Other Use(s):

Local ID: MW-4

WELL CONSTRUCTION

Total Depth Drilled (ft.): 15 Finished Well Depth (ft.): 15 Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	15	6		
Casing	0	3	2	PVC	Sch 40
Screen	3	15	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	6	2		14	1
Gravel Pack	1	15	6	2	#1 Sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 6 ft. below land surface
Water Level Measure Tool: M-Scope
Well Development Period: .5 hrs.
Method of Development: SubPump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: 6712dt
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG
0 - 12: Brown OT - Other former excavation sand
12 - 15: Brown OL - Organic silts and organic silty clays of low plasticity

ADDITIONAL INFORMATION:

Driller of Record: Robert Hough, JOURNEYMAN LICENSE # 0013756 Company: UNI-TECH DRILLING CO INC

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: AOC-19: QC LaboratoryHess Corporation – Former Port Reading Complex (HC-PR)

List all AKAs:

Street Address: 835 West Avenue

Municipality: Port Reading (Township, Borough or City)

County: MIddlesex Zip Code: 07064

Program Interest (PI) Number(s): 006148 Case Tracking Number(s): E20130449

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hess Corporation
2. Well Location (Street Address) 835 West Avenue
3. Well Location (Municipal Block and Lot) Block# 1.01 Lot # 664.01

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):.. E201607933
2. Site Well Number as shown on application or plans): MW-1
3. Well Completion Date: ..... July 5, 2016
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 0
5. Total Depth of Well to the nearest ½ foot: 13.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... 3.00
7. Screen Length (or length of open hole) in feet: 10
8. Screen or Slot Size: 1
9. Screen or Slot Material: ..... PVC
10. Casing Material (PVC, steel, or other – specify): ..... PVC
11. Casing Diameter (inches): 2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 6.00
13. Yield (gallons per minute): ..... 0.5 gpm
14. Development Techinque (specify): ..... Whale Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes): ..... 0.5 hours

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: AOC-19: QC LaboratoryHess Corporation – Former Port Reading Complex (HC-PR)

List all AKAs:

Street Address: 835 West Avenue

Municipality: Port Reading (Township, Borough or City)

County: MIddlesex Zip Code: 07064

Program Interest (PI) Number(s): 006148 Case Tracking Number(s): E20130449

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hess Corporation
2. Well Location (Street Address) 835 West Avenue
3. Well Location (Municipal Block and Lot) Block# 1.01 Lot # 664.01

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):.. E201607934
2. Site Well Number as shown on application or plans): MW-2
3. Well Completion Date: ..... July 5, 2016
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 0
5. Total Depth of Well to the nearest ½ foot: 13.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... 3.00
7. Screen Length (or length of open hole) in feet: 10
8. Screen or Slot Size: 1
9. Screen or Slot Material: ..... PVC
10. Casing Material (PVC, steel, or other – specify): ..... PVC
11. Casing Diameter (inches): 2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 6.00
13. Yield (gallons per minute): ..... 0.5 gpm
14. Development Techinque (specify): ..... Whale Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes): ..... 0.5 hours

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: AOC-19: QC LaboratoryHess Corporation – Former Port Reading Complex (HC-PR)

List all AKAs:

Street Address: 835 West Avenue

Municipality: Port Reading (Township, Borough or City)

County: MIddlesex Zip Code: 07064

Program Interest (PI) Number(s): 006148 Case Tracking Number(s): E20130449

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hess Corporation
2. Well Location (Street Address) 835 West Avenue
3. Well Location (Municipal Block and Lot) Block# 1.01 Lot # 664.01

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):.. E201607935
2. Site Well Number as shown on application or plans): MW-3
3. Well Completion Date: ..... July 5, 2016
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 0
5. Total Depth of Well to the nearest ½ foot: 13.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... 3.00
7. Screen Length (or length of open hole) in feet: 10
8. Screen or Slot Size: 1
9. Screen or Slot Material: ..... PVC
10. Casing Material (PVC, steel, or other – specify): ..... PVC
11. Casing Diameter (inches): 2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 6.00
13. Yield (gallons per minute): ..... 0.5 gpm
14. Development Techinque (specify): ..... Whale Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes): ..... 0.5 hours

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: AOC-19: QC LaboratoryHess Corporation – Former Port Reading Complex (HC-PR)

List all AKAs:

Street Address: 835 West Avenue

Municipality: Port Reading (Township, Borough or City)

County: MIddlesex Zip Code: 07064

Program Interest (PI) Number(s): 006148 Case Tracking Number(s): E20130449

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hess Corporation
2. Well Location (Street Address) 835 West Avenue
3. Well Location (Municipal Block and Lot) Block# 1.01 Lot # 664.01

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):.. E201615028
2. Site Well Number as shown on application or plans): MW-4
3. Well Completion Date: ..... December 22, 2016
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 0
5. Total Depth of Well to the nearest ½ foot: 15.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... 3.00
7. Screen Length (or length of open hole) in feet: 12
8. Screen or Slot Size: 1
9. Screen or Slot Material: ..... PVC
10. Casing Material (PVC, steel, or other – specify): ..... PVC
11. Casing Diameter (inches): 2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 6.00
13. Yield (gallons per minute): ..... 0.5 gpm
14. Development Techinque (specify): ..... Whale Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes): ..... 0.5 hours

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Port Reading Complex

List all AKAs:

Street Address: 835 West Avenue

Municipality: Township of Woodbridge (Township, Borough or City)

County: Middlesex Zip Code: 07064

Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address)
3. Well Location (Municipal Block and Lot) Block# Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):
2. Site Well Number (As shown on application or plans): MW-1
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°33'48.89" Longitude: West 74°15'09.64"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 630306 East 560836
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 24.48
   Elevation Top of Outer casing: 25.09 Elevation of ground: 21.58
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   BENCHMARK: NJTP PISCATAWAY CORS ARP
   ELEV.=109.56'(NAVD 88 DATUM)
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date 7.26.16

Surveyor's Name: Steven D. Parent License Number: 24GS03626900

Firm Name: DPK Consulting, LLC Certificate of Authorization #: 24GA28042200

Mailing Address 147 Union Avenue - Suite 1C

City/Town: Middlesex State New Jersey Zip Code: 08846

Phone Number 732.764.0100 Ext.: Fax: 732.764.0990

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Port Reading Complex

List all AKAs:

Street Address: 835 West Avenue

Municipality: Township of Woodbridge (Township, Borough or City)

County: Middlesex Zip Code: 07064

Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address)
3. Well Location (Municipal Block and Lot) Block# Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):
2. Site Well Number (As shown on application or plans): MW-2
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°33'48.18" Longitude: West 74°15'08.56"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 630234 East 560919
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 19.01
   Elevation Top of Outer casing: 19.37 Elevation of ground: 19.37(PAVE)
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   BENCHMARK: NJTP PISCATAWAY CORS ARP
   ELEV.=109.56'(NAVD 88 DATUM)
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date 7.26.16

Surveyor's Name: Steven D. Parent License Number: 24GS03626900

Firm Name: DPK Consulting, LLC Certificate of Authorization #: 24GA28042200

Mailing Address 147 Union Avenue - Suite 1C

City/Town: Middlesex State New Jersey Zip Code: 08846

Phone Number 732.764.0100 Ext.: Fax: 732.764.0990

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Port Reading Complex

List all AKAs:

Street Address: 835 West Avenue

Municipality: Township of Woodbridge (Township, Borough or City)

County: Middlesex Zip Code: 07064

Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address)
3. Well Location (Municipal Block and Lot) Block# Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):
2. Site Well Number (As shown on application or plans): MW-3
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°33'47.57" Longitude: West 74°15'08.94"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 630172 East 560890
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 18.91
   Elevation Top of Outer casing: 19.29 Elevation of ground: 19.28(PAVE)
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   BENCHMARK: NJTP PISCATAWAY CORS ARP
   ELEV.=109.56'(NAVD 88 DATUM)
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

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Surveyor's Name: Steven D. Parent License Number: 24GS03626900

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Mailing Address 147 Union Avenue - Suite 1C

City/Town: Middlesex State New Jersey Zip Code: 08846

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Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address)
3. Well Location (Municipal Block and Lot) Block# Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):
2. Site Well Number (As shown on application or plans): MW-4
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°33'48.48" Longitude: West 74°15'09.09"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 630265 East 560879
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 24.07
   Elevation Top of Outer casing: 24.55 Elevation of ground: 21.22
   Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   BENCHMARK: NJTP PISCATAWAY CORPS ARP
   ELEV.= 109.56' (NAVD 88 DATUM)
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date 01/16/2017

Surveyor's Name: James J. Heiser License Number: 24GS04331100

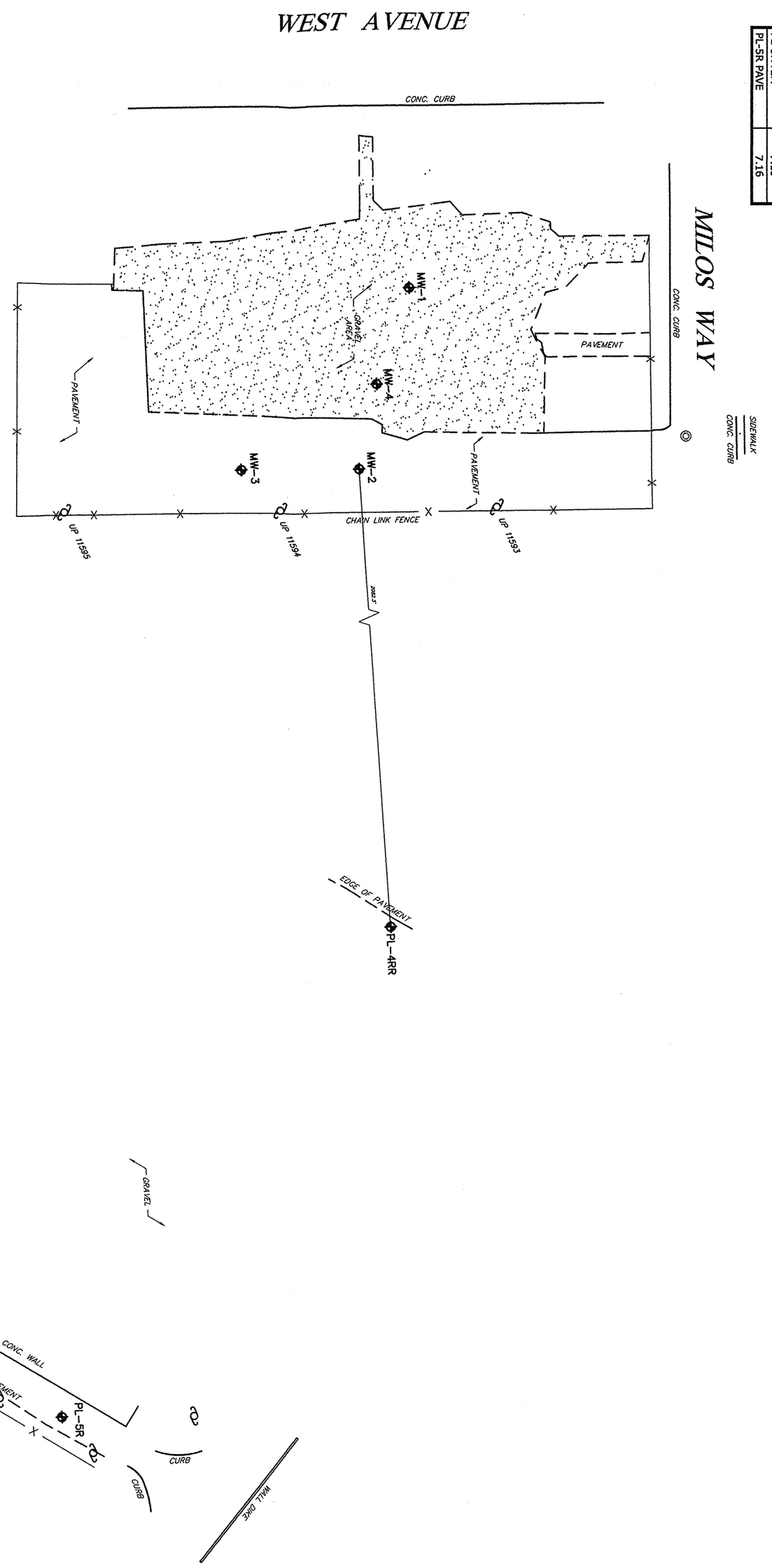
Firm Name: DPK Consulting, LLC Certificate of Authorization #: 24GA28042200

Mailing Address 220 Old New Brunswick Road Suite 220

City/Town: Piscataway State New Jersey Zip Code: 08854

Phone Number 732.764.0100 Ext.: Fax: 732.764.0990

DESIGNATION	ELEVATION
MW-1 TOP PVC	24.48
MW-1 RISER	25.09
MW-1 GROUND	21.58
MW-2 TOP PVC	19.01
MW-2 RIM	19.37
MW-2 PAVEMENT	19.37
MW-3 TOP PVC	18.91
MW-3 RIM	19.29
MW-3 PAVEMENT	19.28
MW-4 TOP PVC	24.07
MW-4 RISER	24.55
MW-4 GROUND	21.22
PL-4RR TOP PVC	11.56
PL-4RR RISER	12.28
PL-4RR PAVE	8.38
PL-5R TOP PVC	6.54
PL-5R RIM	7.15
PL-5R PAVE	7.16



NOTES:

1. FIELD WORK PERFORMED ON JULY 19, 2016 AND DECEMBER 29,2016.
2. ELEVATION DATUM NAVD 1988 DERIVED USING LEICA GX1230+ GPS RECEIVERS AND KEYNET. CORS STATION: NJTP PISCATAWAY ELEV=109.56' (NAVD 1988 GEOID 12A)

SCALE: 1"=60'

60 30 0 60

NJ STATE PLANE COORDINATE GRID NAD 1983

PROJECT NUMBER: 16-7365

DRAWING FILE: 16-7365.MW01

SHEET 1 / 1

REV. 1

MONITORING WELL LOCATION MAP

FOR:
EARTH SYSTEMS

SITE:
HESS PORT READING COMPLEX
835 WEST AVENUE
PORT READING, NEW JERSEY

DRAWN BY: M.T.R.	SCALE: 1" = 60'
CHK'D BY: S.D.P.	DATE: 07/26/2016

DPK CONSULTING

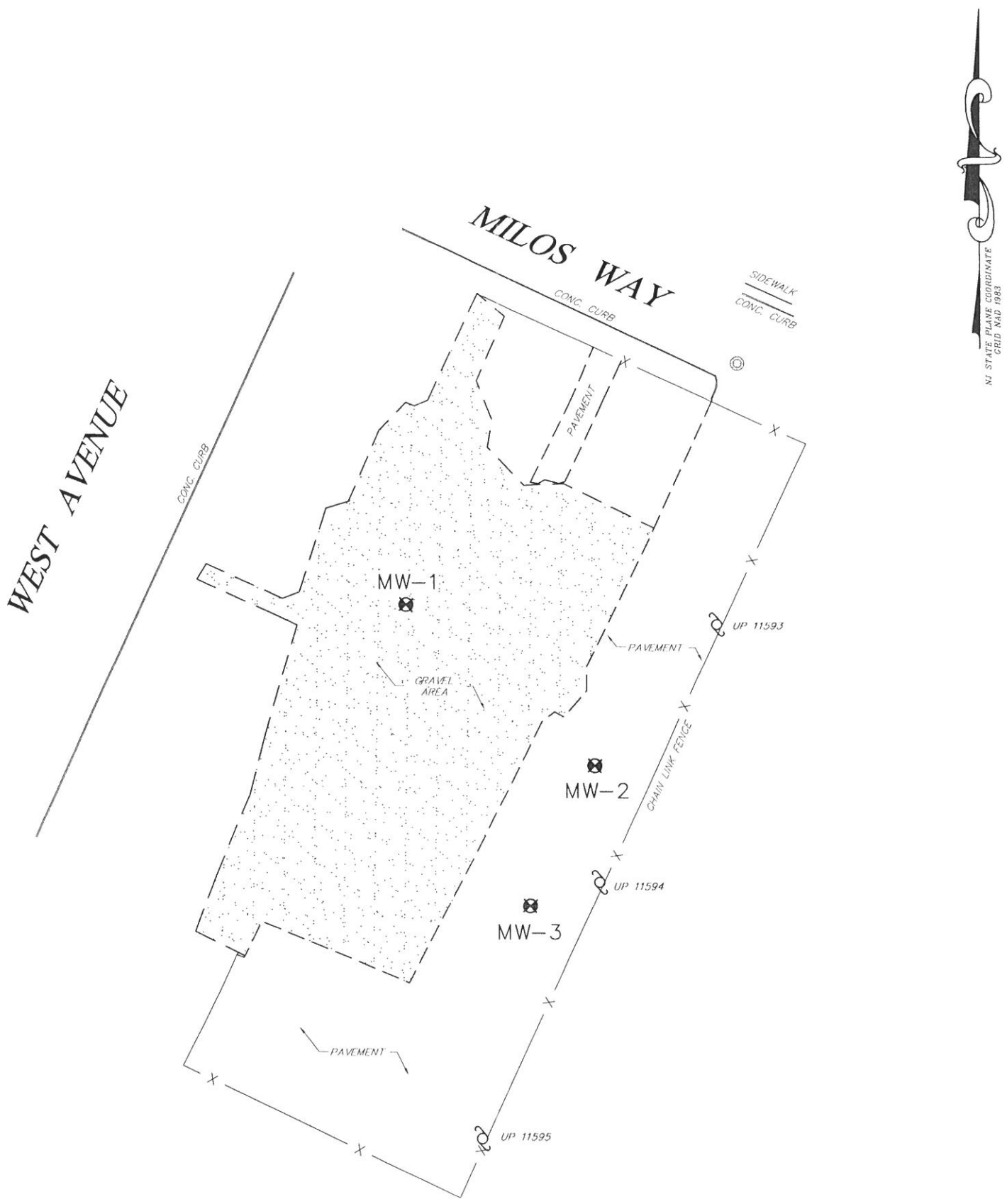
DPK CONSULTING, LLC
220 OLD NEW BRUNSWICK RD-STE. 201, PISCATAWAY, NJ 08854
P:732-764-0100 F: 732-764-0990
NEW JERSEY CERTIFICATE OF AUTHORIZATION NO. 24GA28042200

REV	DATE	DESCRIPTION	BY	CHKD
1	1/16/2017	ADDED MW-4, PL-4RR AND PL-5R	B.D.B.	J.J.H.

Steven D. Parent
Professional Land Surveyor
N.J. Lic: 24GS03626900
SPARENT@DPKCONSULTING.NET

James J. Heiser
Professional Land Surveyor
N.J. Lic: 24GS04331100
JHEISER@DPKCONSULTING.NET
N.Y. Lic: 050932-1

1/16/17



DESIGNATION	ELEVATION
MW-1 TOP PVC	24.48
MW-1 RISER	25.09
MW-1 GROUND	21.58
MW-2 TOP PVC	19.01
MW-2 RIM	19.37
MW-2 PAVEMENT	19.37
MW-3 TOP PVC	18.91
MW-3 RIM	19.29
MW-3 PAVEMENT	19.28

NOTES:

1. FIELD WORK PERFORMED ON JULY 19, 2016.
2. ELEVATION DATUM NAVD 1988 DERIVED USING LEICA GX1230+ GPS RECEIVERS AND KEYNET. CORS STATION: NJTP PISCATAWAY ELEV=109.56' (NAVD 1988 GEOID 12A)

60 30 0 60

SCALE: 1"=60'

DPK CONSULTING
147 Union Ave, Ste. 1C, Middlesex, NJ 08846 P: 732-764-0100 F: 732-764-0990
NEW JERSEY CERTIFICATE OF AUTHORIZATION NO. 24GA28042200

7.26.16
date
Steven D. Parent
Professional Land Surveyor
N.J. Lic: 24GS03626900
SPARENT@DPKCONSULTING.NET

date
James J. Heiser
Professional Land Surveyor
N.J. Lic: 24GS04331100 N.Y. Lic: 050932-1
JHEISER@DPKCONSULTING.NET

MONITORING WELL LOCATION MAP

FOR:
EARTH SYSTEMS

SITE:
HESS PORT READING COMPLEX
835 WEST AVENUE
PORT READING, NEW JERSEY

Scale	Dr.	Chk.	Date
1"=60'	MTR	S.D.P.	07/26/2016

Job No.: 16-7365 Drawing File: 16-7365.MW00

APPENDIX H:
CLASSIFICATION EXCEPTION AREA DOCUMENTATION

New Jersey Department of Environmental Protection
Site Remediation Program

CLASSIFICATION EXCEPTION AREA / WELL RESTRICTION AREA (CEA/WRA) FACT SHEET FORM

Date Stamp
(For Department use only)

SECTION A. SITE INFORMATION

Site Name: AOC-19: QC Laboratory, Hess Corporation - Former Port Reading Complex (HC-PR)

Program Interest (PI) Number(s): 006148

Case Tracking Number(s) for this submission: E20130449

This form must be attached to the Cover / Certification Form if not submitted through the RIR Online Service

1. Indicate the reason for submission of this form *(see instructions)*:

   ☒ New CEA ☐ Revise CEA ☐ Reestablish CEA ☐ Existing CEA with no changes
   ☐ CEA for historic fill ☐ CEA lift/removal

   If you are submitting this form for an existing CEA provide the CEA Subject Item ID: _____

2. Indicate the type of ground water Remedial Action (RA):

   ☒ Natural ☐ Active ☐ Final RA not yet selected

3. Is this form being submitted with a Remedial Action Permit (RAP) Form (for Soil or Ground Water)? ... ☒ Yes ☐ No

SECTION B. CEA COMPONENT INFORMATION

1. **Contaminant(s):** This CEA/WRA applies only to contaminants above applicable numeric values established by the Ground Water Quality Standards (GWQS), N.J.A.C. 7:9C, listed in the table below. Except for historic fill CEAs based on assumed ground water contamination, list the maximum contaminant value for all ground water data that could be representative of current conditions and is for any well or sampling point used to establish the CEA. The values listed below may or may not be appropriate for use in evaluating plume fate and transport. See form instructions.

Contaminant	Concentration (1)	GWQS (2)	SWQS(3)	GWSL(4)
Arsenic	10.7	3		

Notes:
(1) Maximum concentration in Micrograms Per Liter
(2) New Jersey Ground Water Quality Standards, N.J.A.C. 7:9C
(3) Surface Water Quality Standards, N.J.A.C. 7:9B - Applicable only where contaminants in the CEA may discharge to a surface water body.
(4) Current NJDEP Vapor Intrusion Ground Water Screening Levels available at http://www.nj.gov/dep/srp/guidance/vaporintrusion/

☐ Check if attaching an Addendum to list additional contaminants and associated information.

2. **CEA Boundaries:** Year of tax map used: 2014

   For CEA revisions: ☐ check if CEA Boundary has changed (*See instructions*)
   ☐ check if Block and Lot numbers have changed (*See instructions*)

List the Block(s) and Lot(s) included in the areal extent of the Classification Exception Area:

Block(s)	Lot(s)	Check if off-site	Block(s)	Lot(s)	Check if off-site
664.01	1.01	☐			☐
		☐			☐
		☐			☐
		☐			☐
		☐			☐

☐ Check if attaching an Addendum to list additional Blocks/Lots and associated information.

Narrative description of proposed CEA:

A CEA approximately 12,700 square feet is being established to address low level arsenic impacts to approximately 15 feet below grade. (see Exhibit D)

Name(s) of the affected Geologic Formation(s)/Unit(s): Rahway Till

Direction of ground water flow: SE (*If multiple water bearing zones exist within the CEA and/or there is no predominant flow direction, see instructions.*)

Ground Water Classification: Class IIA (*See instructions and GWQS for classification area information.*)

Vertical Depth of CEA: 15 (ft bgs) **and** 4 (msl).

Horizontal Extent of CEA: 12,700 Indicate units: ☐ acres or ☒ square feet

3. Projected Term of CEA: (*Based on modeling/calculations in the fate and transport description*)

Proposed Duration in Years: _____ Anticipated Expiration Date: _____

or ☒ Indeterminate (*Review instructions before selecting* "Indeterminate.")

4. <u>ATTACH AND/OR SUBMIT THE FOLLOWING</u>: (*see instructions for additional information*)

Exhibit A: Site Location Maps – USGS Quadrangle Map;

Exhibit B: CEA Map and Cross Section Figure – See N.J.A.C 7:26C- 7.3(c)1 and 2 and instructions regarding what to include on the map and the cross-section figure.

Exhibit C: GIS Deliverables – CEA Boundary Extent Map. The CEA Boundary Extent Map shall be submitted via email to srpgis_cea@dep.nj.gov. See the instructions for detailed GIS deliverable requirements.

For revisions, does the attached map differ from the CEA map on NJ-GeoWeb? ☐ Yes ☐ No ☒ N/A

If "Yes or N/A," identify the format of the CEA Boundary Extent Map: ..... ☒ Shape File ☐ CAD File

SECTION C. CURRENT GROUND WATER USE DOCUMENTATION

1. Indicate the year of the most recent well search completed per N.J.A.C. 7:26E-1.14: 2015
2. If this Fact Sheet form is for a revised CEA or an existing CEA with no changes, have new wells been installed since the CEA was established? ..... ☐ Yes ☐ No ☒ N/A
3. Are there any pumping wells (e.g., potable, industrial, irrigation or recovery wells) within the foot print of the CEA? ..... ☐ Yes ☒ No

SECTION D. WELL RESTRICTION INFORMATION

Certain well restrictions relevant to potable ground water use, such as "Double Case Wells", "Sample Potable Wells", and "Evaluate Production Wells", are consistently set within the boundaries of all CEAs established by the NJDEP in Class I and II-A areas (*see instructions*).

1. Are there any other site-specific well restrictions relevant to potable ground water use that should be set within or near the boundaries of the proposed CEA?..... ☐ Yes ☒ No

   If "Yes", describe below any such site-specific well restrictions proposed for this CEA:

SECTION E. PUBLIC NOTIFICATION REQUIREMENTS

See form instructions for notification procedures

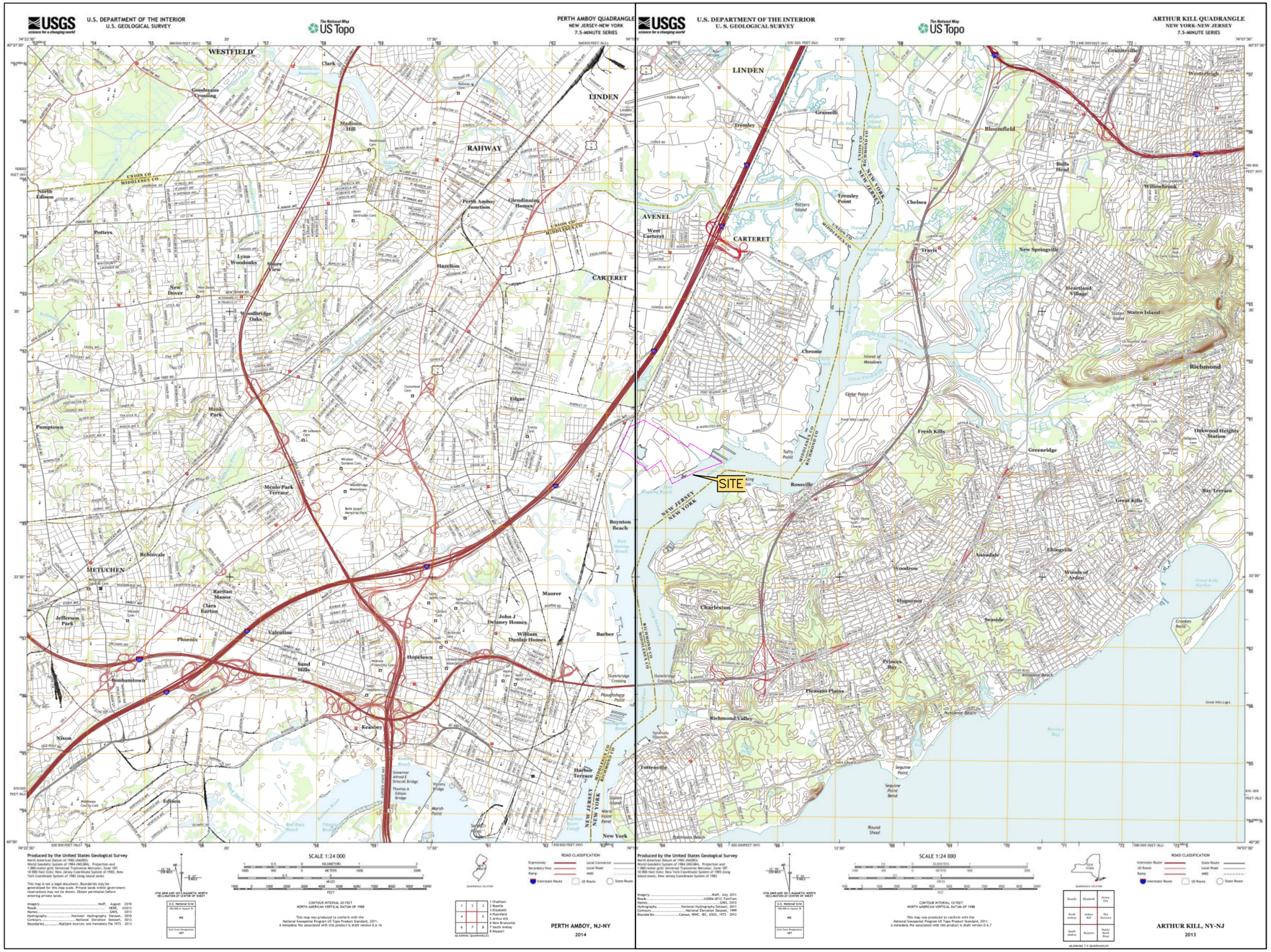
1. Indicate which of the following entities have been notified pursuant to N.J.A.C. 7:26C-7.3(d). (*check all that apply*)

   ☒ Municipal and county clerk(s)
   ☒ Local, county or regional health department(s)
   ☒ Designated County Environmental Health Act agency (if applicable)
   ☒ County Planning Board
   ☐ Pinelands Commission (if applicable)
   ☐ Owners of real property overlying CEA foot print

2. **List of Names and Addresses** – List below and/or in an attachment, the names/addresses of all persons notified pursuant to N.J.A.C. 7:26C-7.3(d) based on the proposed CEA boundaries. If the site property owner differs from the person responsible for conducting the remediation, enter the site owner's name and address first in below table. See instructions for more information regarding address list and indicating if vapor intrusion was evaluated for properties over the CEA.

   ☒ Check here if no volatile contaminants are in the CEA

Entity or Owner Name	**Notification Address Used** (include applicable block and lot overlying CEA if owner address differs from property address)	**Date notification sent**	**Was property evaluated for vapor intrusion?** Check if "Yes"
John Mitch, Municipal Clerk	1 Man Street, Woodbridge, NJ 07095	06/06/2017	☐
Dennis Green, Director	Health & Human Services, 2 George Frederick Plaza, Woodbridge	06/06/2017	☐
Elaine Flynn, Clerk	County Admin Bldg, 75 Bayard St, New Brunswick, NJ	06/06/2017	☐
Middlesex County Public Safety & Health	35 Kennedy Blvd, East Brunswick, NJ 08816	06/06/2017	☐
Office of Planning	County Admin Bldg, 75 Bayard St, New Brunswick, NJ	06/06/2017	☐
Environmental Health Division	County Admin Bldg, 75 Bayard St, New Brunswick, NJ	06/06/2017	☐
			☐
			☐
			☐
			☐
			☐
			☐
			☐
			☐
			☐



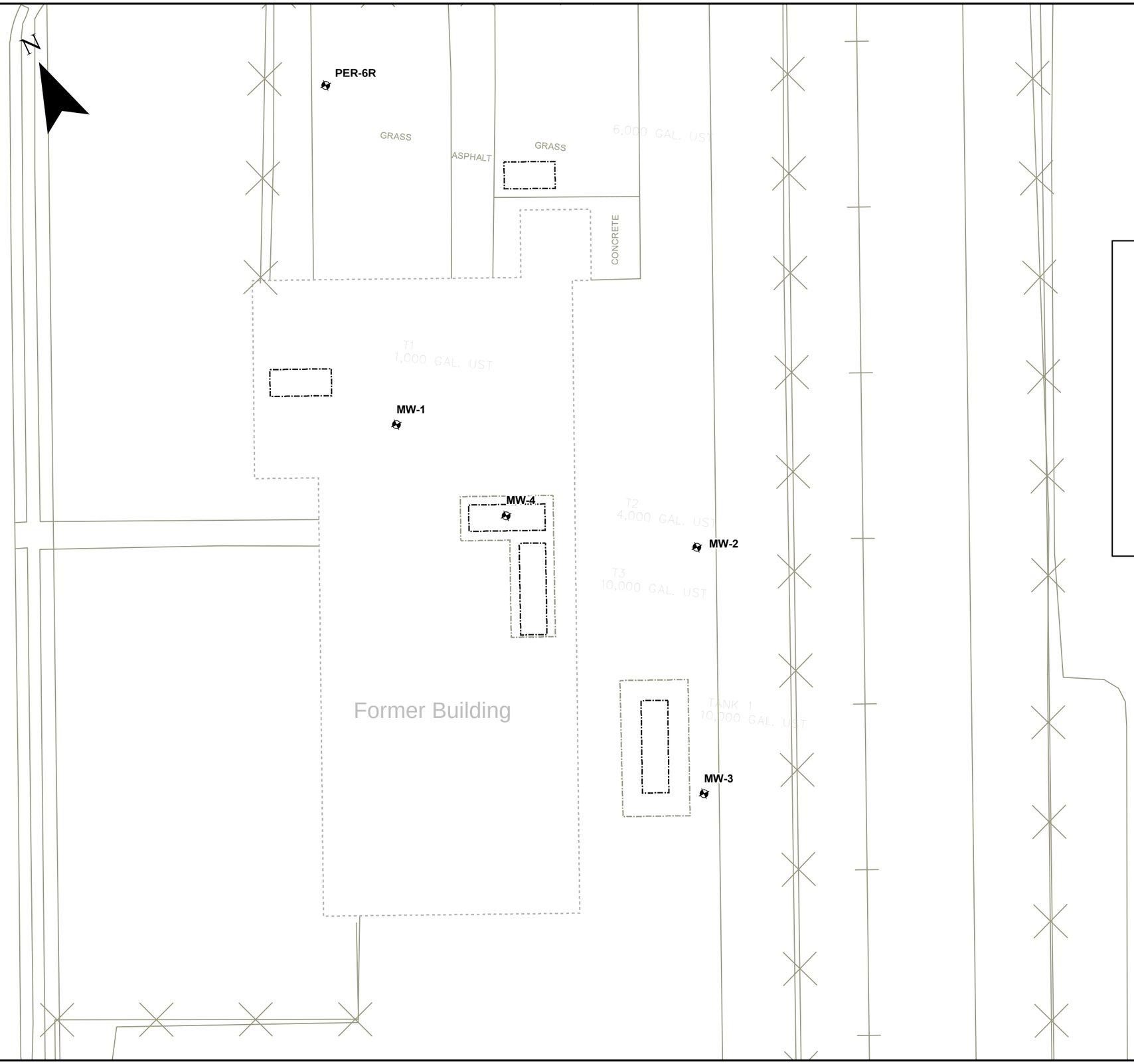
USGS MAP

Hess Corporation Former Port Reading Complex (HC–PR)
750 Cliff Road
Port Reading, New Jersey

Earth Systems

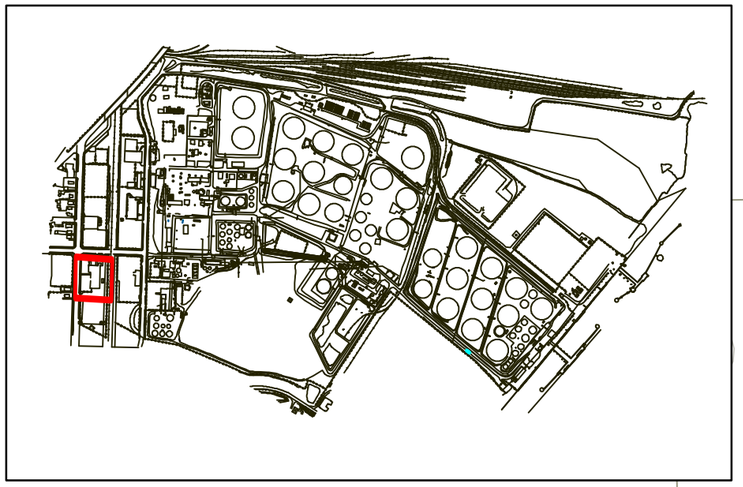
Exhibit A-1

09/15 FIG1



LEGEND

Monitoring Well



0 15 30 60 Feet

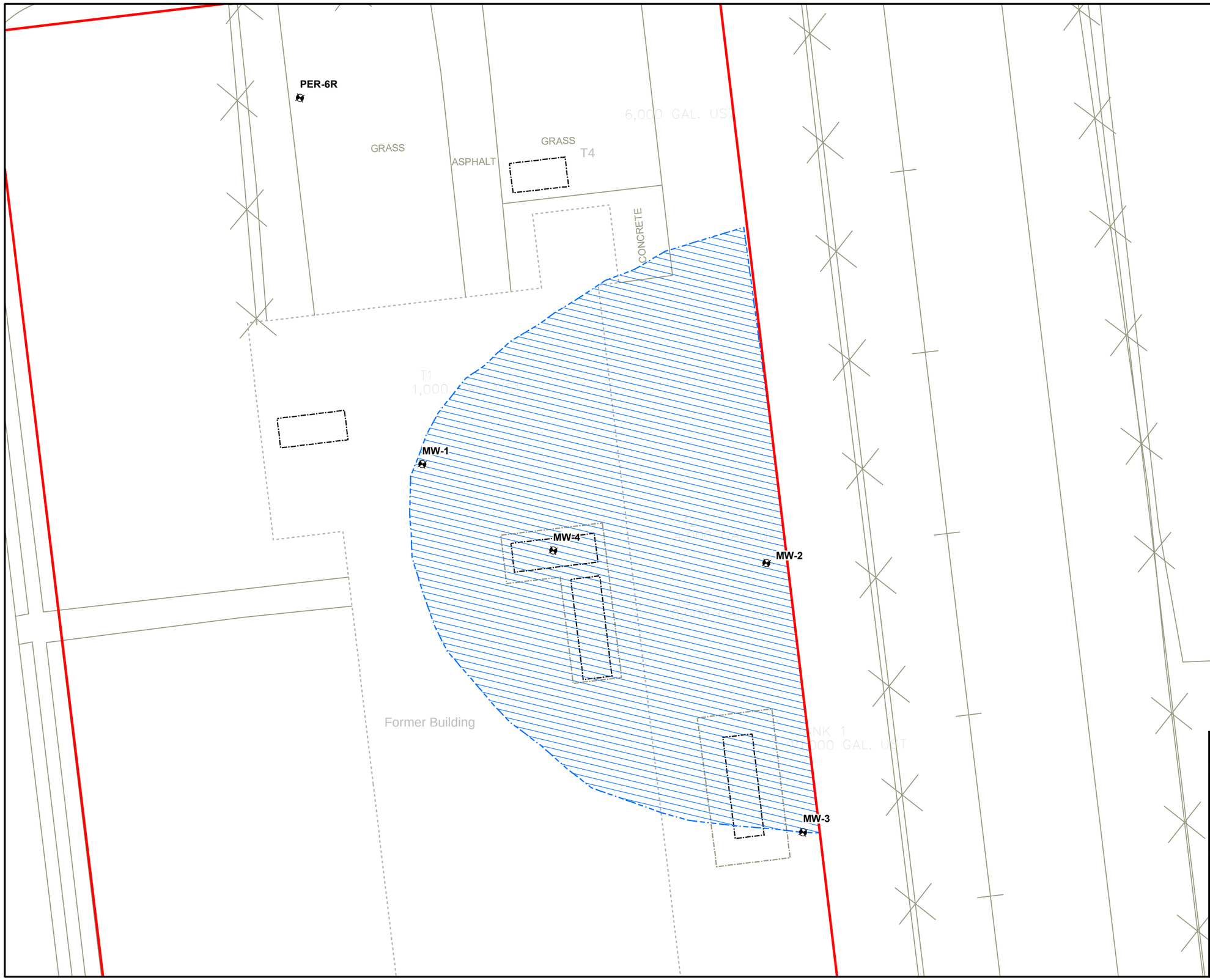
1 inch = 30 feet

Exhibit A-2 - QC Lab Parcel

Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By:	RC	Date :	4/25/2017

Earth Systems
Environmental Engineering
1625 Highway 71, Belmar, NJ 07719
T. 732.449.0077 | F. 732.449.5810



LEGEND

- Site Parcel Boundary
- Monitoring Well
- Arsenic CEA (Estimated)

N

1 inch = 25 feet

0 12.5 25 50 Feet

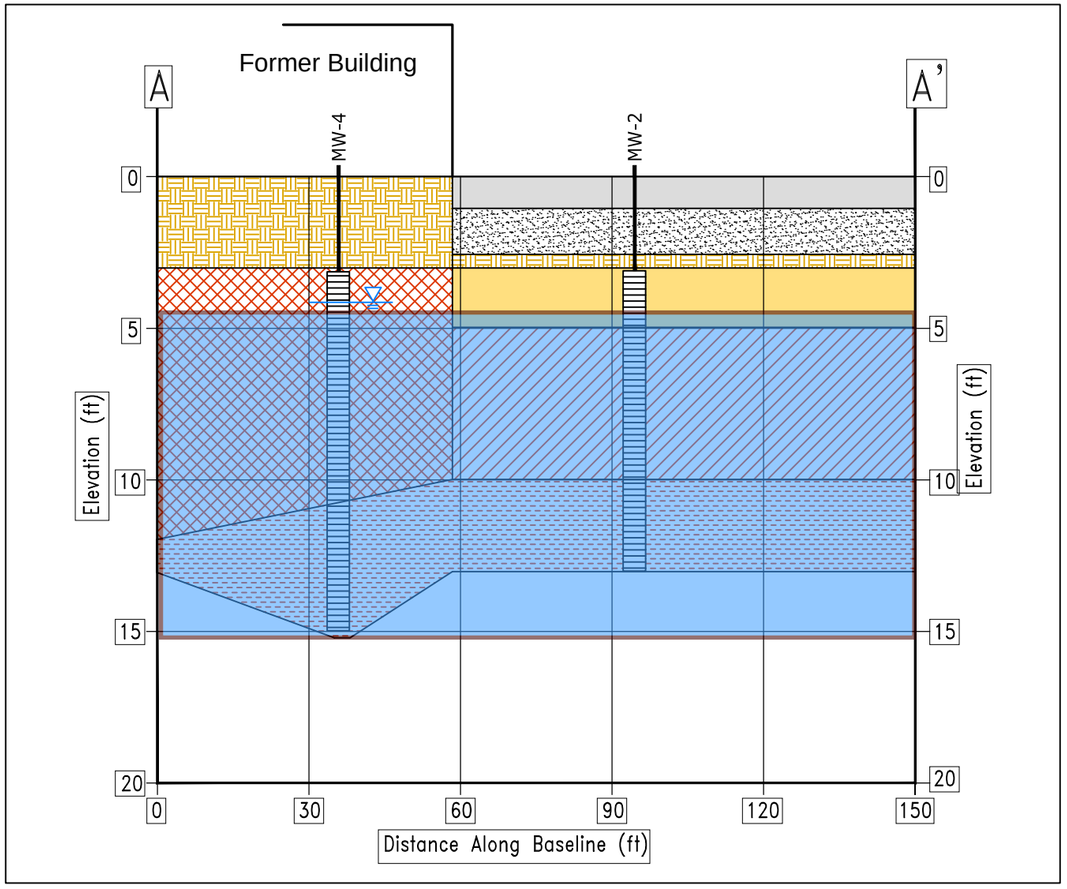
Exhibit B -1 - Arsenic CEA Boundary Map

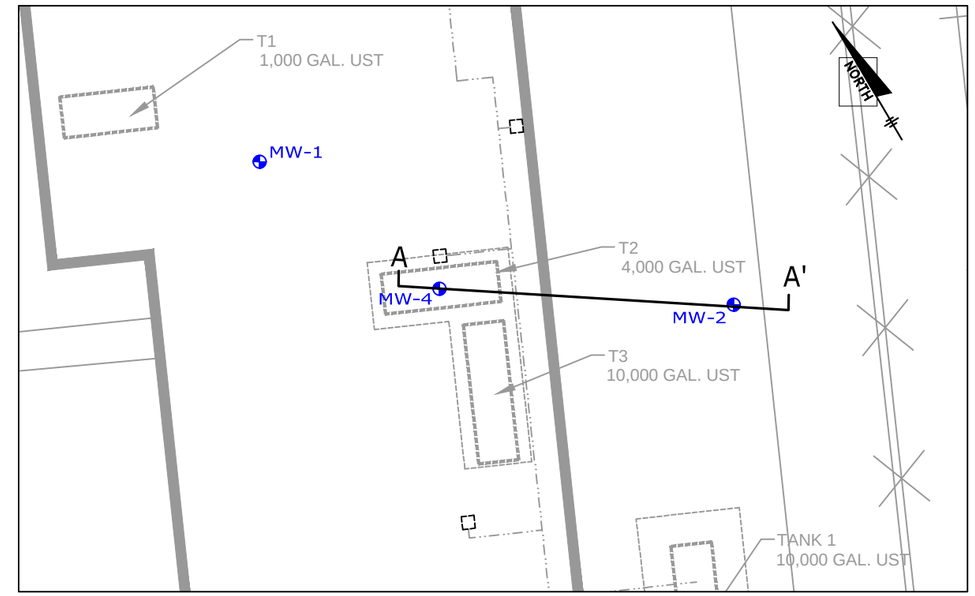
Hess Former Port Reading Complex - QC Lab
835 West Avenue
Port Reading, New Jersey

Drawn By:	RC	Date :	06/02/2017

Earth Systems
Environmental Engineering

1625 Highway 71, Belmar, NJ 07719
T. 732.449.0077 | F. 732.449.5810





KEYMAP
SCALE: 1"=30'

LEGEND

- ASPHALT
- GRAVEL
- OVERBURDEN
- BROWN SANDY SILT-SATURATED
- RED BROWN SANDY CLAY
- RED BROWN CLAY
- SAND/FILL/MIXED MATERIALS
- MW-4 — MONITORING WELL AND SCREEN LOCATION AND ID
- APPROXIMATE SHALLOW GROUND WATER ELEVATION
- ARSENIC CEA

VERTICAL
1 inch = 5 ft.
5
2.5

HORIZONTAL
1 inch = 30 ft.
15
30

GEOLOGIC CROSS SECTION

HESS CORPORATION
HESS PORT READING COMPLEX
FORMER QC LABORATORY
835 WEST AVENUE
PORT READING, NEW JERSEY

Earth Systems

Exhibit B-2

I:\Clients\E\EARTHSYSTEMS\HESS\PINNACLE\LAB\LAB BLDG GEOSECTION.dwg, xsection, 5/2/2017 12:25:16 PM, pinnacle
FILE: I:\CLIENTS\E\EARTHSYSTEMS\HESS\PINNACLE\LAB\LAB BLDG GEOSECTION.DWG, DATE: 05/02/2017 12:25:16PM

CLASSIFICATION EXCEPTION AREA (CEA)

EXHIBIT D

1 Background Information

This Classification Exception Area (CEA) is being established for the area of concern designated as AOC-19: Former Quality Control Laboratory (QC Lab or Site) associated with the Hess Corporation Former Port Reading Complex (HC-PR). The former QC Lab is located on Block 664.01 and Lot 1.01 (835 West Avenue, Port Reading, Middlesex County, New Jersey).

The QC Lab was demolished in 2015 and included the decommissioning of four (4) underground storage tanks (USTs). The USTs served the Lab as the endpoint of waste petroleum products that were tested and evaluated within the building. Following decommissioning and removal, soil samples were collected. The analyses identified soil impacts attributable to historic releases from the USTs. In 2016, all impacted soil was excavated from the AOC and post remediation groundwater sampling confirmed that soil remediation to address impacts attributable to the historic UST release was effective.

This CEA is being established to address low level groundwater arsenic impacts, unrelated to the historic UST release. No significant arsenic soil impacts were detected during investigation activities. Once the CEA is established and the Remedial Action Permit (RAP) is approved, the Licensed Site Remediation Professional (LSRP) will issue a Limited Restricted Use Response Action Outcome to close out the AOC.

2 Fate and Transport – CEA Longevity

The proposed duration of the CEA is indeterminate. As specified in the CEA form instructions, indeterminate is an acceptable duration when metals are the only contaminant of concern.

3 Horizontal and Vertical Extent of CEA

The horizontal extent of the CEA is approximately 12,700 square feet. Groundwater direction generally flows in the east, southeast direction. The QC lab parcel is being investigated concurrently with the entire Port Reading complex (located directly to the east). As part of the investigation and remediation of the remaining Port Reading AOCs, a CEA will ultimately be established for the Port Reading complex also. Therefore, even though the boundaries of the QC Lab CEA are not defined to the east, the CEA is still protective since a CEA will also be established to address the remaining Site AOCs located adjacent to the QC lab parcel. The vertical depth of the CEA has been assumed to be confined to the shallow groundwater table, approximately 15 feet below grade.

4 Monitored Natural Attenuation (MNA)

Monitored natural attenuation (MNA) is the remedial action selected to address arsenic impacts at the Site. MNA refers to the reliance on natural attenuation processes to achieve the applicable ground water remediation standard. Natural attenuation processes include a variety of physical, chemical, or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in ground water. These processes include biodegradation, dispersion, dilution, sorption, volatilization, and chemical or biological stabilization, transformation, or destruction of contaminants.

MNA is the appropriate remedy to address the groundwater impacts associated with this Site for the following reasons:

- Soil remediation was completed at the Site which effectively removed all source impacted soils;
- No significant arsenic soil impacts were identified during investigation activities;

5 Monitoring Schedule

Groundwater at the site is impacted with low levels of arsenic. Groundwater sampling of the QC lab wells will be conducted on an annual basis for arsenic analysis.

APPENDIX I:
HISTORIC ENVIROTRAC REPORT

August 5, 2014

Rafael Rivera
New Jersey Department of Environmental Protection
Bureau of Initial Notice and Case Assignment
401 -05H
PO Box 420
Trenton, New Jersey 08625-0420

Re: Site Investigation/Remedial Action Report
Hess Corporation- Former Quality Control Laboratory
835 West Avenue
Port Reading, Middlesex County, New Jersey
NJDEP Incident #13-07-24-1427-02
SRP PI #004800

Dear Mr. Rivera,

This Site Investigation/Remedial Action Report for Hess Corporation- Port Reading Complex AOC 19 – Quality Control Laboratory is being submitted by EnviroTrac Ltd. on behalf of Hess Corporation.

Should you have any questions or comments regarding the information submitted in this report, please do not hesitate to contact me at 609-387-5553, John Engdahl of Hess Corporation at 732-750-6934.

Sincerely,

David J. Carlson
Senior Project Manager
LSRP #581780
EnviroTrac Ltd.

Cc: Phil Cole, NJDEP – BCM (3 copies+ 1 electronic)
Nidal Azzim – USEPA Region II (w/o enclosure)
Andrew Park – USEPA Region II (electronic)
John Engdahl, Hess Corporation (enfos)
EnviroTrac Project File

New Jersey Department of Environmental Protection
Site Remediation Program

ALTERNATIVE OR NEW REMEDIATION STANDARD AND/OR SCREENING LEVEL APPLICATION FORM

Date Stamp
(For Department use only)

NOTE: This form shall be completed for all contaminants for which a direct contact exposure pathway alternative or new remediation standard, alternative impact to ground water soil remediation standard, alternative vapor intrusion screening level, ecological risk-based remediation goal, and/or ecological risk management decision goal is being implemented and/or requested for a site or area of concern. The form shall be used regardless of whether Department pre-approval is required.

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Corporation - Quality Control Laboratory

List all AKAs: QC Lab

Street Address: 835 West Avenue

Municipality: Port Reading (Township, Borough or City)

County: Middlesex Zip Code: 07064

Program Interest (PI) Number(s): 004800, 006148

Case Tracking Number(s): 13-07-24-1427-02; N13-9009

SECTION B. REMEDIATION STANDARD NOTIFICATION SPREADSHEET

Complete and attach the Remediation Standard Notification Spreadsheet which can be found at: http://www.nj.gov/dep/srp/srra/forms/. This form will not be processed by the NJDEP if the spreadsheet is not attached.

SECTION C. PURPOSE FOR SUBMISSION

Pre-Approval Required:

- ☐ Ingestion/Dermal Alternative Soil Remediation Standard
- ☐ Inhalation Alternative Soil Remediation Standard (New Toxicity Data, New Modeling, etc.)
- ☐ Development of New Remediation Standard
- ☐ Ecological Risk Based Remediation Goal
- ☐ Ecological Risk Management Decision Goal

No Pre-Approval Required:

- ☐ Inhalation Alternative Soil Remediation Standard (Calculation Spreadsheet)
- ☒ Impact to Groundwater Alternative Soil Remediation Standard
- ☐ Vapor Intrusion Alternative Screening Level
- ☐ Development of New Vapor Intrusion Screening Level

SECTION D. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Hess Corporation

Representative First Name: John Representative Last Name: Engdahl

Title: Senior Specialist

Phone Number: (732) 750-6934 Ext: Fax: (732) 750-6805

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: JEngdahl@hess.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Date: 7/30/2014

Name/Title: John Engdahl/Senior Specialist No changes to contact information since last submittal ☐

SECTION E. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 581780

First Name: David Last Name: Carlson

Phone Number: (609) 387-5553 Ext: Fax:

Mailing Address: 6 Terri Lane, Suite 350

City/Town: Burlington State: NJ Zip Code: 08016

Email Address: davec@envirotrac.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:

☐ *directly oversaw and supervised all of the referenced remediation, and\or*

☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

I believe that the information contained herein, and including all attached documents, is true, accurate and complete.

It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: Date: 8/3/2014

LSRP Name/Title: David Carlson/Senior Project Manager

Company Name: EnviroTrac Ltd.

No changes to contact information since last submittal ☒

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

New Jersey Department of Environmental Protection
Site Remediation Program

Instructions

Clear Form

REMEDIATION STANDARD NOTIFICATION SPREADSHEET

Site Name: Hess Quality Control Laboratory

Program Interest Number: 004800, 006148

ALTERNATIVE STANDARDS OR SCREENING LEVELS REQUESTED/IMPLEMENTED

Chemical Name	CAS	Concentration Range on Site (include units)	ARS / Screening Level	Scenario	Type of Standard	Default Remediation Standard / Screening level (include units)	Proposed Remediation Standard / Screening level (include units)
Acetone	67-64-1	NonDetect- 39.4 mg/kg	Impact to Ground Water – SPLP	NA	Alternative	12 mg/kg	120 mg/kg
Ethylbenzene	100-41-4	NonDetect- 14.8 mg/kg	Impact to Ground Water – Soil Water Partition Equation	NA	Alternative	8 mg/kg	26 mg/kg
Methyl Tert Butyl Ether	1634-04-4	NonDetect-27.2 mg/kg	Impact to Ground Water – SPLP	NA	Alternative	0.2 mg/kg	1.4 mg/kg
Methylene Chloride	75-09-2	NonDetect- 0.0084 mg/kg	Impact to Ground Water – SPLP	NA	Alternative	0.007 mg/kg	0.06 mg/kg
Toluene	108-88-3	NonDetect- 17.5 mg/kg	Impact to Ground Water – Soil Water Partition Equation	NA	Alternative	4 mg/kg	12 mg/kg
Total Xylenes	1330-20-7	NonDetect- 66.0 mg/kg	Impact to Ground Water – Soil Water Partition Equation	NA	Alternative	12 mg/kg	39 mg/kg
Benzo(a)pyrene	50-32-8	NonDetect- 0.255 mg/kg	Impact to Ground Water – Soil Water Partition Equation	NA	Alternative	0.2 mg/kg	0.5 mg/kg
2-methylnapthalene	91-57-6	NonDetect-5.76 mg/kg	Impact to Ground Water – Soil Water Partition Equation	NA	Alternative	5 mg/kg	19 mg/kg
Aluminum	7429-90-5	4,560-18,300 mg/kg	Impact to Ground Water – Soil Water Partition Equation	NA	Alternative	3,900 mg/kg	6,000 mg/kg
Beryllium	7440-71-7	0.27-0.99 mg/kg	Impact to Ground Water – Soil Water Partition Equation	NA	Alternative	0.5 mg/kg	0.7 mg/kg
Manganese	7439-96-5	60.5-1,320 mg/kg	Impact to Ground Water – Soil Water Partition Equation	NA	Alternative	42 mg/kg	65 mg/kg
Nickel	7440-02-0	6.5-32.3 mg/kg	Impact to Ground Water – Soil Water Partition Equation	NA	Alternative	31 mg/kg	48 mg/kg

	A	B	D	E	F	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	**Case Name:**	Hess Corporation- Port Reading Complex QC Lab																		
2	**PI #:**	004800, 006148																		
3	**IMPORTANT:** *Do not copy and paste into more than 1 cell at a time because it can disrupt hidden equations*																			
4	**Case Inventory Document Version 1.2 06/09/14**																			
5	**AOC ID**	**AOC Type**	**AOC Details**	**Confirmed Contamination**	**AOC Status**	**Status Date**	**Incident #**	**DEP AOC Number**	**Contaminated Media**	**Contaminants of Concern**	**Additional Contaminants of Concern**	**Additional Contaminants of Concern**	**Applicable Remediation Standard**	**Exposure Route**	**Additional Exposure Route**	**RA Type**	**Additional RA Type**	**Additional RA Type**	**Was an Order of Magnitude Evaluation Conducted?**	**Activity**
6	AOC #1	Storage tank and appurtenance - Federal Regulated Under ground storage tank	Former 10,000-gallon oil UST and appurtnant piping- used for spent laboratory samples	Yes	SI		1307-24-1427-02	AOC 19	Mixed Media	VO	Metals		Remediation Standards	Ground Water					No	June-December 2013: UST removed and appurtnant piping abandoned in place. Initial investigation completed in June, remedial Investigation conductedin December, Site Specific IGWSRS created for multiple compounds. MTBE present above NRDCSRS. Benzene, xylenes and multiple metal compounds present above IGWSRS.
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New Jersey Department of Environmental Protection
Site Remediation Program

CONFIRMED DISCHARGE NOTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Corporation- Quality Control Laboratory

List all AKAs: QC Lab

Street Address: 835 West Ave

Municipality: Woodbridge Township (Township, Borough or City)

County: Middlesex Zip Code: 07064

Program Interest (PI) Number(s): 004800, 006148

Case Tracking Number(s): 13-07-24-1427-02; N13-9009

Date Remediation Initiated Pursuant to N.J.A.C. 7:26C-2. 07/24/2013

State Plane Coordinates for a central location at the site: Easting: 560882.68 Northing: 630201.18

Municipal Block(s) and Lot(s):

Block #	664.01	Lot #	1.01	Block #		Lot #	
Block #		Lot #		Block #		Lot #	
Block #		Lot #		Block #		Lot #	
Block #		Lot #		Block #		Lot #	

SECTION B. DISCHARGE BEING REPORTED WITH THIS SUBMISSION

Incident Number/Com. Center Number for the discharge being reported with this submission: 13-07-24-1427-02

Is there an existing remedial case at the site? ☒ Yes ☐ No

If "Yes," would you like to combine this incident number with the existing case? ☐ Yes ☒ No

Provide the Tracking Number for the existing remedial case would you like to combine this incident number with: _____

SECTION C. CURRENT OWNER OF THE SITE

Affiliation/Name of Organization: Hess Corporation

First Name of Contact: John Last Name of Contact: Engdahl

Title: Senior Specialist

Phone Number: (732) 750-6934 Ext: _____ Fax: (732) 750-6805

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: JEngdahl@hess.com

SECTION D. SITE USE

Current Site Use (check all that apply)

- ☒ Industrial
- ☐ Residential
- ☐ Commercial
- ☐ School or child care
- ☐ Agricultural
- ☐ Park or recreational use
- ☒ Vacant
- ☐ Government
- ☐ Other: _____

Intended Future Site Use, if known (check all that apply)

- ☐ Industrial
- ☐ Residential
- ☐ Commercial
- ☐ School or child care
- ☐ Park or recreational use
- ☒ Vacant
- ☐ Government
- ☐ Future site use unknown

SECTION E. DESCRIPTION OF DISCHARGE

Date Discharge Occurred: Unknown Date NJDEP Hotline called: 7-24-2013

Media Contaminated:

☒ Soil ☒ Groundwater ☐ Surface Water Receiving Water: _____

☐ Historic Fill only

Description of Discharge:

One 10,000-gallon Underground storage tank was removed and appurtanent piping was abandoned in place as per issued NJDEP Closure Permit (TMS #N13-9009, Activity # UCL130001). Soil and Groundwater sampling was conducted in accordance to the July 13, 2012 NJDEP Technical Guidance for Investigation of Underground Storage Tank Systems. Analytical data indicated constituents of concern above applicable remediation standards.

SECTION F. FEDERAL RELEASE

Is this discharge related to a release from a Federally regulated UST?..... ☒ Yes ☐ No

If "Yes," please answer the following questions:

Tank ID (from Registration): N13-9009 Tank System Size: _____

Contents: Waste Oil

Source of Federal Release (check appropriate category):

- ☐ Dispenser
- ☐ Vent Pipe
- ☐ Fill Port/Fill Lines
- ☐ Piping (Upgraded)
- ☒ Piping (Not Upgraded)
- ☐ Spill Bucket
- ☐ Tank (Upgraded)
- ☒ Tank (Not Upgraded)
- ☐ Vapor System Recovery
- ☐ Submersible Turbine Pump Area
- ☐ Other (Specify) _____
- ☐ Delivery Problem
- ☐ Unknown

Cause of Federal Release (check appropriate category):

- ☐ Spill
- ☐ Overfill
- ☐ Physical/Mechanical Damage
- ☐ Loose Fittings
- ☐ Installation Problem
- ☐ Vapor Release
- ☐ Other (Specify) _____
- ☐ Corrosion
- ☒ Unknown

SECTION G. CASE TYPE: (check all that apply)

- ☐ Administrative Consent Order (ACO)
- ☐ Brownfield Development Area (BDA)
- ☐ Child Care Facility
- ☐ Chrome Site (Chromate chemical production waste)
- ☐ Coal Gas
- ☐ Due Diligence with RAO
- ☐ Hazardous Discharge Remediation Fund (HDSRF) Grant/Loan
- ☐ Historic Pesticides
- ☐ ISRA
- ☐ Landfill (SRP subject only)
- ☒ Regulated Underground Storage Tank (UST)
- ☐ Remediation Agreement (RA)
- ☐ School Development Authority (SDA)
- ☐ School facility
- ☐ Spill Act Defense – Government Entity
- ☐ Spill Act Discharge
- ☐ UST Grant/Loan
- ☐ Other (explain): _____

Federal Case (check all that apply)

☒ **RCRA GPRA 2020** ☐ **CERCLA/NPL** ☐ **USDOD** ☐ **USDOE** ☐ TSCA

SECTION H. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Hess Corporation

Representative First Name: John Representative Last Name: Engdahl

Title: Senior Specialist

Phone Number: (732) 750-6934 Ext: Fax: (732) 750-6805

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: JEngdahl@Hess.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Date: 7/30/2014

Name/Title: John Engdahl/ Senior Specialist

No Changes To Contact Information Since Last Submittal ☐

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

New Jersey Department of Environmental Protection
Site Remediation Program
PRELIMINARY ASSESSMENT / SITE INVESTIGATION
(Also Use this Form For Unknown Source Investigations)

☐ PA ☒ SI ☐ Unknown Source Investigation

Date Stamp
(For Department use only)

A Phase I or Phase II is not equivalent to a Preliminary Assessment or Site Investigation; therefore, they not acceptable substitutions.

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Corporation - Quality Control Laboratory

List all AKAs: QC Lab

Street Address: 835 West Avenue

Municipality: Port Reading (Township, Borough or City)

County: Middlesex Zip Code: 07064

Incident Number(s)/Com. Center Number(s): 13-07-24-1427-02

Program Interest (PI) Number(s): 004800, 006148

Case Tracking Number(s) for this submission: N13-9009

Date Remediation Initiated Pursuant to N.J.A.C. 7:26C-2: 07/24/2013

State Plane Coordinates for a central location at the site: Easting: 560882.68 Northing: 630201.18

Municipal Block(s) and Lot(s):

Block #	664.01	Lot #	1.01	Block #		Lot #	
Block #		Lot #		Block #		Lot #	
Block #		Lot #		Block #		Lot #	
Block #		Lot #		Block #		Lot #	

SECTION B. SUBMISSION STATUS

1. Indicate how the Electronic Data Deliverable (EDD) for this submission is being provided to the NJDEP:

   ☒ Via Email at srpedd@dep.state.nj.us (attach NJDEP confirmation email); or
   ☐ CD (attach to this submission)
   ☐ PA only – No EDD

2. Complete the following Submission and Permit Status Table:

	N/A	Included in this Submission	Previously Submitted	Date Of Submission	Date of Revised Submission	Date of Previous NJDEP Approval	Date of Document Withdrawal
Alternative Soil Remediation Standard and/or Screening level Application Form	☐	☒	☐				
Case Inventory Document		☒					
Discharge to Ground Water Permit by Rule Authorization Request	☒	☐	☐				
IEC Engineered System Response Action Report	☒	☐	☐				
Immediate Environmental Concern Report	☒	☐	☐				
LNAPL Interim Remedial Measure Report	☒	☐	☐				
Preliminary Assessment Report	☒	☐	☐				
Public Notification	☐	☒	☐				
Receptor Evaluation	☐	☒	☐				

Remedial Action Report	☐	☒	☐				
Remedial Action Work Plan	☒	☐	☐				
Remedial Investigation Report	☒	☐	☐				
Response Action Outcome	☒	☐	☐				
Site Investigation Report	☐	☒	☐				
Technical Impracticability Determination	☒	☐	☐				
Vapor Concern Mitigation Report	☒	☐	☐				
Permit Application – list:	☒						
		☐	☐				
		☐	☐				
		☐	☐				
		☐	☐				
Radionuclide Remedial Action Report	☒	☐	☐				
Radionuclide Remedial Action Workplan	☒	☐	☐				
Radionuclide Remedial Investigation Report	☒	☐	☐				
Radionuclide Remedial Investigation Workplan	☒	☐	☐				

SECTION C. SITE USE

Current Site Use: (*check all that apply*)

☐ Industrial ☐ Agricultural
☐ Residential ☐ Park or recreational use
☐ Commercial ☒ Vacant
☐ School or child care ☐ Government
☐ Other: _____

Intended Future Site Use, if known: (*check all that apply*)

☐ Industrial ☐ Park or recreational use
☐ Residential ☒ Vacant
☐ Commercial ☐ Government
☐ School or child care ☐ Future site use unknown
☐ Other: _____

SECTION D. CASE TYPE: (*check all that apply*)

☐ Administrative Consent Order (ACO)
☐ Brownfield Development Area (BDA)
☐ Child Care Facility
☐ Chrome Site (Chromate chemical production waste)
☐ Coal Gas
☐ Due Diligence with RAO
☐ Hazardous Discharge Remediation Fund (HDSRF) Grant/Loan
☐ ISRA
☐ Landfill (SRP subject only)
☒ Regulated Underground Storage Tank (UST)
☐ Remediation Agreement (RA)/Remediation Certification
☐ School Development Authority (SDA)
☐ School facility
☐ Spill Act Defense – Government Entity
☐ Spill Act Discharge
☐ UST Grant/Loan
☐ Other: _____

Federal Case (*check all that apply*)

☒ RCRA GPRA 2020 ☐ CERCLA/NPL ☐ USDOD ☐ USDOE

1. Is the party conducting remediation a government entity? ..... ☐ Yes ☒ No

   If "Yes," check one: ☐ Federal ☐ State ☐ Municipal ☐ County

SECTION E. PUBLIC FUNDS

Did the remediation utilize public funds? ..... ☐ Yes ☒ No

If "Yes," check applicable:

☐ UST Grant ☐ UST Loan ☐ Brownfield Reimbursement Program
☐ HDSRF Grant ☐ HDSRF Loan ☐ Landfill Reimbursement Program
☐ Spill Fund ☐ Schools Development Authority ☐ Environmental Infrastructure Trust

SECTION F. GENERAL

1. Prior to this submission have any NFAs/RAOs been issued for this site? ☒ Yes ☐ No
   a. Does the site currently have a Deed Notice? ☐ Yes ☒ No
   b. Does the site currently have a Classification Exception Area (CEA)? ☐ Yes ☒ No
   c. Has an order of magnitude evaluation been performed? ☐ Yes ☒ No ☐ N/A
2. Is the ground water at the site classified as a Class I Ground Water? ☐ Yes ☒ No
3. Are there potable wells on-site? ☐ Yes ☒ No
4. Has the remediation varied from the Technical Rules? ☐ Yes ☒ No

   If "Yes." provide the citation(s) from which the remediation has varied and the page(s) in the attached document where the rationale for the variance is provided.

   N.J.A.C. 7:26E-_____ Page _____

   N.J.A.C. 7:26E-_____ Page _____

   N.J.A.C. 7:26E-_____ Page _____
5. **Areas of Concern:**
   a) For PA or PA/SI Report, list each AOC.
   b) For SI Report or Unknown Source Investigation, check **only** AOCs documented in this submission

	Area of Concern	Currently Exists? ☒ if "Yes"	Formerly Existed? ☒ if "Yes"	Investigation: SI Conducted ☒ if "Yes"	Investigation: RI Proposed ☒ if "Yes"
1	Above ground storage tank and associated piping	☐	☐	☐	☐
2	Area of stressed vegetation	☐	☐	☐	☐
3	Area which receives flood or storm water from potentially contaminated areas	☐	☐	☐	☐
4	Chemical storage cabinet and closet	☐	☐	☐	☐
5	Compressor vent discharge	☐	☐	☐	☐
6	Discharge area pursuant to N.J.A.C. 7:1E	☐	☐	☐	☐
7	Discolored or spill area	☐	☐	☐	☐
8	Drainage swale and culvert	☐	☐	☐	☐
9	Drywell and sump	☐	☐	☐	☐
10	Dumpster	☐	☐	☐	☐
11	Electrical transformer and capacitor	☐	☐	☐	☐
12	Floor drain collection system	☐	☐	☐	☐
13	Former agricultural applied pesticide area	☐	☐	☐	☐
14	Hazardous material storage or handling area	☐	☐	☐	☐
15	Historic fill or any other fill material	☐	☐	☐	☐
16	Hydraulic lift	☐	☐	☐	☐
17	Incinerator	☐	☐	☐	☐
18	Landfill or landfarm	☐	☐	☐	☐
19	Loading and unloading area	☐	☐	☐	☐
20	Non-contact cooling water discharge	☐	☐	☐	☐
21	Open area away from production area	☐	☐	☐	☐
22	Piping, above ground and below ground pumping station, sump and pit	☐	☐	☐	☐
23	Process area sink and piping which receive process waste	☐	☐	☐	☐
24	Rail car	☐	☐	☐	☐

25	Roof leader when process operations vent to the roof	☐	☐	☐	☐
26	Septic system, leachfield or seepage pit	☐	☐	☐	☐
27	Silo	☐	☐	☐	☐
28	Sprayfield	☐	☐	☐	☐
29	Storage pad including drum and/or waste storage	☐	☐	☐	☐
30	Storm sewer and spill containment collection system	☐	☐	☐	☐
31	Storm water detention pond and fire pond	☐	☐	☐	☐
32	Surface impoundment and lagoon	☐	☐	☐	☐
33	Surface water body	☐	☐	☐	☐
34	Underground piping including industrial process sewer	☐	☐	☐	☐
35	Underground storage tank and associated piping	☐	☒	☒	☒
36	Waste pile as defined by N.J.A.C. 7:26	☐	☐	☐	☐
37	Waste water treatment	☐	☐	☐	☐
38	Other: _____	☐	☐	☐	☐

SECTION G. PRELIMINARY ASSESSMENT

Complete this section only if you are submitting a PA

1. Was an inspection of the site conducted? ☐ Yes ☐ No

   Date of the most recent inspection: _____

2. Did the PA identify any areas of concern? ☐ Yes ☐ No
3. Identify the location in the report (e.g. page #, Figure #, Appendix #) of the site map showing AOCs: _____
4. Identify all current and historic industrial, commercial, agricultural or residential uses at the site dating back to the time the site was naturally vegetated.

   Provide the current and historic operators/operations. (attach additional sheets as necessary)

Name of Operator	Type of Operation – e.g., dry cleaning, electro-plating, residence	Dates of Operation Start	End

5. Have all regulated USTs on site been registered with the NJDEP? ☐ Yes ☐ No ☐ NA

   If "No," complete and submit an UST Facility Certification Questionnaire to the NJDEP to update the registration prior to submitting this form.

6. Have all regulated USTs that have been closed been delisted from the registration? ☐ Yes ☐ No ☐ NA

   If "No," complete and submit an UST Facility Certification Questionnaire to the NJDEP to update the registration prior to submitting this form.

7. Have any USTs been removed on/after September 4, 1990? ☐ Yes ☐ No ☐ NA
8. Including this submission, has an SI/RI report been submitted for all USTs closed on/after September 4, 1990? ☐ Yes ☐ No ☐ NA

SECTION H. SITE INVESTIGATION

Complete this section only if you are submitting a SI or Unknown Source Investigation Report

1. Does the SI address:
   - ☒ Area(s) of Concern (AOCs) Only
   - ☐ Entire Site (Based on a completed and submitted Preliminary Assessment/Site Investigation)
2. Total number of contaminated AOCs associated with the case: 1
3. Total number of contaminated AOCs addressed in this submission: 1
4. Identify the media impacted above applicable standards/screening levels (*check all that apply*).

   ☒ Soil ☒ Ground water ☐ Sediment ☐ Surface water
   ☐ Soil gas ☐ Indoor air
   ☐ No sampling results above applicable standards/screening levels.

   If any media have been impacted above applicable standards/screening levels, identify the type of contamination below (*check all that apply*).

Soil	Ground Water	Sediment	Surface Water	Type Of Contamination
☒	☒	☐	☐	Volatile Organics
☐	☐	☐	☐	Polycyclic Aromatic Hydrocarbons(PAHs)
☐	☐	☐	☐	Acid Extractables
☐	☐	☐	☐	Base Neutrals (non-PAHs)
☒	☒	☐	☐	Metals (other than arsenic, chromium & mercury)
☐	☐	☐	☐	Pesticides
☐	☐	☐	☐	PHC
☐	☐	☐	☐	PCBs
☐	☒	☐	☐	Chromium
☐	☐	☐	☐	Dioxin
☐	☒	☐	☐	Mercury
☒	☒	☐	☐	Arsenic
☐	☐	☐	☐	Perchlorate, RDX, TNT, etc.
☐	☐	☐	☐	Other, specify:_____

5. Has a well search been conducted pursuant to N.J.A.C. 7:26E-1.14? ☒ Yes ☐ No

   If "Yes," are there any potable wells within 200' of the contaminated AOCs listed in Section F above or within 200' of the site boundary? ☐ Yes ☒ No
6. Has the presence of free product been identified? ☐ Yes ☒ No
7. Is an environmentally sensitive natural resource (ESNR) present on, adjacent to, or potentially impacted by the site? ☐ Yes ☒ No

   If "Yes," provide the following information:

   a. Specify the section/page(s) of the report where the site map showing the location of all ESNRs can be found (e.g. page #, Figure #, Appendix #): _____
   b. Are there visible signs of impact/impairment (e.g., discolored media, stressed vegetation, discharge/spill, seeps, fish kill)? ☐ Yes ☐ No
   c. Were land use permits required to complete any of the investigative activities? ☐ Yes ☐ No
   d. Specify the section/page(s) of the report where the land use permits are discussed: _____
8. Have Alternative Soil Remediation Standards (ASRS) been utilized for Inhalation and/or Ingestion/Dermal pathways? ☐ Yes ☒ No

9. Are you proposing an alternative remediation standard pursuant to N.J.A.C. 7:26D-7.4, alternate vapor intrusion screening level, or ecological site specific goal? ☐ Yes ☒ No

If "Yes," attach the Alternative Remediation Standard and/or Screening Level Application Form as an addendum.

10. Was a site-specific screening level developed for the evaluation of the VI pathway? ☐ Yes ☒ No

11. Have any site specific Impact to Groundwater Soil Remediation Standards (IGWSRS) been established? ☒ Yes ☐ No

12. Was an Interim Soil Remediation Standard proposed where a Standard does not currently exist? ☐ Yes ☒ No

If "Yes," attach the Alternative Remediation Standard and/or Screening Level Application Form as an addendum.

13. Is Historic Fill present? ☐ Yes ☒ No

If "Yes":

a). What is the evidence that Historic Fill is present?

b). Are any other AOCs co-located within the Historic Fill? ☐ Yes ☐ No

If "Yes," have the same contaminant types (e.g. lead arsenic, etc.) characterized as being present in the Historic Fill been sampled for as contaminants of concern at these co-located AOCs? ☐ Yes ☐ No

14. Is ground water contamination present above applicable standards? ☒ Yes ☐ No

If "Yes,":

a). Describe conditions:

Groundwater contamination present in unconfined aquifer

b). Is contaminated ground water present in bedrock aquifer? ☐ Yes ☒ No

c). Is ground water contamination present at levels above Vapor Intrusion Screening Levels? ☐ Yes ☒ No

If "Yes,":

1). Was a vapor intrusion investigation conducted? ☐ Yes ☒ No

2). Has a Vapor Concern (VC) or Immediate Environmental Concern (IEC) condition been identified? ☐ Yes ☒ No

15. Has a discharge occurred from a Federally regulated UST that has not received an NFA/RAO? ☒ Yes ☐ No

Note: An UST system **is** Federally regulated *unless* one of the following conditions apply:

- The UST system is less than 110 gallons in rated volume;
- The UST system is a SUMP as defined in the UST regulations at N.J.A.C. 7:14B-1.6;
- The hazardous substance stored in the UST system is a RCRA regulated waste;
- The UST system contained heating oil used exclusively for onsite consumption;
- The UST system was used for motor fuel for non-commercial farm or residential purposes and the total rated capacity of all motor fuel USTs at the site is less than 1,100 gallons.

If you answered "Yes," to question 11. provide the following information:

Date Discharge Occurred or Identified: July 24, 2013

Date Discharge Reported to the NJDEP: July 24, 2013

Media Contaminated (*check all that apply*):

☒ Soil ☒ Groundwater ☐ Surface Water Receiving Water: _____

Tank ID (from Registration): N13-9009 Tank System Size: 10,000

Contents: Waste Oil

If a Confirmed Discharge Notification (CDN) form has not been previously submitted to the NJDEP specifically for the discharge from a Federally Regulated UST, attach a completed CDN form to this submission.

16. Have all regulated USTs addressed in this submission been registered with the NJDEP? ☒ Yes ☐ No ☐ NA
    If "No," complete and submit an UST Facility Certification Questionnaire to the NJDEP to update the registration prior to submitting this form.

17 Have all regulated USTs addressed in this submission that have been closed been delisted from the registration? ☒ Yes ☐ No ☐ NA
    If "No," complete and submit an UST Facility Certification Questionnaire to the NJDEP to update the registration prior to submitting this form.

18. Are there any AOCs at which an SI was conducted and an RI/RA is not proposed? ☐ Yes ☒ No
    If "Yes," answer the following questions, if "No," proceed to next section.

Answer the following questions ONLY for AOCs at which an SI was conducted and an RI and/or RA is not proposed:

19. Are any soil analytical results greater than the most stringent Direct Contact Soil Remediation Standards (DCSRS)? ☐ Yes ☐ No
20 Are any soil analytical results greater than the default Impact to Ground Water Soil Screening Levels (IGWSSL)? ☐ Yes ☐ No
21. Are any ground water analytical results greater than the Ground Water Quality Standards (GWQS)? ☐ Yes ☐ No ☐ NA
22. Are any Reporting Limits (RLs) greater than the applicable soil and/or ground water standards or screening levels? ☐ Yes ☐ No
23. Are any surface water analytical results greater than the most stringent Surface Water Quality Standards? ☐ Yes ☐ No ☐ NA
24. Are any sediment analytical results above the screening levels? ☐ Yes ☐ No ☐ NA
25. Are any soil analytical results greater than Soil Ecological Screening Criteria in an Environmentally Sensitive Natural Resource (ESNR)? ☐ Yes ☐ No ☐ NA
26. Are any analytical results above the vapor intrusion screening levels? ☐ Yes ☐ No ☐ NA
27. Did the SI demonstrate via background investigation per N.J.A.C. 7:26E-3.8 that contamination is naturally occurring? ☐ Yes ☐ No ☐ NA
28. Did the SI demonstrate via background investigation per N.J.A.C. 7:26E-3.9, that contamination is migrating onto this site? ☐ Yes ☐ No ☐ NA
29. Contamination is associated with an ongoing ISRA remediation not related to this investigation. ☐ Yes ☐ No ☐ NA

SECTION J. LABORATORY DATA

Complete only if sampling was conducted

1. Were all data submitted in the appropriate full and/or reduced formats according to the deliverables defined in N.J.A.C. 7:26E-2? ☒ Yes ☐ No
2. Do all data submitted meet the quality assurance/quality control (QA/QC) requirements incorporated by reference in N.J.A.C. 7:26E-2 for:
   sampling ☒ Yes ☐ No
   analysis ☒ Yes ☐ No
3. How was it determined that the data complied with the QA/QC requirements? *(check all that apply)*
   ☒ Laboratory non-conformance summary/narrative
   ☒ Laboratory correspondence
   ☐ LSRP review
   ☐ Independent contractor review
   ☐ Other: _____
4. Has any data been qualified and used? ☒ Yes ☐ No

5. Has any data been rejected and used?..... ☐ Yes ☒ No

6. Provide the page number for the "Reliability of Data" section of the report: 4

SECTION K. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Hess Corporation

Representative First Name: John Representative Last Name: Engdahl

Title: Senior Specialist

Phone Number: (732) 750-6934 Ext: Fax: (732) 750-6805

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: NJ ZIP Code: 07095

Email Address: JEngdahl@hess.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Date: 7/30/2014

Name/Title: John Engdahl/Senior Specialist

No changes to contact information since last submission ☐

SECTION L. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 581780

First Name: David Last Name: Carlson

Phone Number: (609) 387-5553 Ext: Fax: (609) 387-5533

Mailing Address: 6 Terri Lane, Suite 350

City/Town: Burlington State: NJ Zip Code: 08016

Email Address: davec@envirotrac.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with section 14 of P.L.2009 c.60 (N.J.S.A. 58:10C-14), and paragraphs (1) and (2) of subsection b. of section 30 of P.L.2009 c.60 (N.J.S.A. 58:10B=1.3b(1) and (2)).

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:

☐ *directly oversaw and supervised all of the referenced remediation, and\or*

☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

I believe that the information contained herein, and including all attached documents, is true, accurate and complete.

It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: Date: 8/3/2014

LSRP Name/Title: David Carlson/Senior Project Manager

Company Name: EnviroTrac Ltd.

No changes to contact information since last submission ☐

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

New Jersey Department of Environmental Protection
Site Remediation Program

PUBLIC NOTIFICATION AND OUTREACH

Date Stamp
(For Department use only)

SECTION A. SITE LOCATION

Site Name: Hess Corporation - Quality Control Laboratory

List all AKAs: QC Lab

Street Address: 835 West Avenue

Municipality: Port Reading (Township, Borough or City)

County: Middlesex Zip Code: 07064

Mailing Address if different than street address:

Program Interest (PI) Number(s): 004800, 006148 Case Tracking Number(s): 13-07-24-1427-02**

Date Remediation Initiated Pursuant to N.J.A.C. 7:26C-2: 07/24/2013

State Plane Coordinates for a central location at the site: Easting: 560882.68 Northing: 630201.18

Municipal Block(s) and Lot(s):

Block #	664.01	Lot #	1.01	Block #		Lot #	
Block #		Lot #		Block #		Lot #	
Block #		Lot #		Block #		Lot #	
Block #		Lot #		Block #		Lot #	

SECTION B. NOTIFICATION INFORMATION

1. Indicate the type of Public Notification:

   ☒ Initial ☐ Update

2. Public notification was provided via: (Check all that apply)

   Sign ☒ Yes ☐ No Fact sheet ☐ Yes ☐ No
   Letter ☐ Yes ☐ No Alternate plan ☐ Yes ☐ No

3. Were materials produced in a language other than English? ☐ Yes ☒ No

   If "Yes," in what other language was notification prepared?

4. Were copies provided to municipal clerk, local/county health dept., and local health agency? ☒ Yes ☐ No
5. Did you provide an electronic copy of all required submittals? ☒ Yes ☐ No
6. Was notification of excess fill material conducted pursuant to N.J.A.C. 7:26E-1.4(k)? ☐ Yes ☒ No
7. Was additional public outreach conducted due to the Department's determination of substantial public interest? ☐ Yes ☒ No

**Additional case tracking #N13-9009

SECTION C. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Hess Corporation

Representative First Name: John Representative Last Name: Engdahl

Title: Senior Specialist

Phone Number: (732) 750-6934 Ext: Fax: (732) 750-6805

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: JEngdahl@hess.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Date: 7/31/2014

Name/Title: John Engdahl/Senior Specialist **No Changes Since Last Submittal** ☐

SECTION D. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 581780

First Name: David Last Name: Carlson

Phone Number: (609) 387-5553 Ext: Fax: (609) 387-5533

Mailing Address: 6 Terri Lane, Suite 350

City/Town: Burlington State: NJ Zip Code: 08016

Email Address: davec@envirotrac.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:

☐ *directly oversaw and supervised all of the referenced remediation, and\or*

☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

I believe that the information contained herein, and including all attached documents, is true, accurate and complete.

It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: Date: 8/3/2014

LSRP Name/Title: David Carlson/Senior Project Manager **No Changes Since Last Submittal** ☒

Company Name: EnviroTrac Ltd.

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

EnviroTrac
Environmental Services

July 17, 2014

Mr. John M. Mitch, County Clerk
Woodbridge Township Municipal Building
1 Main Street
Woodbridge, NJ 07095

RE: Notification and Public Outreach Compliance
Former Hess Quality Control Laboratory
835 West Avenue
Woodbridge, Middlesex County, New Jersey
Block 664.01, Lot 1.01
NJDEP Case #13-07-24-1427-02
NJDEP Preferred ID #004800; 006148

Dear Mr. Mitch:

In accordance with New Jersey Department of Environmental Protection (NJDEP) regulations for "Notification and Public Outreach", EnviroTrac Ltd. (ET), on behalf of the Hess Corporation (Hess) posted a sign at the above referenced site on August 22, 2013. Enclosed are a hard-copy picture of the sign pursuant to the Public Notification and Outreach Rule N.J.A.C. 7:26C-1.7.

If you have any questions regarding this information, please do not hesitate to contact the undersigned at (609) 387-5553 or John Engdahl of Hess at (732) 750-6805.

Sincerely,

David J. Carlson, LSRP
Senior Project Manager
LSRP # 581780

6 Terri Lane, Suite 350, Burlington, NJ 08016 (609) 387-5553 Fax: (609) 387-5533
www.envirotrac.com

EnviroTrac
Environmental Services

July 17, 2014

Mr. Philip Bujalski, Chief
Woodbridge Department of Health & Human Services
2 George Frederick Plaza
Woodbridge, NJ 07095

RE: Notification and Public Outreach Compliance
Former Hess Quality Control Laboratory
835 West Avenue
Woodbridge, Middlesex County, New Jersey
Block 664.01, Lot 1.01
NJDEP Case #13-07-24-1427-02
NJDEP Preferred ID #004800; 006148

Dear Mr. Bujalski:

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If you have any questions regarding this information, please do not hesitate to contact the undersigned at (609) 387-5553 or John Engdahl of Hess at (732) 750-6805.

Sincerely,

David J. Carlson, LSRP
Senior Project Manager
LSRP # 581780

6 Terri Lane, Suite 350, Burlington, NJ 08016 (609) 387-5553 Fax: (609) 387-5533
www.envirotrac.com

EnviroTrac
Environmental Services

July 17, 2014

Mr. Lester Jones, Director
County of Middlesex, Public Health Department
Middlesex County Administration Building, 5th Floor
John F. Kennedy Square
New Brunswick, NJ 08901

RE: Notification and Public Outreach Compliance
Former Hess Quality Control Laboratory
835 West Avenue
Woodbridge, Middlesex County, New Jersey
Block 664.01, Lot 1.01
NJDEP Case #13-07-24-1427-02
NJDEP Preferred ID #004800; 006148

Dear Mr. Jones:

In accordance with New Jersey Department of Environmental Protection (NJDEP) regulations for "Notification and Public Outreach", EnviroTrac Ltd. (ET), on behalf of the Hess Corporation (Hess) posted a sign at the above referenced site on August 22, 2013. Enclosed are a hard-copy picture of the sign pursuant to the Public Notification and Outreach Rule N.J.A.C. 7:26C-1.7.

If you have any questions regarding this information, please do not hesitate to contact the undersigned at (609) 387-5553 or John Engdahl of Hess at (732) 750-6805.

Sincerely,

David J. Carlson, LSRP
Senior Project Manager
LSRP # 581780

6 Terri Lane, Suite 350, Burlington, NJ 08016 (609) 387-5553 Fax: (609) 387-5533
www.envirotrac.com

ENVIRONMENTAL INVESTIGATION / CLEANUP
IN PROGRESS AT THIS SITE
FOR FURTHER INFORMATION PLEASE CONTACT
HESS NEW JERSEY
COMMUNITY OUTREACH REPRESENTATIVE
(732) 750-6857
NJDEP PREFERRED ID #006148
POSTED 09/01/2009
JOHNNY
ON THE SPOT
732-721-3443

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Lester Jones, Director
Co. of Middlesex, Public Health Dept.
Middlesex County Admin. Building, 5th Floor
~~John F. Kennedy Square~~
New Brunswick, NJ 08901

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☒ Address

B. Received by (Printed Name) | C. Date of Delive
E. [illegible] | 7/23

D. Is delivery address different from item 1? ☒ Yes
If YES, enter delivery address below: ☐ No

NEW BRUNSWICK NJ 08901 BAYARD ST 23 PM

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandis
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from s 7010 1870 0001 0775 4633

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-15

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. John Mitch, County Clerk
Woodbridge Twp. Municipal Building
1 Main Street
Woodbridge, NJ 07095

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☒ Agent ☐ Addresse

B. Received by (Printed Name) | C. Date of Deliver
Dun [illegible] | 7/24/5

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandis
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Numl (Transfer from 7010 1870 0001 0775 4619

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-154

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Philip Bujalski, Chief
Woodbridge Dept. of Health and
Human Services
2 George Frederick Plaza
Woodbridge, NJ 07095

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addresse

B. Received by (Printed Name) | C. Date of Deliver

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Numl (Transfer fro 7010 1870 0001 0775 4626

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-154

New Jersey Department of Environmental Protection
Site Remediation Program

RECEPTOR EVALUATION (RE) FORM

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Corporation -Quality Control Laboratory

List all AKAs: QC Lab

Street Address: 835 West Avenue

Municipality: Port Reading (Township, Borough or City)

County: Middlesex Zip Code: 07064

Program Interest (PI) Number(s): 006148, 004800 Case Tracking Number(s): 13-07-24-1427-02, N13-9009

Indicate the type of submission:

☒ Initial RE Submission

☐ Updated RE Submission

Indicate the reason for submission of an updated RE form

☐ Submission of an Immediate Environmental Concern (IEC) source control report;
☐ Submission of a Remedial Investigation Report;
☐ Submission of a Remedial Action Report;

Check if included in updated RE

☐ The known concentration or extent of contamination in any medium has increased;
☐ A new AOC has been identified;
☐ A new receptor is identified;
☐ A new exposure pathway has been identified.

SECTION B. ON SITE AND SURROUNDING PROPERTY USE

1. Identify any sensitive populations/uses that are currently on-site or surrounding property usage within 200 feet of the site boundary (check all that apply):

	On-site	Off-site
None of the following	☒	☐
Residences or residential property	☐	☒
Public or Private Schools grades K-12	☐	☐
Child care centers	☐	☐
Public parks, playgrounds or other recreation areas	☐	☐
Other sensitive population use(s) Explain _____	☐	☐

If any of the above applies, attach a list of addresses, facility names, type of use, and a map depicting each location relative to the site.

2. Current site uses (check all that apply):

☐ Industrial ☐ Residential ☐ Commercial ☐ Agricultural
☐ School or child care ☐ Government ☐ Park or recreational use
☒ Vacant ☐ Other: _____

3. Planned future site uses and off-site use within 200 ft of site boundary (check all that apply):

☒ Industrial ☒ Residential ☐ Commercial ☐ Agricultural
☐ School or child care ☐ Government ☐ Park or recreational use
☒ Vacant ☐ Other: _____

Provide a map depicting the location of the proposed changes in land use.

SECTION C. DESCRIPTION OF CONTAMINATION

1. Identify if any of the following exist at the site (check all that apply):
   - ☐ Free product [N.J.A.C. 7:26E-1.8] identified is ☐ LNAPL* or ☐ DNAPL**. Date identified: _____
   - ☐ Residual product [N.J.A.C. 7:26E-1.8]
   - ☐ Other high concentration source materials not identified above (e.g., buried drums, containers, unsecured friable asbestos)

     Explain: _____

   * LNAPL – measured thickness of .01 feet or more

   **DNAPL – See US EPA DNAPL Overview

2. Soil Migration Pathway

   Has soil contamination been delineated to the applicable Direct Contact Soil Remediation Standard? ..... ☐ Yes ☒ No

   Are all soils either below the applicable Direct Contact Criteria or under an institutional control (i.e. deed notice)? ..... ☐ Yes ☒ No

3. If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section D. Otherwise attach a brief summary of all currently available data and information to be included in the site investigation or remedial investigation report.

SECTION D. GROUND WATER USE

1. Has the requirement for ground water sampling been triggered? ..... ☒ Yes ☐ No ☐ Unknown
   If "No," proceed to Section F. If "Unknown," explain:

   _____

2. Is Ground water contaminated above the Ground Water Remediation Standards [N.J.A.C.7:9C]? ..... ☒ Yes ☐ No ☐ Unknown

   Or ☐ Awaiting laboratory data with the expected due date: _____

   If "Yes," provide the date that the laboratory data was available and confirmed contamination above the Ground Water Remediation Standards. Date: 01/22/2014

   If "Unknown," explain: _____

   If "No," or awaiting laboratory data proceed to Section F.

3. Has ground water contamination been delineated to the applicable Remediation Standard? ..... ☐ Yes ☒ No
4. Has a well search been completed? ..... ☒ Yes ☐ No

   Date of most recent or updated well search: 08/08/2013

   Identify if any of the following conditions exist based on the well search [N.J.A.C.7:26E-1.14(a)] (check all that apply):
   - ☐ Potable wells located within 500 feet from the downgradient edge of the currently known extent of contamination.
   - ☐ Potable well located 250 feet upgradient or 500 feet side gradient of the currently known extent of contamination.
   - ☐ Ground water contamination is located within a Tier 1 wellhead protection area (WHPA).

5. Is a completed Well Search Spreadsheet or historical well search table attached and has an electronic copy of the spreadsheet been submitted to srpgis_wrs@dep.state.nj.us. ..... ☒ Yes ☐ No

   If "No," explain: _____

6. Are any private potable or irrigation wells located within ½ mile of the currently known extent of contamination? ..... ☐ Yes ☒ No

   If "Yes," was a door to door survey completed? ..... ☐ Yes ☐ No

   If survey was not completed explain: _____

7. Has sampling been conducted of ☐ potable well(s) and /or ☐ non-potable use well(s)? ..... ☐ Yes ☒ No

   If "No," provide justification then proceed to Section E.

   _____

8 Has contamination been identified in potable well(s) above Ground Water Remediation Standards that is not suspected to be from the site? (If "Yes," provide justification) ..... ☐ Yes ☐ No

_____

9 Has contamination been identified in potable well(s) that is above the Ground Water Remediation Standards or Federal Drinking Water Standards? ..... ☐ Yes ☐ No

Provide date laboratory data was received: _____

Or ☐ awaiting laboratory data with the expected due date: _____

If "Yes" for potable well contamination **not attributable to background**, follow the IEC Guidance Document at http://www.nj.gov/dep/srp/guidance/index.html#iec for required actions and answer the following:

Has an engineered system response action been completed on all receptors? ..... ☐ Yes ☐ No
Provide a brief narrative description:

Date completed: _____ NJDEP Case Manager: _____

10. Were Non-potable use well(s) sampled and results were above Class II Ground Water Remediation Standards? ..... ☐ Yes ☐ No

Provide date laboratory data was received: _____

Or ☐ awaiting laboratory data with the expected due date: _____

11. Has the ground water use evaluation been completed? ..... ☐ Yes ☐ No

SECTION E. VAPOR INTRUSION (VI)

1. Contaminants present in ground water exceed the Vapor Intrusion Ground Water Screening Levels that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance). ... ☐ Yes ☒ No ☐ Unknown

Or ☐ Awaiting laboratory data and the expected due date: _____

Provide the date that the laboratory data was available and confirmed contamination above the Vapor Intrusion Trigger Levels. Date: _____

2. Other existing conditions that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance)

☐ Wet basement or sump containing free product or ground water containing volatile organics
☐ Methane generating conditions causing oxygen deficient or explosion concern
☐ Other human or safety concern from the VI pathway (i.e. elemental mercury, unsaturated contamination, elevated soil gas or indoor vapor (explain):

If you answered "No," or awaiting laboratory data to Question 1., *and* did not check any boxes in Question 2, proceed to Section F, "Ecological Receptors", otherwise complete the rest of this section.

3. Has ground water contamination been delineated to the applicable Ground Water Vapor Screening Level? ..... ☐ Yes ☐ No

4. Was a site specific screening level, modeling or other alternative approach employed for the VI pathway? ..... ☐ Yes ☐ No

5. Identify and locate on a scaled map any buildings/sensitive populations that exist within the following distances from ground water contamination with concentrations above the Vapor Intrusion Ground Water Screening Levels or specific threats (check all that apply):

☐ 30 feet of petroleum free product or dissolved petroleum hydrocarbon contamination in ground water
☐ 100 feet of any non-petroleum free product or any non-petroleum dissolved volatile organic ground water contamination
☐ No buildings exist within the specified distances

6. The vapor intrusion pathway is a concern at or adjacent to the site (if "No," attach justification) ..... ☐ Yes ☐ No

7. Has soil gas sampling of the building(s) been conducted? ☐ Yes ☐ No ☐ N/A
   If "No," or "N/A," proceed to #10

8. Has indoor air sampling been conducted at the identified building(s)? ☐ Yes ☐ No
   If "No," proceed to #10

9 Has indoor air contamination been identified but not suspected to be from the site?
   (if "Yes," attach justification) ☐ Yes ☐ No

10. Indoor air results were above the NJDEP's Rapid Action Levels. ☐ Yes ☐ No

    Provide the date that the laboratory data was available and confirmed contamination above the Rapid Action Levels. Date: _____

    Or ☐ Awaiting laboratory data with the expected due date: _____

    If "Yes" to #10 above, follow the IEC Guidance Document at http://www.nj.gov/dep/srp/guidance/index.html#iec for required actions.

    The IEC engineering system response for control was implemented for all identified structures ☐ Yes ☐ No

    Date: _____ NJDEP Case Manager: _____

11. Indoor air sampling was conducted and results were above the NJDEP's Indoor Air Screening Levels but at or below the Rapid Action Levels ☐ Yes ☐ No

    Provide the date that the laboratory data was available. Date: _____

    Or ☐ Awaiting laboratory data with the expected due date: _____

    If "Yes" to #11 above, answer the following:

    Has the Vapor Concern (VC) Response Action Form notifying the NJDEP of the exceedances been submitted? ☐ Yes ☐ No
    Date: _____

    Has a plan to mitigate and monitor the exposure been submitted? ☐ Yes ☐ No
    Date: _____

    Has the Mitigation Response Action Report been submitted? ☐ Yes ☐ No
    Date: _____

12. Has the vapor intrusion investigation been completed? ☐ Yes ☐ No
    If "No", is the vapor intrusion investigation stepping out as part of the site investigation or remedial investigation. (If "No," attach justification) ☐ Yes ☐ No

SECTION F. ECOLOGICAL RECEPTORS

1. Has an Ecological Evaluation (EE) has been conducted? [N.J.A.C. 7:26E-1.16] ☒ Yes ☐ No
   Date conducted: 02/20/2014

2. Do the results of an EE trigger a remedial investigation of ecological receptors? [N.J.A.C. 7:26E-4.8] ☐ Yes ☒ No

3. Has a remedial investigation of ecological receptors been conducted? ☐ Yes ☒ No
   Date conducted: _____

4. Provide the following information for any surface water body on or within 200 feet of the site:

Surface Water Body Name	Stream Classification	Antidegradation Designation	Trout Production	Trout Maintenance
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐

5. Does the site contain any features regulated by the Land Use Regulation Program (LURP)? (e.g. wetlands, flood hazard area, tidelands, etc.). ☐ Yes ☒ No

   If "Yes," identify the type(s) of features: _____

6. Have any formal LURP jurisdiction letters or approvals been issued for the site? ☐ Yes ☒ No

   If "Yes," what is the LURP Program Interest (PI) number(s) for the site? _____

7. Have any applications for formal LURP jurisdiction letters or approvals been submitted the NJDEP? ☐ Yes ☒ No

   If "Yes," what is the LURP Program Interest (PI) number(s) for the site? _____

8. Is free product or residual product located within 100 feet from an ecological receptor? ☐ Yes ☒ No

9. Available data indicate an impact on: ☐ Ecological receptor(s) ☐ Surface water ☐ Sediment

   If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section G. Otherwise attach a description of the type of contamination and provide a schedule and a description of all actions to be taken to mitigate exposure.

SECTION G. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Hess Corporation

Representative First Name: John Representative Last Name: Engdahl

Title: Senior Specialist

Phone Number: (732) 750-6934 Ext: _____ Fax: (732) 750-6805

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: _____ Zip Code: 07095

Email Address: JEngdahl@hess.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: _____ Date: 8/5/2014

Name/Title: John Engdahl/Senior Specialist **No Changes Since Last Submittal** ☐

SECTION H. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 581780

First Name: David Last Name: Carlson

Phone Number: (609) 387-5553 Ext: Fax: (609) 387-5533

Mailing Address: 6 Terri Lane, Suite 350

City/Town: Burlington State: NJ Zip Code: 08016

Email Address: davec@envirotrac.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:

☒ *directly oversaw and supervised all of the referenced remediation, and\or*

☐ *personally reviewed and accepted all of the referenced remediation presented herein.*

I believe that the information contained herein, and including all attached documents, is true, accurate and complete.

It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: Date: 8/3/2014

LSRP Name/Title: David Carlson/Senior Project Manager **No Changes Since Last Submittal** ☒

Company Name: EnviroTrac Ltd.

Completed forms should be sent to the municipal clerk, designate health department, and:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

SITE NAME	Amerada Hess Port Reading Corp
SITE STREET ADDRESS	750 Cliff Road
SITE COUNTY (select)	Middlesex
SITE MUNICIPALITY (select)	Woodbridge Twp
PROGRAM INTEREST (PI) ID # :	006148, 004800
SOURCE COORDINATE X	561544
SOURCE COORDINATE Y	630878
GROUNDWATER FLOW DIRECTION USED (if any)	E
WERE APPLICABLE WELL TYPES FOUND? (Yes/No)	Yes
IS THIS SUBMISSION AN UPDATE? (Yes/No)	Yes
AUTHOR (name of company)	EnviroTrac Ltd.
AUTHOR STREET ADDRESS (include town and zip code)	6 Terri Lane, Suite #350, Burlington, NJ 08016
LSRP LICENSE NUMBER OVERSEEING WORK	581780
LSRP NAME OVERSEEING WORK	David J. Carlson
PROFESSIONAL WHO PREPARED SUBMISSION	Sheila Gardner
EMAIL CONTACT	sheilag@envirotrac.com
PHONE CONTACT	(609) 387-5553

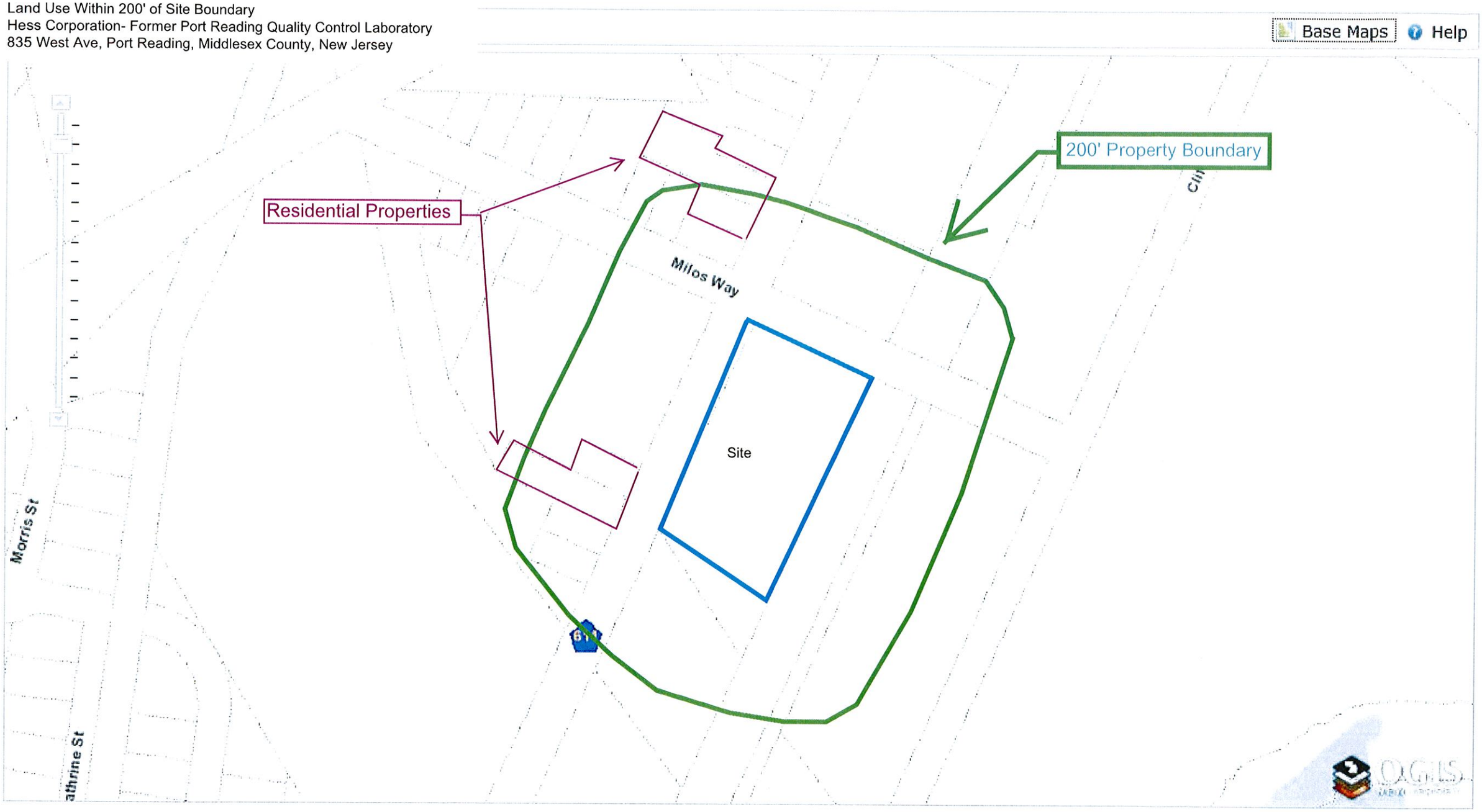
D Permit_Number	Well_Use	Potentially_Potable	Document	Date (permitted/drille	Physical_Address	County	Municipality	Block	Lot
2600000238	Domestic	Yes	Record	12/30/1950	72 2ND AVE	Middlesex	Woodbridge Twp	632	104
2600003135	Domestic	Yes	Record	4/28/1965	117 LARCH ST.	Middlesex	Woodbridge Twp	1079.17	9.02
2600000004	Industrial	Yes	Permit	11/19/1947	Unknown	Middlesex	Woodbridge Twp		
2600000003	Industrial	Yes	Permit	11/19/1947	Unknown	Middlesex	Woodbridge Twp		
2600001829	Industrial	Yes	Record	5/28/1958	PORT READING AV	Middlesex	Woodbridge Twp		
2600004315	Industrial	Yes	Record	11/21/1969	100 MARKLEY ST	Middlesex	Woodbridge Twp	603	11

Location_Method	Easting_X	Northing_Y	Distance_(feet)	Depth (feet)	Capacity (gal/min)	COORD_METHOD	TOP_OPE	BOT_OPE	STATIC	STATUS	WELL_SAMPLED?
Prop Loc - Dig Image	558694	630863	4702	146	4	GIS Parcel Centroid	86	146	30	Outside Canvass	
Prop Loc - Dig Image	566091	633071	4891	100	30	GIS Parcel Centroid	25	100	15	Outside Canvass	
Prop Loc - Hard Cop	562227	632787		100	50					Owner Unavailable	
Prop Loc - Hard Cop	562227	632787		100	50					Owner Unavailable	
Prop Loc - Dig Image	562717	632148	2750	168	150		110	125		Sealed	
Prop Loc - Hard Cop	558502	632356		600	32	GIS Parcel Centroid	52	600	5	Outside Canvass	

Hess Corporation Former Port Reading Complex- Quality Control Laboratory
835 West Ave
Port Reading, Middlesex County, New Jersey
Area Land Use Table

Block	Lot	Owner	Address	Owner Address	City	State	Zip	Property Use
664.01	1.01	Amerada Hess Corporation	835 West Ave	PO Box 696419	San Antonio	TX	782696419	Site
664.03	1	Amerada Hess Corporation	West Ave	PO Box 696419	San Antonio	TX	782696419	Parking Lot
665	31	Amerada Hess Corporation	33 Milos Way	PO Box 696419	San Antonio	TX	782696419	Vacant
665	32	Amerada Hess Corporation	39 Milos Way	PO Box 696419	San Antonio	TX	782696419	Vacant
665	33	Amerada Hess Corporation	864 West Ave	PO Box 696419	San Antonio	TX	782696419	Vacant
665	34	Clem Kenjorski	870 West Avenue	870 West Avenue	Port Reading	NJ	07064	Residential
665	35	Ana Arroyo	874 West Avenue	874 West Avenue	Port Reading	NJ	07064	Residential
666	24	Amerada Hess Corporation	West Ave	PO Box 696419	San Antonio	TX	782696419	Vacant
666	30	Amerada Hess Corporation	West Ave	PO Box 696419	San Antonio	TX	782696419	Vacant
666	31	Peter and Elizabeth Boehm	834 West Avenue	834 West Avenue	Port Reading	NJ	07064	Residential
666	32	Dorothy Murphy	830 West Avenue	14 West Side Avenue	Avenel	NJ	07001	Residential
666	33	Unknown	West Ave	Unknown	Unknown	Unknown		Vacant
666	34	Unknown	West Ave	Unknown	Unknown	Unknown		Vacant
756.01	2	Buckeye Port Reading	Cliff Rd	750 Cliff Rd	Port Reading	NJ	07064	Industrial-Storage
756.02	1	Buckeye Port Reading	750 Cliff Rd	750 Cliff Rd	Port Reading	NJ	07064	Terminal Office
1200.03	11	Con-Rail Corp Tax Dept	Milos Way Railroad Spur	6 Penn Center Plaza	Philadelphia	PA	19104	RailRoad
1200.03	13	Con-Rail Corp Tax Dept	Milos Way Railroad Spur	6 Penn Center Plaza	Philadelphia	PA	19104	Railroad

Land Use Within 200' of Site Boundary
Hess Corporation- Former Port Reading Quality Control Laboratory
835 West Ave, Port Reading, Middlesex County, New Jersey



New Jersey Department of Environmental Protection
Site Remediation Program

REMEDIAL ACTION REPORT FORM

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Corporation - Quality Control Laboratory

List all AKAs: QC Lab

Street Address: 835 West Avenue

Municipality: Port Reading (Township, Borough or City)

County: Middlesex Zip Code: 07064

Program Interest (PI) Number(s): 004800, 006148

Case Tracking Number(s) for this submission: 13-07-24-1427-02; N13-9009

Date Remediation Initiated Pursuant to N.J.A.C. 7:26C-2: 07/24/2013

State Plane Coordinates for a central location at the site: Easting: 560882.68 Northing: 630201.18

Municipal Block(s) and Lot(s):

Block #: 664.01	Lot #: 1.01	Block #:	Lot #:
Block #:	Lot #:	Block #:	Lot #:
Block #:	Lot #:	Block #:	Lot #:
Block #:	Lot #:	Block #:	Lot #:

SECTION B. SUBMISSION STATUS

1. Indicate how the Electronic Data Deliverable (EDD) for this submission is being provided to the NJDEP:

   ☒ Via Email at srpedd@dep.state.nj.us (attach NJDEP confirmation email); or
   ☐ CD (attach to this submission)
   ☐ Not Applicable – No EDD

2. Complete the following Submission and Permit Status Table:

	N/A	Included in this Submission	Previously Submitted	Date of Submission	Date of Revised Submission	Date of Previous NJDEP Approval	Date of Document Withdrawal
Alternative Soil Remediation Standard and/or Screening level Application Form	☐	☒	☐				
Case Inventory Document		☒					
Discharge to Ground Water Permit by Rule Authorization Request	☒	☐	☐				
IEC Engineered System Response Action Report	☒	☐	☐				
Immediate Environmental Concern Report	☒	☐	☐				
LNAPL Interim Remedial Measure Report	☒	☐	☐				
Preliminary Assessment Report	☒	☐	☐				
Public Notification	☐	☒	☐				
Receptor Evaluation	☐	☒	☐				
Remedial Action Report	☐	☒	☐				
Remedial Action Work Plan	☒	☐	☐				
Remedial Investigation Report	☒	☐	☐				

Response Action Outcome	☒	☐	☐				
Site Investigation Report	☐	☒	☐				
Technical Impracticability Determination	☒	☐	☐				
Vapor Concern Mitigation Report	☒	☐	☐				
Permit Application – list:	☒						
		☐	☐				
		☐	☐				
		☐	☐				
		☐	☐				
Radionuclide Remedial Investigation Workplan	☒	☐	☐				
Radionuclide Remedial Investigation Report	☒	☐	☐				
Radionuclide Remedial Action Workplan	☒	☐	☐				
Radionuclide Remedial Action Report	☒	☐	☐				

SECTION C. SITE USE

Current Site Use *(check all that apply)*

- ☐ Industrial
- ☐ Agricultural
- ☐ Residential
- ☐ Park or recreational use
- ☐ Commercial
- ☒ Vacant
- ☐ School or child care
- ☐ Government
- ☐ Other: _____

Intended Future Site Use *(check all that apply)*

- ☐ Industrial
- ☐ Park or recreational use
- ☐ Residential
- ☒ Vacant
- ☐ Commercial
- ☐ Government
- ☐ School or child care
- ☐ Future site use unknown
- ☐ Other: _____

SECTION D. CASE TYPE: *(check all that apply)*

- ☐ Administrative Consent Order (ACO)
- ☐ Brownfield Development Area (BDA)
- ☐ Child Care Facility
- ☐ Chrome Site (Chromate chemical production waste)
- ☐ Coal Gas
- ☐ Due Diligence with RAO
- ☐ Hazardous Discharge Remediation Fund (HDSRF) Grant/Loan
- ☐ ISRA
- ☐ Landfill (SRP subject only)
- ☒ Regulated Underground Storage Tank (UST)
- ☐ Remediation Agreement (RA)/ Remediation Certification
- ☐ School Development Authority (SDA)
- ☐ School facility
- ☐ Spill Act Defense – Government Entity
- ☐ Spill Act Discharge
- ☐ UST Grant/Loan
- ☐ Other: _____

Federal Case *(check all that apply)*

☒ RCRA GPRA 2020 ☐ CERCLA/NPL ☐ USDOD ☐ USDOE

1. Is the party conducting remediation a government entity? ..... ☐ Yes ☒ No
   If "Yes," check one: ☐ Federal ☐ State ☐ Municipal ☐ County

SECTION E. PUBLIC FUNDS

Did the remediation utilize public funds? ..... ☐ Yes ☒ No

If "Yes," check applicable:

- ☐ UST Grant
- ☐ UST Loan
- ☐ Brownfield Reimbursement Program
- ☐ HDSRF Grant
- ☐ HDSRF Loan
- ☐ Landfill Reimbursement Program
- ☐ Spill Fund
- ☐ Schools Development Authority
- ☐ Environmental Infrastructure Trust

SECTION F. SCOPE OF REMEDIAL ACTION REPORT

1. Does the RAR address:
   - ☒ Area(s) of Concern (AOCs) Only
   - ☐ Entire Site (Based on a completed and submitted Preliminary Assessment/Site Investigation)
2. Total number of contaminated AOCs associated with the case: 1

3. Total number of contaminated AOCs addressed in this submission: 1

4. Are there any outstanding contaminated AOCs associated with the case where the remedial action has NOT been performed? ☐ Yes ☒ No

When answering the remaining questions on this form consider only the AOCs addressed in this submission.

SECTION G. GENERAL

1. Does this submission include Remedial Action Permit Application(s) that require Site Remediation Program approval? ☐ Yes ☒ No
2. Was a remediation initiated after May 6, 2010, for new construction or a change in the use of the site proposed for the purpose of residential use, use as a licensed child care center or use as a school? ☐ Yes ☒ No

   If "Yes," was an unrestricted use or a presumptive remedy implemented? ☐ Yes ☐ No
3. Was an alternative remedy approved by the NJDEP? ☐ Yes ☒ No

   If "Yes," provide the date of the approval: _____
4. Has the remediation varied from the Technical Rules? ☐ Yes ☒ No

   If "Yes," provide the citation(s) from which the remediation has varied and the page(s) in the attached document where the rationale for the variance is provided.

   N.J.A.C. 7:26E- _____ Page _____

   N.J.A.C. 7:26E- _____ Page _____

   N.J.A.C. 7:26E- _____ Page _____
5. Were the laboratory Reporting Limits below applicable remediation standards/screening levels criteria required for the contaminants of concern for the AOCs addressed in this submission? ☐ Yes ☒ No
6. Have past NJDEP-documented deficiencies been addressed in this submission? ☐ Yes ☐ No ☒ N/A
7. Did the remediation deviate from that proposed in the Remedial Action Workplan? ☐ Yes ☒ No

   If "Yes," specify the section/page(s) in the report where the deviation(s) are discussed:

   _____
8. Did the remedial action render the property unusable for future redevelopment or for recreational use (N.J.A.C. 7:26C-6.4(b)? ☐ Yes ☒ No

SECTION H. SITE CONDITIONS

1. At any time, was there any radiological contamination detected at the AOCs addressed in this submission? ☐ Yes ☒ No
2. At any time, did any of the AOCs addressed in this submission contain Ordnance and Explosives/ Unexploded Ordnance (OE/UXO)? ☐ Yes ☒ No
3. Did the remedial action involve containment of free product? ☐ Yes ☒ No
4. Has dioxin been detected at levels above NJDEP's interim direct contact soil screening level of 50 ppt dioxin TEQ (TCDD Toxicity Equivalence Quotient) in any AOCs addressed in this submission? ☐ Yes ☒ No
5. Have any of the following contaminants *ever* been detected in sediment above the ecological screening levels at the AOCs addressed in this submission? ☐ Yes ☒ No

   If "Yes," check all that apply:

   ☐ Arsenic ☐ Dioxin ☐ Mercury ☐ PCBs ☐ Pesticides
6. Is remediation complete in all affected media at the AOCs addressed in this submission? ☐ Yes ☒ No
7. Did contaminants from the AOCs addressed in this submission discharge to surface water? ☐ Yes ☒ No
8. Did contaminants from the AOCs addressed in this submission discharge to an Environmentally Sensitive Natural Resource (ESNR)? ☐ Yes ☒ No

9. Are any of the following conditions currently present for the AOCs addressed in this submission? *(check all that apply)*:

Groundwater:

- ☒ Contaminated ground water in the overburden aquifer
- ☐ Contaminated ground water in a confined aquifer
- ☐ Contaminated ground water in the bedrock aquifer
- ☐ Contaminated ground water in multiple aquifer units
- ☐ Multiple distinct ground water plumes
- ☐ Contaminated ground water migrating off-site
- ☐ Natural background ground water contamination
- ☐ Contaminated ground water discharging to surface water or Environmentally Sensitive Natural Resource (ESNR)
- ☐ Residual or free product
- ☐ Radionuclides

Soil:

- ☐ On-site discharge(s) impacting soil off-site
- ☐ Chromate Chemical Production Waste/COPR
- ☐ Munitions and explosives of concern
- ☐ Contaminated soil in the saturated zone
- ☐ Historic pesticide impacts to soil
- ☐ Residual or free product
- ☐ Radionuclides
- ☐ Historic Fill
- ☐ Natural background only above Impact to Ground Water Cleanup Criteria
- ☐ Natural background above Direct Contact Remediation Standards
- ☐ Soil contamination in an ESNR

SECTION I. APPLICABLE REMEDIATION STANDARDS

1. Were Default Remediation Standards used for all contaminants? ..... ☐ Yes ☒ No

   If "Yes," check all that apply:

   - ☐ Direct Contact
   - ☐ Impact to Ground Water Soil Screening Levels
   - ☐ Ecological Screening Levels

2. Has compliance averaging been utilized to determine compliance with the Soil Remediation Standards? ..... ☐ Yes ☒ No

   If "Yes," check all that apply:

	Compliance Averaging Method Utilized			
Pathway	Arithmetic Mean	95 Percent UCL	Spatially Weighted Average	75 Percent/ 10X Procedure
☐ Ingestion-Dermal Pathway	☐	☐	☐	☐
☐ Inhalation Pathway	☐	☐	☐	☐
☐ Impact to Ground Water Pathway	☐	☐	☐	☐

3. Has a compliance option been utilized to determine compliance with the Impact to Ground Water Pathway? (If "Yes," check all that apply) ..... ☐ Yes ☒ No

   - ☐ Immobile Compounds
   - ☐ Data evaluation for metals and semi-volatiles
   - ☐ Data evaluation for volatile organics derived from discharges of petroleum mixtures

4. Was an interim standard used for a contaminant where a standard does not exist? ..... ☐ Yes ☒ No
5. Were Alternate Remediation Standards used for the Ingestion/Dermal Pathway? ..... ☐ Yes ☒ No
6. Were Alternate Remediation Standards used for the Inhalation Pathway? ..... ☐ Yes ☒ No
7. Were Site Specific Standards used for the Impact to Ground Water Pathway? ..... ☒ Yes ☐ No

   If "Yes," check all that apply:

   ☒ Soil-Water Partitioning Equation ☒ SPLP ☐ Sesoil ☐ Sesoil/AT123D
   ☐ DAF Modification

8. Were Site Specific Ecological Remediation Goals used? ..... ☐ Yes ☒ No
9. What is the ground water classification for this site as per N.J.A.C. 7:9C? (check all that apply)

   - ☐ Class I-A
   - ☐ Class I-PL Pinelands Protection Area
   - ☐ Class I-PL Pinelands Preservation Area
   - ☒ Class II-A
   - ☐ Class III-A
   - ☐ Class III-B

SECTION J. ALTERNATIVE AND CLEAN FILL USE

1. Was alternative fill used? ☐ Yes ☒ No
2. Was clean fill used? ☒ Yes ☐ No
3. Was material sent off-site for use as alternative and/or clean fill? ☐ Yes ☒ No
   If "Yes," specify the section/page in the RAR where it states the SRP site receiving this alternative and/or clean fill: _____
4. Was material sent off-site for use as alternative and/or clean fill at a non-SRP site? ☐ Yes ☒ No
   If "Yes," specify the section/page in the RAR where it states the non-SRP site receiving this alternative and/or clean fill: _____
5. Was alternative fill used in excess of the amount required for the remedial action? ☐ Yes ☒ No
   If "Yes," was the NJDEP's preapproval obtained pursuant to N.J.A.C. 7:26E-5.2(b)3? ☐ Yes ☐ No

SECTION K. REMEDIAL ACTION REPORT INFORMATION

Soils

1. Did the remedy include a remedial action for soils? ☐ Yes ☒ No
   If "No," skip to **Ground Water**
2. Is a restricted use required? ☐ Yes ☐ No
   If "Yes," indicate the type of restriction being implemented. _____
3. If applicable, has consent from all involved property owners been obtained (i.e., for institutional or engineering controls)? ☐ Yes ☐ No
4. Was an engineering control required? ☐ Yes ☐ No
   If "Yes," indicate the receptor(s) each engineering control is intended to protect. *(check all that apply)*
   ☐ Human ☐ Ecological ☐ Offsite Impacts

Ground Water

5. Did the remedy include a remedial action for ground water? ☐ Yes ☒ No
   If "No," skip to **Ecological**
6. Is a restricted use required for ground water? ☐ Yes ☐ No
7. Is a revised CEA required? ☐ Yes ☐ No
8. Do any contaminant levels in ground water currently exceed the vapor intrusion ground water trigger? ☐ Yes ☐ No

Ecological

9. Did the remedy include a remedial action for Environmentally Sensitive Natural Resources (ESNRs)? ☐ Yes ☒ No
   If "No," skip to **Indoor Air**
10. Was post-remedial sampling performed to determine whether contaminant levels currently meet ecological screening levels or ecological remediation goals? ☐ Yes ☐ No
11. Did the remedial action require filling of State open waters or wetlands? ☐ Yes ☐ No
12. Have ecological risk-based remediation goals been developed? ☐ Yes ☐ No
    If "Yes," have the ecological risk-based remediation goals been approved by NJDEP? ☐ Yes ☐ No
13. Have Risk Management Decision (RMD) goals been developed? ☐ Yes ☐ No
    If "Yes," have the RMD goals been approved by NJDEP? ☐ Yes ☐ No

Indoor Air

14. Have any vapor intrusion engineering controls/mitigation systems been installed in order to mitigate a vapor condition in a structure? ☐ Yes ☒ No

If "Yes," check each type of engineering control that was implemented:

- ☐ Subsurface Depressurization System
- ☐ Subsurface Ventilation System
- ☐ Soil Vapor Extraction System
- ☐ HVAC Positive Pressure
- ☐ Other (specify): _____

SECTION L. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Hess Corporation

Representative First Name: John Representative Last Name: Engdahl

Title: Senior Specialist

Phone Number: (732) 750-6934 Ext: _____ Fax: (732) 750-6805

Mailing Address: One Hess Plaza

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: JEngdahl@hess.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: _____ Date: 7/30/2014

Name/Title: John Engdahl/Senior Specialist

No changes to contact information since last submission ☐

SECTION M. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 581780

First Name: David Last Name: Carlson

Phone Number: (609) 387-5553 Ext: Fax: (609) 387-5533

Mailing Address: 6 Terri Lane, Suite 350

City/Town: Burlington State: NJ Zip Code: 08016

Email Address: davec@envirotrac.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with section 14 of P.L.2009 c.60 (N.J.S.A. 58:10C-14), and paragraphs (1) and (2) of subsection b. of section 30 of P.L.2009 c.60 (N.J.S.A. 58:10B=1.3b(1) and (2)).

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:

☐ *directly oversaw and supervised all of the referenced remediation, and\or*

☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

I believe that the information contained herein, and including all attached documents, is true, accurate and complete.

It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: Date: 8/3/2014

LSRP Name/Title: David Carlson/Senior Project Manager

Company Name: EnviroTrac Ltd.

No changes to contact information since last submission ☒

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

SITE INVESTIGATION/ REMEDIAL ACTION REPORT

Hess Corporation- Former Quality Control Laboratory
835 West Avenue
Port Reading, Middlesex County, New Jersey

NJDEP Case #13-07-24-1427-02
SRP PI #004800

August 5, 2014

Prepared for:

John J. Engdahl
Senior Specialist
Hess Corporation
One Hess Plaza
Woodbridge, NJ 07095

Prepared by:

EnviroTrac Ltd.
6 Terri Lane, Suite #350
Burlington, NJ 08016

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Sarah J. Dyson
Project Manager

Reviewed by:

David J. Carlson, PG, LSRP
Senior Project Manager
LSRP # 581780

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Site Investigation/ Remedial Action Report
AOC 19 – Quality Control Laboratory
Hess Corporation – Port Reading Complex
835 West Avenue- 750 Cliff Road
Port Reading, Middlesex County, New Jersey

1.0 Introduction

EnviroTrac Ltd. (ET) has been retained by Hess Corporation (Hess) to provide environmental consulting services with regard to subsurface conditions at the Hess Corporation – Former Port Reading (HC-PR) Complex. HC-PR is located at 750 Cliff Road in Port Reading, Middlesex County, New Jersey. **Figure 1** is a United States Geological Survey (USGS) 7.5 minute series quadrangle map (Arthur Kill, New Jersey) depicting the facility and associated land features.

This Site Investigation/Remedial Action Report (SI/RAR) presents the removal of one (1) 10,000-gallon waste oil underground storage tank (UST) and the abandonment-in-place of the appurtenant product piping occurring at the newly designated Area of Concern (AOC) 19 – Former Quality Control Laboratory (QC Lab), located at 835 West Avenue. The QC Lab is located along the western most boundary of HC-PR, between West Ave and the Conrail Railroad right-of-way. The location of AOC 19 is shown on **Figure 2**, and Site Plan for AOC 19 is presented as **Figure 3**.

The Former Quality Control Laboratory (AOC 19) is located at 835 West Avenue, Port Reading, Middlesex County, New Jersey. Preferred Identification Number (PI#) 004800 and Case Tracking Number 13-07-24-1427-02 have been assigned to the QC Lab by the New Jersey Department of Environmental Protection (NJDEP).

2.0 Historical and Background Information

2.1 Historical Information and Physical Setting

HC-PR operations were initiated in 1958 with a Crude Topping Unit and underwent various expansions between 1958 and 1970. In 1974, refining operations were suspended; and the facility functioned only as a bulk storage and distribution terminal until 1985. In April 1985, following a lengthy retrofit, the HC-PR Complex resumed operations processing low sulfur gas oils and residuals as feed to a Fluidized Catalytic Cracking Unit (FCCU) that converted gas oil into gasoline, fuel oil and hydrocarbon products (e.g. methane, ethane and liquid petroleum gas). In December 2013 the facility was sold to Buckeye Partners, LP (Buckeye) of Breinigsville, Pennsylvania. Buckeye continues to operate the facility as a Bulk Storage and Distribution Terminal, the refinery, including AOC 19, has been deactivated and with only minor exception is undergoing demolition.

A review of available historic aerial photographs and historic topographic maps of the AOC 19 site has been conducted. The photographs ranging from 1931 through 2007, and topographic maps ranging from 1891 to 1981 indicate that the site was sparsely developed until 1957. The area of AOC - 19 is depicted on historic aerial photographs and topographic maps as undeveloped dry upland field. None of the drainage channels associated with Smith Creek, its tributaries, and salt marshes located in other parts of the facility are shown in the area of AOC 19, confirming it is not located on former marshland. This assessment is further supported by NJDEP Historic Fill Quadrangles for Arthur Kill and Perth Amboy, which detail no historic fill in the area of the QC Lab. The QC Lab was constructed between 1957 and 1963, with an apparent building expansion between 1970 and 1972. Photographs dated after 1972 indicate minimal changes to

the area. Historical aerial photographs are presented in **Appendix I**, historic topographic maps are presented in **Appendix II**, and Historic Fill Quadrangles are presented in **Appendix III**.

The QC Lab is located on West Avenue at the Former Hess Port Reading Complex. The lab was historically used for quality control analysis of petroleum products manufactured at the refinery and is no longer in-use. The 10,000-gallon waste oil UST, formerly located outside of the QC Lab, to the rear of the southern portion of the building, was used for temporary storage of waste petroleum materials from the laboratory. The appurtenant piping run of the UST is located beneath the building interior along most of the rear portion of the building, and connects to waste-disposal or 'slop' sinks (Sinks) and two engine testing pedestals (Test Pedestals) located within the laboratory. **Figure 3** depicts the QC Lab building and associated locations of the UST and appurtenant piping.

2.2 Site Specific Geology and Hydrogeology

According to the NJDEP Geologic Survey Map of New Jersey 2001, the site is underlain by the Raritan Formation and is part of the Coastal Plain Physiographic Province. Surficial geology consists of Rahway Till, and soils within this formation are composed predominantly of clayey silt to sandy silt. The site is located upon the Potomac-Raritan-Magothy bedrock aquifer system. The Geologic Survey Map for the Arthur Kill is presented in **Appendix IV**.

There are no predominant geological surface features, such as rock outcroppings, on the subject facility. Site-specific stratigraphy was gathered during soil boring and monitoring well advancement and installation activities in the site area and other parts of HC-PR. The documented lithology confirms the aerial photograph observations that the facility is geographically divided into two distinct sections. The western portion of the HC-PR, where the QC Lab is located, is underlain by unconsolidated clays, silts, silty sands and clayey sands.

Ground water movement varies in relation to topography, lithology, elevations of recharge and discharge areas, and man-made influences. Given the proximity of the facility to the Arthur Kill, a tidal survey was performed in May and June of 2002. The results of the survey concluded that facility wells adjacent to the Arthur Kill are tidally influenced, but those within the "interior" portions of the facility, including the QC Lab area, are generally unaffected by tidal influences.

2.3 Topography

According to the United States Geological Survey *Arthur Kill Quadrangle, New Jersey / New York* 7.5 Minute Series Topographic Map, topography of the facility is generally level at an approximate elevation of 7- to 22-feet above mean sea level (msl). The QC Lab is situated 20-feet above msl. The USGS Topographic Map is presented as **Figure 1.**

2.4 Groundwater Direction

Site wide shallow groundwater gauging event was conducted on November 11, 2013, groundwater flow was determined to be towards the Detention Basin in the central portion of the site and to the southeast in the eastern portion of the site, consistent with previous events. Groundwater flow in the area of the QC Lab is towards the east/southeast. Site-wide gauging data is presented in **Table 1**. The groundwater flow map for the November 11, 2013 gauging event is presented as **Figure 4**.

3.0 Receptor Evaluation

A formal Receptor Evaluation for the entire HC-PR facility was submitted to the NJDEP in February 2011. The section below customizes information developed by that formal evaluation to address the conditions specific to AOC 19 – QC Lab. The format and contents of the Receptor Evaluation below correspond to the requirements specified in the August 2012 NJDEP document *Technical Guidance for Ecological Evaluations*.

3.1 Groundwater Use

The site area is serviced by a municipal water supply, which is provided by the Middlesex Water Company. The Middlesex Water Company pulls water from the Delaware-Raritan Canal to a water treatment and pumping station located in New Brunswick, New Jersey. Well searches were conducted by The Shaw Group in December 2006 and EnviroTrac in February 2011 and August 2013. The results did not identify any potable wells within the vicinity of the facility. The well search results have previously been submitted to the NJDEP. There are no domestic supplies, irrigation or industrial use wells reported within 0.5 miles of the site.

3.2 Vapor Intrusion

The land cover in the area of AOC 19 is predominantly asphalt with concrete present beneath the QC Lab building. Groundwater and soil sampling in the area of the building indicate volatile impact beneath and adjacent to the QC Building. A Vapor Intrusion Investigation has not been triggered at this time and no sub-slab sampling is proposed.

3.3 Ecological Evaluation

An ecological evaluation (EE) was conducted at AOC 19. The EE included the identification of environmentally sensitive natural resources (ESNR) approximately seven-hundred (700) feet southeast of AOC 19, in the interior of the HC-PR Complex. Contaminants of Potential Ecological Concern (COPEC) have been identified within AOC 19.

3.3.1 Environmentally Sensitive Natural Resources

One surface water body is located approximately seven-hundred (700) feet southeast of AOC 19. The water body is referred to as the Detention Basin, is identified in **Figure 2** and comprises AOC 12. The Detention Basin is approximately 8.65 acres in size, and was created for the protection of downstream resources. There is no surface water outlet from the Detention Basin. Water from the basin is routinely pumped and treated via the facility wastewater treatment facility, located onsite. The treated water is then discharged under NJPDES Permit #0028878.

Approximately four hundred (400) feet southwest of the Detention Basin are headwaters of Smith Creek. These are located just southwest of the Detention Basin adjacent to the PSEG transmission facility, and over sixteen hundred (1,600) feet from AOC 19. Smith Creek is classified as FW2-NT/SE3 tidal channel. This is a general surface water classification applied to freshwater non-trout tributaries to saline estuaries.

A review of available information regarding the possible presence of environmentally sensitive areas and New Jersey or Federally listed species found no rare, threatened or endangered species inhabiting any portions of the site or adjacent to the subject facility. However, rare wildlife species were identified within ¼ mile of the subject facility.

A review of the NJDEP GIS Digital data indicates that freshwater emergent wetlands are located around AOC 12 - Detention Basin and small patches of cord grass (*Spartina Alterniflora*) were identified surrounding the Detention Basin. To the south of the Detention basin are freshwater emergent (0.14 miles) and riverine (0.16 miles) wetlands. No wetlands were identified within the boundaries of AOC 19.

The Detention Basin and the freshwater emergent wetlands, located south of the Detention Basin are considered environmentally sensitive areas.

During the on-site field investigation of AOC 19, there were no visual observations of existing contaminant migration pathways, such as stressed or dead vegetation, discolored soil, absence

of biota from particular areas, or seeps and discharges. Man-made structures, e.g. the QC Lab building, and paving cover most of the site.

3.3.2 Contaminants of Potential Ecological Concern (COPECS)

For purposes of this evaluation, the highest concentrations detected from any groundwater or soil sample from the QC Lab was compared, when available, to the NJDEP Ecological Screening Criteria pursuant to N.J.A.C. 7:9 B. Analytical data indicates that the volatile organic compounds (VOCs), benzene, ethylbenzene, and total xylenes, the semi-volatile organic compounds (SVOCs), benzo(a)anthracene, naphthalene and 2-methylnapthalene, and metal compounds; aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, selenium, silver, thallium, vanadium and zinc, are present in the site soil and groundwater at levels above applicable Ecological Screening Criteria, and will therefore be considered COPECs.

Table 2 is a comparison of the most elevated compound concentration in dissolved groundwater and soil samples collected within AOC 19 and the applicable Ecological Screening Criteria.

3.3.3 Contaminant Migration Pathways

The QC Lab area is covered with non-pervious asphalt and/or concrete. Investigations of soil and groundwater have identified COPECs at depths greater than 2.0 feet bgs, and not within the "biotic zone". Additionally, no environmentally sensitive areas are located on or adjacent to the site. Therefore, any possible COPECs in soils do not have the potential to impact an environmentally sensitive area.

Additional migration pathways, such as preferential flow through subsurface utilities or their trenches do have the potential to be complete based on the depth to groundwater (approximately 4 to 10 feet below grade). However, based on the absence of environmentally sensitive areas in proximity to the site, the migration pathway is not complete.

The groundwater migration pathway requires further remedial investigation. COPECs were detected in groundwater at temporary well QC-TW-1, but a completed migration pathway has not been confirmed.

3.3.4 Conclusion of Ecological Evaluation

Pending further investigation, the EE finds that no further evaluation or is required at this time at the QC Lab.

4.0 Technical Overview

4.1 Reliability of Data

Laboratory analytical data generated by EnviroTrac throughout the course of the investigation are considered to be reliable, all samples were submitted to a New Jersey certified laboratory, and no significant issues have been identified with regard to holding times, method detection limits (MDLs) or precision and accuracy. **Appendix V** provides a survey of analytical methods and quality assurance indicators regarding samples collected by EnviroTrac. Laboratory data for groundwater samples referred to in the report are enclosed in **Appendix VI** and **Appendix VII.**

4.2 Establishment of Site-Specific Impact to Groundwater Soil Remediation Standards

Initial soil sampling in the QC Lab was conducted in June 2013, as part of the UST removal and abandonment-in-place of the appurtenant piping. No exceedances of Residential or Non-Residential Standards specified in N.J.A.C 7:26D – Remediation Standards were detected.

Several exceedances of the default Impact to Groundwater Soil Remediation Standards (IGWSRS) were detected. Therefore during delineation soil sampling at the site additional samples were collected for determination of site specific IGWSRS via the NJDEP sanctioned methods.

The *N.J.A.C 7:26D – Remediation Standards* and implementing guidance enable the site owner to calculate and employ site-specific IGWSRS via the Soil-Water Partition Equation Impact to Groundwater Soil Remediation Standards (SWPE-IGWSRS) and the Synthetic Precipitation Leaching Procedure Impact to Groundwater Soil Remediation Standard (SPLP-IGWSRS). The soil sample analysis results discussed herein are compared to the applicable least stringent of the IGWSRS, SWPE-IGWSRS or SPLP-IGWSRS, as per The *NJDEP's Technical Guidance for the Attainment of Remediation Standards and Site Specific Criteria (September 24, 2012*). The following is a discussion on the determination of the applicable site-specific standards established for the subject site.

The protocol for applying the site-specific IGWSRS via the SWPE are specified in the *NJDEP* November 2013 guidance document- *Development of Impact to Groundwater Soil Remediation Standards Using the Soil-Water Partition Equation*. In accordance with the guidance three (3) soil samples from a similar lithology, each containing less than 1,000 mg/kg of organic contamination, were subjected to analysis for Total Organic Carbon (TOC) by the Lloyd-Kahn Method. The average TOC was employed into a spreadsheet calculator supplied by the NJDEP. The calculated spreadsheets are presented in **Appendix VIII.** Selected soil sample results are been compared to the calculated SWPE-IGWSRS in **Table 3.**

The protocol for applying the site-specific IGWSRS via the SPLP are specified in the *NJDEP November 2013 guidance document- Development of Impact to Groundwater Soil Remediation Standards Using the Synthetic Precipitation Leaching Procedure*. In accordance to the guidance, SPLP analysis was performed on soil samples collected from the subject site and the results were employed into a spreadsheet calculator supplied by the NJDEP. The calculated spreadsheets are presented in **Appendix IX.** Selected soil sample results are compared to the calculated SWPE-IGWSRS in **Table 3.**

Table 3 also shows a comparison of selected soil sample results are also compared to the Default Leachate Criteria. Because various compounds are compared to different default or site specific IGWSRS **Table 3** contains a separate column identifying the 'applied IGWSRS' each compound.

5.0 Underground Storage Tank and Piping Closure Activities

5.1 Underground Storage Tank Removal & Soil Sampling Activities- June 2013

A UST-closure permit was obtained from the NJDEP on May 24, 2013: TMS# N13-9009, Activity# UCL 130001. Between June 17 and June 19, 2013, EnviroTrac oversaw UST-excavation and removal activities at the subject site. Tank removal services were provided by EISCO-NJ of New Brunswick, NJ. A vacuum truck was utilized to remove the accumulated water and residual product from the UST. The liquid waste was disposed of and treated at the water treatment facility located on-site at the Hess Port Reading Complex. After the liquid waste was removed, and properly disposed, the overburden was excavated to expose the top of the UST, which was encountered at approximately four below ground surface (bgs). Compressed air was utilized to evacuate potential residual waste oil within the associated piping, and the piping was removed from the UST. The UST was removed from the excavation and properly disposed of on June 19, 2013. Upon removal, the UST was measured to be one (1) 10,000-gallon double-walled steel tank with a fiber glass shell. No holes were observed in the UST and the tank dimensions were measured to be twenty-seven (27) feet by eight (8) feet. The NJDEP UST-removal permit, Woodbridge Township Construction Permit, and tank disposal receipt are found in **Appendix X**.

During UST-removal activities, the groundwater interface was encountered at approximately 7-feet bgs and groundwater was present in the UST excavation. No obvious signs of a release to the soils within the excavation were noted and no product or sheen was observed on the groundwater within the excavation. Six (6) soil samples, designated UST-1 through UST-6, were collected from the sidewalls of the UST excavation at the 6.5- to 7.0-feet interval bgs and one (1) soil sample, P-1, was collected below the connecting product piping, at 3.0- to 3.5-feet bgs. The soil samples were submitted to Accutest Laboratories (Accutest) of Dayton, NJ (Certification #12129) and analyzed for Extractable Petroleum Hydrocarbons (EPH), utilizing NJDEP EPH Method, VOCs with a library search for fifteen (15) Tentatively Identified Compounds (VOC+TICs) using EPA Method 8260B; SVOCs with a library search for twenty (20) TICs (SVO+TICs) using EPA Method 8270D; and Target Analyte List (TAL) metals, utilizing EPA Method 6010.

Analytical results reported targeted EPH, VOC, SVOC and metal compounds as either non-detect (ND) or below applicable soil remediation standards, with the exception of beryllium in samples UST-2 (0.75 ppm) and UST-3 (0.88 ppm), which exceeded the respective NJDEP IGWSRS of 0.5 ppm, the SPLP-Site Specific Leachate Criterion (SPLP-SSLC) of 0.68 ppm and the SWPE-ISGSRS 0.70 ppm. Aluminum and manganese were detected in six (6) of the seven (7) soil samples at concentrations which exceeded the respective IGWSRS and SWPE-IGWSRS. As per the *NJDEP Site Remediation Program's (SRP) Frequently Asked Questions for the Impact to Groundwater Pathway in Soil Remediation Standards (Ver1.0, 1/27/2011)* applicable aluminum and manganese standards are based on secondary considerations and do not need to be addressed unless there is cause to believe that their presence is due to a site discharge. Aluminum and manganese do not consistently co-occur with COPECs and are attributed to natural background conditions, therefore remediation will not be conducted

Summarized soil sample analytical results are presented in **Table 3**. The soil sample locations are presented in **Figure 5**. The laboratory analytical data report package is presented in **Appendix VI**. The Electronic Data Deliverable (EDD) Submittal Confirmation is included in **Appendix XIV**. Photographic documentation of the UST removal is presented in **Appendix XI**. Clean Fill Certification is enclosed in **Appendix XII**.

The soil samples were collected in accordance to the July 13, 2012 NJDEP *Technical Guidance for Investigation of Underground Storage Tank Systems*, and analytical parameters are those designated in Table 2-1 of the New Jersey Administrative Code (N.J.A.C.) 7:26E- *Technical Requirements for Site Remediation*. After the removal of the UST and sample collection was complete, the excavation was backfilled with stone removed from the excavation as well as certified-clean fill. Clean fill was imported from Maddox Materials LLC, located in Spotswood, New Jersey, certification of which is included in **Appendix XII**.

5.2 Piping Abandonment-In-Place June 20 and 21, 2013

As discussed above in Section 5.1 compressed air was utilized to evacuate potential residual waste oil within the associated piping to the UST. The piping run was constructed of steel with a glass inner lining. On June 19, 2013 legs of the piping were alternately capped and blown to force remaining mobile liquids to the UST.

On June 20th and 21st, 2013, EnviroTrac performed a soil investigation of the product piping run located primarily below the concrete floor/slab of the laboratory building. Ten (10) soil borings, P-2 through P-11, were advanced by hand auger in designated locations within 2-feet of the product piping run. Each boring was advanced to a depth of 2.5-feet bgs where one (1) sample was collected at 2.0- to 2.5-feet, a depth that is below the piping invert. Samples were collected at a frequency of approximately every 15-feet of piping run, biased toward joints and sink locations. Boring P-2 was advanced outside of the laboratory building and borings P-3 through P-11 were advanced within the lab building. **Figure 5** depicts the locations of the piping run and the boring/soil sample locations.

EnviroTrac field personnel screened the soil column for each boring for evidence of hydrocarbon impact via visual, olfactory, and Photo-Ionization Detector (PID) observation to assess the potential for a release. Soil boring logs can be found in **Appendix XIII.** Soils primarily consisted of brown silt overlain by orange to red fine-medium sand. No soil-staining was observed in the ten (10) soil borings, PID readings ranged from 0.0 ppm to 215 ppm at P-7. Other than P-7 readings were indicative of background readings (less than 10 ppm). The soil samples were submitted to Accutest to be analyzed for EPH, VOC+TICs, SVOC+TICs, and TAL metals. The SVOC analysis of samples P-6 through P-10 was not performed due to a shipping error by Accutest that resulted in loss of the samples. These SVOC samples were re-collected and analyzed at a later date as discussed below.

Analytical results reported targeted EPH, VOC and SVOC (when available) compound concentrations as ND or below applied IGWSRS (see **Table 3**) with the exception of gasoline related compounds, benzene, toluene, and total xylenes at P-7 with the applied IGWSRS of 0.005 mg/kg, 12 mg/kg, and 39 mg/kg, respectively.

Analytical results reported targeted TAL metal results lead at P-5 (127 ppm) and beryllium at P-6 (0.99 ppm) above their respective applied IGWSRS of 90 mg/kg and 0.7 mg/kg (see **Table 3**).

Aluminum was reported above the applicable IGWSRS/SWPE-IGWSRS at locations P-2 through P-7, manganese was reported above the SWPE-IGWSRS of 65 ppm at P-2 through P-11. As per the *NJDEP Site Remediation Program's (SRP) Frequently Asked Questions for the Impact to Groundwater Pathway in Soil Remediation Standards (Ver1.0, 1/27/2011)* aluminum and manganese standards are based on secondary considerations and do not need to be addressed unless there is cause to believe that their presence is due to a site discharge. These elements do not consistently co-occur with COPECs and are attributed to natural background conditions, therefore remediation will not be conducted. It should be noted that both cadmium and silver were reported to have Laboratory Method Detection Limits (MDLs) above applicable soil remediation standards at P-6.

Based on the above, the compounds requiring further assessment were: benzene, toluene and total xylenes at P-7; lead at P-5; and beryllium at P-6, UST-2, and UST-3. These compounds exceeded only the applied IGWSRS.

Summarized soil sample analytical results are presented in **Table 3**. The soil sample locations are presented in **Figure 5**. Soil Boring logs are presented in **Appendix XIII**. The laboratory analytical data report package is presented in **Appendix VI**. The EDD Submittal Confirmation is included in **Appendix XIV**. The soil samples were collected in accordance to the July 13, 2012 NJDEP *Technical Guidance for Investigation of Underground Storage Tank Systems*, and analytical parameters are those designated in Table 2-1 of the N.J.A.C. 7:26E- *Technical Requirements for Site Remediation*.

6.0 Delineation Soil and Groundwater Investigation Activities

6.1 Soil Boring Installation and Sampling Activities- December 2013

On December 18 through 20, 2013 EnviroTrac performed further soil investigation activities in the piping run area. Field services were provided by Zebra Environmental Corporation. Seven (7) borings were installed via concrete coring and hand auger within the QC Laboratory. Soil boring logs are presented in **Appendix VIII**. The soil column for each boring was screened for evidence of hydrocarbon impact via visual, olfactory, and PID observation to assess the potential for a release. The observations were recorded by EnviroTrac field personnel. The soil boring investigation was conducted to delineate impact identified in soil samples P-5, P-6, P-7 and to recollect SVOC samples for P-6 through P-10, and is discussed in Sections 6.1.1 through 6.1.4 below.

6.1.1 Recollect Semi-Volatile Samples at P-6 through P-10

Five (5) borings, designated P-6R through P-10R, were advanced in the locations immediately adjacent to the numerically corresponding borings. Borings P-6R and P-8R through P-10R were advanced to a depth of 2.0- to 2.5-feet bgs, P-7R was advanced to a depth of 6.0-feet, PID Readings in P-6R through P-10 ranged from 0.0 ppm to 8,753 ppm. One (1) soil sample from each boring, was collected at a depth of 2- to 2.5-feet bgs and analyzed for SVO+TICs. SVOC analytical results for recollected SVOC samples from P-6R through P-10R reported all targeted compounds as either ND or below applicable IGWSRS.

Summarized soil sample analytical results are presented in **Table 3**. The soil sample locations are presented in **Figure 5**. Soil Boring logs are presented in **Appendix XIII**. The laboratory analytical data report package is presented in **Appendix VI**. The EDD Submittal Confirmation is included in **Appendix XIV**.

6.1.2 Horizontally and vertically delineate P-7

Based on June 2013 results the occurrence of benzene, toluene and total xylenes detected in P-7 are horizontally delineated to the east (P-8) north (P-9), and south (P-6). One (1) boring, designated P-7R, was advanced immediately adjacent to former, P-7, to a depth of 6-feet bgs for the purpose of calculating site specific IGWSRS and vertical delineation. PID readings ranged from (12.8 ppm to 8,753 ppm). One vertical delineation soil sample was collected, P-7R (5.5-6.0) was collected and analyzed for VOC+TICs. The detected toluene concentration P-7R (5.5-6.0) was less than the applied IGWSRS, however benzene, methyl tertiary butyl ether (MTBE), and total xylenes at exceeded the applied IGWSRS, additionally MTBE was detected above the NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS) and the Non-Residential Direct Contact Soil Remediation Standard (NRDCSRS). Toluene is vertically delineated but not horizontally delineated to the west. Benzene, MTBE, and total xylenes are not vertically delineated or horizontally delineated to the west.

Summarized soil sample analytical results are presented in **Table 3**. The soil sample locations are presented in **Figure 5**. Soil Boring logs are presented in **Appendix XIII**. The laboratory analytical data report package is presented in **Appendix VI**. The EDD Submittal Confirmation is included in **Appendix XIV**.

6.1.3 Horizontally and vertically delineate P-5

Based on June 2013 results the occurrence of lead in P-5 is horizontally delineated to the east (P-2) and north (P-6). Soil Borings P-12 and P-13 and were installed to the west and south for horizontal delineation Two (2) soil samples were collected depths of 2.0- to 2.5-feet bgs, and 4.0- to 4.5-feet bgs from each boring. Analytical results reported lead (97.7 ppm) in P-12(4.0-4.5) in exceedance of applied IGWSRS. Lead is delineated horizontally to the north, south and east, however further delineation is required both vertically and westerly.

Summarized soil sample analytical results are presented in **Table 3**. The soil sample locations are presented in **Figure 5**. Soil Boring logs are presented in **Appendix XIII**. The laboratory analytical data report package is presented in **Appendix VI**. The EDD Submittal Confirmation is included in **Appendix XIV**.

6.1.4 Horizontally and vertically delineate P-6

Based on June 2013 results the occurrence of in Beryllium in UST- 2, UST-3 and P-6 is horizontally delineated to the north (P-7), northeast (P-8), and south (P-5). P-13 was installed to horizontally and vertically delineate beryllium. Two (2) soil samples were collected depths of 2.0- to 2.5-feet bgs, and 4.0- to 4.5-feet bgs. Analytical results reported beryllium (0.81 ppm) in P-13 (4.0-4.5) in exceedance of applied the applied IGWSRS of 0.7 ppm, beryllium in P-13 (2.0-2.5) was detected below the applied standard. Beryllium is not horizontally or vertically delineated. It

should be noted that analytical results reported arsenic (78.7 ppm) in P-13 (2.0-2.5) above applicable IGWSRS, arsenic is vertically delineated by P-13 (4.0-4.5), and horizontally delineated to the north (P-5), south (UST-2), west (P-3 and P-4) and east (P-1).

Summarized soil sample analytical results are presented in **Table 3**. The soil sample locations are presented in **Figure 5**. Soil Boring logs are presented in **Appendix XIII**. The laboratory analytical data report package is presented in **Appendix VI**. The EDD Submittal Confirmation is included in **Appendix XIV**.

6.1.5 Secondary Considerations

Analytical results reported concentrations of aluminum above the applied IGWSRS in three (3) locations, and manganese above the IGWSRS in four (4) locations As per the *NJDEP Site Remediation Program's (SRP) Frequently Asked Questions for the Impact to Groundwater Pathway in Soil Remediation Standards (Ver1.0, 1/27/2011)* applicable aluminum and manganese standards are based on secondary considerations and do not need to be addressed unless there is cause to believe that their presence is due to a site discharge. These elements do not consistently co-occur with COPECs and are attributed to natural background conditions, and therefore will not be remediated.

The results discussed above are graphically presented on **Figure 5** and tabulated on **Table 3**.

6.2 Temporary Well Installation and Sampling Activities- December 19, 2013

In accordance with the July 13, 2012 NJDEP *Technical Guidance for Investigation of Underground Storage Tank Systems*, one temporary well was installed adjacent to the UST excavation due to the presence of groundwater in contact with the tank. On December 19, 2013 one (1) boring (QC-TW-1) was installed to a depth of 15-feet bgs adjacent to the eastern sidewall of the former UST excavation. EnviroTrac field personnel screened the soil column PID readings were recorded as 0.0 ppm throughout. One (1) temporary well point (QC-TW-1) was installed at this location with 15-feet of screen. Groundwater was encountered at a depth of 4-feet bgs during these activities. One (1) groundwater sample (QC-TW-1) was collected and analyzed for VOC+TICs, SVOC+TICs, TAL metals and Ammonia.

Analytical results reported concentrations of benzene (1.8 parts per billion (ppb)), arsenic (34.2 ppb), beryllium (22.3 ppb), cadmium (4.3 ppb), chromium (119 ppb), iron (139,000 ppb), lead (85.0 ppb), manganese (15,900 ppb), mercury (9.6 ppb), nickel (198 ppb), and sodium (227,000 ppb) above the applicable NJDEP Class II-A Groundwater Quality Criteria (GWQC).

Summarized groundwater analytical results are presented on **Table 4**. The laboratory analytical data report package is presented in **Appendix VIII**. The EDD submittal documentation is included in **Appendix XIV**. The temporary well log for QC-TW-1 is presented in **Appendix XIII.**

7.0 Conclusions and Summary

Sample analysis indicates that site soil and groundwater have been impacted by the former 10,000-gallon UST and the appurtenant product-piping system. In soil the volatile component identified at P-7, the lead identified at P-5 and P-12, arsenic at P-13 and beryllium at UST-2, UST-3 and P-6 exceed applicable standards. In groundwater the benzene, arsenic and beryllium, cadmium, chromium, iron, lead, manganese, mercury, nickel and sodium exceed Class IIA GWQS. A Remedial Investigation of soil and groundwater impacts is required at the QC Lab.

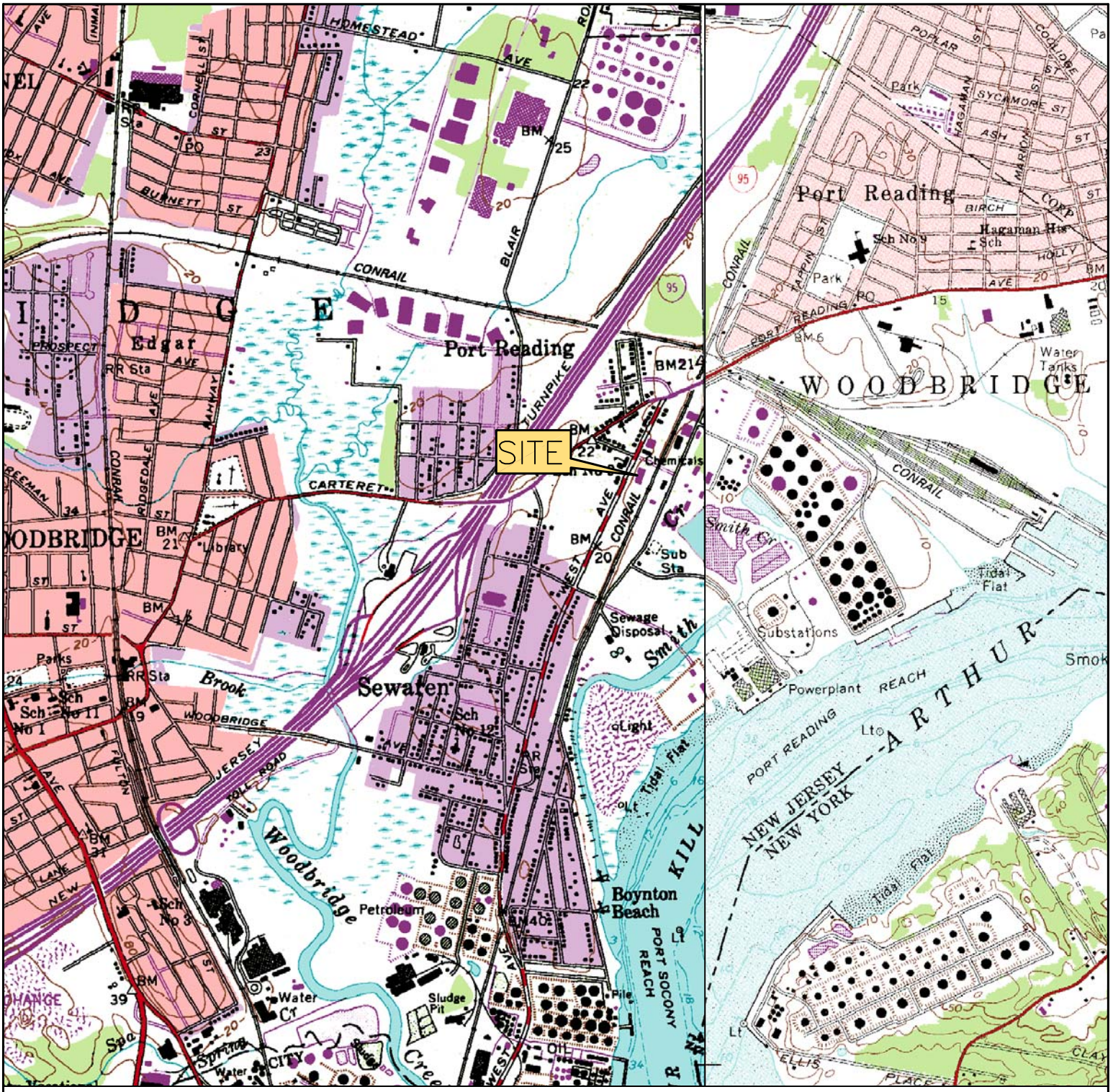
The SI reported herein was conducted to confirm whether a release requiring remediation had occurred at the QC Lab UST system. The results indicate that there are conditions requiring remediation. Therefore, QC Lab UST case cannot be closed with a Response Action Outcome and must be removed from current status as an NJDEP Site Remediation Program – Licensed Site Remediation Professional case. The Hess QC Lab case (PI #004800) will be incorporated into the

ongoing Resource Conservation and Recovery Act (RCRA) remediation at the Former Hess Port Reading Complex (PI #006148), and will be referred to as AOC 19. The Facility is a USEPA lead site and the assigned Case is Philip Cole of the NJDEP Bureau of Case Management. This incorporation will mandate status updates for AOC 19 be included in Quarterly Progress Reports on the Facility and elimination of Annual Fee as well as Regulatory and Mandatory Timeframe requirements of the Administrative Requirements for Remediation of Contaminated Sites (NJAC 7:26C). A remedial investigation will be conducted and a remedial investigation report (RIR) will submitted for AOC 19 in accordance with the requirements applicable to the USEPA-lead RCRA program.

FIGURES

1. Site Location Map/ USGS Topographic Map
2. Site Plan
3. Quality Control Laboratory- Site Plan
4. Groundwater Contour Map- November 11, 2013
5. Soil and Groundwater Sampling Location Map

EnviroTrac



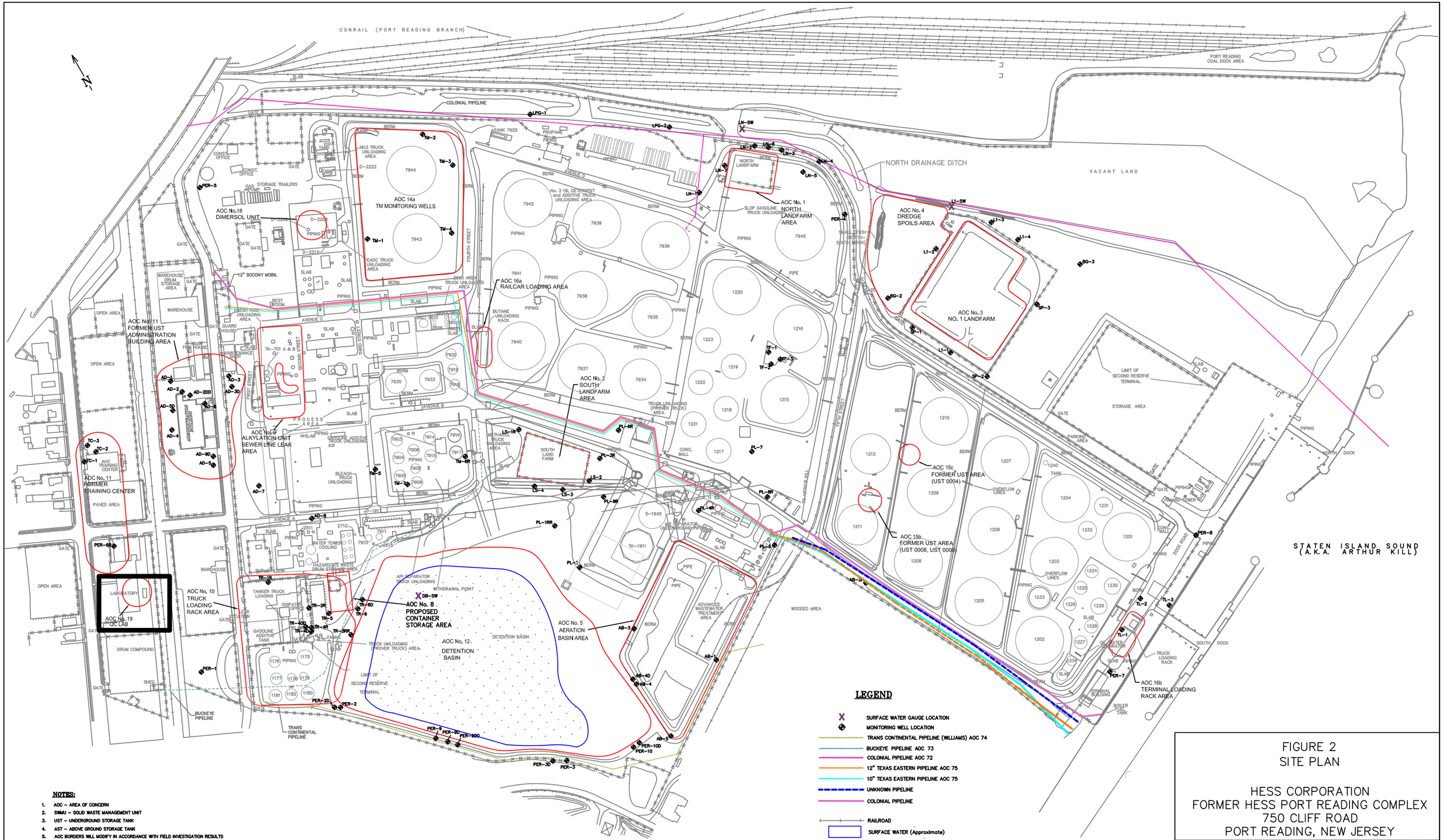
QUADRANGLE LOCATION:
PERTH AMBOY/ARTHUR KILL, NEW JERSEY

SOURCE: USGS 7.5 MINUTE SERIES
REVISED/INSPECTED: 1981
CONTOUR INTERVAL: 10 FEET

0 2,000 6,000 FEET
1,000 4,000

N W E S

FIGURE #	U.S.G.S. TOPOGRAPHIC MAP	DRAWN BY: KN	EnviroTrac ENVIRONMENTAL SERVICES
1	HESS CORPORATION – QC LABORATORY 835 WEST AVENUE PORT READING, NEW JERSEY	REVISION DATE: 6/5/2014	6 TERRI LANE, SUITE #350, BURLINGTON, NJ 08016 PHONE: (609)387-5553 FAX: (609)387-5533



NOTES:

1. AOC – AREA OF CONCERN
2. SWMU – SOLID WASTE MANAGEMENT UNIT
3. UST – UNDERGROUND STORAGE TANK
4. AST – ABOVE GROUND STORAGE TANK
5. AOC BORDERS WILL MODIFY IN ACCORDANCE WITH FIELD INVESTIGATION RESULTS
6. ALL CONTOURS ARE INFERRED BASED ON THE INTERPOLATION OF FIELD MEASUREMENTS AND KNOWLEDGE OF THE SITE

FIGURE 2
SITE PLAN

HESS CORPORATION
FORMER HESS PORT READING COMPLEX
750 CLIFF ROAD
PORT READING, NEW JERSEY

DRAWN BY: KN	0 150 SCALE IN FEET	EnviroTrac ENVIRONMENTAL SERVICES 6 TERRI LANE, SUITE 350, BURLINGTON NJ 08016 PHONE: (609)387-5553 FAX: (609)387-5533
DATE: 7/10/2014		

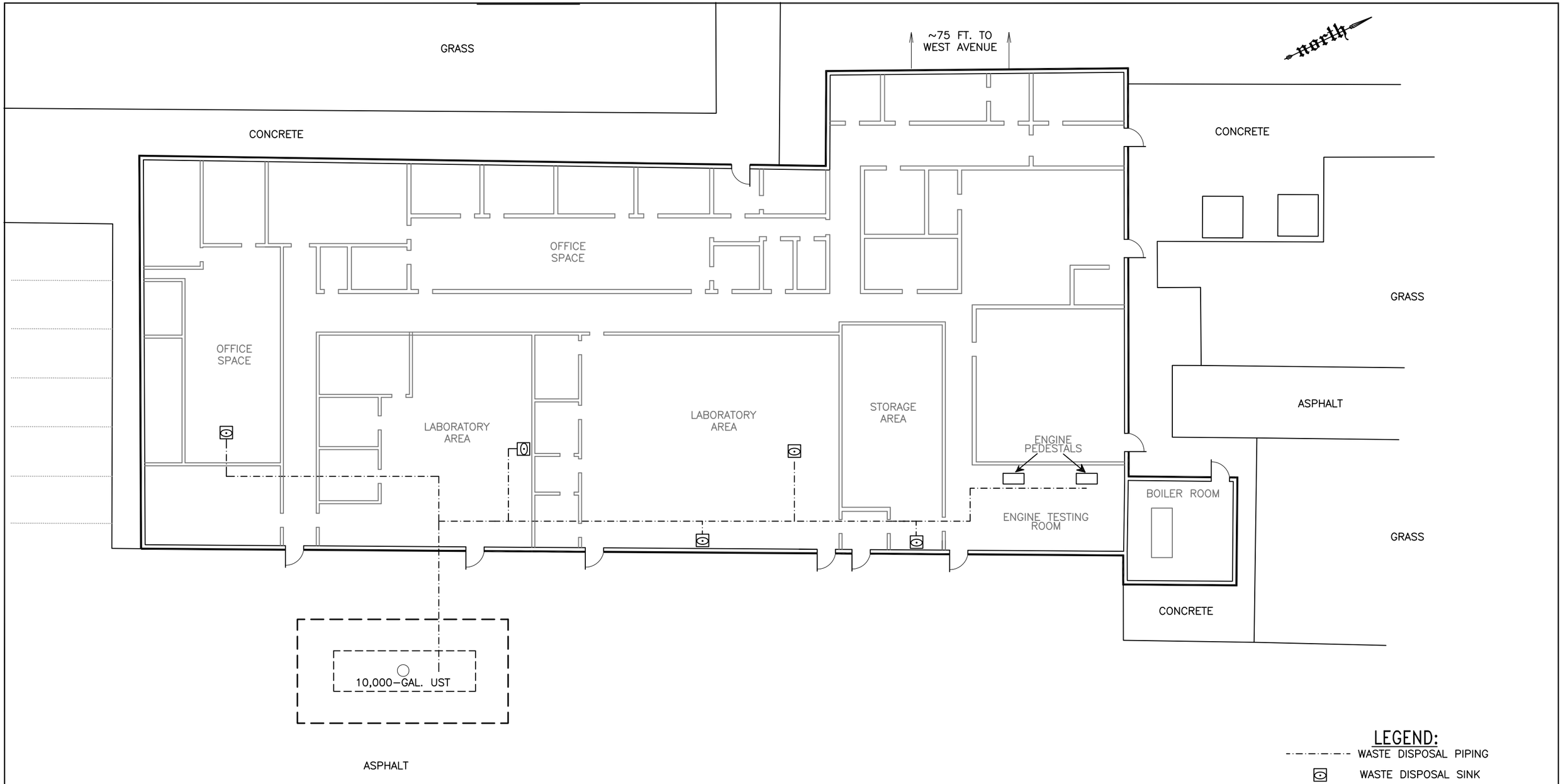
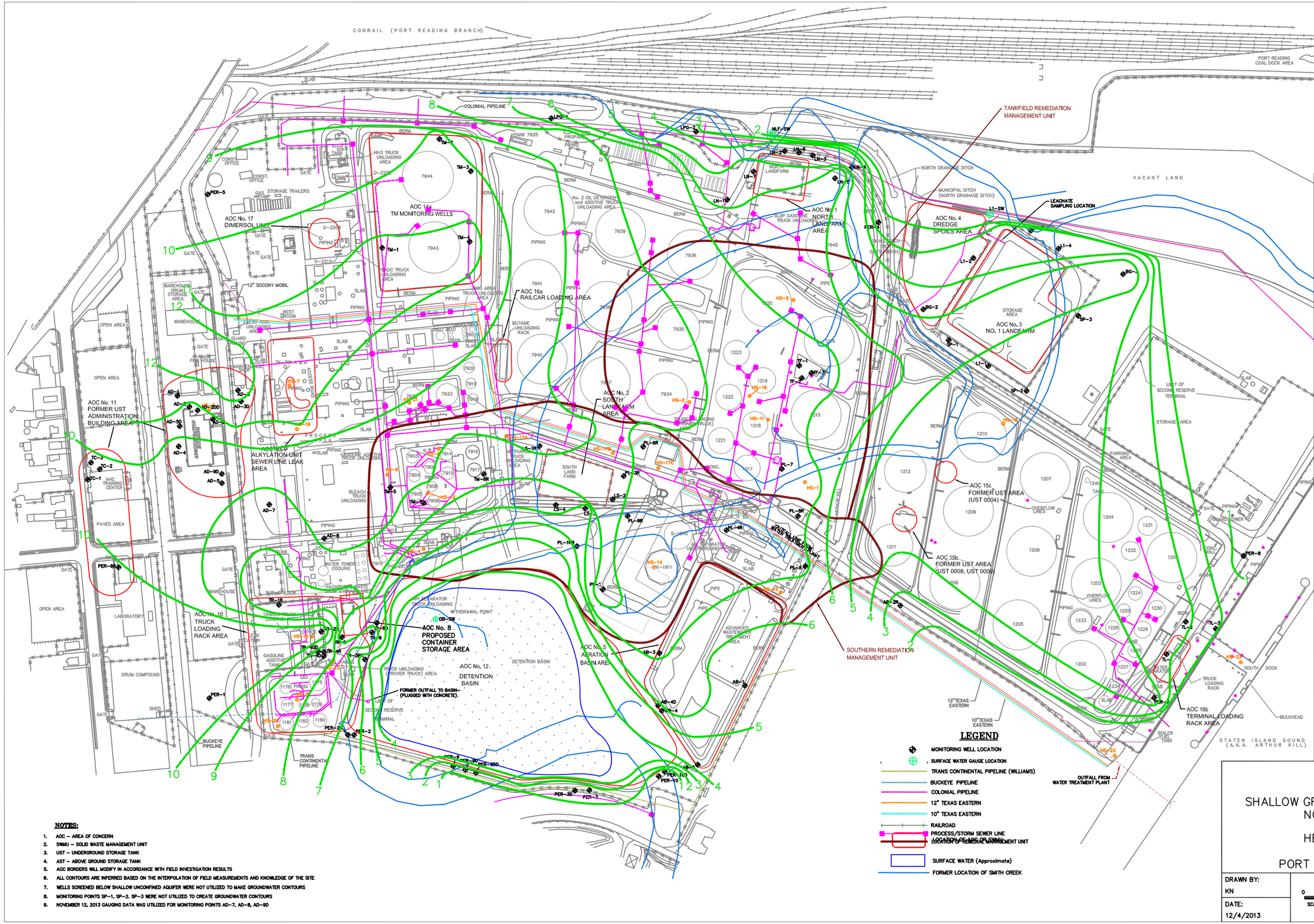


FIGURE #	FORMER HESS QC LABORATORY 835 WEST AVENUE PORT READING, NEW JERSEY	HESS	QUALITY CONTROL LABORATORY (AOC 19) SITE PLAN	0 10 20 SCALE IN FEET	EnviroTrac ENVIRONMENTAL SERVICES 6 TERRI LANE, SUITE 350. BURLINGTON NJ 08016 PHONE: (609)387-5553 FAX: (609)387-5553
3			DRAWN BY: KN / REVISION DATE: 7/10/14		



MONITORING POINT	DEPTH TO BOTTOM	KNOWN ELEVATION	DEPTH TO WATER	DEPTH TO PRODUCT	GROUNDWATER ELEVATION
DB-SW	–	10.72	3.12	–	3.34
AB-1	13.10	13.85	8.65	–	5.20
AB-2R	21.05	10.81	8.06	–	2.75
AB-3	13.10	14.62	7.27	–	7.35
AB-4	4.85	14.24	DRY	–	–
AB-5	13.08	13.24	8.51	–	4.73
AD-1	10.93	18.25	6.33	–	11.92
AD-2	17.15	18.95	7.97	–	10.98
AD-3	13.88	22.00	9.82	–	12.18
AD-4	14.88	17.55	7.90	–	9.65
AD-5	13.09	17.73	8.16	–	9.57
AD-6	14.60	19.18	8.21	–	10.97
AD-7	19.76	13.32	4.89	–	8.43
AD-8	14.74	15.88	6.39	–	9.49
BG-2	11.00	11.13	6.64	–	4.49
BG-3	10.78	12.54	6.58	–	5.96
L1-1	14.70	13.38	8.56	–	4.82
L1-2	14.31	10.98	7.19	–	3.79
L1-3	10.97	11.50	8.06	–	3.44
L1-4	11.04	12.97	9.69	–	3.28
L1-SW	–	5.48	1.34	–	1.32
LN-1	13.33	12.19	6.86	–	5.33
LN-2	11.38	12.21	7.24	–	4.97
LN-3	13.12	11.34	6.62	–	4.72
LN-4	14.21	13.55	8.76	–	4.79
LN-5	16.93	12.85	6.13	–	6.72
LN-6	17.10	14.56	9.74	–	4.82
LN-7	16.90	15.75	9.87	–	5.88
LN-SW	–	5.19	1.90	–	1.59
LPG-1	8.10	13.74	7.63	–	6.11
LPG-2	9.69	9.30	5.89	–	3.41
LS-1R	15.90	14.49	4.97	–	9.52
LS-2	11.93	11.69	2.99	–	8.70
LS-3	12.66	8.30	1.92	–	6.38
LS-4	13.26	11.25	4.12	–	7.13
PER-1	19.26	19.29	9.17	–	10.12
PER-2	12.19	12.91	6.21	–	6.70
PER-3	12.20	9.55	8.47	–	1.08
PER-4	15.67	10.23	7.89	–	2.34
PER-5	14.40	20.47	11.27	–	9.20
PER-6R	21.97	23.76	13.64	–	10.12
PER-7	16.63	11.15	6.89	–	4.26
PER-8	14.58	7.48	6.51	–	0.97
PER-9	17.89	8.45	6.49	–	1.96
PER-10	18.87	12.18	11.63	–	0.55
PL-1RR	–	7.35	1.68	1.67	5.68
PL-2	–	11.78	3.23	3.21	8.56
PL-3R	18.60	12.27	3.87	–	8.40
PL-4R	20.85	12.40	4.59	–	7.81
PL-5	–	9.08	1.99	1.98	7.10
PL-6R	21.62	11.49	3.97	–	7.52
PL-7	19.58	13.06	5.59	–	7.47
PL-8R	21.76	11.96	4.77	–	7.19
PL-9R	20.84	11.26	4.10	–	7.16
SP-1	11.97	9.22	8.48	–	0.74
SP-2	12.26	10.73	9.19	–	1.54
SP-3	11.98	9.29	8.44	–	0.85
TC-1	17.75	20.48	10.60	–	9.88
TC-2	14.88	19.57	9.71	–	9.86
TC-3	17.18	19.55	9.64	–	9.91
TM-1	20.78	22.36	11.24	–	11.12
TM-2	22.20	22.22	12.16	–	10.29
TM-3	20.75	22.50	12.18	–	10.32
TM-4	15.35	21.14	9.97	–	11.17
TM-5	22.10	18.47	9.24	–	9.23
TM-6R	19.95	14.06	5.92	–	8.14
TM-7	–	17.03	8.17	8.16	8.87
TF-1	12.15	10.82	3.53	–	7.29
TF-2	–	NM	7.13	7.12	–
TF-3	11.80	10.73	3.23	–	7.50
TL-1	12.68	8.76	5.82	–	2.94
TL-2	14.54	8.44	5.39	–	3.05
TL-3	9.88	8.62	5.84	–	2.78
TR-1R	15.02	13.70	6.39	–	7.31
TR-2R	–	14.66	4.09	4.08	10.58
TR-3RR	14.66	9.65	3.68	–	5.97
TR-4R	14.59	12.10	3.89	–	8.21
TR-5	10.58	12.00	5.82	–	6.18
TR-6	10.71	12.90	5.52	–	7.38

NOTES:

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4. AST – ABOVE GROUND STORAGE TANK
5. AOC BORDERS WILL MODIFY IN ACCORDANCE WITH FIELD INVESTIGATION RESULTS
6. ALL CONTOURS ARE INFERRED BASED ON THE INTERPOLATION OF FIELD MEASUREMENTS AND KNOWLEDGE OF THE SITE
7. WELLS SCREENED BELOW SHALLOW UNCONFINED AQUIFER WERE NOT UTILIZED TO MAKE GROUNDWATER CONTOURS
8. MONITORING POINTS SP-1, SP-2, SP-3 WERE NOT UTILIZED TO CREATE GROUNDWATER CONTOURS
9. NOVEMBER 12, 2013 GAUGING DATA WAS UTILIZED FOR MONITORING POINTS AD-7, AD-8, AD-9D

Figure 4

SHALLOW GROUNDWATER CONTOUR MAP
NOVEMBER 11, 2013

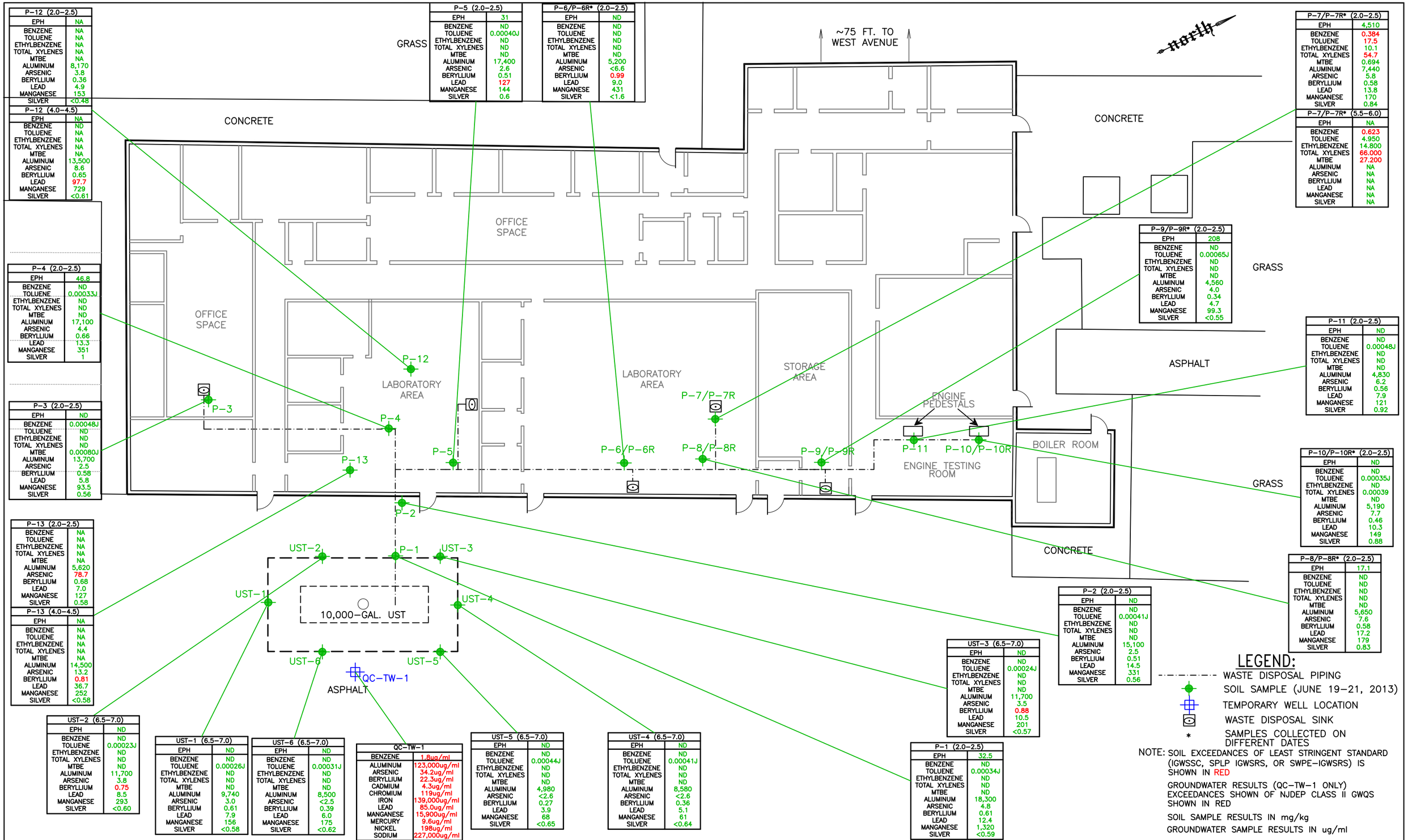
HESS CORPORATION
750 CLIFF ROAD
PORT READING, NEW JERSEY

DRAWN BY: KN

DATE: 12/4/2013

0 150
SCALE IN FEET

EnviroTrac
ENVIRONMENTAL SERVICES
400E CORPORATE COURT, So. PLAINFIELD NJ 07080
PHONE: (908)757-1900 FAX: (908)757-0017



P-12 (2.0-2.5)	
EPH	NA
BENZENE	NA
TOLUENE	NA
ETHYLBENZENE	NA
TOTAL XYLENES	NA
MTBE	NA
ALUMINUM	8,170
ARSENIC	3.8
BERYLLIUM	0.36
LEAD	4.9
MANGANESE	153
SILVER	<0.48

P-12 (4.0-4.5)	
EPH	NA
BENZENE	ND
TOLUENE	NA
ETHYLBENZENE	NA
TOTAL XYLENES	NA
MTBE	NA
ALUMINUM	13,500
ARSENIC	8.6
BERYLLIUM	0.65
LEAD	97.7
MANGANESE	729
SILVER	<0.61

P-5 (2.0-2.5)	
EPH	31
BENZENE	ND
TOLUENE	0.00040J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	17,400
ARSENIC	2.6
BERYLLIUM	0.51
LEAD	127
MANGANESE	144
SILVER	0.6

P-6/P-6R* (2.0-2.5)	
EPH	ND
BENZENE	ND
TOLUENE	ND
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	5,200
ARSENIC	<6.6
BERYLLIUM	0.99
LEAD	9.0
MANGANESE	431
SILVER	<1.6

P-7/P-7R* (2.0-2.5)	
EPH	4,510
BENZENE	0.384
TOLUENE	17.5
ETHYLBENZENE	10.1
TOTAL XYLENES	54.7
MTBE	0.694
ALUMINUM	7,440
ARSENIC	5.8
BERYLLIUM	0.58
LEAD	13.8
MANGANESE	170
SILVER	0.84

P-7/P-7R* (5.5-6.0)	
EPH	NA
BENZENE	0.623
TOLUENE	4.950
ETHYLBENZENE	14.800
TOTAL XYLENES	66.000
MTBE	27.200
ALUMINUM	NA
ARSENIC	NA
BERYLLIUM	NA
LEAD	NA
MANGANESE	NA
SILVER	NA

P-9/P-9R* (2.0-2.5)	
EPH	208
BENZENE	ND
TOLUENE	0.00065J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	4,560
ARSENIC	4.0
BERYLLIUM	0.34
LEAD	4.7
MANGANESE	99.3
SILVER	<0.55

P-11 (2.0-2.5)	
EPH	ND
BENZENE	ND
TOLUENE	0.00048J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	4,830
ARSENIC	6.2
BERYLLIUM	0.56
LEAD	7.9
MANGANESE	121
SILVER	0.92

P-4 (2.0-2.5)	
EPH	46.8
BENZENE	ND
TOLUENE	0.00033J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	17,100
ARSENIC	4.4
BERYLLIUM	0.66
LEAD	13.3
MANGANESE	351
SILVER	1

P-3 (2.0-2.5)	
EPH	ND
BENZENE	0.00048J
TOLUENE	ND
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	0.00080J
ALUMINUM	13,700
ARSENIC	2.5
BERYLLIUM	0.58
LEAD	5.8
MANGANESE	93.5
SILVER	0.56

P-10/P-10R* (2.0-2.5)	
EPH	ND
BENZENE	ND
TOLUENE	0.00035J
ETHYLBENZENE	ND
TOTAL XYLENES	0.00039
MTBE	ND
ALUMINUM	5,190
ARSENIC	7.7
BERYLLIUM	0.46
LEAD	10.3
MANGANESE	149
SILVER	0.88

P-13 (2.0-2.5)	
BENZENE	NA
TOLUENE	NA
ETHYLBENZENE	NA
TOTAL XYLENES	NA
MTBE	NA
ALUMINUM	5,620
ARSENIC	78.7
BERYLLIUM	0.68
LEAD	7.0
MANGANESE	127
SILVER	0.58

P-13 (4.0-4.5)	
EPH	NA
BENZENE	NA
TOLUENE	NA
ETHYLBENZENE	NA
TOTAL XYLENES	NA
MTBE	NA
ALUMINUM	14,500
ARSENIC	13.2
BERYLLIUM	0.81
LEAD	36.7
MANGANESE	252
SILVER	<0.58

P-8/P-8R* (2.0-2.5)	
EPH	17.1
BENZENE	ND
TOLUENE	ND
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	5,650
ARSENIC	7.6
BERYLLIUM	0.58
LEAD	17.2
MANGANESE	179
SILVER	0.83

P-2 (2.0-2.5)	
EPH	ND
BENZENE	ND
TOLUENE	0.00041J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	15,100
ARSENIC	2.5
BERYLLIUM	0.51
LEAD	14.5
MANGANESE	331
SILVER	0.56

UST-3 (6.5-7.0)	
EPH	ND
BENZENE	ND
TOLUENE	0.00024J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	11,700
ARSENIC	3.5
BERYLLIUM	0.88
LEAD	10.5
MANGANESE	201
SILVER	<0.57

UST-2 (6.5-7.0)	
EPH	ND
BENZENE	ND
TOLUENE	0.00023J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	11,700
ARSENIC	3.8
BERYLLIUM	0.75
LEAD	8.5
MANGANESE	293
SILVER	<0.60

UST-1 (6.5-7.0)	
EPH	ND
BENZENE	ND
TOLUENE	0.00026J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	9,740
ARSENIC	3.0
BERYLLIUM	0.61
LEAD	7.9
MANGANESE	156
SILVER	<0.58

UST-6 (6.5-7.0)	
EPH	ND
BENZENE	ND
TOLUENE	0.00031J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	8,500
ARSENIC	<2.5
BERYLLIUM	0.39
LEAD	6.0
MANGANESE	175
SILVER	<0.62

QC-TW-1	
BENZENE	1.8ug/ml
ALUMINUM	123,000ug/ml
ARSENIC	34.2ug/ml
BERYLLIUM	22.3ug/ml
CADMIUM	4.3ug/ml
CHROMIUM	119ug/ml
IRON	139,000ug/ml
LEAD	85.0ug/ml
MANGANESE	15,900ug/ml
MERCURY	9.6ug/ml
NICKEL	198ug/ml
SODIUM	227,000ug/ml

UST-5 (6.5-7.0)	
EPH	ND
BENZENE	ND
TOLUENE	0.00044J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	4,980
ARSENIC	<2.6
BERYLLIUM	0.27
LEAD	3.9
MANGANESE	68
SILVER	<0.65

UST-4 (6.5-7.0)	
EPH	ND
BENZENE	ND
TOLUENE	0.00041J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	8,580
ARSENIC	<2.6
BERYLLIUM	0.36
LEAD	5.1
MANGANESE	61
SILVER	<0.64

P-1 (2.0-2.5)	
EPH	32.5
BENZENE	ND
TOLUENE	0.00034J
ETHYLBENZENE	ND
TOTAL XYLENES	ND
MTBE	ND
ALUMINUM	18,300
ARSENIC	4.8
BERYLLIUM	0.61
LEAD	12.4
MANGANESE	1,320
SILVER	<0.59

LEGEND:

- WASTE DISPOSAL PIPING
- SOIL SAMPLE (JUNE 19-21, 2013)
- TEMPORARY WELL LOCATION
- WASTE DISPOSAL SINK
- * SAMPLES COLLECTED ON DIFFERENT DATES

NOTE: SOIL EXCEEDANCES OF LEAST STRINGENT STANDARD (IGWSSC, SPLP IGWSRS, OR SWPE-IGWSRS) IS SHOWN IN RED

GROUNDWATER RESULTS (QC-TW-1 ONLY) EXCEEDANCES SHOWN OF NJDEP CLASS II GWQS SHOWN IN RED

SOIL SAMPLE RESULTS IN mg/kg

GROUNDWATER SAMPLE RESULTS IN ug/ml

FIGURE # 5

FORMER HESS QC LABORATORY
835 WEST AVENUE
PORT READING, NEW JERSEY

HESS

SOIL SAMPLE & TEMPORARY WELL LOCATION MAP (AOC-19)

DRAWN BY: KN

REVISION DATE: 7/10/14

0 10 20
SCALE IN FEET

EnviroTrac
ENVIRONMENTAL SERVICES
6 TERRI LANE, SUITE 350. BURLINGTON NJ 08016
PHONE: (609)387-5553 FAX: (609)387-5553

TABLES

1. Site Wide Groundwater Gauging Summary Table
2. Quality Control Laboratory Ecological Comparison Table
3. Quality Control Laboratory Soil Sampling Analytical Comparison Table
4. Quality Control Laboratory Groundwater Sampling Analytical Comparison Table

Table 1
Site-Wide Groundwater Gauging Data
Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
AB-1	7/7/2008	13.02	13.85	6.33	--	7.52
	7/10/2009	13.02	13.85	5.93	--	7.92
	9/8/2010	--	13.85	5.68	--	8.17
	8/25/2011	12.91	13.85	5.01	--	8.84
	6/26/2012	14.15	13.85	4.60	--	9.25
	11/26/2012	13.11	13.85	5.42	--	8.43
	7/22/2013	14.20	13.85	4.72	--	9.13
	11/11/2013	**13.10**	**13.85**	**8.65**	**--**	**5.20**
AB-2	7/7/2008	14.64	12.03	2.88	--	9.15
	Well Abandoned 11/08					
AB-2R	12/5/2008	21.25	10.81	4.48	--	6.33
	7/10/2009	21.25	10.81	4.22	--	6.59
	9/8/2010	--	10.81	4.04	--	6.77
	8/25/2011	21.01	10.81	3.95	--	6.86
	6/26/2012	21.05	10.81	3.90	--	6.91
	11/26/2012	21.03	10.81	4.35	--	6.46
	7/22/2013	21.02	10.81	4.17	--	6.64
	11/11/2013	**21.05**	**10.81**	**8.06**	**--**	**2.75**
AB-3	7/7/2008	13.08	14.62	7.09	--	7.53
	7/10/2009	13.08	14.62	4.15	--	10.47
	9/8/2010	--	14.62	5.77	--	8.85
	8/25/2011	13.09	14.62	6.51	--	8.11
	6/26/2012	13.15	14.62	3.63	--	10.99
	11/26/2012	13.13	14.62	3.10	--	11.52
	7/22/2013	13.09	14.62	3.97	--	10.65
	11/11/2013	**13.10**	**14.62**	**7.27**	**--**	**7.35**
AB-4	7/7/2008	6.58	14.24	5.13	--	9.11
	7/10/2009	6.58	14.24	4.09	--	10.15
	9/8/2010	--	14.24	DRY	--	--
	8/25/2011	4.90	14.24	4.60	--	9.64
	6/26/2012	4.85	14.24	3.03	--	11.21
	11/26/2012	4.90	14.24	3.42	--	10.82
	7/22/2013	4.95	14.24	3.75	--	10.49
	11/11/2013	**4.89**	**14.24**	**DRY**	**--**	**--**
AB-4D	7/22/2013	32.66	11.80	9.99	--	1.81
	12/4/2013	**32.55**	**11.80**	**9.72**	**--**	**2.08**
AB-5	7/7/2008	13.09	13.24	5.61	--	7.63
	7/10/2009	13.09	13.24	4.97	--	8.27
	9/8/2010	--	13.24	8.03	--	5.21
	8/25/2011	13.10	13.24	4.35	--	8.89
	6/26/2012	13.13	13.24	4.13	--	9.11
	11/26/2012	13.16	13.24	5.30	--	7.94
	7/22/2013	13.08	13.24	4.39	--	8.85
	11/11/2013	**13.08**	**13.24**	**8.51**	**--**	**4.73**
AD-1	7/7/2008	-	18.25	Unable to Open		
	7/10/2009	--	18.25	Unable to Open		
	9/10/2010	--	18.25	5.79	--	12.46
	8/25/2011	10.91	18.25	4.23	--	14.02
	6/26/2012	--	18.25	Unable to Open		
	11/26/2012	10.95	18.25	6.15	--	12.10
	7/22/2013	--	18.25	Could Not Access		
	11/11/2013	**10.93**	**18.25**	**6.33**	**--**	**11.92**

DTB- Depth to Bottom TOC- Top of Casing -- Not applicable
DTW- Depth to Water DTP- Depth to Product GW- Ground water
* TOC measurement not applicable, LNAPL recovery trailer installed

Table 1
Site-Wide Groundwater Gauging Data
Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
AD-2	7/7/2008	17.13	18.95	6.72	--	12.23
	7/10/2009	17.13	18.95	6.49	--	12.46
	9/7/2010	--	18.95	7.76	--	11.19
	8/25/2011	17.04	18.95	6.18	--	12.77
	6/26/2012	17.15	18.95	6.32	--	12.63
	11/26/2012	17.18	18.95	7.90	--	11.05
	7/22/2013	17.12	18.95	6.23	--	12.72
	11/11/2013	**17.15**	**18.95**	**7.97**	**--**	**10.98**
AD-2DD	7/22/2013	41.00	16.59	9.30	--	7.29
	11/11/2013	39.97	16.59	9.61	--	6.98
	12/4/2013	**41.62**	**16.59**	**10.68**	**--**	**5.91**
AD-3	7/7/2008	13.70	22.00	9.63	--	12.37
	7/10/2009	13.70	22.00	9.41	--	12.59
	9/8/2010	--	22.00	10.40	--	11.60
	8/25/2011	13.70	22.00	9.36	--	12.64
	6/26/2012	14.00	22.00	8.30	--	13.70
	11/26/2012	14.00	22.00	10.93	--	11.07
	7/22/2013	13.90	22.00	9.60	--	12.40
	11/11/2013	**13.88**	**22.00**	**9.82**	**--**	**12.18**
AD-3D	7/22/2013	28.95	19.75	8.90	--	10.85
	11/11/2013	28.93	19.75	9.39	--	10.36
	12/4/2013	**28.90**	**19.75**	**11.21**	**--**	**8.54**
AD-4	7/7/2008	14.56	17.55	5.37	--	12.18
	7/10/2009	14.56	17.55	5.14	--	12.41
	9/7/2010	--	17.55	6.97	--	10.58
	8/25/2011	14.57	17.55	5.90	--	11.65
	6/26/2012	14.61	17.55	6.04	--	11.51
	11/26/2012	14.60	17.55	7.42	--	10.13
	7/22/2013	14.63	17.55	6.17	--	11.38
	11/11/2013	**14.88**	**17.55**	**7.90**	**--**	**9.65**
AD-5	7/7/2008	15.60	17.73	Unable to Open		
	7/10/2009	15.60	17.73	5.39	--	12.34
	9/7/2011	--	17.73	6.85	--	10.88
	8/25/2011	14.59	17.73	5.20	--	12.53
	6/26/2012	14.64	17.73	5.25	--	12.48
	11/26/2012	14.65	17.73	6.75	--	10.98
	7/22/2013	14.65	17.73	5.25	--	12.48
	11/11/2013	**13.09**	**17.73**	**8.16**	**--**	**9.57**
AD-5D	3/30/2012	--	17.58	6.02	NP	11.56
	6/26/2012	28.85	17.58	8.06	--	9.52
	11/26/2012	28.80	17.58	8.47	--	9.11
	7/22/2013	28.86	17.58	8.10	--	9.48
	11/11/2013	28.84	17.58	8.16	--	9.42
	12/4/2013	**28.66**	**17.58**	**9.27**	**--**	**8.31**
AD-6	7/7/2008	14.38	19.18	6.56	--	12.62
	7/10/2009	14.38	19.18	6.45	--	12.73
	9/7/2010	--	19.18	7.65	--	11.53
	8/25/2011	14.61	19.18	6.20	--	12.98
	6/26/2012	14.68	19.18	6.50	--	12.68
	11/26/2012	14.62	19.18	8.03	--	11.15
	7/22/2013	14.66	19.18	6.71	--	12.47
	11/11/2013	**14.60**	**19.18**	**8.21**	**--**	**10.97**

DTB- Depth to Bottom TOC- Top of Casing -- Not applicable
DTW- Depth to Water DTP- Depth to Product GW- Ground water
* TOC measurement not applicable, LNAPL recovery trailer installed

Table 1
Site-Wide Groundwater Gauging Data
Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
AD-7	11/26/2012	19.76	13.32	4.46	--	8.86
	7/22/2013	19.75	13.32	3.35	--	9.97
	11/12/2013	**19.76**	13.32	4.89	**--**	**8.43**
AD-8	7/22/2013	14.75	15.88	5.95	--	9.93
	11/12/2013	**14.74**	**15.88**	**6.39**	**--**	**9.49**
AD-9D	7/22/2013	26.25	15.52	7.85	--	7.67
	12/4/2013	**26.61**	**15.52**	**9.29**	**--**	**6.23**
BG-2	7/7/2008	9.75	11.13	5.14	--	5.99
	7/10/2009	9.75	11.13	4.42	--	6.71
	9/7/2010	--	11.13	--	--	--
	8/25/2011	10.95	11.13	3.35	--	7.78
	6/26/2012	10.95	11.13	3.85	--	7.28
	11/26/2012	10.89	11.13	4.67	--	6.46
	7/22/2013	--	11.13	Could Not Access		
	11/11/2013	**11.00**	**11.13**	**6.64**	**--**	**4.49**
BG-3	7/7/2008	--	12.54	Unable To Locate		
	7/10/2009	--	12.54	Unable To Locate		
	9/7/2010	--	12.54	Unable To Locate		
	8/25/2011	--	12.54	Unable To Locate		
	6/26/2012	10.72	12.54	2.85	--	9.69
	11/26/2012	10.76	12.54	4.83	--	7.71
	7/22/2013	10.82	12.54	5.60	--	6.94
	11/11/2013	**10.78**	**12.54**	**6.58**	**--**	**5.96**
L1-1	7/7/2008	15.10	13.38	6.14	--	7.24
	7/10/2009	15.10	13.38	6.46	--	6.92
	9/7/2010	--	13.38	--	--	--
	8/25/2011	14.91	13.38	5.03	--	8.35
	6/26/2012	14.98	13.38	6.34	--	7.04
	11/26/2012	14.42	13.38	7.13	--	6.25
	7/22/2013	14.72	13.38	5.65	--	7.73
	11/11/2013	**14.70**	**13.38**	**8.56**	**--**	**4.82**
L1-2	7/7/2008	15.05	10.98	5.45	--	5.53
	7/10/2009	15.05	10.98	Unable to Open		
	9/7/2010	--	10.98	--	--	--
	8/25/2011	14.40	10.98	5.78	--	5.20
	6/26/2012	14.45	10.98	6.28	--	4.70
	11/26/2012	14.64	10.98	6.70	--	4.28
	7/22/2013	14.35	10.98	5.35	--	5.63
	11/11/2013	**14.31**	**10.98**	**7.19**	**--**	**3.79**
L1-3	7/7/2008	10.90	11.50	Unable To Locate		
	7/10/2009	10.90	11.50	6.96	--	4.54
	9/7/2010	--	11.50	--	--	--
	8/25/2011	10.94	11.50	6.56	--	4.94
	6/26/2012	11.00	11.50	6.90	--	4.60
	11/26/2012	10.58	11.50	7.23	--	4.27
	7/22/2013	11.03	11.50	5.78	--	5.72
	11/11/2013	**10.97**	**11.50**	**8.06**	**--**	**3.44**

DTB- Depth to Bottom TOC- Top of Casing -- Not applicable
DTW- Depth to Water DTP- Depth to Product GW- Ground water
* TOC measurement not applicable, LNAPL recovery trailer installed

Table 1
Site-Wide Groundwater Gauging Data
Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
L1-4	7/7/2008	11.02	12.97	Unable To Locate		
	7/10/2009	11.02	12.97	8.42	--	4.55
	9/7/2010	--	12.97	--	--	--
	8/25/2011	11.00	12.97	8.98	--	3.99
	6/26/2012	11.00	12.97	8.36	--	4.61
	11/26/2012	11.00	12.97	8.54	--	4.43
	7/22/2013	11.08	12.97	7.17	--	5.80
	11/11/2013	**11.04**	**12.97**	**9.69**	**--**	**3.28**
L1-SW	7/22/2013	--	5.48	3.20	--	3.18
	11/11/2013	**--**	**5.48**	**1.34**	**--**	**1.32**
LN-1	7/7/2008	13.12	12.19	4.79	--	7.40
	7/10/2009	13.12	12.19	4.60	--	7.59
	9/7/2010	--	12.19	--	--	--
	8/25/2011	13.36	12.19	3.84	--	8.35
	6/26/2012	13.37	12.19	3.96	--	8.23
	11/26/2012	13.27	12.19	5.00	--	7.19
	7/22/2013	13.33	12.19	3.95	--	8.24
	11/11/2013	**13.33**	**12.19**	**6.86**	**--**	**5.33**
LN-2	7/7/2008	11.38	12.21	5.90	--	6.31
	7/10/2009	11.38	12.21	5.77	--	6.44
	9/7/2010	--	12.21	--	--	--
	8/25/2011	11.50	12.21	5.32	--	6.89
	6/26/2012	11.50	12.21	5.53	--	6.68
	11/26/2012	11.43	12.21	6.06	--	6.15
	7/22/2013	11.38	12.21	5.35	--	6.86
	11/11/2013	**11.38**	**12.21**	**7.24**	**--**	**4.97**
LN-3	7/7/2008	13.92	11.34	5.48	--	5.86
	7/10/2009	13.92	11.34	5.32	--	6.02
	9/7/2011	--	11.34	--	--	--
	8/25/2011	12.18	11.34	4.95	--	6.39
	6/26/2012	12.18	11.34	5.06	--	6.28
	11/26/2012	13.10	11.34	5.37	--	5.97
	7/22/2013	13.12	11.34	4.82	--	6.52
	11/11/2013	**13.12**	**11.34**	**6.62**	**--**	**4.72**
LN-4	7/7/2008	13.92	13.55	7.64	--	5.91
	7/10/2009	13.92	13.55	Unable to Gauge		
	9/7/2010	--	13.55	--	--	--
	8/25/2011	14.29	13.55	6.98	--	6.57
	6/26/2012	14.29	13.55	7.10	--	6.45
	11/26/2012	14.10	13.55	7.60	--	5.95
	7/22/2013	14.20	13.55	6.85	--	6.70
	11/11/2013	**14.21**	**13.55**	**8.76**	**--**	**4.79**
LN-5	8/25/2011	17.00	12.85	5.91	--	6.94
	6/26/2012	17.03	12.85	5.54	--	7.31
	11/26/2012	16.98	12.85	6.83	--	6.02
	7/22/2013	16.93	12.85	4.50	--	8.35
	11/11/2013	**16.93**	**12.85**	**6.13**	**--**	**6.72**

DTB- Depth to Bottom TOC- Top of Casing -- Not applicable
DTW- Depth to Water DTP- Depth to Product GW- Ground water
* TOC measurement not applicable, LNAPL recovery trailer installed

Table 1
Site-Wide Groundwater Gauging Data
Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
LN-6	8/25/2011	17.15	14.56	7.99	--	6.57
	6/26/2012	17.15	14.56	8.30	--	6.26
	11/26/2012	17.12	14.56	8.81	--	5.75
	7/22/2013	17.10	14.56	7.98	--	6.58
	11/11/2013	**17.10**	**14.56**	**9.74**	**--**	**4.82**
LN-7	8/25/2011	17.17	15.75	8.26	--	7.49
	6/26/2012	17.17	15.75	8.55	--	7.20
	11/26/2012	17.13	15.75	9.19	--	6.56
	7/22/2013	16.90	15.75	8.46	--	7.29
	11/11/2013	**16.90**	**15.75**	**9.87**	**--**	**5.88**
LN-SW	7/22/2013	--	5.19	3.40	--	3.09
	11/11/2013	**--**	**5.19**	**1.90**	**--**	**1.59**
LPG-1	7/7/2008	8.60	13.74	4.87	--	8.87
	7/10/2009	8.60	13.74	4.65	--	9.09
	9/8/2010	--	13.74	5.35	--	8.39
	8/25/2011	8.48	13.74	3.60	--	10.14
	6/26/2012	8.26	13.74	2.42	--	11.32
	11/26/2012	8.21	13.74	6.00	--	7.74
	7/22/2013	8.26	13.74	3.62	--	10.12
	11/11/2013	**8.10**	**13.74**	**7.63**	**--**	**6.11**
LPG-2	7/7/2008	9.64	9.30	3.41	--	5.89
	7/10/2009	9.64	9.30	3.12	--	6.18
	9/8/2010	--	9.30	3.13	--	6.17
	8/25/2011	9.67	9.30	2.71	--	6.59
	6/26/2012	9.69	9.30	2.71	--	6.59
	11/26/2012	9.70	9.30	3.35	--	5.95
	7/22/2013	9.70	9.30	3.73	--	5.57
	11/11/2013	**9.69**	**9.30**	**5.89**	**--**	**3.41**
LS-1R	7/7/2008	15.71	14.49	2.92	--	11.57
	7/10/2009	15.71	14.49	3.15	--	11.34
	9/7/2010	--	14.49	--	--	--
	8/25/2011	15.93	14.49	2.86	--	11.63
	6/26/2012	15.92	14.49	2.55	--	11.94
	11/26/2012	15.81	14.49	3.72	--	10.77
	7/22/2013	15.90	14.49	2.71	--	11.78
	11/11/2013	**15.90**	**14.49**	**4.97**	**--**	**9.52**
LS-2	7/7/2008	12.11	11.69	1.81	--	9.88
	7/10/2009	12.11	11.69	1.66	--	10.03
	9/7/2010	--	11.69	--	--	--
	8/25/2011	12.08	11.69	1.96	--	9.73
	6/26/2012	12.06	11.69	1.02	--	10.67
	11/26/2012	12.07	11.69	3.11	--	8.58
	7/22/2013	11.88	11.69	0.93	--	10.76
	11/11/2013	**11.93**	**11.69**	**2.99**	**--**	**8.70**

DTB- Depth to Bottom TOC- Top of Casing -- Not applicable
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* TOC measurement not applicable, LNAPL recovery trailer installed

Table 1
Site-Wide Groundwater Gauging Data
Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
LS-3	7/7/2008	12.90	10.70	1.87	--	8.83
	7/10/2009	12.90	10.70	1.19	--	9.51
	9/7/2010	--	10.70	--	--	--
	8/25/2011	12.63	10.70	1.13	--	9.57
	6/26/2012	12.63	10.70	0.69	--	10.01
	11/26/2012	12.75	8.30	0.90	--	7.40
	7/22/2013	12.66	8.30	0.82	--	7.48
	11/11/2013	**12.66**	**8.30**	**1.92**	**--**	**6.38**
LS-4	7/7/2008	13.44	11.25	2.19	--	9.06
	7/10/2009	13.44	11.25	1.82	--	9.43
	9/7/2010	--	11.25	--	--	--
	8/25/2011	13.29	11.25	1.74	--	9.51
	6/26/2012	13.29	11.25	1.58	--	9.67
	11/26/2012	13.30	11.25	1.90	--	9.35
	7/22/2013	13.25	11.25	2.60	--	8.65
	11/11/2013	**13.26**	**11.25**	**4.12**	**--**	**7.13**
PER-1	7/7/2008	17.65	19.29	9.46	--	9.83
	7/10/2009	17.65	19.29	8.69	--	10.60
	9/8/2010	--	19.29	10.17	--	9.12
	8/25/2011	17.65	19.29	9.85	--	9.44
	6/26/2012	17.69	19.29	9.40	--	9.89
	11/26/2012	17.74	19.29	10.50	--	8.79
	7/22/2013	17.65	19.29	8.79	--	10.50
	11/11/2013	**19.26**	**19.29**	**9.17**	**--**	**10.12**
PER-2	7/7/2008	12.14	12.91	6.74	--	6.17
	7/10/2009	12.14	12.91	6.19	--	6.72
	9/9/2010	--	12.91	8.59	--	4.32
	8/25/2011	12.13	12.91	5.62	--	7.29
	6/26/2012	12.20	12.91	5.94	--	6.97
	11/26/2012	12.17	12.91	5.62	--	7.29
	7/22/2013	12.20	12.91	5.25	--	7.66
	11/11/2013	**12.19**	**12.91**	**6.21**	**--**	**6.70**
PER-2D	7/22/2013	31.70	11.32	5.61	--	5.71
	12/4/2013	**31.60**	**11.32**	**6.91**	**--**	**4.41**
PER-3	7/7/2008	12.19	9.55	6.13	--	3.42
	7/10/2009	12.19	9.55	5.01	--	4.54
	9/9/2011	--	9.55	5.19	--	4.36
	8/25/2011	12.19	9.55	5.00	--	4.55
	6/26/2012	12.25	9.55	4.61	--	4.94
	11/26/2012	12.26	9.55	4.05	--	5.50
	7/22/2013	12.25	9.55	4.20	--	5.35
	11/11/2013	**12.20**	**9.55**	**8.47**	**--**	**1.08**
PER-3D	7/22/2013	31.38	7.29	5.56	--	1.73
	12/4/2013	**31.22**	**7.29**	**5.23**	**--**	**2.06**
PER-4	7/7/2008	14.10	12.78	6.86	--	5.92
	7/10/2009	14.10	12.78	5.96	--	6.82
	9/7/2010	--	12.78	7.02	--	5.76
	8/25/2011	16.32	12.78	6.15	--	6.63
	6/26/2012	16.30	12.78	6.36	--	6.42
	11/26/2012	15.70	10.23	6.70	--	3.53
	7/22/2013	15.68	10.23	4.49	--	5.74
	11/11/2013	**15.67**	**10.23**	**7.89**	**--**	**2.34**

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Table 1
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Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
PER-5	7/7/2008	--	20.47	Unable to Open		
	7/10/2009	--	20.47	Unable to Open		
	9/8/2010	--	20.47	11.41	--	9.06
	8/25/2011	14.37	20.47	1.02	--	19.45
	6/26/2012	14.43	20.47	3.24	--	17.23
	11/26/2012	14.44	20.47	10.97	--	9.50
	7/22/2013	14.40	20.47	3.46	--	17.01
	11/11/2013	**14.40**	**20.47**	**11.27**	**--**	**9.20**
PER-6	7/7/2008	14.64	21.93	0.92	--	21.01
	Well Abandoned 11/08					
PER-6R	12/5/2008	22.00	23.76	13.59	--	10.17
	7/10/2009	22.00	23.76	5.00	--	18.76
	9/10/2010	--	23.76	2.13		21.63
	8/25/2011	21.92	23.76	1.94	--	21.82
	6/26/2012	21.60	23.76	3.93	--	19.83
	11/26/2012	21.99	23.76	13.11	--	10.65
	7/22/2013	21.57	23.76	4.11	--	19.65
	11/11/2013	**21.97**	**23.76**	**13.64**	**--**	**10.12**
PER-7	7/7/2008	17.10	11.15	7.09	--	4.06
	7/10/2009	17.10	11.15	4.86	--	6.29
	9/8/2010	--	11.15	7.21	--	3.94
	8/25/2011	17.03	11.15	8.18	--	2.97
	6/26/2012	16.67	11.15	5.91	--	5.24
	11/26/2012	16.65	11.15	6.65	--	4.50
	7/22/2013	16.64	11.15	6.13	--	5.02
	11/11/2013	**16.63**	**11.15**	**6.89**	**--**	**4.26**
PER-8	7/7/2008	18.14	10.40	6.52	--	3.88
	7/10/2009	18.14	10.40	5.58	--	4.82
	9/8/2010	--	10.40	6.50	--	3.90
	8/25/2011	18.17	10.40	0.00	--	10.40
	6/26/2012	14.61	10.40	4.71	--	5.69
	11/26/2012	14.60	7.48	5.90	--	1.58
	7/22/2013	14.59	7.48	5.28	--	2.20
	11/11/2013	**14.58**	**7.48**	**6.51**	**--**	**0.97**
PER-9	**11/11/2013**	**17.89**	**8.45**	**6.49**	**--**	**1.96**
PER-9D	11/11/2013	37.44	8.29	6.72	--	1.57
	12/4/2013	**37.41**	**8.29**	**5.59**	**--**	**2.70**
PER-9DD	11/11/2013	67.47	8.34	7.03	--	1.31
	12/4/2013	**67.44**	**8.34**	**5.97**	**--**	**2.37**
PER-10	7/22/2013	18.90	12.18	7.75	--	4.43
	11/11/2013	**18.87**	**12.18**	**11.63**	**--**	**0.55**
PER-10D	7/22/2013	32.09	11.93	10.27	--	1.66
	12/4/2013	**32.14**	**11.93**	**9.84**	**--**	**2.09**

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Table 1
Site-Wide Groundwater Gauging Data
Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
PL-1	7/7/2008	19.94	11.82	1.84	--	9.98
	7/10/2009	19.94	11.82	1.95	--	9.87
	9/9/2010	--	11.82	3.50	3.48	8.33
	8/25/2011	19.88	11.82	2.45	--	9.37
		Well Abandoned				
PL-1R	6/26/2012	19.86	11.82	4.49	4.45	7.35
	11/26/2012	Unable to Gauge- Well Damaged				
PL-1RR	7/22/2013	--	7.35	0.63	0.62	6.73
	11/11/2013	**--**	**7.35**	**1.68**	**1.67**	**5.68**
PL-2	7/7/2008	18.61	11.78	2.09	--	9.69
	7/10/2009	18.61	11.78	2.34	2.31	9.46
	9/9/2010	--	11.78	2.92	3.31	8.63
	8/25/2011	16.89	11.78	2.39	2.37	9.40
	6/26/2012	16.95	11.78	1.91	--	9.87
	11/26/2012	16.94	11.78	2.05	2.04	9.74
	7/22/2013	16.94	11.78	1.92	--	9.86
	11/11/2013	**--**	**11.78**	**3.23**	**3.21**	**8.56**
PL-3	7/7/2008	19.89	12.81	2.75	--	10.06
	Well Abandoned 11/08					
PL-3R	12/5/2008	21.30	12.27	3.38	--	8.89
	7/10/2009	21.30	12.27	Unable to Gauge		
	9/9/2010	--	12.27	2.74	--	9.53
	8/25/2011	18.27	12.27	2.31	--	9.96
	6/26/2012	18.27	12.27	2.15	--	10.12
	11/26/2012	18.57	12.27	2.92	2.91	9.36
	7/22/2013	18.60	12.27	2.49	SHEEN	9.78
	11/11/2013	**18.60**	**12.27**	**3.87**	**--**	**8.40**
PL-4	7/7/2008	17.14	13.30	3.32	--	9.98
	Well Abandoned 11/08					
PL-4R	12/5/2008	21.30	12.40	3.23	--	9.17
	7/10/2009	21.30	12.40	2.85	--	9.55
	9/9/2010	--	12.40	3.05	--	9.35
	8/25/2011	21.60	12.40	2.41	--	9.99
	6/26/2012	20.85	12.40	2.79	--	9.61
	11/26/2012	21.00	12.40	3.46	--	8.94
	7/22/2013	20.80	12.40	2.93	--	9.47
	11/11/2013	**20.85**	**12.40**	**4.59**	**--**	**7.81**
PL-5	7/7/2008	10.17	9.08	6.50	1.04	5.86
	7/10/2009	10.17	9.08	1.77	1.52	7.46
	9/9/2010	--	9.08	Unable to Gauge		
	8/25/2011	--	9.08	1.05	0.70	8.24
	6/26/2012	--	9.08	1.12	1.11	7.97
	11/26/2012	--	9.08	1.26	1.25	7.83
	7/22/2013	--	9.08	1.05	1.03	8.04
	11/11/2013	**--**	**9.08**	**1.99**	**1.98**	**7.10**
PL-6	7/7/2008	15.29	11.95	2.51	--	9.44
		Well Abandoned 11/08				

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Table 1
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Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
PL-6R	12/5/2008	21.74	11.49	2.46	--	9.03
	7/10/2009	21.74	11.49	2.19	--	9.30
	9/9/2010	--	11.49	2.36	--	9.13
	8/25/2011	21.59	11.49	1.81	--	9.68
	6/26/2012	21.59	11.49	2.60	--	8.89
	11/26/2012	21.62	11.49	2.35	--	9.14
	7/22/2013	21.62	11.49	5.22	--	6.27
	11/11/2013	**21.62**	**11.49**	**3.97**	**--**	**7.52**
PL-7	7/7/2008	19.58	13.06	4.53	--	8.53
	7/10/2009	19.58	13.06	4.63	--	8.43
	9/9/2010	--	13.06	5.27	--	7.79
	8/25/2011	19.53	13.06	2.91	--	10.15
	6/26/2012	19.50	13.06	3.21	--	9.85
	11/26/2012	19.59	13.06	4.79	--	8.27
	7/22/2013	19.58	13.06	4.02	--	9.04
	11/11/2013	**19.58**	**13.06**	**5.59**	**--**	**7.47**
PL-8	7/7/2008	19.69	12.39	4.09	--	8.30
	Well Abandoned 11/08					
PL-8R	12/5/2008	19.61	11.96	3.83	--	8.13
	7/10/2009	19.61	11.96	3.46	--	8.50
	9/9/2010	--	11.96	4.43	--	7.53
	8/25/2011	21.74	11.96	2.62	--	9.34
	6/26/2012	21.74	11.96	3.36	--	8.60
	11/26/2012	21.76	11.96	3.75	--	8.21
	7/22/2013	21.75	11.96	3.11	--	8.85
	11/11/2013	**21.76**	**11.96**	**4.77**	**--**	**7.19**
PL-9	7/7/2008	18.65	11.95	2.23	--	9.72
	Well Abandoned 11/08					
PL-9R	12/5/2008	21.33	11.26	2.47	--	8.79
	7/10/2009	21.33	11.26	1.69	--	9.57
	9/9/2010	--	11.26	1.90	--	9.36
	8/25/2011	20.91	11.26	2.31	--	8.95
	6/26/2012	20.91	11.26	1.40	--	9.86
	11/26/2012	20.84	11.26	3.75	--	7.51
	7/22/2013	20.84	11.26	1.48	--	9.78
	11/11/2013	**20.84**	**11.26**	**4.10**	**--**	**7.16**
SP-1	7/7/2008	14.11	14.07	6.03	--	8.04
	7/10/2009	14.11	14.07	5.61	--	8.46
	9/7/2010	--	14.07	--	--	--
	8/25/2011	--	14.07	--	--	--
	6/26/2012	12.00	14.07	5.30	--	8.77
	11/26/2012	12.05	14.07	7.32	--	6.75
	7/22/2013	12.00	9.22	4.60	--	4.62
	11/11/2013	**11.97**	**9.22**	**8.48**	**--**	**0.74**

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Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
SP-2	7/7/2008	14.69	15.24	8.23	--	7.01
	7/10/2009	14.69	15.24	7.52	--	7.72
	9/7/2010	--	15.24	--	--	--
	8/25/2011	--	15.24	--	--	--
	6/26/2012	14.93	15.24	7.28	--	7.96
	11/26/2012	14.85	15.24	8.54	--	6.70
	7/22/2013	12.30	10.73	4.70	--	6.03
	11/11/2013	**12.26**	**10.73**	**9.19**	**--**	**1.54**
SP-3	7/7/2008	14.90	14.66	7.18	--	7.48
	7/10/2009	14.90	14.66	6.38	--	8.28
	9/7/2010	--	14.66	--	--	--
	8/25/2011	--	14.66	--	--	--
	6/26/2012	16.39	14.66	5.91	--	8.75
	11/26/2012	16.43	14.66	7.38	--	7.28
	7/22/2013	11.97	9.29	4.61	--	4.68
	11/11/2013	**11.98**	**9.29**	**8.44**	**--**	**0.85**
TC-1	7/7/2008	17.66	20.48	9.07	--	11.41
	7/10/2009	17.66	20.48	8.17	--	12.31
	9/7/2010	--	20.48	9.84	--	10.64
	8/25/2011	17.60	20.48	9.18	--	11.30
	6/26/2012	17.65	20.48	9.17	--	11.31
	11/26/2012	17.76	20.48	10.35	--	10.13
	7/22/2013	17.63	20.48	7.71	--	12.77
	11/11/2013	**17.75**	**20.48**	**10.60**	**--**	**9.88**
TC-2	7/7/2008	16.11	19.57	8.04	--	11.53
	7/10/2009	16.11	19.57	7.26	--	12.31
	9/7/2010	--	19.57	8.83	--	10.74
	8/25/2011	14.96	19.57	8.23	--	11.34
	6/26/2012	14.93	19.57	8.05	--	11.52
	11/26/2012	14.90	19.57	9.50	--	10.07
	7/22/2013	14.89	19.57	6.63	--	12.94
	11/11/2013	**14.88**	**19.57**	**9.71**	**--**	**9.86**
TC-3	7/7/2008	17.34	19.55	7.65	--	11.90
	7/10/2009	17.34	19.55	7.15	--	12.40
	9/7/2010	--	19.55	8.60	--	10.95
	8/25/2011	17.28	19.55	8.12	--	11.43
	6/26/2012	17.21	19.55	8.12	--	11.43
	11/26/2012	17.20	19.55	9.32	--	10.23
	7/22/2013	17.23	19.55	6.57	--	12.98
	11/11/2013	**17.18**	**19.55**	**9.64**	**--**	**9.91**
TF-1	7/7/2008	10.27	10.82	2.62	--	8.20
	7/10/2009	10.27	10.82	2.54	--	8.28
	9/7/2010	--	10.82	--	--	--
	8/25/2011	12.09	10.82	2.26	--	8.56
	6/26/2012	12.09	10.82	3.03	--	7.79
	11/26/2012	12.15	10.82	2.78	2.77	8.05
	7/22/2013	--	10.82	2.68	2.67	8.15
	11/11/2013	**12.15**	**10.82**	**3.53**	**--**	**7.29**

DTB- Depth to Bottom TOC- Top of Casing -- Not applicable
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Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
TF-2	7/7/2008	--	10.13	--	1.79	--
	7/10/2009	--	10.13	--	1.94	--
	9/7/2010	--	10.13	--	--	--
	8/25/2011	--	10.13	Unable to Gauge		
	6/26/2012	--	10.13	Unable to Gauge		
	11/26/2012	--	NA*	7.01	6.97	--
	7/22/2013	--	NA*	6.37	6.36	--
	11/11/2013	**--**	**NA***	**7.13**	**7.12**	**--**
TF-3	7/7/2008	11.76	10.73	2.33	--	8.40
	7/10/2009	11.76	10.73	2.41	--	8.32
	9/7/2010	--	10.73	--	--	--
	8/25/2011	11.78	10.73	1.89	--	8.84
	6/26/2012	11.79	10.73	2.66	--	8.07
	11/26/2012	11.79	10.73	2.59	--	8.14
	7/22/2013	11.70	10.73	1.50	--	9.23
	11/11/2013	**11.80**	**10.73**	**3.23**	**--**	**7.50**
TL-1	7/22/2013	12.68	8.76	5.40	--	3.36
	11/11/2013	**12.68**	**8.76**	**5.82**	**--**	**2.94**
TL-2	7/22/2013	14.45	8.44	5.20	--	3.24
	11/11/2013	**14.54**	**8.44**	**5.39**	**--**	**3.05**
TL-3	7/22/2013	9.88	8.62	5.79	--	2.83
	11/11/2013	**9.88**	**8.62**	**5.84**	**--**	**2.78**
TM-1	7/7/2008	20.11	22.36	9.89	--	12.47
	7/10/2009	20.11	22.36	9.71	--	12.65
	9/8/2010	--	22.36	10.70	--	11.66
	8/25/2011	20.00	22.36	9.35	--	13.01
	6/26/2012	20.62	22.36	9.47	--	12.89
	11/26/2012	20.20	22.36	10.85	--	11.51
	7/22/2013	20.99	22.36	9.19	--	13.17
	11/11/2013	**20.78**	**22.36**	**11.24**	**--**	**11.12**
TM-2	7/7/2008	22.16	22.45	10.76	--	11.69
	7/10/2009	22.16	22.45	10.52	--	11.93
	9/8/2010	--	22.45	11.24	--	11.21
	8/25/2011	--	22.45	--	--	--
	6/26/2012	22.08	22.45	10.04	--	12.41
	11/26/2012	22.27	22.45	11.80	--	10.65
	7/22/2013	22.10	22.45	10.11	--	12.34
	11/11/2013	**22.20**	**22.45**	**12.16**	**--**	**10.29**
TM-3	7/7/2008	20.80	22.50	10.63	--	11.87
	7/10/2009	20.80	22.50	10.44	--	12.06
	9/8/2010	--	22.50	11.47	--	11.03
	8/25/2011	20.97	22.50	10.20	--	12.30
	6/26/2012	20.95	22.50	10.14	--	12.36
	11/26/2012	22.85	22.50	11.79	--	10.71
	7/22/2013	20.76	22.50	9.91	--	12.59
	11/11/2013	**20.75**	**22.50**	**12.18**	**--**	**10.32**

DTB- Depth to Bottom TOC- Top of Casing -- Not applicable
DTW- Depth to Water DTP- Depth to Product GW- Ground water
* TOC measurement not applicable, LNAPL recovery trailer installed

Table 1
Site-Wide Groundwater Gauging Data
Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
TM-4	7/7/2008	15.28	21.14	8.76	--	12.38
	7/10/2009	15.28	21.14	8.60	--	12.54
	9/8/2010	--	21.14	9.68	--	11.46
	8/25/2011	14.93	21.14	8.08	--	13.06
	6/26/2012	14.91	21.14	8.50	--	12.64
	11/26/2012	15.36	21.14	10.08	--	11.06
	7/22/2013	15.34	21.14	8.17	--	12.97
	11/11/2013	**15.35**	**21.14**	**9.97**	**--**	**11.17**
TM-5	7/7/2008	22.13	18.47	8.22	--	10.25
	7/10/2009	22.13	18.47	8.14	--	10.33
	9/10/2010	--	18.47	8.26	--	10.21
	8/25/2011	22.09	18.47	8.12	--	10.35
	6/26/2012	22.09	18.47	7.46	--	11.01
	11/26/2012	22.15	18.47	8.35	--	10.12
	7/22/2013	22.10	18.47	7.81	--	10.66
	11/11/2013	**22.10**	**18.47**	**9.24**	**--**	**9.23**
TM-6	7/7/2008	21.20	17.68	6.32	--	11.36
	7/10/2009	21.20	17.68	6.27	--	11.41
	9/10/2010	--	17.68	7.25	--	10.43
	8/25/2011	21.33	17.68	6.22	--	11.46
		Well Abandoned				
TM-6R	6/26/2012	20.04	14.06	4.90	--	9.16
	11/26/2012	--	14.06	5.76	5.75	8.31
	7/22/2013	19.95	14.06	4.92	--	9.14
	11/11/2013	**19.95**	**14.06**	**5.92**	**--**	**8.14**
TM-7	7/7/2008	21.22	17.03	7.18	--	9.85
	7/10/2009	21.22	17.03	7.11	--	9.92
	9/10/2010	--	17.03	7.70	--	9.33
	8/25/2011	21.83	17.03	6.89	6.88	10.15
	6/26/2012	--	17.03	6.83	6.82	10.21
	11/26/2012	--	17.03	7.72	7.70	9.32
	7/22/2013	--	17.03	6.80	SHEEN	10.23
	11/11/2013	**--**	**17.03**	**8.17**	**8.16**	**8.87**
TR-1	7/7/2008		15.56	Unable To Locate		
	7/10/2009		15.56	Unable To Locate		
		Well Paved Over				
TR-1R	7/22/2013	15.02	13.70	5.88	--	7.82
	11/11/2013	**15.02**	**13.70**	**6.39**	**--**	**7.31**
TR-2	7/7/2008	21.44	14.70	2.99	--	11.71
	Well Abandoned 11/08					
TR-2R	12/5/2008	21.45	14.66	5.27	--	9.39
	7/10/2009	21.45	14.66	Unable To Locate		
	9/7/2010	--	14.66	5.04	--	9.62
	8/25/2011	--	14.66	--	--	--
	6/26/2012	--	14.66	0.00	--	14.66
	11/26/2012	20.25	14.66	5.24	--	9.42
	7/22/2013	--	14.66	3.62	3.61	11.05
	11/11/2013	**--**	**14.66**	**4.09**	**4.08**	**10.58**

DTB- Depth to Bottom TOC- Top of Casing -- Not applicable
DTW- Depth to Water DTP- Depth to Product GW- Ground water
* TOC measurement not applicable, LNAPL recovery trailer installed

Table 1
Site-Wide Groundwater Gauging Data
Hess Corporation- Former Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well	Date	DTB (ft)	TOC (ft)	DTW (ft)	DTP (ft)	GW Elevation (ft)
TR-3	7/7/2008	16.94	12.96	3.83	--	9.13
	Well Abandoned 11/08					
TR-3R	12/5/2008	16.88	12.93	4.19	--	8.74
	7/10/2009	16.88	12.93	3.20	--	9.73
	9/7/2010	--	12.93	Could not Locate		
	8/25/2011	--	12.93	Could not Locate		
	6/26/2012	--	12.93	Could not Locate		
		Well Sealed with Concrete				
TR-3RR	7/22/2013	14.66	9.65	2.97	--	6.68
	11/11/2013	**14.66**	**9.65**	**3.68**	**--**	**5.97**
TR-4	7/7/2008		14.71	Unable To Locate		
	7/10/2009		14.71	Unable To Locate		
	9/10/2010	--	14.71	5.00	--	9.71
	8/25/2011	--	14.71	--	--	--
	6/26/2012	Well Abandoned				
TR-4R	11/26/2012	14.60	12.10	4.58	--	7.52
	7/22/2013	14.57	12.10	1.98	--	10.12
	11/11/2013	**14.59**	**12.10**	**3.89**	**--**	**8.21**
TR-4D	11/26/2012	24.60	12.37	5.70	--	6.67
	7/22/2013	24.95	12.37	4.71	--	7.66
	12/4/2013	**24.46**	**12.37**	**6.67**	**--**	**5.70**
TR-4DD	7/22/2013	56.75	12.59	5.35	--	7.24
	12/4/2013	**55.88**	**12.59**	**6.84**	**--**	**5.75**
TR-5	11/26/2012	--	14.09	Could not Locate		
	7/22/2013	10.58	12.00	3.64	--	8.36
	11/11/2013	**10.58**	**12.00**	**5.82**	**--**	**6.18**
TR-6	11/26/2012	--	12.90	Could Not Access		
	7/22/2013	10.71	12.90	3.98	--	8.92
	11/11/2013	**10.71**	**12.90**	**5.52**	**--**	**7.38**
TR-6D	7/22/2013	28.30	10.82	3.69	--	7.13
	12/4/2013	**28.15**	**10.82**	**6.29**	**--**	**4.53**
Pond Gauge	10/22/2012	--	6.37	2.20	--	4.17
		Lost due to Hurricane Sandy				
DB-SW	7/22/2013	--	10.72	5.00	--	5.22
	11/11/2013	**--**	**10.72**	**3.12**	**--**	**3.34**

DTB- Depth to Bottom TOC- Top of Casing -- Not applicable
DTW- Depth to Water DTP- Depth to Product GW- Ground water
* TOC measurement not applicable, LNAPL recovery trailer installed

Table 2
Hess Corporation Port Reading Complex
750 Cliff Rd
Port Reading, Middlesex County, New Jersey
Quality Control Laboratory Ecological Comparison Table

Toxic Substance	CAS Number	Surface Water (ug/L)			QC-TW-1	Soil (mg/kg)						Greatest Soil Concentration Detected
		Fresh Water (FW2) Criteria				Wildlife PRGs (flora and fauna)	Terrestrial Plant Tox Benchmarks	EcoSSLs[20]				
		Aquatic		Human Health				Plants	Soil Invertebrates	Avian	Mammalian	
		Acute	Chronic									
Acenaphthene	83-32-9		38[8]	670(h)	ND	20[9]						0.126
Acenaphthylene	208-96-8		4840[8]		ND	682[8]						ND
Aluminum	7429-90-5				123,000		50					**123,000**
Anthracene	120-12-7		0.035[8]	8,300(h)	ND	1,480[8]						0.0458
Antimony	7440-36-0		80[8]	5.6(h)(T)	**<6.0**	5[9]	5		78		0.27	<6.6
Arsenic	7440-38-2	340(d)(s)	150(d)(s)	0.017(hc)(T)	**34.2**	9.9[9,10]	10	18		43	46	**78.7**
Barium	7440-39-3		220[8]	2,000(h)(T)	**4,200**	283[11]	500		330		2,000	83
Benz(a)anthracene	56-55-3		0.025[8]	0.038(hc)	ND	5.21[8]						**0.0835**
Benzene	71-43-2		114[8] 824[16]	0.15(hc)	**1.8**	0.255[8]						**0.623**
3,4-Benzofluoranthene (Benzo(b)fluoranthene)	205-99-2		9.07[8]	0.038(hc)	ND	59.8[8]						0.128
Benzo(g,h,i)perylene	191-24-2		7.64[8]		ND	119[8]						0.237
Benzo(a)pyrene (BaP)	50-32-8		0.014[8]	0.0038(hc)	ND	1.52[8]						0.255
Beryllium	7440-41-7		3.6[8]	6.0(h)(T)	**22.3**	10[9]	10		40		21	0.99
Bis(2-ethylhexyl) phthalate	117-81-7		0.3[8]	1.2(hc)	ND	0.925[8]						0.332
Cadmium	7440-43-9	(a)	(a)	3.4(h)(T)	**4.3**	4[9,11]	4	32	140	0.77	0.36	ND
Chloroform	67-66-3		140[8]	68(h)	ND	1.19[8]						0.00038 J
Chromium	7440-47-3		42[8]	92(h)(T)	**119**	0.4[12]	1					**58.1**
Chrysene	218-01-9			3.8(hc)	ND	4.73[8]						0.0432
Cobalt	7440-48-4		24[8]		**114**	20[9] 0.14[8]	20	13		120	230	10.1
Copper	7440-50-8	(a)	(a)	1,300(h)(T)	206	60[12] 5.4[8]	100	70	80	28	49	36.2

Table 2
Hess Corporation Port Reading Complex
750 Cliff Rd
Port Reading, Middlesex County, New Jersey
Quality Control Laboratory Ecological Comparison Table

Toxic Substance	CAS Number	Surface Water (ug/L)			QC-TW-1	Soil (mg/kg)						Greatest Soil Concentration Detected
		Fresh Water (FW2) Criteria				Wildlife PRGs (flora and fauna)	Terrestrial Plant Tox Benchmarks	EcoSSLs[20]				
		Aquatic		Human Health				Plants	Soil Invertebrates	Avian	Mammalian	
		Acute	Chronic									
Dibenz(a,h)anthracene	53-70-3			0.0038(hc)	ND	18.4[8]						0.110
1,1-Dichloroethylene	75-35-4		65[8]	4.7(h)	0.41 J	8.28[8]						ND
Ethylbenzene	100-41-4		14[8] 81[16]	530(h)	ND	5.16[8]						**14.8**
Fluoranthene	206-44-0		1.9[8]	130(h)	ND	122[8]						0.0471
Fluorene	86-73-7		19[8]	1,100(h)	ND	122[8]						0.211
Indeno(1,2,3-cd)pyrene	193-39-5		4.31[8]	0.038(hc)	ND	109[8]						0.111
Lead	7439-92-1	38(d)(s)	5.4(d)(s)	5.0(h)(T)	**85.0**	40.5[11] 0.0537[8]	50	120	1,700	11	56	**127**
Manganese	7439-96-5				15,900		500	220	450	4,300	4,000	**1,320**
Mercury	7439-97-6	1.4(d)(s)	0.77(d)(s)	0.050(h)(T)	**9.6**	0.00051[11] 0.1[8]	0.3					**0.095**
Methyl t-butyl ether (MTBE)	1634-04-4	151,000[17]	51,450[16] 51,000[17]	70(h)	50.2							27.200
Methylene chloride	75-09-2		940[8]	2.5(hc)	ND	4.05[8]						0.0084
2-Methylnaphthalene	91-57-6		330[8]		ND	3.24[8]						**5.760**
Naphthalene	91-20-3		13[8]		0.288	0.0994[8]						**2.900**
Nickel	7440-02-0	(a)	(a)	500(h)(T)	198	30[9] 13.6[8]	30	38	280	210	130	**32.3**
Phenanthrene	85-01-8		3.6[8]		ND	45.7[8]						0.286
Selenium	7782-49-2	20(s)	5.0(s)	170(h)(T)	**<10**	0.21[13] 0.0276[8]	1	0.52	4.1	1.2	0.63	**<6.6**
Silver	7440-22-4	(a)	0.12[8]	170(h)(T)	**<10**	2[9] 4.04[8]	2	560		4.2	14	1
Styrene	100-42-5		32[8]		<4.0	300[9] 4.69[8]	300					ND

Table 2
Hess Corporation Port Reading Complex
750 Cliff Rd
Port Reading, Middlesex County, New Jersey
Quality Control Laboratory Ecological Comparison Table

Toxic Substance	CAS Number	Surface Water (ug/L)			QC-TW-1	Soil (mg/kg)						Greatest Soil Concentration Detected
		Fresh Water (FW2) Criteria				Wildlife PRGs (flora and fauna)	Terrestrial Plant Tox Benchmarks	EcoSSLs[20]				
		Aquatic		Human Health				Plants	Soil Invertebrates	Avian	Mammalian	
		Acute	Chronic									
Thallium	7440-28-0		10[8]	0.24(h)(T)	**<4.0**	1[9]	1					**<3.3**
Toluene	108-88-3		253[8] 822[16]	1,300(h)	ND	200[9]	200					17.5
1,1,1-Trichloroethane	71-55-6		76[8]	120(h)	0.66 J	29.8[8]						ND
Vanadium	7440-62-2		12[8]		**244**	2[9]	2			7.8	280	**46.2**
Xylene	1330-20-7		27[8] 296[16]		ND	10[8]						**66.000**
Zinc	7440-66-6	(a)	(a)	7,400(h)(T)	456	8.5[11] 6.62[8]	50	160	120	46	79	**185**

Detection in **Bold** exceed one or more applicable Ecological Criteria
(a) Criteria as listed at (f)3 below as formula
(b) Criteria as listed at (f)4 below as formula
(d) Criterion is expressed as a function of the Water Effect Ratio (WER). For criterion in the table, WER equates to the default value of 1.0.
(fc) Criteria expressed as free cyanide (as CN)/L
(h) Human health noncarcinogen
(hc) Human health carcinogen
(s) Dissolved criterion
(T) Total recoverable criterion

NOTE: See Page 7/7 (SW Calculations tab) for Surface Water Calculator for metals.

Table 3
Quality Control Laboratory- Soil Sampling Analytical Summary Table
Former Hess Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Client Sample ID:		NRDCSRS	RDCSRS	IGWSRS	DLC	SPLP-IGWSRS	SWPE-IGWSRS	Applied Standard	UST-1	UST-2	UST-3	UST-4	UST-5	UST-6	P-1	P-2	P-3	P-4	P-5	P-6	P-6R	P-7
Depth									6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	3.0-3.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5
Lab Sample ID:									JB40127-1	JB40127-2	JB40127-3	JB40127-4	JB40127-5	JB40127-6	JB40127-7	JB40350-1	JB40350-2	JB40350-3	JB40350-4	JB40351-1	JB-55929-1	JB40351-2
Date Sampled:									6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/21/2013	6/21/2013	6/21/2013	6/21/2013	6/20/2013	12/16/2013	6/20/2013
GC/MS Volatiles (SW846/8260B)																						
Acetone	mg/kg	NA	70,000	12	120	-	19	**120**	ND (0.0016)	0.0129	ND (0.0017)	ND (0.0019)	ND (0.0019)	ND (0.0017)	0.0162	ND (0.0018)	0.0199	0.0853	0.0165	ND (0.0018)	NA	39.4
Benzene	mg/kg	5	2	0.005	0.004	-	0.005	**0.005**	ND (0.00012)	ND (0.00012)	ND (0.00012)	ND (0.00013)	ND (0.00014)	ND (0.00012)	ND (0.00011)	ND (0.00013)	0.00048 J	ND (0.00013)	ND (0.00013)	ND (0.00013)	NA	**0.384**
Bromochloromethane	mg/kg	-	-	-	-	-	-	**-**	ND (0.00026)	ND (0.00027)	ND (0.00026)	ND (0.00030)	ND (0.00030)	ND (0.00027)	ND (0.00026)	ND (0.00029)	ND (0.00029)	ND (0.00028)	ND (0.00028)	ND (0.00029)	NA	ND (0.085)
Bromodichloromethane	mg/kg	3	1	0.005	-	-	-	**-**	ND (0.00010)	ND (0.00011)	ND (0.00010)	ND (0.00012)	ND (0.00012)	ND (0.00011)	ND (0.00010)	ND (0.00011)	ND (0.00012)	ND (0.00011)	ND (0.00011)	ND (0.00011)	NA	ND (0.034)
Bromoform	mg/kg	280	81	0.02	-	-	-	**-**	ND (0.00015)	ND (0.00016)	ND (0.00015)	ND (0.00017)	ND (0.00017)	ND (0.00016)	ND (0.00015)	ND (0.00016)	ND (0.00017)	ND (0.00016)	ND (0.00016)	ND (0.00016)	NA	ND (0.048)
Bromomethane	mg/kg	59	25	0.03	-	-	-	**-**	ND (0.00027)	ND (0.00028)	ND (0.00027)	ND (0.00030)	ND (0.00031)	ND (0.00028)	ND (0.00026)	ND (0.00029)	ND (0.00030)	ND (0.00029)	ND (0.00029)	ND (0.00030)	NA	ND (0.088)
2-Butanone (MEK)	mg/kg	44,000	3,100	0.6	-	-	-	**-**	ND (0.0023)	ND (0.0025)	ND (0.0024)	ND (0.0027)	ND (0.0027)	ND (0.0025)	ND (0.0023)	ND (0.0026)	ND (0.0026)	0.0063 J	ND (0.0026)	ND (0.0026)	NA	ND (0.77)
Carbon disulfide	mg/kg	110,000	7,800	4	14	-	-	**14**	ND (0.00011)	ND (0.00012)	ND (0.00012)	0.0010 J	ND (0.00013)	ND (0.00012)	ND (0.00011)	ND (0.00013)	ND (0.00013)	0.0018 J	ND (0.00013)	ND (0.00013)	NA	ND (0.038)
Carbon tetrachloride	mg/kg	2	0.6	0.005	-	-	-	**-**	ND (0.00013)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00015)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00015)	ND (0.00014)	ND (0.00014)	ND (0.00014)	NA	ND (0.043)
Chlorobenzene	mg/kg	7,400	510	0.4	-	-	-	**-**	ND (0.00011)	ND (0.00011)	ND (0.00011)	ND (0.00012)	ND (0.00012)	ND (0.00011)	ND (0.00010)	ND (0.00012)	ND (0.00012)	ND (0.00011)	ND (0.00012)	ND (0.00012)	NA	ND (0.035)
Chloroethane	mg/kg	1,100	220	NA	-	-	-	**-**	ND (0.00022)	ND (0.00023)	ND (0.00023)	ND (0.00025)	ND (0.00026)	ND (0.00023)	ND (0.00022)	ND (0.00025)	ND (0.00025)	ND (0.00024)	ND (0.00024)	ND (0.00025)	NA	ND (0.073)
Chloroform	mg/kg	2	0.6	0.2	1.4	-	-	**1.4**	ND (0.000080)	ND (0.000085)	ND (0.000082)	ND (0.000092)	ND (0.000095)	ND (0.000085)	ND (0.000080)	ND (0.000089)	ND (0.000091)	ND (0.000087)	ND (0.000089)	0.00038 J	NA	ND (0.026)
Chloromethane	mg/kg	12	4	NA	-	-	-	**-**	ND (0.00018)	ND (0.00019)	ND (0.00018)	ND (0.00021)	ND (0.00021)	ND (0.00019)	ND (0.00018)	ND (0.00020)	ND (0.00020)	ND (0.00020)	ND (0.00020)	ND (0.00020)	NA	ND (0.060)
Cyclohexane	mg/kg	-	-	-	-	-	-	**-**	ND (0.00012)	ND (0.00013)	ND (0.00012)	ND (0.00014)	ND (0.00014)	ND (0.00013)	ND (0.00012)	ND (0.00013)	ND (0.00014)	ND (0.00013)	ND (0.00013)	ND (0.00013)	NA	0.621 J
Dibromochloromethane	mg/kg	8	3	0.005	-	-	-	**-**	ND (0.00016)	ND (0.00017)	ND (0.00016)	ND (0.00018)	ND (0.00019)	ND (0.00017)	ND (0.00016)	ND (0.00018)	ND (0.00018)	ND (0.00017)	ND (0.00018)	ND (0.00018)	NA	ND (0.053)
1,2-Dichlorobenzene	mg/kg	59,000	5,300	11	-	-	-	**-**	ND (0.00018)	ND (0.00019)	ND (0.00019)	ND (0.00021)	ND (0.00022)	ND (0.00020)	ND (0.00018)	ND (0.00020)	ND (0.00021)	ND (0.00020)	ND (0.00020)	ND (0.00020)	NA	ND (0.061)
1,3-Dichlorobenzene	mg/kg	59,000	5300	12	-	-	-	**-**	ND (0.00018)	ND (0.00019)	ND (0.00019)	ND (0.00021)	ND (0.00022)	ND (0.00019)	ND (0.00018)	ND (0.00020)	ND (0.00021)	ND (0.00020)	ND (0.00020)	ND (0.00020)	NA	ND (0.060)
1,4-Dichlorobenzene	mg/kg	13	5	1	-	-	-	**-**	ND (0.00017)	ND (0.00018)	ND (0.00017)	ND (0.00020)	ND (0.00020)	ND (0.00018)	ND (0.00017)	ND (0.00019)	ND (0.00019)	ND (0.00019)	ND (0.00019)	ND (0.00019)	NA	ND (0.056)
Dichlorodifluoromethane	mg/kg	230,000	490	25	-	-	-	**-**	ND (0.00022)	ND (0.00023)	ND (0.00023)	ND (0.00025)	ND (0.00026)	ND (0.00024)	ND (0.00022)	ND (0.00025)	ND (0.00025)	ND (0.00024)	ND (0.00025)	ND (0.00025)	NA	ND (0.073)
1,1-Dichloroethane	mg/kg	24	8	0.2	-	-	-	**-**	ND (0.00013)	ND (0.00014)	ND (0.00014)	ND (0.00015)	ND (0.00016)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00015)	ND (0.00014)	ND (0.00015)	ND (0.00015)	NA	ND (0.044)
1,2-Dichloroethane	mg/kg	3	0.9	0.005	-	-	-	**-**	ND (0.00013)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00016)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00015)	ND (0.00014)	ND (0.00015)	ND (0.00015)	NA	ND (0.043)
1,1-Dichloroethene	mg/kg	150	11	0.005	-	-	-	**-**	ND (0.00025)	ND (0.00026)	ND (0.00025)	ND (0.00029)	ND (0.00030)	ND (0.00027)	ND (0.00025)	ND (0.00028)	ND (0.00028)	ND (0.00027)	ND (0.00028)	ND (0.00028)	NA	ND (0.082)
cis-1,2-Dichloroethene	mg/kg	560	230	0.2	-	-	-	**-**	ND (0.00018)	ND (0.00019)	ND (0.00018)	ND (0.00020)	ND (0.00021)	ND (0.00019)	ND (0.00018)	ND (0.00020)	ND (0.00020)	ND (0.00019)	ND (0.00020)	ND (0.00020)	NA	ND (0.059)
trans-1,2-Dichloroethene	mg/kg	720	300	0.4	-	-	-	**-**	ND (0.00023)	ND (0.00024)	ND (0.00024)	ND (0.00027)	ND (0.00027)	ND (0.00025)	ND (0.00023)	ND (0.00026)	ND (0.00026)	ND (0.00025)	ND (0.00026)	ND (0.00026)	NA	ND (0.076)
1,2-Dichloropropane	mg/kg	5	2	0.005	-	-	-	**-**	ND (0.00015)	ND (0.00016)	ND (0.00015)	ND (0.00017)	ND (0.00018)	ND (0.00016)	ND (0.00015)	ND (0.00017)	ND (0.00017)	ND (0.00016)	ND (0.00017)	ND (0.00017)	NA	ND (0.049)
cis-1,3-Dichloropropene	mg/kg	7	2	0.005	-	-	-	**-**	ND (0.00014)	ND (0.00014)	ND (0.00014)	ND (0.00015)	ND (0.00016)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00015)	NA	ND (0.045)
trans-1,3-Dichloropropene	mg/kg	7	2	0.005	-	-	-	**-**	ND (0.00015)	ND (0.00016)	ND (0.00015)	ND (0.00017)	ND (0.00018)	ND (0.00016)	ND (0.00015)	ND (0.00017)	ND (0.00017)	ND (0.00016)	ND (0.00017)	ND (0.00017)	NA	ND (0.050)
Ethylbenzene	mg/kg	110,000	7,800	8	14	-	26	**26**	ND (0.00026)	ND (0.00027)	ND (0.00026)	ND (0.00029)	ND (0.00030)	ND (0.00027)	ND (0.00025)	ND (0.00028)	ND (0.00029)	ND (0.00028)	ND (0.00028)	ND (0.00028)	NA	10.1
Freon 113	mg/kg	-	-	-	-	-	-	**-**	ND (0.00042)	ND (0.00044)	ND (0.00043)	ND (0.00048)	ND (0.00049)	ND (0.00044)	ND (0.00042)	ND (0.00046)	ND (0.00047)	ND (0.00045)	ND (0.00046)	ND (0.00046)	NA	ND (0.14)
2-Hexanone	mg/kg	-	-	-	-	-	-	**-**	ND (0.00060)	ND (0.00064)	ND (0.00062)	ND (0.00069)	ND (0.00072)	ND (0.00064)	ND (0.00060)	ND (0.00067)	ND (0.00068)	ND (0.00066)	ND (0.00067)	ND (0.00067)	NA	ND (0.20)
Isopropylbenzene	mg/kg	-	-	-	-	-	-	**-**	ND (0.000072)	ND (0.000076)	ND (0.000074)	ND (0.000083)	ND (0.000085)	ND (0.000077)	ND (0.000072)	ND (0.000080)	ND (0.000081)	ND (0.000078)	ND (0.000080)	ND (0.000080)	NA	1.38 J
Methyl Acetate	mg/kg	NA	78,000	14	-	-	-	**-**	ND (0.0025)	ND (0.0027)	ND (0.0026)	ND (0.0029)	ND (0.0030)	ND (0.0027)	ND (0.0025)	ND (0.0028)	ND (0.0029)	ND (0.0027)	ND (0.0028)	ND (0.0028)	NA	ND (0.83)
Methylcyclohexane	mg/kg	-	-	-	-	-	-	**-**	ND (0.00016)	ND (0.00017)	ND (0.00017)	ND (0.00019)	ND (0.00019)	ND (0.00017)	ND (0.00016)	ND (0.00018)	ND (0.00019)	ND (0.00018)	ND (0.00018)	ND (0.00018)	NA	4.12
Methyl Tert Butyl Ether	mg/kg	320	110	0.2	1.4	-	0.3	**1.4**	ND (0.00023)	ND (0.00024)	ND (0.00023)	ND (0.00026)	ND (0.00027)	ND (0.00024)	ND (0.00023)	ND (0.00025)	0.00080 J	ND (0.00025)	ND (0.00025)	ND (0.00025)	NA	0.694
4-Methyl-2-pentanone(MIBK)	mg/kg	-	-	-	-	-	-	**-**	ND (0.00073)	ND (0.00077)	ND (0.00075)	ND (0.00084)	ND (0.00086)	ND (0.00078)	ND (0.00073)	ND (0.00081)	ND (0.00082)	ND (0.00079)	ND (0.00081)	ND (0.00081)	NA	ND (0.24)
Methylene chloride	mg/kg	97	34	0.007	0.06	-	0.01	**0.06**	0.0077	0.0067	0.0067	0.0078	0.0084	0.0077	0.0037 J	ND (0.0014)	ND (0.0014)	0.0027 J	0.0034 J	ND (0.0014)	NA	ND (0.41)
Styrene	mg/kg	260	90	2	-	-	-	**-**	ND (0.000089)	ND (0.000094)	ND (0.000091)	ND (0.000010)	ND (0.000011)	ND (0.000095)	ND (0.000089)	ND (0.000099)	ND (0.000010)	ND (0.000097)	ND (0.000099)	ND (0.000099)	NA	ND (0.029)
1,1,2,2-Tetrachloroethane	mg/kg	3	1	0.005	-	-	-	**-**	ND (0.00013)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00015)	ND (0.00014)	ND (0.00013)	ND (0.00014)	ND (0.00014)	ND (0.00014)	ND (0.00014)	ND (0.00014)	NA	ND (0.042)
Tetrachloroethene	mg/kg	5	2	0.005	-	-	-	**-**	ND (0.00017)	ND (0.00018)	ND (0.00017)	ND (0.00019)	ND (0.00020)	ND (0.00018)	ND (0.00017)	ND (0.00019)	ND (0.00019)	ND (0.00018)	ND (0.00018)	ND (0.00019)	NA	ND (0.055)
Toluene	mg/kg	91,000	6,300	4	12	-	12	**12**	0.00026 J	0.00023 J	0.00024 J	0.00041 J	0.00044 J	0.00031 J	0.00034 J	0.00041 J	ND (0.00012)	0.00033 J	0.00040 J	ND (0.00011)	NA	**17.5**
1,2,3-Trichlorobenzene	mg/kg	-	-	-	-	-	-	**-**	ND (0.00016)	ND (0.00017)	ND (0.00016)	ND (0.00018)	ND (0.00019)	ND (0.00017)	ND (0.00016)	ND (0.00018)	ND (0.00018)	ND (0.00017)	ND (0.00018)	ND (0.00018)	NA	ND (0.053)
1,2,4-Trichlorobenzene	mg/kg	820	73	0.4	-	-	-	**-**	ND (0.00014)	ND (0.00014)	ND (0.00014)	ND (0.00015)	ND (0.00016)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00015)	NA	ND (0.045)
1,1,1-Trichloroethane	mg/kg	4,200	290	0.2	-	-	-	**-**	ND (0.00010)	ND (0.00011)	ND (0.00011)	ND (0.00012)	ND (0.00012)	ND (0.00011)	ND (0.00010)	ND (0.00011)	ND (0.00012)	ND (0.00011)	ND (0.00011)	ND (0.00011)	NA	ND (0.034)
1,1,2-Trichloroethane	mg/kg	6	2	0.01	-	-	-	**-**	ND (0.00017)	ND (0.00018)	ND (0.00017)	ND (0.00019)	ND (0.00020)	ND (0.00018)	ND (0.00017)	ND (0.00019)	ND (0.00019)	ND (0.00018)	ND (0.00019)	ND (0.00019)	NA	ND (0.056)
Trichloroethene	mg/kg	20	7	0.007	-	-	-	**-**	ND (0.00017)	ND (0.00018)	ND (0.00017)	ND (0.00019)	ND (0.00020)	ND (0.00018)	ND (0.00017)	ND (0.00019)	ND (0.00019)	ND (0.00018)	ND (0.00019)	ND (0.00019)	NA	ND (0.056)
Trichlorofluoromethane	mg/kg	340,000	23,000	22	-	-	-	**-**	ND (0.00029)	ND (0.00031)	ND (0.00030)	ND (0.00033)	ND (0.00034)	ND (0.00031)	ND (0.00029)	ND (0.00032)	ND (0.00033)	ND (0.00031)	ND (0.00032)	ND (0.00032)	NA	ND (0.096)
Vinyl chloride	mg/kg	2	0.7	0.005	-	-	-	**-**	ND (0.00014)	ND (0.00015)	ND (0.00014)	ND (0.00016)	ND (0.00017)	ND (0.00015)	ND (0.00014)	ND (0.00016)	ND (0.00016)	ND (0.00015)	ND (0.00015)	ND (0.00016)	NA	ND (0.046)
m,p-Xylene	mg/kg	170,000	12,000	12	20	-	39	**39**	ND (0.00017)	ND (0.00018)	ND (0.00017)	ND (0.00019)	ND (0.00020)	ND (0.00018)	ND (0.00017)	ND (0.00019)	ND (0.00019)	ND (0.00018)	ND (0.00019)	ND (0.00019)	NA	**40.8**
o-Xylene	mg/kg	170,000	12,000	12	20	-	39	**39**	ND (0.00014)	ND (0.00014)	ND (0.00014)	ND (0.00015)	ND (0.00016)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00015)	NA	13.9
Xylene (total)	mg/kg	170,000	12,000	12	20	-	39	**39**	ND (0.00014)	ND (0.00014)	ND (0.00014)	ND (0.00015)	ND (0.00016)	ND (0.00014)	ND (0.00013)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00015)	ND (0.00015)	NA	**54.7**
GC/MS Volatile TIC																						
Total TIC, Volatile	mg/kg	-	-	-	-	-	-	**-**	0	0	0	0.0069 J	0	0	0	0	0	0.0095 J	0.0248 J	0	NA	239 (10) J

Table 3
Quality Control Laboratory- Soil Sampling Analytical Summary Table
Former Hess Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Client Sample ID:		NRDCSRS	RDCSRS	IGWSRS	DLC	SPLP-IGWSRS	SWPE-IGWSRS	Applied Standard	P-7R	P-7R	P-8	P-8R	P-9	P-9R	P-10	P-10R	P-11	P-12	P-12	P-13	P-13	QC-TW-1
Depth									2.0-2.5	5.5-6.0	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	4.0-4.5	2.0-2.5	4.0-4.5	2.5-3.0
Lab Sample ID:									JB-55929-2	JB-55929-3 (5.5-	JB40351-3	JB-55929-4	JB40351-4	JB-55929-5	JB40351-5	JB-55929-6	JB40350-5	JB55929-7	JB55929-8	JB55929-9	JB55929-10	JB56243-2
Date Sampled:									12/17/2013	12/17/2013	6/20/2013	12/16/2013	6/20/2013	12/17/2013	6/20/2013	12/16/2013	6/21/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013	12/18/2013
GC/MS Volatiles (SW846/8260B)																						
Acetone	mg/kg	NA	70,000	12	120	-	19	**120**	NA	ND (0.260)	ND (0.0018)	NA	0.0087 J	NA	0.0116	NA	0.015	NA	NA	NA	NA	NA
Benzene	mg/kg	5	2	0.005	0.004	-	0.005	**0.005**	NA	**0.623**	ND (0.00012)	NA	ND (0.00012)	NA	ND (0.00014)	NA	ND (0.00014)	NA	NA	NA	NA	NA
Bromochloromethane	mg/kg	-	-	-	-	-	-	**-**	NA	ND (0.030)	ND (0.00028)	NA	ND (0.00027)	NA	ND (0.00030)	NA	ND (0.00031)	NA	NA	NA	NA	NA
Bromodichloromethane	mg/kg	3	1	0.005	-	-	-	**-**	NA	ND (0.016)	ND (0.00011)	NA	ND (0.00011)	NA	ND (0.00012)	NA	ND (0.00012)	NA	NA	NA	NA	NA
Bromoform	mg/kg	280	81	0.02	-	-	-	**-**	NA	ND (0.015)	ND (0.00016)	NA	ND (0.00015)	NA	ND (0.00017)	NA	ND (0.00018)	NA	NA	NA	NA	NA
Bromomethane	mg/kg	59	25	0.03	-	-	-	**-**	NA	ND (0.028)	ND (0.00028)	NA	ND (0.00028)	NA	ND (0.00031)	NA	ND (0.00032)	NA	NA	NA	NA	NA
2-Butanone (MEK)	mg/kg	44,000	3,100	0.6	-	-	-	**-**	NA	ND (0.250)	ND (0.0025)	NA	ND (0.0024)	NA	ND (0.0027)	NA	ND (0.0028)	NA	NA	NA	NA	NA
Carbon disulfide	mg/kg	110,000	7,800	4	14	-	-	**14**	NA	ND (0.0082)	ND (0.00012)	NA	ND (0.00012)	NA	ND (0.00013)	NA	ND (0.00014)	NA	NA	NA	NA	NA
Carbon tetrachloride	mg/kg	2	0.6	0.005	-	-	-	**-**	NA	ND (0.015)	ND (0.00014)	NA	ND (0.00013)	NA	ND (0.00015)	NA	ND (0.00015)	NA	NA	NA	NA	NA
Chlorobenzene	mg/kg	7,400	510	0.4	-	-	-	**-**	NA	ND (0.011)	ND (0.00011)	NA	ND (0.00011)	NA	ND (0.00012)	NA	ND (0.00013)	NA	NA	NA	NA	NA
Chloroethane	mg/kg	1,100	220	NA	-	-	-	**-**	NA	ND (0.058)	ND (0.00024)	NA	ND (0.00023)	NA	ND (0.00026)	NA	ND (0.00026)	NA	NA	NA	NA	NA
Chloroform	mg/kg	2	0.6	0.2	1.4	-	-	**1.4**	NA	ND (0.015)	ND (0.000086)	NA	ND (0.000084)	NA	ND (0.000094)	NA	ND (0.000096)	NA	NA	NA	NA	NA
Chloromethane	mg/kg	12	4	NA	-	-	-	**-**	NA	ND (0.020)	ND (0.00019)	NA	ND (0.00019)	NA	ND (0.00021)	NA	ND (0.00022)	NA	NA	NA	NA	NA
Cyclohexane	mg/kg	-	-	-	-	-	-	**-**	NA	0.466	ND (0.00013)	NA	ND (0.00013)	NA	ND (0.00014)	NA	ND (0.00014)	NA	NA	NA	NA	NA
Dibromochloromethane	mg/kg	8	3	0.005	-	-	-	**-**	NA	ND (0.014)	ND (0.00017)	NA	ND (0.00017)	NA	ND (0.00019)	NA	ND (0.00019)	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	mg/kg	59,000	5,300	11	-	-	-	**-**	NA	ND (0.020)	ND (0.00020)	NA	ND (0.00019)	NA	ND (0.00022)	NA	ND (0.00022)	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	mg/kg	59,000	5300	12	-	-	-	**-**	NA	ND (0.013)	ND (0.00019)	NA	ND (0.00019)	NA	ND (0.00021)	NA	ND (0.00022)	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	mg/kg	13	5	1	-	-	-	**-**	NA	ND (0.015)	ND (0.00018)	NA	ND (0.00018)	NA	ND (0.00020)	NA	ND (0.00020)	NA	NA	NA	NA	NA
Dichlorodifluoromethane	mg/kg	230,000	490	25	-	-	-	**-**	NA	ND (0.020)	ND (0.00024)	NA	ND (0.00023)	NA	ND (0.00026)	NA	ND (0.00027)	NA	NA	NA	NA	NA
1,1-Dichloroethane	mg/kg	24	8	0.2	-	-	-	**-**	NA	ND (0.018)	ND (0.00014)	NA	ND (0.00014)	NA	ND (0.00016)	NA	ND (0.00016)	NA	NA	NA	NA	NA
1,2-Dichloroethane	mg/kg	3	0.9	0.005	-	-	-	**-**	NA	ND (0.019)	ND (0.00014)	NA	ND (0.00014)	NA	ND (0.00015)	NA	ND (0.00016)	NA	NA	NA	NA	NA
1,1-Dichloroethene	mg/kg	150	11	0.005	-	-	-	**-**	NA	ND (0.017)	ND (0.00027)	NA	ND (0.00026)	NA	ND (0.00029)	NA	ND (0.00030)	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	mg/kg	560	230	0.2	-	-	-	**-**	NA	ND (0.012)	ND (0.00019)	NA	ND (0.00019)	NA	ND (0.00021)	NA	ND (0.00021)	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	mg/kg	720	300	0.4	-	-	-	**-**	NA	ND (0.025)	ND (0.00025)	NA	ND (0.00024)	NA	ND (0.00027)	NA	ND (0.00028)	NA	NA	NA	NA	NA
1,2-Dichloropropane	mg/kg	5	2	0.005	-	-	-	**-**	NA	ND (0.025)	ND (0.00016)	NA	ND (0.00016)	NA	ND (0.00018)	NA	ND (0.00018)	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	mg/kg	7	2	0.005	-	-	-	**-**	NA	ND (0.013)	ND (0.00014)	NA	ND (0.00014)	NA	ND (0.00016)	NA	ND (0.00016)	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	mg/kg	7	2	0.005	-	-	-	**-**	NA	ND (0.016)	ND (0.00016)	NA	ND (0.00016)	NA	ND (0.00018)	NA	ND (0.00018)	NA	NA	NA	NA	NA
Ethylbenzene	mg/kg	110,000	7,800	8	14	-	26	**26**	NA	14.800 [b]	ND (0.00027)	NA	ND (0.00027)	NA	ND (0.00030)	NA	ND (0.00031)	NA	NA	NA	NA	NA
Freon 113	mg/kg	-	-	-	-	-	-	**-**	NA	ND (0.025)	ND (0.00045)	NA	ND (0.00043)	NA	ND (0.00049)	NA	ND (0.00050)	NA	NA	NA	NA	NA
2-Hexanone	mg/kg	-	-	-	-	-	-	**-**	NA	ND (0.100)	ND (0.00065)	NA	ND (0.00063)	NA	ND (0.00071)	NA	ND (0.00072)	NA	NA	NA	NA	NA
Isopropylbenzene	mg/kg	-	-	-	-	-	-	**-**	NA	1.060	ND (0.000077)	NA	ND (0.000075)	NA	ND (0.000085)	NA	ND (0.000086)	NA	NA	NA	NA	NA
Methyl Acetate	mg/kg	NA	78,000	14	-	-	-	**-**	NA	ND (0.097)	ND (0.0027)	NA	ND (0.0026)	NA	ND (0.0030)	NA	ND (0.0030)	NA	NA	NA	NA	NA
Methylcyclohexane	mg/kg	-	-	-	-	-	-	**-**	NA	8.140	ND (0.00018)	NA	ND (0.00017)	NA	ND (0.00019)	NA	ND (0.00020)	NA	NA	NA	NA	NA
Methyl Tert Butyl Ether	mg/kg	320	110	0.2	1.4	-	0.3	**1.4**	NA	**27.200** [b]	ND (0.00024)	NA	ND (0.00024)	NA	ND (0.00027)	NA	ND (0.00027)	NA	NA	NA	NA	NA
4-Methyl-2-pentanone(MIBK)	mg/kg	-	-	-	-	-	-	**-**	NA	ND (0.076)	ND (0.00078)	NA	ND (0.00076)	NA	ND (0.00086)	NA	ND (0.00087)	NA	NA	NA	NA	NA
Methylene chloride	mg/kg	97	34	0.007	0.06	-	0.01	**0.06**	NA	ND (0.098)	0.0020 J	NA	0.0050 J	NA	0.0062	NA	ND (0.0015)	NA	NA	NA	NA	NA
Styrene	mg/kg	260	90	2	-	-	-	**-**	NA	ND (0.013)	ND (0.000095)	NA	ND (0.000093)	NA	ND (0.00010)	NA	ND (0.00011)	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	mg/kg	3	1	0.005	-	-	-	**-**	NA	ND (0.020)	ND (0.00014)	NA	ND (0.00013)	NA	ND (0.00015)	NA	ND (0.00015)	NA	NA	NA	NA	NA
Tetrachloroethene	mg/kg	5	2	0.005	-	-	-	**-**	NA	ND (0.024)	ND (0.00018)	NA	ND (0.00017)	NA	ND (0.00020)	NA	ND (0.00020)	NA	NA	NA	NA	NA
Toluene	mg/kg	91,000	6,300	4	12	-	12	**12**	NA	4.950	ND (0.00011)	NA	0.00065 J	NA	0.00035 J	NA	0.00048 J	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	mg/kg	-	-	-	-	-	-	**-**	NA	ND (0.012)	ND (0.00017)	NA	ND (0.00017)	NA	ND (0.00019)	NA	ND (0.00019)	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	mg/kg	820	73	0.4	-	-	-	**-**	NA	ND (0.010)	ND (0.00014)	NA	ND (0.00014)	NA	ND (0.00016)	NA	ND (0.00016)	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	mg/kg	4,200	290	0.2	-	-	-	**-**	NA	ND (0.017)	ND (0.00011)	NA	ND (0.00011)	NA	ND (0.00012)	NA	ND (0.00012)	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	mg/kg	6	2	0.01	-	-	-	**-**	NA	ND (0.048)	ND (0.00018)	NA	ND (0.00018)	NA	ND (0.00020)	NA	ND (0.00020)	NA	NA	NA	NA	NA
Trichloroethene	mg/kg	20	7	0.007	-	-	-	**-**	NA	ND (0.020)	ND (0.00018)	NA	ND (0.00018)	NA	ND (0.00020)	NA	ND (0.00020)	NA	NA	NA	NA	NA
Trichlorofluoromethane	mg/kg	340,000	23,000	22	-	-	-	**-**	NA	ND (0.013)	ND (0.00031)	NA	ND (0.00030)	NA	ND (0.00034)	NA	ND (0.00035)	NA	NA	NA	NA	NA
Vinyl chloride	mg/kg	2	0.7	0.005	-	-	-	**-**	NA	ND (0.020)	ND (0.00015)	NA	ND (0.00015)	NA	ND (0.00016)	NA	ND (0.00017)	NA	NA	NA	NA	NA
m,p-Xylene	mg/kg	170,000	12,000	12	20	-	39	**39**	NA	**60.300** [b]	ND (0.00018)	NA	ND (0.00018)	NA	0.00039 J	NA	ND (0.00020)	NA	NA	NA	NA	NA
o-Xylene	mg/kg	170,000	12,000	12	20	-	39	**39**	NA	5.750	ND (0.00014)	NA	ND (0.00014)	NA	ND (0.00016)	NA	ND (0.00016)	NA	NA	NA	NA	NA
Xylene (total)	mg/kg	170,000	12,000	12	20	-	39	**39**	NA	**66.000** [b]	ND (0.00014)	NA	ND (0.00014)	NA	0.00039 J	NA	ND (0.00016)	NA	NA	NA	NA	NA
GC/MS Volatile TIC																						
Total TIC, Volatile	mg/kg	-	-	-	-	-	-	**-**	NA	22.100 (5) J	0	NA	0	NA	0.0268 J	NA	0.0152 J	NA	NA	NA	NA	NA

Table 3
Quality Control Laboratory- Soil Sampling Analytical Summary Table
Former Hess Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Client Sample ID:		NRDCSRS	RDCSRS	IGWSRS	DLC	SPLP-IGWSRS	SWPE-IGWSRS	Applied Standard	UST-1	UST-2	UST-3	UST-4	UST-5	UST-6	P-1	P-2	P-3	P-4	P-5	P-6	P-6R	P-7
Depth									6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	3.0-3.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5
Lab Sample ID:									JB40127-1	JB40127-2	JB40127-3	JB40127-4	JB40127-5	JB40127-6	JB40127-7	JB40350-1	JB40350-2	JB40350-3	JB40350-4	JB40351-1	JB-55929-1	JB40351-2
Date Sampled:									6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/21/2013	6/21/2013	6/21/2013	6/21/2013	6/20/2013	12/16/2013	6/20/2013
GC/MS Semi-volatiles (SW846/8270D)																						
Acenaphthene	mg/kg	37,000	3,400	74	--	-	-	**74**	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.024)	ND (0.025)	ND (0.024)	ND (0.010)	ND (0.0096)	ND (0.010)	ND (0.0099)	ND (0.0097)	*	ND (0.010)	*
Acenaphthylene	mg/kg	300,000	NA	NA	-	-	-	-	ND (0.022)	ND (0.023)	ND (0.023)	ND (0.024)	ND (0.024)	ND (0.023)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	*	ND (0.011)	*
Acetophenone	mg/kg	5	2	2	-	-	-	-	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.024)	ND (0.025)	ND (0.024)	ND (0.0061)	ND (0.0058)	ND (0.0063)	ND (0.0060)	ND (0.0059)	*	ND (0.0061)	*
Anthracene	mg/kg	30,000	17,000	1,500	-	-	-	**1,500**	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.012)	ND (0.012)	ND (0.013)	ND (0.012)	ND (0.012)	*	ND (0.012)	*
Atrazine	mg/kg	2,400	210	0.2	-	-	-	-	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.0069)	ND (0.0065)	ND (0.0070)	ND (0.0067)	ND (0.0066)	*	ND (0.0068)	*
Benzo(a)anthracene	mg/kg	2	0.6	0.5	-	-	2	**2**	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.011)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	*	ND (0.011)	*
Benzo(a)pyrene	mg/kg	0.2	0.2	0.2	-	-	0.5	**0.5**	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	*	ND (0.011)	*
Benzo(b)fluoranthene	mg/kg	2	0.6	2	-	-	6	**6**	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	*	ND (0.012)	*
Benzo(g,h,i)perylene	mg/kg	30,000	380,000	-	-	-	-	-	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.013)	ND (0.012)	ND (0.013)	ND (0.013)	ND (0.012)	*	ND (0.013)	*
Benzo(k)fluoranthene	mg/kg	23	6	16	-	-	-	-	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.21)	ND (0.20)	ND (0.013)	ND (0.0076)	ND (0.0082)	ND (0.0078)	ND (0.0077)	*	ND (0.013)	*
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.024)	ND (0.025)	ND (0.024)	ND (0.013)	ND (0.012)	ND (0.013)	ND (0.013)	ND (0.013)	*	ND (0.013)	*
Butyl benzyl phthalate	mg/kg	14,000	1,200	150	-	-	-	-	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.026)	ND (0.026)	ND (0.025)	ND (0.020)	ND (0.012)	ND (0.013)	ND (0.012)	ND (0.012)	*	ND (0.020)	*
1,1'-Biphenyl	mg/kg	34,000	3,100	90	-	-	-	**90**	ND (0.039)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.042)	ND (0.040)	ND (0.0040)	ND (0.019)	ND (0.021)	ND (0.020)	ND (0.019)	*	ND (0.004)	*
Benzaldehyde	mg/kg	68,000	6,100	NA	-	-	-	-	ND (0.026)	ND (0.027)	ND (0.026)	ND (0.027)	ND (0.028)	ND (0.027)	ND (0.0080)	ND (0.0038)	ND (0.0041)	ND (0.0040)	ND (0.0039)	*	ND (0.0079)	*
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-	-	ND (0.021)	ND (0.022)	ND (0.022)	ND (0.023)	ND (0.023)	ND (0.022)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.011)	ND (0.010)	*	ND (0.011)	*
4-Chloroaniline	mg/kg	-	-	-	-	-	-	-	ND (0.025)	ND (0.026)	ND (0.025)	ND (0.027)	ND (0.027)	ND (0.026)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.011)	ND (0.010)	*	ND (0.011)	*
Carbazole	mg/kg	96	24	NA	-	-	-	-	ND (0.029)	ND (0.030)	ND (0.030)	ND (0.031)	ND (0.031)	ND (0.030)	ND (0.016)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	*	ND (0.016)	*
Caprolactam	mg/kg	340,000	31,000	8	-	-	-	-	ND (0.021)	ND (0.022)	ND (0.022)	ND (0.023)	ND (0.023)	ND (0.022)	ND (0.011)	ND (0.015)	ND (0.017)	ND (0.016)	ND (0.015)	*	ND (0.011)	*
Chrysene	mg/kg	230	62	52	-	-	-	**52**	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.012)	ND (0.011)	*	ND (0.012)	*
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-	-	ND (0.027)	ND (0.028)	ND (0.027)	ND (0.029)	ND (0.029)	ND (0.028)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)	ND (0.013)	*	ND (0.014)	*
bis(2-Chloroethyl)ether	mg/kg	2	0.4	0.2	-	-	-	-	ND (0.026)	ND (0.027)	ND (0.026)	ND (0.028)	ND (0.028)	ND (0.027)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	*	ND (0.010)	*
bis(2-Chloroisopropyl)ether	mg/kg	67	23	3	-	-	-	-	ND (0.022)	ND (0.022)	ND (0.022)	ND (0.023)	ND (0.024)	ND (0.023)	ND (0.010)	ND (0.0099)	ND (0.011)	ND (0.010)	ND (0.0099)	*	ND (0.010)	*
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-	-	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.021)	ND (0.022)	ND (0.021)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	*	ND (0.010)	*
2,4-Dinitrotoluene	mg/kg	3	0.7	NA	-	-	-	-	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.022)	ND (0.021)	ND (0.015)	ND (0.014)	ND (0.016)	ND (0.015)	ND (0.015)	*	ND (0.015)	*
2,6-Dinitrotoluene	mg/kg	3	0.7	NA	-	-	-	-	ND (0.023)	ND (0.024)	ND (0.024)	ND (0.025)	ND (0.025)	ND (0.024)	ND (0.013)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.013)	*	ND (0.013)	*
3,3'-Dichlorobenzidine	mg/kg	4	1	0.2	-	-	-	-	ND (0.032)	ND (0.033)	ND (0.033)	ND (0.034)	ND (0.035)	ND (0.033)	ND (0.0088)	ND (0.0084)	ND (0.0091)	ND (0.0087)	ND (0.0085)	*	ND (0.0088)	*
Dibenzo(a,h)anthracene	mg/kg	0.2	0.2	0.5	-	-	-	**0.5**	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.012)	ND (0.011)	*	ND (0.012)	*
Dibenzofuran	mg/kg	-	-	-	-	-	-	-	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.021)	ND (0.020)	ND (0.010)	ND (0.0099)	ND (0.011)	ND (0.010)	ND (0.0099)	*	ND (0.010)	*
Di-n-butyl phthalate	mg/kg	68,000	6,100	620	-	-	-	-	ND (0.039)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.042)	ND (0.040)	ND (0.0077)	ND (0.0074)	ND (0.0079)	ND (0.0076)	ND (0.0074)	*	ND (0.0077)	*
Di-n-octyl phthalate	mg/kg	27,000	2,400	3,300	-	-	-	-	ND (0.039)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.042)	ND (0.040)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.017)	ND (0.016)	*	ND (0.017)	*
Diethyl phthalate	mg/kg	550,000	49,000	57	-	-	-	-	ND (0.039)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.042)	ND (0.040)	ND (0.012)	ND (0.011)	ND (0.012)	ND (0.012)	ND (0.011)	*	ND (0.012)	*
Dimethyl phthalate	mg/kg	-	-	-	-	-	-	-	ND (0.039)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.042)	ND (0.040)	ND (0.012)	ND (0.012)	ND (0.013)	ND (0.012)	ND (0.012)	*	ND (0.012)	*
bis(2-Ethylhexyl)phthalate	mg/kg	140	35	790	-	-	-	**35**	ND (0.039)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.042)	ND (0.040)	ND (0.031)	0.0423 J	0.113	0.15	0.332	*	ND (0.030)	*
Fluoranthene	mg/kg	24,000	2,300	840	-	-	-	**840**	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.015)	ND (0.015)	*	ND (0.015)	*
Fluorene	mg/kg	24,000	2,300	110	-	-	-	**110**	ND (0.021)	ND (0.022)	ND (0.022)	ND (0.023)	ND (0.023)	ND (0.022)	ND (0.011)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	*	ND (0.011)	*
Hexachlorobenzene	mg/kg	1	0.3	0.2	-	-	-	-	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.011)	ND (0.011)	ND (0.012)	ND (0.011)	ND (0.011)	*	ND (0.011)	*
Hexachlorobutadiene	mg/kg	25	6	0.6	-	-	-	-	ND (0.021)	ND (0.022)	ND (0.021)	ND (0.022)	ND (0.023)	ND (0.022)	ND (0.0097)	ND (0.0092)	ND (0.0099)	ND (0.0095)	ND (0.0093)	*	ND (0.0096)	*
Hexachlorocyclopentadiene	mg/kg	110	45	210	-	-	-	-	ND (0.027)	ND (0.027)	ND (0.027)	ND (0.028)	ND (0.029)	ND (0.028)	ND (0.036)	ND (0.034)	ND (0.036)	ND (0.035)	ND (0.034)	*	ND (0.035)	*
Hexachloroethane	mg/kg	140	35	0.2	-	-	-	-	ND (0.022)	ND (0.022)	ND (0.022)	ND (0.023)	ND (0.024)	ND (0.023)	ND (0.0097)	ND (0.0092)	ND (0.0099)	ND (0.0095)	ND (0.0093)	*	ND (0.0096)	*
Indeno(1,2,3-cd)pyrene	mg/kg	2	0.6	5	-	-	-	**0.6**	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	*	ND (0.012)	*
Isophorone	mg/kg	2,000	510	0.2	-	-	-	-	ND (0.021)	ND (0.022)	ND (0.021)	ND (0.022)	ND (0.023)	ND (0.022)	ND (0.0094)	ND (0.0089)	ND (0.0096)	ND (0.0092)	ND (0.0090)	*	ND (0.0093)	*
2-Methylnaphthalene	mg/kg	2,400	230	5	-	-	19	**19**	ND (0.022)	ND (0.023)	ND (0.023)	ND (0.024)	ND (0.024)	ND (0.023)	ND (0.019)	ND (0.019)	ND (0.020)	ND (0.019)	ND (0.019)	*	ND (0.019)	*
2-Nitroaniline	mg/kg	23,000	39	NA	-	-	-	-	ND (0.028)	ND (0.029)	ND (0.029)	ND (0.030)	ND (0.031)	ND (0.029)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.015)	ND (0.015)	*	ND (0.015)	*
3-Nitroaniline	mg/kg	-	-	-	-	-	-	-	ND (0.027)	ND (0.028)	ND (0.027)	ND (0.029)	ND (0.029)	ND (0.028)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)	ND (0.013)	*	ND (0.014)	*
4-Nitroaniline	mg/kg	-	-	-	-	-	-	-	ND (0.041)	ND (0.042)	ND (0.042)	ND (0.044)	ND (0.044)	ND (0.043)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.013)	*	ND (0.013)	*
Naphthalene	mg/kg	17	6	16	6	-	-	**6**	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.021)	ND (0.020)	ND (0.0095)	ND (0.0091)	ND (0.0098)	ND (0.0093)	ND (0.0091)	*	ND (0.0094)	*
Nitrobenzene	mg/kg	340	31	0.2	-	-	-	-	ND (0.028)	ND (0.029)	ND (0.028)	ND (0.030)	ND (0.030)	ND (0.029)	ND (0.010)	ND (0.0096)	ND (0.010)	ND (0.0099)	ND (0.0096)	*	ND (0.010)	*
N-Nitroso-di-n-propylamine	mg/kg	0.3	0.2	0.2	-	-	-	-	ND (0.021)	ND (0.022)	ND (0.021)	ND (0.022)	ND (0.023)	ND (0.022)	ND (0.0085)	ND (0.0081)	ND (0.0087)	ND (0.0083)	ND (0.0081)	*	ND (0.0084)	*
N-Nitrosodiphenylamine	mg/kg	390	99	0.2	-	-	-	-	ND (0.039)	ND (0.039)	ND (0.039)	ND (0.041)	ND (0.042)	ND (0.040)	ND (0.021)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.020)	*	ND (0.021)	*
Phenanthrene	mg/kg	300,000	NA	NA	-	-	-	-	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.016)	ND (0.015)	ND (0.016)	ND (0.016)	ND (0.015)	*	ND (0.016)	*
Pyrene	mg/kg	18,000	1,700	550	0.14	-	-	**550**	ND (0.019)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.021)	ND (0.020)	ND (0.013)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.013)	*	ND (0.013)	*
GC/MS Semi-volatile TIC																						
Total TIC, Semi-Volatile	mg/kg	-	-	-	-	-	-	-	0	0	0	0.72 J	0.82 J	0.64 J	0.25 J	0	0	0.84 J	0.35 J	*	0	*

Table 3
Quality Control Laboratory- Soil Sampling Analytical Summary Table
Former Hess Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Client Sample ID:		NRDCSRS	RDCSRS	IGWSRS	DLC	SPLP-IGWSRS	SWPE-IGWSRS	Applied Standard	P-7R	P-7R	P-8	P-8R	P-9	P-9R	P-10	P-10R	P-11	P-12	P-12	P-13	P-13	QC-TW-1
Depth									2.0-2.5	5.5-6.0	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	4.0-4.5	2.0-2.5	4.0-4.5	2.5-3.0
Lab Sample ID:									JB-55929-2	JB-55929-3 (5.5-	JB40351-3	JB-55929-4	JB40351-4	JB-55929-5	JB40351-5	JB-55929-6	JB40350-5	JB55929-7	JB55929-8	JB55929-9	JB55929-10	JB56243-2
Date Sampled:									12/17/2013	12/17/2013	6/20/2013	12/16/2013	6/20/2013	12/17/2013	6/20/2013	12/16/2013	6/21/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013	12/18/2013
GC/MS Semi-volatiles (SW846/8270D)																						
Acenaphthene	mg/kg	37,000	3,400	74	--	-	-	**74**	ND (0.010)	NA	*	0.126	*	ND (0.0095)	*	ND (0.0091)	ND (0.0097)	NA	NA	NA	NA	NA
Acenaphthylene	mg/kg	300,000	NA	NA	-	-	-	**-**	ND (0.011)	NA	*	ND (0.010)	*	ND (0.011)	*	ND (0.010)	ND (0.011)	NA	NA	NA	NA	NA
Acetophenone	mg/kg	5	2	2	-	-	-	**-**	ND (0.0062)	NA	*	ND (0.0057)	*	ND (0.0058)	*	ND (0.0055)	ND (0.0059)	NA	NA	NA	NA	NA
Anthracene	mg/kg	30,000	17,000	1,500	-	-	-	**1,500**	0.0458	NA	*	ND (0.011)	*	ND (0.012)	*	ND (0.011)	ND (0.012)	NA	NA	NA	NA	NA
Atrazine	mg/kg	2,400	210	0.2	-	-	-	**-**	ND (0.0069)	NA	*	ND (0.0064)	*	ND (0.0065)	*	ND (0.0062)	ND (0.0066)	NA	NA	NA	NA	NA
Benzo(a)anthracene	mg/kg	2	0.6	0.5	-	-	2	**2**	0.023 J	NA	*	0.0835	*	ND (0.011)	*	ND (0.010)	ND (0.011)	NA	NA	NA	NA	NA
Benzo(a)pyrene	mg/kg	0.2	0.2	0.2	-	-	0.5	**0.5**	0.0169 J	NA	*	0.255	*	ND (0.010)	*	ND (0.0096)	ND (0.010)	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	mg/kg	2	0.6	2	-	-	6	**6**	ND (0.012)	NA	*	0.128	*	ND (0.011)	*	ND (0.011)	ND (0.011)	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	mg/kg	30,000	380,000	-	-	-	-	**-**	0.018 J	NA	*	0.237	*	ND (0.012)	*	ND (0.012)	ND (0.012)	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	mg/kg	23	6	16	-	-	-	**-**	ND (0.013)	NA	*	ND (0.012)	*	ND (0.012)	*	ND (0.012)	ND (0.0077)	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-	**-**	ND (0.013)	NA	*	ND (0.012)	*	ND (0.012)	*	ND (0.011)	ND (0.013)	NA	NA	NA	NA	NA
Butyl benzyl phthalate	mg/kg	14,000	1,200	150	-	-	-	**-**	ND (0.020)	NA	*	ND (0.019)	*	ND (0.019)	*	ND (0.018)	ND (0.012)	NA	NA	NA	NA	NA
1,1'-Biphenyl	mg/kg	34,000	3,100	90	-	-	-	**90**	0.567	NA	*	ND (0.0038)	*	ND (0.0038)	*	ND (0.0037)	ND (0.019)	NA	NA	NA	NA	NA
Benzaldehyde	mg/kg	68,000	6,100	NA	-	-	-	**-**	ND (0.0081)	NA	*	ND (0.0075)	*	ND (0.0076)	*	ND (0.0072)	ND (0.0039)	NA	NA	NA	NA	NA
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-	**-**	ND (0.011)	NA	*	ND (0.010)	*	ND (0.010)	*	ND (0.0098)	ND (0.011)	NA	NA	NA	NA	NA
4-Chloroaniline	mg/kg	-	-	-	-	-	-	**-**	ND (0.011)	NA	*	ND (0.010)	*	ND (0.011)	*	ND (0.010)	ND (0.010)	NA	NA	NA	NA	NA
Carbazole	mg/kg	96	24	NA	-	-	-	**-**	ND (0.016)	NA	*	ND (0.015)	*	ND (0.015)	*	ND (0.015)	ND (0.011)	NA	NA	NA	NA	NA
Caprolactam	mg/kg	340,000	31,000	8	-	-	-	**-**	ND (0.011)	NA	*	ND (0.010)	*	ND (0.010)	*	ND (0.0099)	ND (0.016)	NA	NA	NA	NA	NA
Chrysene	mg/kg	230	62	52	-	-	-	**52**	0.0413	NA	*	0.432	*	ND (0.011)	*	ND (0.011)	ND (0.011)	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-	**-**	ND (0.014)	NA	*	ND (0.013)	*	ND (0.013)	*	ND (0.013)	ND (0.014)	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	mg/kg	2	0.4	0.2	-	-	-	**-**	ND (0.011)	NA	*	ND (0.0098)	*	ND (0.0099)	*	ND (0.0095)	ND (0.010)	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	mg/kg	67	23	3	-	-	-	**-**	ND (0.010)	NA	*	ND (0.0096)	*	ND (0.0098)	*	ND (0.0094)	ND (0.010)	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-	**-**	ND (0.011)	NA	*	ND (0.0098)	*	ND (0.0099)	*	ND (0.0095)	ND (0.010)	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	mg/kg	3	0.7	NA	-	-	-	**-**	ND (0.015)	NA	*	ND (0.014)	*	ND (0.014)	*	ND (0.014)	ND (0.015)	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	mg/kg	3	0.7	NA	-	-	-	**-**	ND (0.013)	NA	*	ND (0.012)	*	ND (0.013)	*	ND (0.012)	ND (0.013)	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	mg/kg	4	1	0.2	-	-	-	**-**	ND (0.0089)	NA	*	ND (0.0082)	*	ND (0.0084)	*	ND (0.008)	ND (0.0085)	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	mg/kg	0.2	0.2	0.5	-	-	-	**0.5**	ND (0.012)	NA	*	0.110	*	ND (0.011)	*	ND (0.011)	ND (0.011)	NA	NA	NA	NA	NA
Dibenzofuran	mg/kg	-	-	-	-	-	-	**-**	0.122	NA	*	ND (0.0096)	*	ND (0.0098)	*	ND (0.0094)	ND (0.010)	NA	NA	NA	NA	NA
Di-n-butyl phthalate	mg/kg	68,000	6,100	620	-	-	-	**-**	ND (0.0078)	NA	*	ND (0.0072)	*	ND (0.0073)	*	ND (0.007)	ND (0.0074)	NA	NA	NA	NA	NA
Di-n-octyl phthalate	mg/kg	27,000	2,400	3,300	-	-	-	**-**	ND (0.017)	NA	*	ND (0.016)	*	ND (0.016)	*	ND (0.015)	ND (0.016)	NA	NA	NA	NA	NA
Diethyl phthalate	mg/kg	550,000	49,000	57	-	-	-	**-**	ND (0.012)	NA	*	ND (0.011)	*	ND (0.011)	*	ND (0.011)	ND (0.011)	NA	NA	NA	NA	NA
Dimethyl phthalate	mg/kg	-	-	-	-	-	-	**-**	ND (0.012)	NA	*	ND (0.011)	*	ND (0.012)	*	ND (0.011)	ND (0.012)	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	mg/kg	140	35	790	-	-	-	**35**	0.0595 J	NA	*	0.183	*	ND (0.029)	*	0.0412 J	0.201	NA	NA	NA	NA	NA
Fluoranthene	mg/kg	24,000	2,300	840	-	-	-	**840**	ND (0.015)	NA	*	0.0471	*	ND (0.015)	*	ND (0.014)	ND (0.015)	NA	NA	NA	NA	NA
Fluorene	mg/kg	24,000	2,300	110	-	-	-	**110**	0.211	NA	*	0.152	*	ND (0.011)	*	ND (0.010)	ND (0.011)	NA	NA	NA	NA	NA
Hexachlorobenzene	mg/kg	1	0.3	0.2	-	-	-	**-**	ND (0.011)	NA	*	ND (0.011)	*	ND (0.011)	*	ND (0.010)	ND (0.011)	NA	NA	NA	NA	NA
Hexachlorobutadiene	mg/kg	25	6	0.6	-	-	-	**-**	ND (0.0098)	NA	*	ND (0.009)	*	ND (0.0092)	*	ND (0.0088)	ND (0.0093)	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	mg/kg	110	45	210	-	-	-	**-**	ND (0.036)	NA	*	ND (0.033)	*	ND (0.034)	*	ND (0.032)	ND (0.034)	NA	NA	NA	NA	NA
Hexachloroethane	mg/kg	140	35	0.2	-	-	-	**-**	ND (0.0098)	NA	*	ND (0.009)	*	ND (0.0092)	*	ND (0.0088)	ND (0.0093)	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	mg/kg	2	0.6	5	-	-	-	**0.6**	ND (0.012)	NA	*	0.111	*	ND (0.011)	*	ND (0.011)	ND (0.012)	NA	NA	NA	NA	NA
Isophorone	mg/kg	2,000	510	0.2	-	-	-	**-**	ND (0.0095)	NA	*	ND (0.0087)	*	ND (0.0089)	*	ND (0.0085)	ND (0.0090)	NA	NA	NA	NA	NA
2-Methylnaphthalene	mg/kg	2,400	230	5	-	-	19	**19**	5.760[b]	NA	*	3.970[b]	*	ND (0.018)	*	ND (0.018)	ND (0.019)	NA	NA	NA	NA	NA
2-Nitroaniline	mg/kg	23,000	39	NA	-	-	-	**-**	ND (0.015)	NA	*	ND (0.014)	*	ND (0.014)	*	ND (0.014)	ND (0.015)	NA	NA	NA	NA	NA
3-Nitroaniline	mg/kg	-	-	-	-	-	-	**-**	ND (0.014)	NA	*	ND (0.013)	*	ND (0.013)	*	ND (0.013)	ND (0.013)	NA	NA	NA	NA	NA
4-Nitroaniline	mg/kg	-	-	-	-	-	-	**-**	ND (0.014)	NA	*	ND (0.013)	*	ND (0.013)	*	ND (0.012)	ND (0.013)	NA	NA	NA	NA	NA
Naphthalene	mg/kg	17	6	16	6	-	-	**6**	2.900	NA	*	2.790[b]	*	ND (0.009)	*	ND (0.0086)	ND (0.0092)	NA	NA	NA	NA	NA
Nitrobenzene	mg/kg	340	31	0.2	-	-	-	**-**	ND (0.010)	NA	*	ND (0.0094)	*	ND (0.0095)	*	ND (0.0091)	ND (0.0097)	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	mg/kg	0.3	0.2	0.2	-	-	-	**-**	ND (0.0086)	NA	*	ND (0.0079)	*	ND (0.008)	*	ND (0.0077)	ND (0.0082)	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	mg/kg	390	99	0.2	-	-	-	**-**	ND (0.021)	NA	*	ND (0.019)	*	ND (0.020)	*	ND (0.019)	ND (0.020)	NA	NA	NA	NA	NA
Phenanthrene	mg/kg	300,000	NA	NA	-	-	-	**-**	0.265	NA	*	0.286	*	ND (0.015)	*	ND (0.014)	ND (0.015)	NA	NA	NA	NA	NA
Pyrene	mg/kg	18,000	1,700	550	0.14	-	-	**550**	0.0658	NA	*	0.271	*	ND (0.013)	*	ND (0.012)	ND (0.013)	NA	NA	NA	NA	NA
GC/MS Semi-volatile TIC																						
Total TIC, Semi-Volatile	mg/kg	-	-	-	-	-	-	**-**	14.540 (15) J	29.000 (20) J	*	29.0 (20) J	*	0.220 (1) J	*	0	0	NA	NA	NA	NA	NA

Table 3
Quality Control Laboratory- Soil Sampling Analytical Summary Table
Former Hess Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Client Sample ID:		NRDCSRS	RDCSRS	IGWSRS	DLC	SPLP-IGWSRS	SWPE-IGWSRS	Applied Standard	UST-1	UST-2	UST-3	UST-4	UST-5	UST-6	P-1	P-2	P-3	P-4	P-5	P-6	P-6R	P-7
Depth									6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	3.0-3.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5
Lab Sample ID:									JB40127-1	JB40127-2	JB40127-3	JB40127-4	JB40127-5	JB40127-6	JB40127-7	JB40350-1	JB40350-2	JB40350-3	JB40350-4	JB40351-1	JB-55929-1	JB40351-2
Date Sampled:									6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/19/2013	6/21/2013	6/21/2013	6/21/2013	6/21/2013	6/20/2013	12/16/2013	6/20/2013
GC Semi-volatiles (NJDEP EPH)																						
EPH (C9-C28)	mg/kg	-	-	-	-	-	-	-	ND (2.6)	ND (2.5)	ND (2.6)	ND (2.6)	ND (2.8)	ND (2.7)	ND (2.7)	ND (2.6)	ND (2.6)	20.7	ND (2.6)	ND (2.6)	NA	3,400
EPH (>C28-C40)	mg/kg	-	-	-	-	-	-	-	ND (3.2)	ND (3.1)	ND (3.2)	ND (3.2)	ND (3.5)	ND (3.3)	32.5	ND (3.2)	ND (3.2)	26.1	31	ND (3.1)	NA	1,110
Total EPH (C9-C40)	mg/kg	54,000	5,100	-	-	-	-	**5,100**	ND (2.6)	ND (2.5)	ND (2.6)	ND (2.6)	ND (2.8)	ND (2.7)	32.5	ND (2.6)	ND (2.6)	46.8	31	ND (2.6)	NA	4,510
Total Fractionated EPH (C10-C40)	mg/kg	54,000	5,100	-	-	-	-	**5,100**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040
Metals																						
Aluminum	mg/kg	NA	78,000	3,900	-	-	6,000	**6,000**	**9,740**	**11,700**	**11,700**	**8,580**	4,980	**8,500**	**18,300**	**15,100**	**13,700**	**17,100**	**17,400**	**5,200**	NA	**7,440**
Antimony	mg/kg	450	31	6	-	-	-	**6**	<2.3	<2.4	<2.3	<2.6	<2.6	<2.5	<2.3	<2.2	<2.2	<2.2	<2.2	**<6.6** [a]	NA	<2.1
Arsenic	mg/kg	19	19	19	-	-	19	**19**	3	3.8	3.5	<2.6	<2.6	<2.5	4.8	2.5	2.5	4.4	2.6	15.9 [a]	NA	5.8
Barium	mg/kg	59,000	16,000	1,300	-	-	-	**1,300**	42.7	66.5	80.1	<26	<26	36.9	82.8	50.1	48.8	69.2	53.1	22.7	NA	32.8
Beryllium	mg/kg	140	16	0.5	-	0.68	0.7	**0.7**	0.61	**0.75**	**0.88**	0.36	0.27	0.39	0.61	0.51	0.58	0.66	0.51	**0.99** [a]	NA	0.58
Cadmium	mg/kg	78	78	1	-	-	-	**1**	<0.58	<0.60	<0.57	<0.64	<0.65	<0.62	<0.59	<0.55	<0.56	<0.54	<0.56	**<1.6** [a]	NA	<0.52
Calcium	mg/kg	-	-	-	-	-	-	-	828	1,220	1,660	713	<650	702	892	3,010	<560	1,110	1,400	679	NA	908
Chromium	mg/kg	-	-	-	-	-	-	-	14.7	15.6	17.9	9.9	6.7	10.9	22.1	13.2	16	58.1	18.1	17.1	NA	26
Cobalt	mg/kg	590	1,600	59	-	-	-	**59**	5.8	<6.0	8.1	<6.4	<6.5	<6.2	7.6	10.1	<5.6	7.1	<5.6	7.2	NA	<5.2
Copper	mg/kg	45,000	3,100	7,300	-	-	-	**3,100**	9.1	12.5	13.6	6.8	6.3	8	12.9	12.8	4.8	14.1	9.3	12.7 [a]	NA	13
Iron	mg/kg	-	-	-	-	-	-	-	17,000	18,500	20,800	8,600	7,570	12,100	28,600	10,300	14,300	19,900	14,000	53,800	NA	20,900
Lead	mg/kg	800	400	90	-	4.9	90	**90**	7.9	8.5	10.5	5.1	3.9	6	12.4	14.5	5.8	13.3	**127**	9.0 [a]	NA	13.8
Magnesium	mg/kg	-	-	-	-	-	-	-	2,670	3,230	4,340	1,720	1,570	2,250	3,500	579	<560	2,180	589	1,880	NA	1,770
Manganese	mg/kg	5,900	11,000	42	-	-	65	**65**	**156**	**293**	**201**	60.5	**68.1**	**175**	**1,320**	**331**	**93.5**	**351**	**144**	**431** [a]	NA	**170**
Mercury	mg/kg	65	23	0.1	-	-	0.1	**0.1**	<0.037	<0.035	<0.040	<0.038	<0.041	<0.035	<0.036	<0.035	<0.033	<0.032	<0.033	<0.032	NA	<0.034
Nickel	mg/kg	23,000	1,600	31	-	19.2	48	**48**	13.3	14.9	19.4	8.6	6.9	10.3	14.9	9.6	10.8	32.3	10.3	14.3	NA	13.9
Potassium	mg/kg	-	-	-	-	-	-	-	1,480	1,940	2,550	<1,300	<1,300	1,250	1,650	<1,100	<1,100	1,120	<1,100	1,140	NA	1,040
Selenium	mg/kg	5,700	390	7	-	-	-	**7**	<2.3	<2.4	<2.3	<2.6	<2.6	<2.5	<2.3	<2.2	<2.2	<2.2	<2.2	<6.6 [a]	NA	<2.1
Silver	mg/kg	5,700	390	1	-	-	1	**1**	<0.58	<0.60	<0.57	<0.64	<0.65	<0.62	<0.59	0.56	0.56	1.0	0.6	**<1.6** [a]	NA	0.84
Sodium	mg/kg	-	-	-	-	-	-	-	<1,200	<1,200	<1,100	<1,300	<1,300	<1,200	<1,200	<1,100	<1,100	<1,100	<1,100	<1,100	NA	<1,000
Thallium	mg/kg	79	5	3	-	-	-	**3**	<1.2	<1.2	<1.1	<1.3	<1.3	<1.2	<1.2	<1.1	<1.1	<1.1	<1.1	**<3.3** [a]	NA	<1.0
Vanadium	mg/kg	1,100	78	NA	-	-	-	-	20.1	23.6	25.6	13.3	8.8	14.5	32	15.3	16.1	25.1	15.9	43.4	NA	20.6
Zinc	mg/kg	110,000	23,000	600	-	-	-	**600**	39.1	35.2	43.2	28.6	17.1	23.6	52	90.3	21.2	34.3	185	66.4	NA	29.5
General Chemistry																						
Solids, Percent	%	-	-	-	-	-	-	-	85.7	83.8	84	81.6	80.5	83.4	83.5	90.8	89.4	91.1	91.2	92.5	94.8	92.5
pH, SPLP Leachate	su	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volume, SPLP Leachate	l	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Weight, SPLP Leachate	kg	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dry Weight, SPLP Leachate	kg	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Beryllium	ug/l	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Lead	ug/l	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Nickel	ug/l	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/kg	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Footnotes:
ND (#) = Non-Detect (Method Detection Limit)
J = Indicates an estimated concentration
a = Elevated detection limit due to dilution required for high interfering element.
b = Result is from Run #2
All units given in mg/kg (ppm), unless otherwise noted

SWPE-IGWSRS: Soil-Water Partition Equation Site Specific Impact to Groundwater Soil Remediation Standard
Bold / Highlighted: Concentration exceeds regulatory criteria
TIC: Tentatively Identified Compound
* = Indicates laboratory error, samples exceeded their holding times and samples could not be analyzed.

NRDCSRS: New Jersey Non-Residential Direct Contact Soil Remediation Standard
RDCSRS: New Jersey Residential Direct Contact Soil Remediation Standard
IGWSSL: New Jersey Default Impact to Ground Water Soil Screening Level
DLC: Synethic Precipiated Leachate Criteria Default Leachate Criteria for Class II Groundwater
SPLP- SSLC: Synthentic Precipitate Leachate Procedure- Site Specific Leachate Criteria

Table 3
Quality Control Laboratory- Soil Sampling Analytical Summary Table
Former Hess Port Reading Complex
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Client Sample ID:		NRDCSRS	RDCSRS	IGWSRS	DLC	SPLP-IGWSRS	SWPE-IGWSRS	Applied Standard	P-7R	P-7R	P-8	P-8R	P-9	P-9R	P-10	P-10R	P-11	P-12	P-12	P-13	P-13	QC-TW-1
Depth									2.0-2.5	5.5-6.0	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	4.0-4.5	2.0-2.5	4.0-4.5	2.5-3.0
Lab Sample ID:									JB-55929-2	JB-55929-3 (5.5-	JB40351-3	JB-55929-4	JB40351-4	JB-55929-5	JB40351-5	JB-55929-6	JB40350-5	JB55929-7	JB55929-8	JB55929-9	JB55929-10	JB56243-2
Date Sampled:									12/17/2013	12/17/2013	6/20/2013	12/16/2013	6/20/2013	12/17/2013	6/20/2013	12/16/2013	6/21/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013	12/18/2013
GC Semi-volatiles (NJDEP EPH)																						
EPH (C9-C28)	mg/kg	-	-	-	-	-	-	-	NA	NA	17.1	NA	123	NA	ND (2.5)	NA	ND (2.5)	NA	NA	NA	NA	NA
EPH (>C28-C40)	mg/kg	-	-	-	-	-	-	-	NA	NA	ND (3.2)	NA	84.8	NA	ND (3.0)	NA	ND (3.1)	NA	NA	NA	NA	NA
Total EPH (C9-C40)	mg/kg	54,000	5,100	-	-	-	-	**5,100**	NA	NA	17.1	NA	208	NA	ND (2.5)	NA	ND (2.5)	NA	NA	NA	NA	NA
Total Fractionated EPH (C10-C40)	mg/kg	54,000	5,100	-	-	-	-	**5,100**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																						
Aluminum	mg/kg	NA	78,000	3,900	-	-	6,000	**6,000**	NA	NA	5,650	NA	4,560	NA	5,190	NA	4,830	**8,170**	**13,500**	5,620	**14,500**	NA
Antimony	mg/kg	450	31	6	-	-	-	**6**	NA	NA	<2.2	NA	<2.2	NA	<2.0	NA	<2.2	<1.9	<2.5	<2.0	<2.3	NA
Arsenic	mg/kg	19	19	19	-	-	19	**19**	NA	NA	7.6	NA	4	NA	7.7	NA	6.2	3.8	8.6	**78.7**	13.3	NA
Barium	mg/kg	59,000	16,000	1,300	-	-	-	**1,300**	NA	NA	28.9	NA	<22	NA	<20	NA	22.2	34.0	97.7	21.7	79.9	NA
Beryllium	mg/kg	140	16	0.5	-	0.68	0.7	**0.7**	NA	NA	0.58	NA	0.34	NA	0.46	NA	0.56	0.36	0.65	0.68	**0.81**	NA
Cadmium	mg/kg	78	78	1	-	-	-	**1**	NA	NA	<0.54	NA	0.61	NA	<0.51	NA	<0.55	<0.48	<0.61	<0.50	<0.58	NA
Calcium	mg/kg	-	-	-	-	-	-	-	NA	NA	<540	NA	<550	NA	2,720	NA	1,110	<480	<610	<500	1,120	NA
Chromium	mg/kg	-	-	-	-	-	-	-	NA	NA	24.4	NA	19.7	NA	29.2	NA	28.9	10.5	16.6	25.3	27.7	NA
Cobalt	mg/kg	590	1,600	59	-	-	-	**59**	NA	NA	<5.4	NA	<5.5	NA	<5.1	NA	5.5	<4.8	9.8	8.6	8.8	NA
Copper	mg/kg	45,000	3,100	7,300	-	-	-	**3,100**	NA	NA	14.4	NA	5.7	NA	12	NA	8.6	5.4	36.2	8.8	32.5	NA
Iron	mg/kg	-	-	-	-	-	-	-	NA	NA	20,100	NA	14,600	NA	23,600	NA	23,800	13,800	18,900	41,900	33,500	NA
Lead	mg/kg	800	400	90	-	4.9	90	**90**	NA	NA	17.2	NA	4.7	NA	10.3	NA	7.9	4.9	**97.7**	7.0	36.7	NA
Magnesium	mg/kg	-	-	-	-	-	-	-	NA	NA	1,850	NA	1,170	NA	1,890	NA	2,040	981	2,430	968	5,460	NA
Manganese	mg/kg	5,900	11,000	42	-	-	65	**65**	NA	NA	**179**	NA	**99.3**	NA	**149**	NA	**121**	**153**	**729**	**127**	**252**	NA
Mercury	mg/kg	65	23	0.1	-	-	0.1	**0.1**	NA	NA	<0.032	NA	0.095	NA	<0.032	NA	<0.033	<0.034	<0.039	<0.035	<0.037	NA
Nickel	mg/kg	23,000	1,600	31	-	19.2	48	**48**	NA	NA	18.9	NA	10.2	NA	17.8	NA	15	6.5	12.4	19.2	19.2	NA
Potassium	mg/kg	-	-	-	-	-	-	-	NA	NA	<1,100	NA	<1,100	NA	1,020	NA	1,100	<950	<1,200	<1,000	2,420	NA
Selenium	mg/kg	5,700	390	7	-	-	-	**7**	NA	NA	<2.2	NA	<2.2	NA	<2.0	NA	<2.2	<1.9	<2.5	<2.0	<2.3	NA
Silver	mg/kg	5,700	390	1	-	-	1	**1**	NA	NA	0.83	NA	<0.55	NA	0.88	NA	0.92	<0.48	<0.61	0.58	<0.58	NA
Sodium	mg/kg	-	-	-	-	-	-	-	NA	NA	<1,100	NA	<1,100	NA	<1,000	NA	<1,100	<950	<1,200	<1,000	<1,200	NA
Thallium	mg/kg	79	5	3	-	-	-	**3**	NA	NA	<1.1	NA	<1.1	NA	<1.0	NA	<1.1	<0.95	<1.2	<1.0	<1.2	NA
Vanadium	mg/kg	1,100	78	NA	-	-	-	-	NA	NA	20.5	NA	15.2	NA	20.9	NA	27.5	13.8	27.4	24.4	46.2	NA
Zinc	mg/kg	110,000	23,000	600	-	-	-	**600**	NA	NA	37.7	NA	25.4	NA	35.1	NA	31.4	19.4	43.6	52.8	54.8	NA
General Chemistry																						
Solids, Percent	%	-	-	-	-	-	-	-	93.3	84.3	93.1	93.1	89.9	96.1	95.4	95.6	93.5	96.7	84.8	92.2	86.0	83.1
pH, SPLP Leachate	su	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.49	NA	6.06	NA	NA
Volume, SPLP Leachate	l	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.008	NA	2.002	NA	NA
Weight, SPLP Leachate	kg	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1004	NA	0.1001	NA	NA
Dry Weight, SPLP Leachate	kg	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0971	NA	0.0923	NA	NA
SPLP Beryllium	ug/l	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0	NA	<5.0	NA	NA
SPLP Lead	ug/l	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	<50	NA	NA	NA	NA
SPLP Nickel	ug/l	-	-	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	NA	NA
Total Organic Carbon	mg/kg	-	-	-	-	-	-	-	2,920	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,660	NA	8,110

Footnotes:
ND (#) = Non-Detect (Method Detection Limit)
J = Indicates an estimated concentration
a = Elevated detection limit due to dilution required for high interfering element.
b = Result is from Run #2
All units given in mg/kg (ppm), unless otherwise noted

SWPE-IGWSRS: Soil-Water Partition Equation Site Sp
Bold / Highlighted: Concentration exceeds regulatory c
TIC: Tentatively Identified Compound
* = Indicates laboratory error, samples exceeded their

All units given in mg/kg-ppm, unless otherwise noted
Bold / Highlighted: Concentration exceeds regulatory criteria
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SWPE-IGWSRS: Soil-Water Partition Equation Site Specific Impact to Groundwater Soil Remediation Standard
NRDCSRS: New Jersey Non-Residential Direct Contact Soil Remediation Standard
RDCSRS: New Jersey Residential Direct Contact Soil Remediation Standard
IGWSSL: New Jersey Default Impact to Ground Water Soil Screening Level
SPLP- DLC: Synethic Precipiated Leachate Criteria Default Leachate Criteria for Class II Groundwater
SPLP- SSLC: Synthentic Precipitate Leachate Procedure- Site Specific Leachate Criteria

Table 4

Hess Corporation Port Reading Complex
750 Cliff Rd
Port Reading, Middlesex County, New Jersey
Quality Control Laboratory Groundwater Sampling Comparison Table

Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).	**Exceed**

Client Sample ID:		**NJ Groundwater Class IIA Criteria (NJAC 7:9C 7/07)[1]**	**QC-TW-1**
Lab Sample ID:			**JB56243-1**
Date Sampled:			**12/19/2013**
Matrix:			**Ground Water**
GC/MS Volatiles (SW846 8260B)			
Acetone	ug/l	6,000	ND (3.3)
Benzene	ug/l	1	**1.8**
Bromochloromethane	ug/l	-	ND (0.42)
Bromodichloromethane	ug/l	1	ND (0.21)
Bromoform	ug/l	4	ND (0.30)
Bromomethane	ug/l	10	ND (0.56)
2-Butanone (MEK)	ug/l	300	ND (3.2)
Carbon disulfide	ug/l	700	ND (0.18)
Carbon tetrachloride	ug/l	1	ND (0.23)
Chlorobenzene	ug/l	50	ND (0.35)
Chloroethane	ug/l	-	ND (0.39)
Chloroform	ug/l	70	ND (0.25)
Chloromethane	ug/l	-	ND (0.36)
Cyclohexane	ug/l	-	0.44 J
1,2-Dibromo-3-chloropropane	ug/l	0.02	ND (1.3)
Dibromochloromethane	ug/l	1	ND (0.19)
1,2-Dibromoethane	ug/l	0.03	ND (0.16)
1,2-Dichlorobenzene	ug/l	600	ND (0.20)
1,3-Dichlorobenzene	ug/l	600	ND (0.31)
1,4-Dichlorobenzene	ug/l	75	ND (0.30)
Dichlorodifluoromethane	ug/l	1,000	ND (0.63)
1,1-Dichloroethane	ug/l	50	0.40 J
1,2-Dichloroethane	ug/l	2	ND (0.22)
1,1-Dichloroethene	ug/l	1	0.41 J
cis-1,2-Dichloroethene	ug/l	70	ND (0.24)
trans-1,2-Dichloroethene	ug/l	100	ND (0.38)
1,2-Dichloropropane	ug/l	1	ND (0.28)
cis-1,3-Dichloropropene	ug/l	-	ND (0.15)
trans-1,3-Dichloropropene	ug/l	-	ND (0.21)
Ethylbenzene	ug/l	700	ND (0.21)
Freon 113	ug/l	-	ND (0.77)
2-Hexanone	ug/l	-	ND (1.7)
Isopropylbenzene	ug/l	700	ND (0.22)
Methyl Acetate	ug/l	7000	ND (1.5)
Methylcyclohexane	ug/l	-	ND (0.15)
Methyl Tert Butyl Ether	ug/l	70	50.2
4-Methyl-2-pentanone(MIBK)	ug/l	-	ND (1.5)
Methylene chloride	ug/l	3	ND (0.86)
Styrene	ug/l	100	ND (0.30)

Table 4			
Hess Corporation Port Reading Complex			
750 Cliff Rd			
Port Reading, Middlesex County, New Jersey			
Quality Control Laboratory Groundwater Sampling Comparison Table			
1,1,2,2-Tetrachloroethane	ug/l	1	ND (0.20)
Tetrachloroethene	ug/l	1	ND (0.25)
Toluene	ug/l	600	ND (0.44)
1,2,3-Trichlorobenzene	ug/l	-	ND (0.24)
1,2,4-Trichlorobenzene	ug/l	9	ND (0.22)
1,1,1-Trichloroethane	ug/l	30	0.66 J
1,1,2-Trichloroethane	ug/l	3	ND (0.21)
Trichloroethene	ug/l	1	ND (0.50)
Trichlorofluoromethane	ug/l	2,000	3.9 J
Vinyl chloride	ug/l	1	ND (0.41)
m,p-Xylene	ug/l	-	ND (0.40)
o-Xylene	ug/l	-	ND (0.19)
Xylene (total)	ug/l	1,000	ND (0.19)
GC/MS Volatile TIC			
Total TIC, Volatile	ug/l	-	5.7 J
Total Alkanes	ug/l	-	0
GC/MS Semi-volatiles (SW846 8270D)			
2-Chlorophenol	ug/l	40	ND (0.97)
4-Chloro-3-methyl phenol	ug/l	-	ND (1.8)
2,4-Dichlorophenol	ug/l	20	ND (1.2)
2,4-Dimethylphenol	ug/l	100	ND (1.5)
2,4-Dinitrophenol	ug/l	40	ND (17)
4,6-Dinitro-o-cresol	ug/l	-	ND (0.99)
2-Methylphenol	ug/l	-	ND (1.0)
3&4-Methylphenol	ug/l	-	ND (0.93)
2-Nitrophenol	ug/l	-	ND (1.5)
4-Nitrophenol	ug/l	-	ND (5.2)
Phenol	ug/l	2,000	ND (1.3)
2,3,4,6-Tetrachlorophenol	ug/l	200	ND (0.94)
2,4,5-Trichlorophenol	ug/l	700	ND (1.6)
2,4,6-Trichlorophenol	ug/l	20	ND (1.3)
Acetophenone	ug/l	700	ND (0.29)
Atrazine	ug/l	3	ND (0.49)
Benzaldehyde	ug/l	-	ND (3.3)
4-Bromophenyl phenyl ether	ug/l	-	ND (0.36)
Butyl benzyl phthalate	ug/l	100	ND (0.29)
1,1'-Biphenyl	ug/l	400	ND (0.30)
2-Chloronaphthalene	ug/l	600	ND (0.30)
4-Chloroaniline	ug/l	30	ND (0.53)
Carbazole	ug/l	-	ND (0.36)
Caprolactam	ug/l	-	ND (0.69)
bis(2-Chloroethoxy)methane	ug/l	-	ND (0.31)
bis(2-Chloroethyl)ether	ug/l	7	ND (0.31)
bis(2-Chloroisopropyl)ether	ug/l	300	ND (0.45)
4-Chlorophenyl phenyl ether	ug/l	-	ND (0.31)

Table 4			
Hess Corporation Port Reading Complex			
750 Cliff Rd			
Port Reading, Middlesex County, New Jersey			
Quality Control Laboratory Groundwater Sampling Comparison Table			
2,4-Dinitrotoluene	ug/l	-	ND (0.43)
2,6-Dinitrotoluene	ug/l	-	ND (0.46)
3,3'-Dichlorobenzidine	ug/l	30	ND (0.36)
1,4-Dioxane	ug/l	-	ND (0.27)
Dibenzofuran	ug/l	-	ND (0.27)
Di-n-butyl phthalate	ug/l	700	ND (0.56)
Di-n-octyl phthalate	ug/l	100	ND (0.31)
Diethyl phthalate	ug/l	6,000	ND (0.33)
Dimethyl phthalate	ug/l	-	ND (0.28)
bis(2-Ethylhexyl)phthalate	ug/l	3	ND (0.59)
Hexachlorobutadiene	ug/l	1	ND (0.51)
Hexachlorocyclopentadiene	ug/l	40	ND (7.1)
Hexachloroethane	ug/l	7	ND (0.55)
Isophorone	ug/l	40	ND (0.27)
2-Methylnaphthalene	ug/l	-	ND (0.38)
2-Nitroaniline	ug/l	-	ND (1.1)
3-Nitroaniline	ug/l	-	ND (1.3)
4-Nitroaniline	ug/l	-	ND (1.7)
Nitrobenzene	ug/l	6	ND (0.42)
N-Nitroso-di-n-propylamine	ug/l	10	ND (0.30)
N-Nitrosodiphenylamine	ug/l	10	ND (0.31)
1,2,4,5-Tetrachlorobenzene	ug/l	-	ND (0.31)
GC/MS Semi-volatiles (SW846 8270D BY SIM)			
Pentachlorophenol	ug/l	0.3	ND (0.10)
Acenaphthene	ug/l	400	ND (0.020)
Acenaphthylene	ug/l	-	ND (0.024)
Anthracene	ug/l	2,000	ND (0.020)
Benzo(a)anthracene	ug/l	0.1	ND (0.012)
Benzo(a)pyrene	ug/l	0.1	ND (0.012)
Benzo(b)fluoranthene	ug/l	0.2	ND (0.010)
Benzo(g,h,i)perylene	ug/l	-	ND (0.016)
Benzo(k)fluoranthene	ug/l	0.5	ND (0.015)
Chrysene	ug/l	5	ND (0.012)
Dibenzo(a,h)anthracene	ug/l	0.3	ND (0.017)
Fluoranthene	ug/l	300	ND (0.013)
Fluorene	ug/l	300	ND (0.017)
Hexachlorobenzene	ug/l	0.02	ND (0.017)
Indeno(1,2,3-cd)pyrene	ug/l	0.2	ND (0.014)
Naphthalene	ug/l	300	0.288
Phenanthrene	ug/l	-	ND (0.021)
Pyrene	ug/l	200	ND (0.015)
GC/MS Semi-volatile TIC			
Total TIC, Semi-Volatile	ug/l	-	50.2 J
Total Alkanes	ug/l	-	0

Table 4

Hess Corporation Port Reading Complex

750 Cliff Rd

Port Reading, Middlesex County, New Jersey

Quality Control Laboratory Groundwater Sampling Comparison Table

Metals Analysis			
Aluminum	ug/l	200	**123,000**
Antimony	ug/l	6	<6.0
Arsenic	ug/l	3	**34.2 [a]**
Barium	ug/l	6,000	4200
Beryllium	ug/l	1	**22.3**
Cadmium	ug/l	4	**4.3**
Calcium	ug/l	-	154000
Chromium	ug/l	70	**119**
Cobalt	ug/l	-	114
Copper	ug/l	1,300	206
Iron	ug/l	300	**139,000 [a]**
Lead	ug/l	5	**85.0 [a]**
Magnesium	ug/l	-	87400
Manganese	ug/l	50	**15,900**
Mercury	ug/l	2	**9.6**
Nickel	ug/l	100	**198**
Potassium	ug/l	-	15800
Selenium	ug/l	40	<10
Silver	ug/l	40	<10
Sodium	ug/l	50,000	**227,000**
Thallium	ug/l	2	<4.0 [a]
Vanadium	ug/l	-	244
Zinc	ug/l	2,000	456
General Chemistry			
Nitrogen, Ammonia	mg/l	3	0.61

Footnotes:

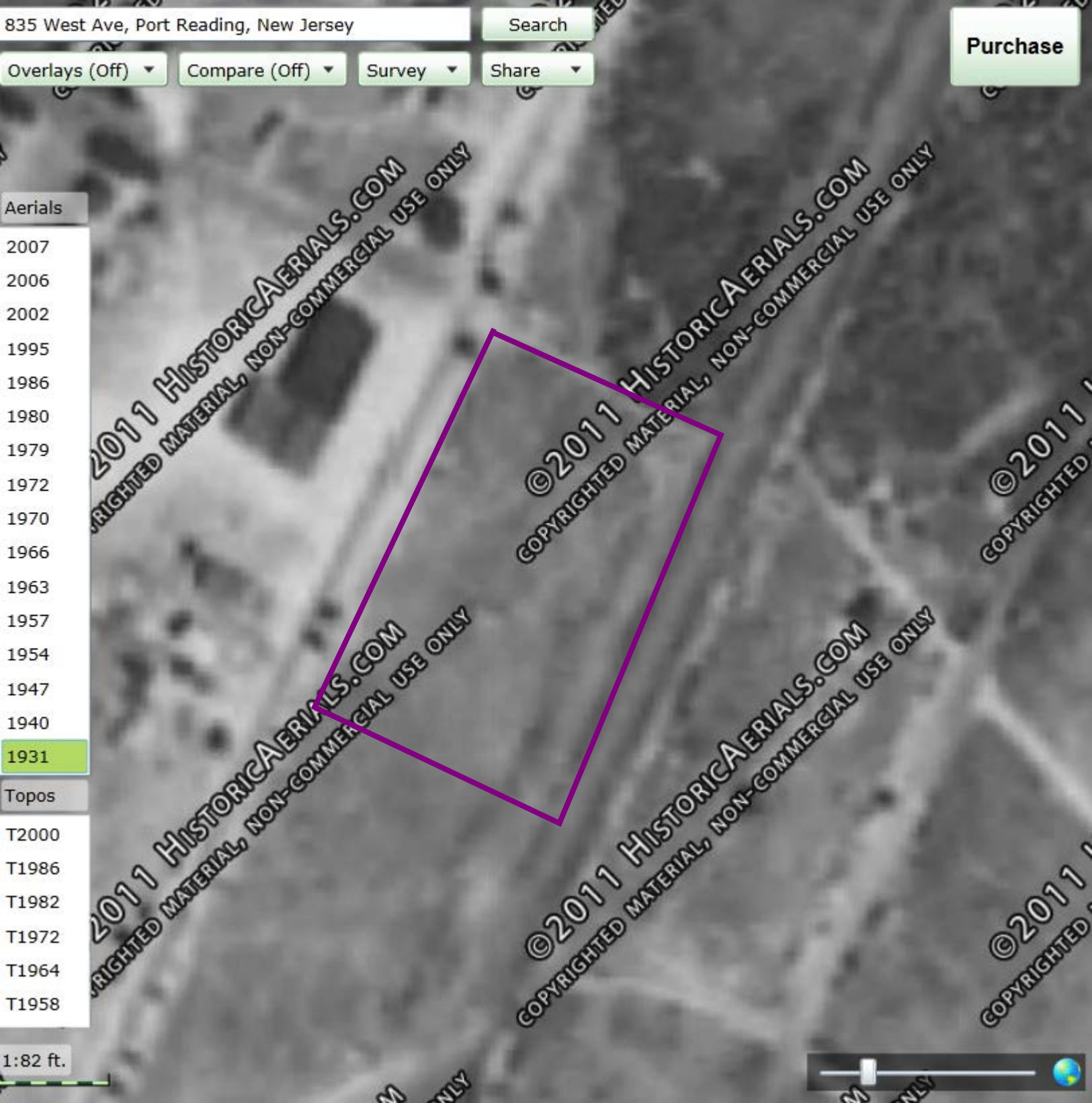
[a] Elevated detection limit due to dilution required for high interfering element.

Regulatory limits listed in this document have been obtained from the latest version of the regulations cited and are used for advisory purposes only. Accutest assumes no responsibility for errors in regulatory documents or changes to criteria detailed in later versions of the referenced regulation. It is the responsibility of the user to verify these limits before using or reporting any data.

13 results exceeded regulatory criteria.

APPENDIX I

Historic Aerial Photographs (1931-2007)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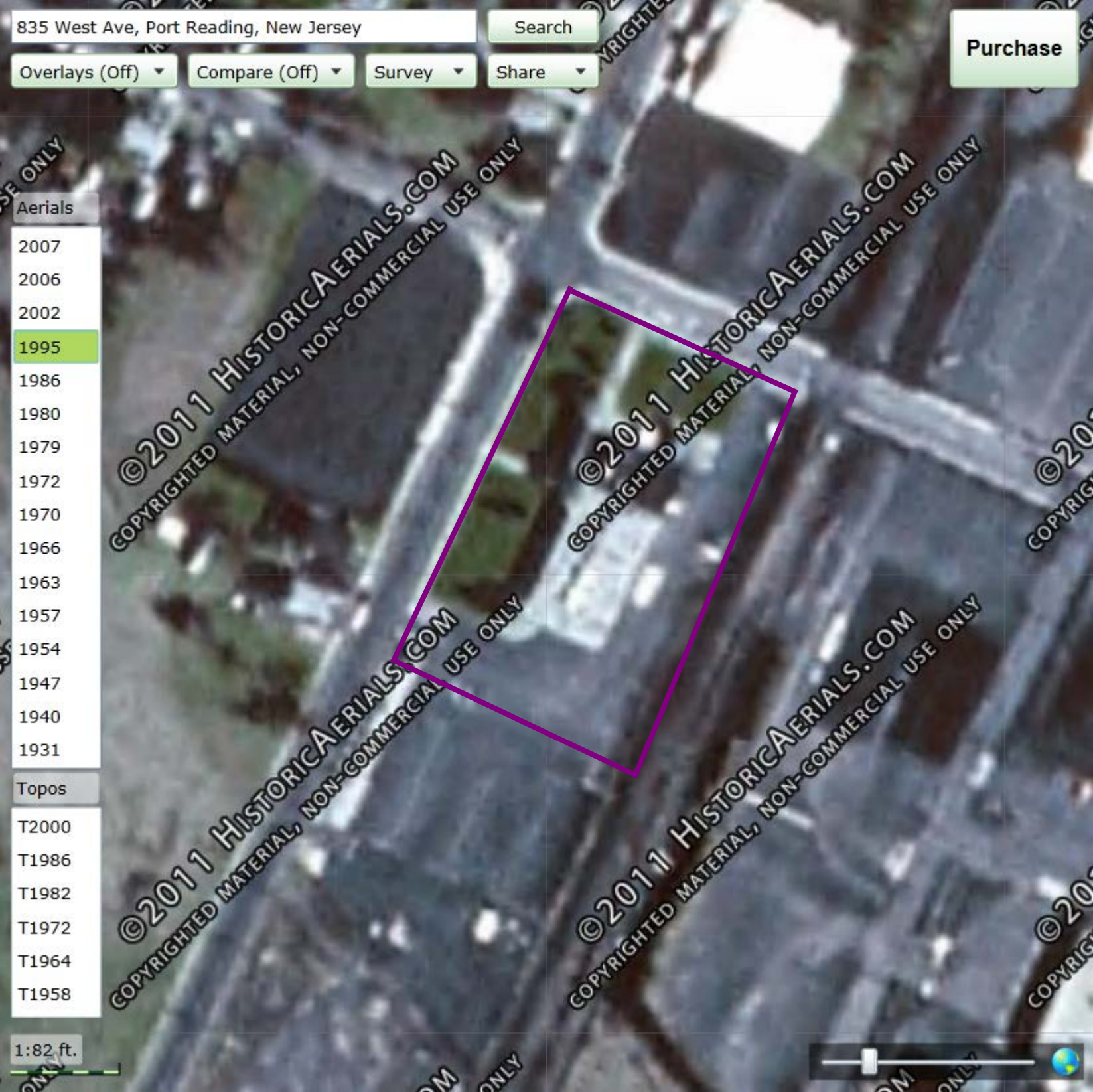

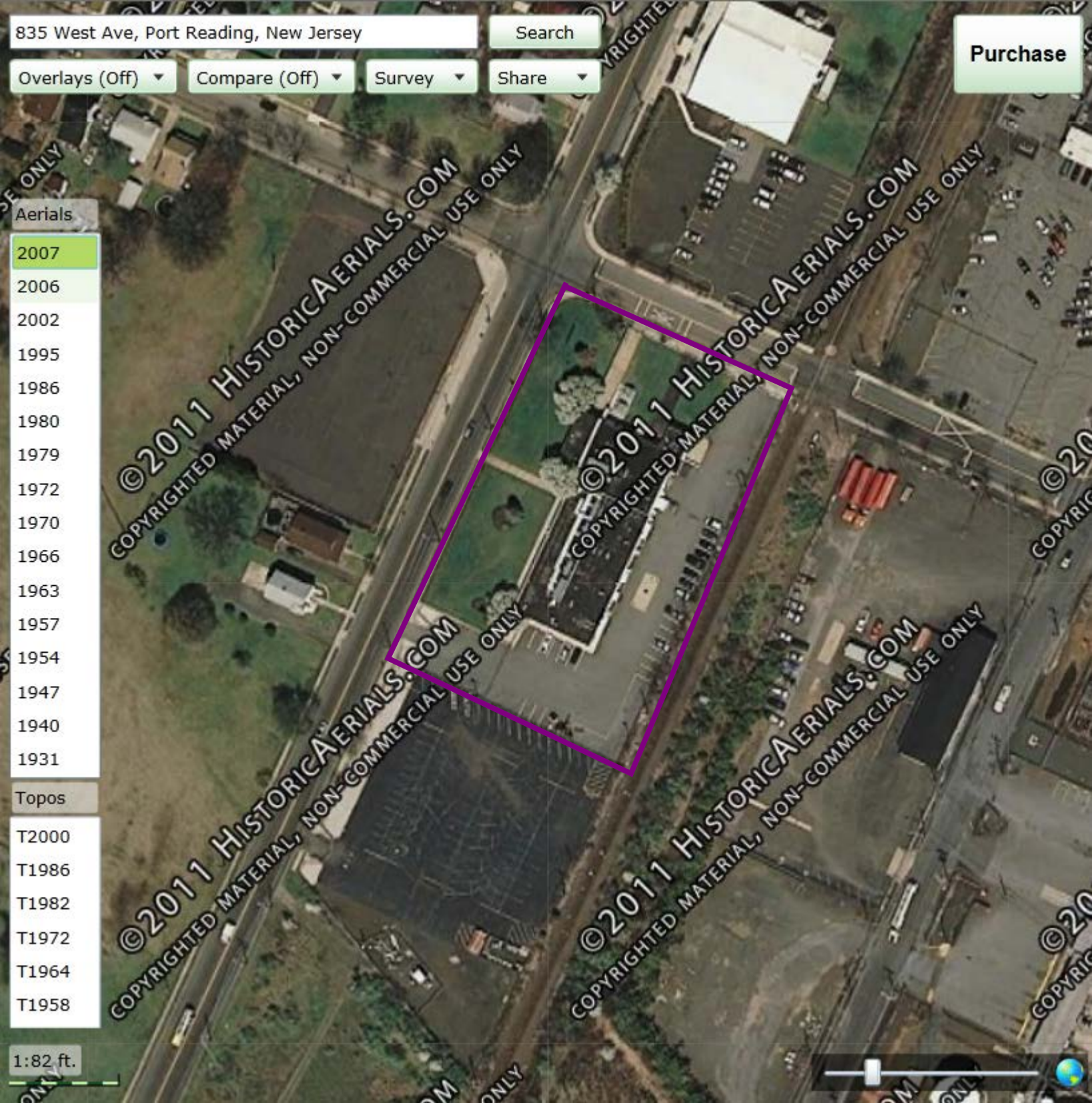
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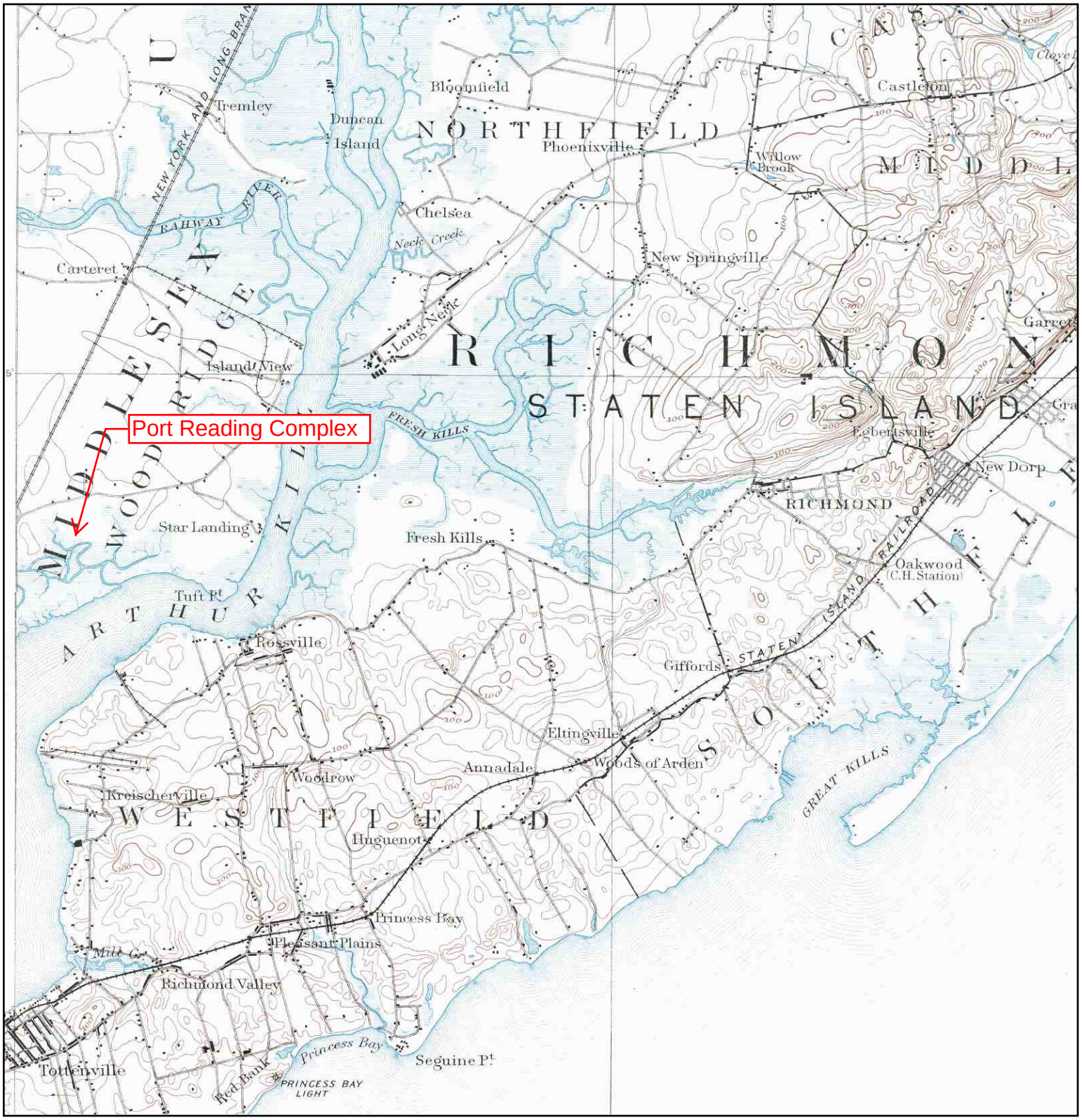
APPENDIX II

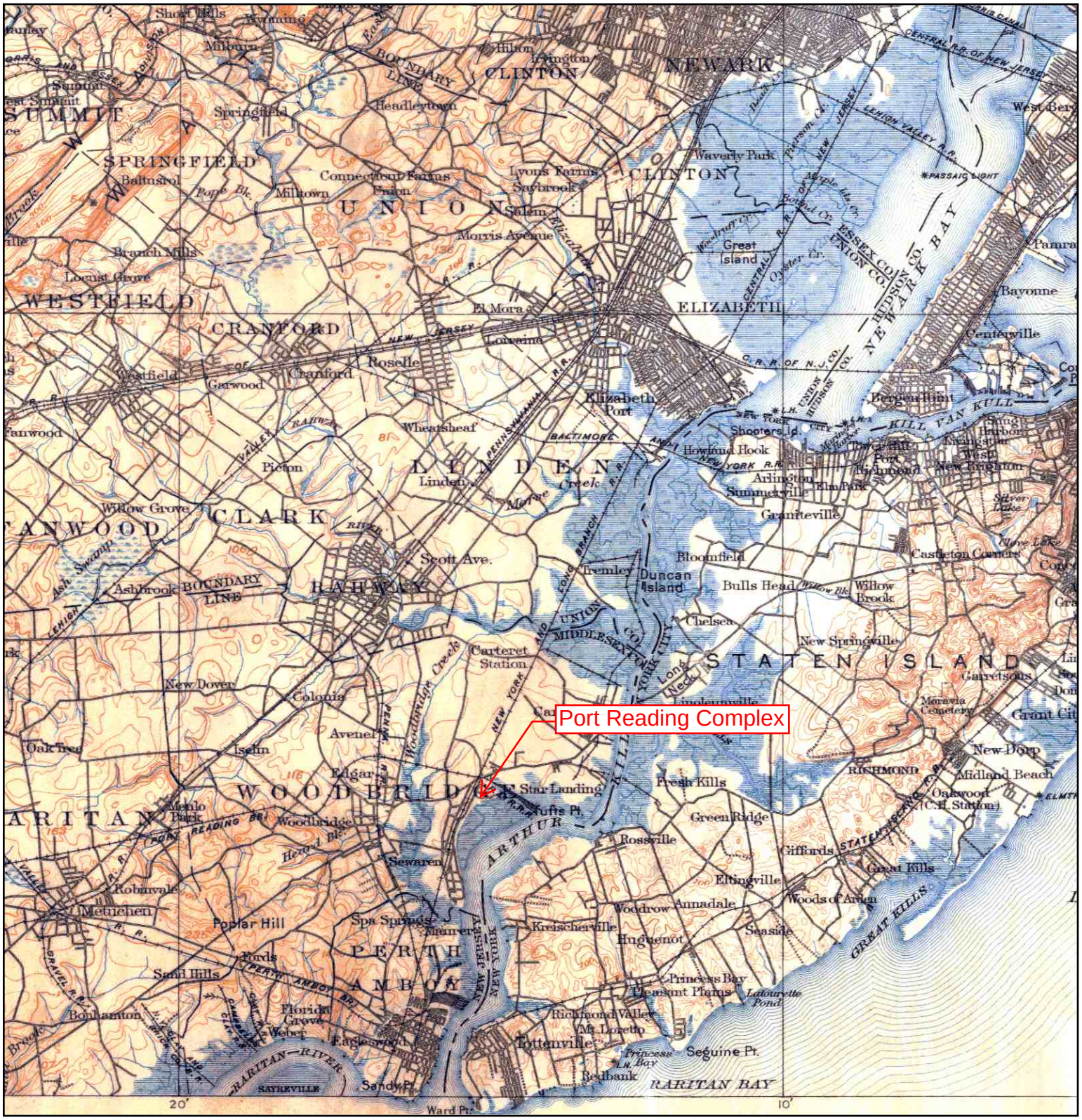
Historic Topographic Maps (1891-1981)

Historical Topographic Map



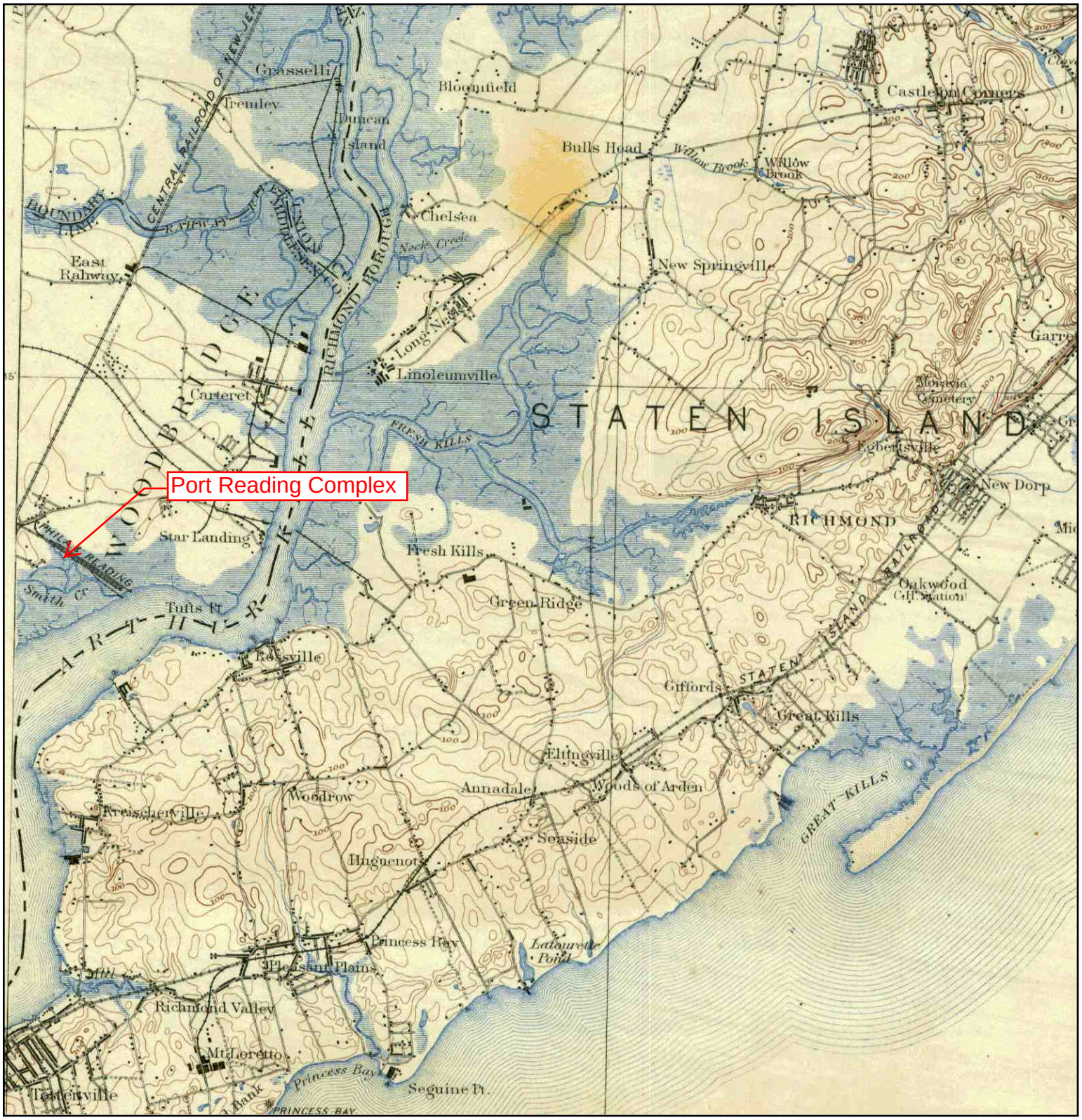
N	TARGET QUAD NAME: STATEN ISLAND MAP YEAR: 1891 SERIES: 15 SCALE: 1:62500	SITE NAME: Coal Dock Area ADDRESS: 1000 West Middlesex Avenue Woodbridge, NJ 07077 LAT/LONG: 40.5644 / 74.24	CLIENT: EnviroTrac Environmental Svcs. CONTACT: Dave Carlson INQUIRY#: 2445975.4 RESEARCH DATE: 03/19/2009

Historical Topographic Map



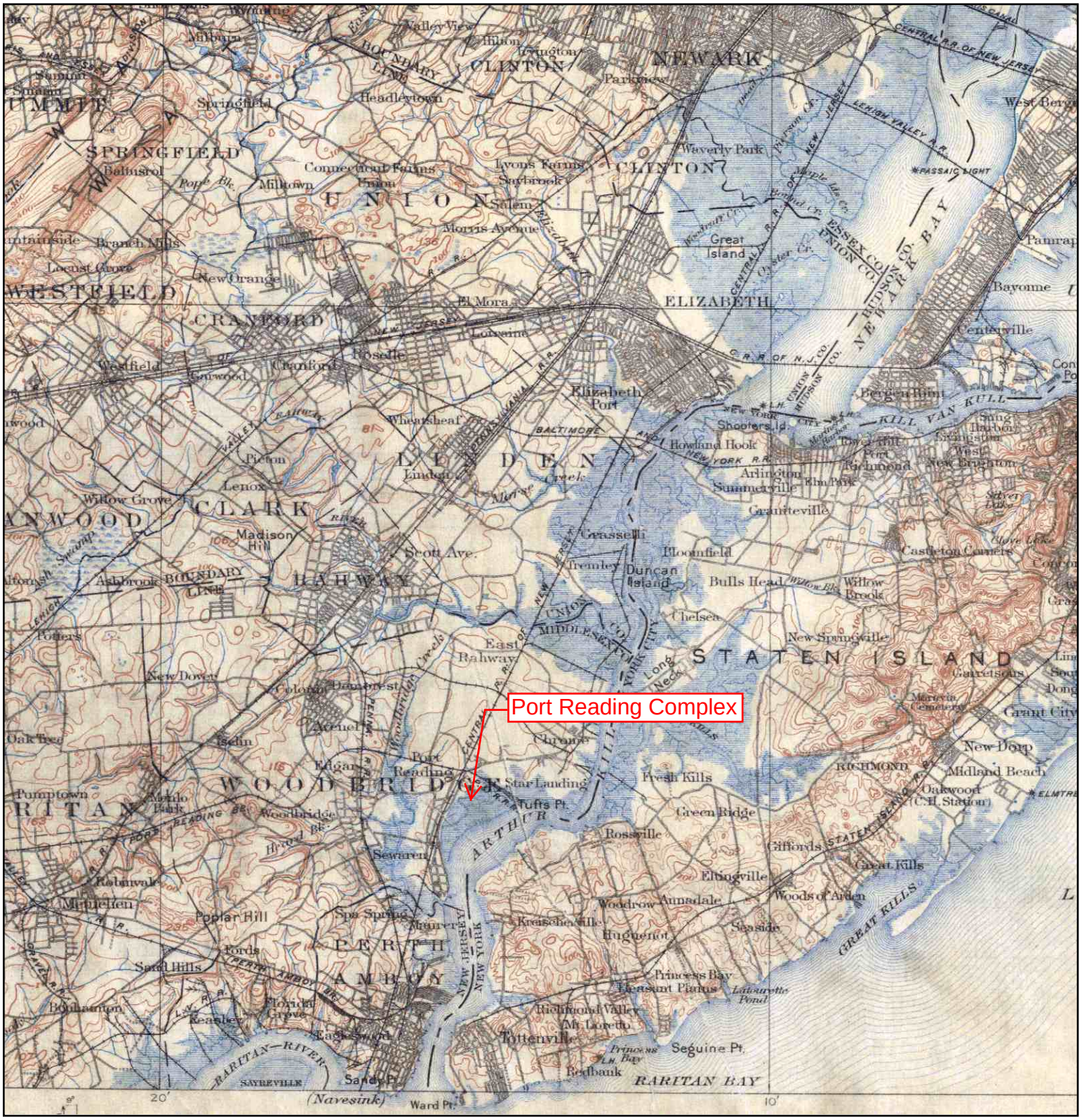
N	TARGET QUAD NAME: PASSAIC MAP YEAR: 1900 SERIES: 30 SCALE: 1:125000	SITE NAME: Coal Dock Area ADDRESS: 1000 West Middlesex Avenue Woodbridge, NJ 07077 LAT/LONG: 40.5644 / 74.24	CLIENT: EnviroTrac Environmental Svcs. CONTACT: Dave Carlson INQUIRY#: 2445975.4 RESEARCH DATE: 03/19/2009

Historical Topographic Map



N	TARGET QUAD NAME: STATEN ISLAND MAP YEAR: 1900 SERIES: 15 SCALE: 1:62500	SITE NAME: Coal Dock Area ADDRESS: 1000 West Middlesex Avenue Woodbridge, NJ 07077 LAT/LONG: 40.5644 / 74.24	CLIENT: EnviroTrac Environmental Svcs. CONTACT: Dave Carlson INQUIRY#: 2445975.4 RESEARCH DATE: 03/19/2009

Historical Topographic Map

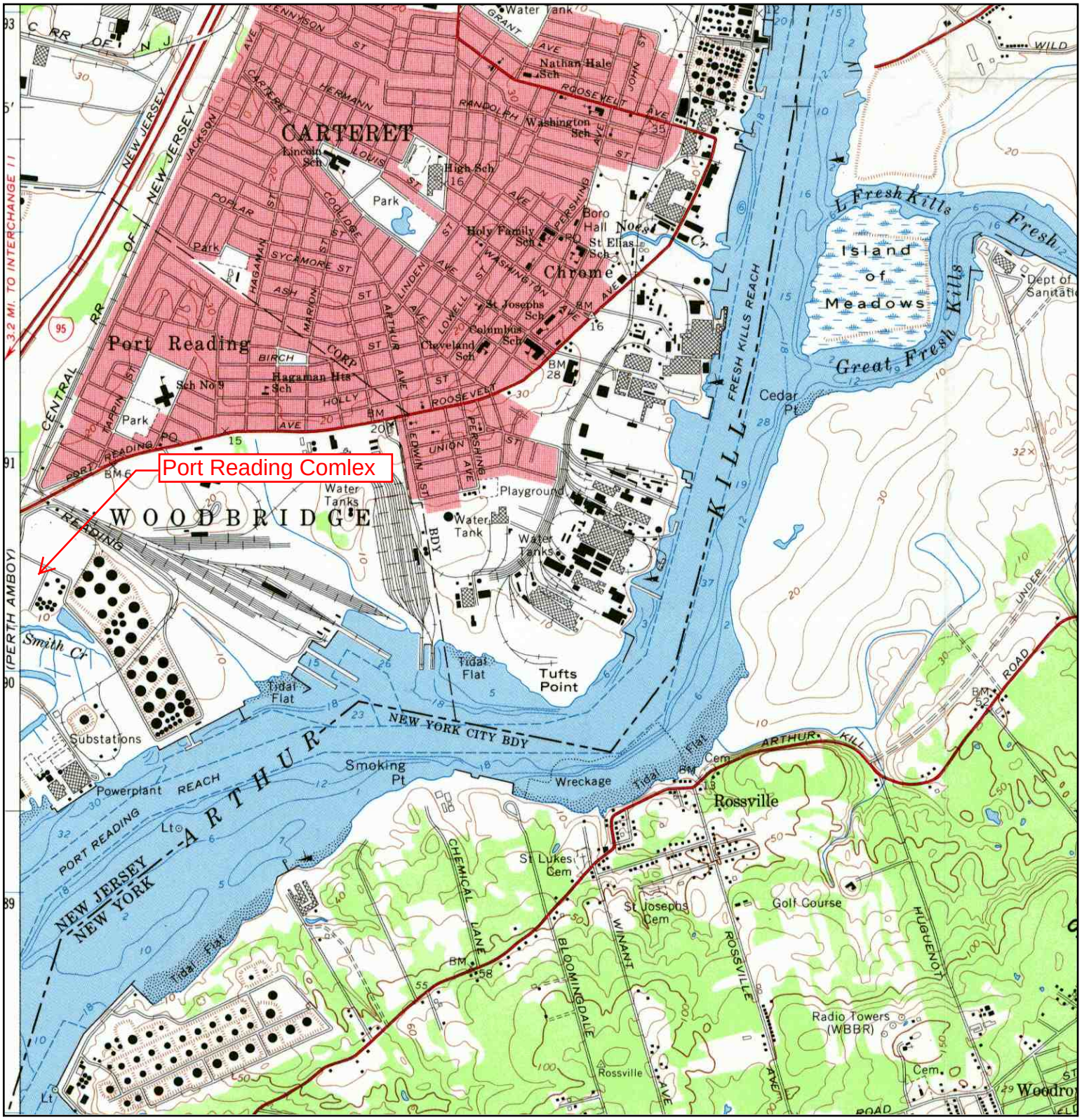


N	TARGET QUAD NAME: PASSAIC MAP YEAR: 1905 SERIES: 30 SCALE: 1:125000	SITE NAME: Coal Dock Area ADDRESS: 1000 West Middlesex Avenue Woodbridge, NJ 07077 LAT/LONG: 40.5644 / 74.24	CLIENT: EnviroTrac Environmental Svcs. CONTACT: Dave Carlson INQUIRY#: 2445975.4 RESEARCH DATE: 03/19/2009

Historical Topographic Map

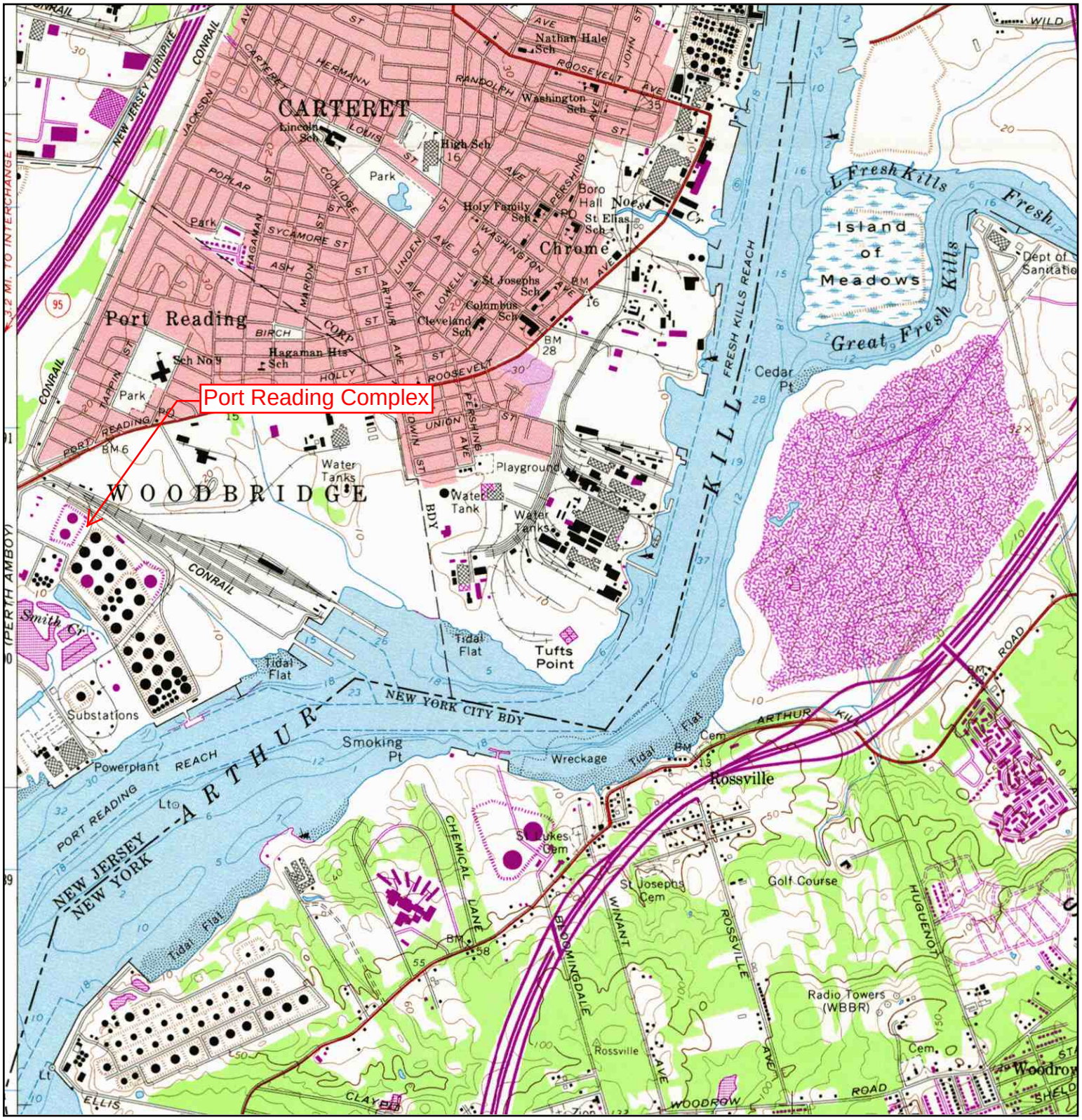
N	TARGET QUAD NAME: ARTHUR KILL MAP YEAR: 1947 SERIES: 7.5 SCALE: 1:25000	SITE NAME: Coal Dock Area ADDRESS: 1000 West Middlesex Avenue Woodbridge, NJ 07077 LAT/LONG: 40.5644 / 74.24	CLIENT: EnviroTrac Environmental Svcs. CONTACT: Dave Carlson INQUIRY#: 2445975.4 RESEARCH DATE: 03/19/2009

Historical Topographic Map



N	TARGET QUAD NAME: ARTHUR KILL MAP YEAR: 1966 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Coal Dock Area ADDRESS: 1000 West Middlesex Avenue Woodbridge, NJ 07077 LAT/LONG: 40.5644 / 74.24	CLIENT: EnviroTrac Environmental Svcs. CONTACT: Dave Carlson INQUIRY#: 2445975.4 RESEARCH DATE: 03/19/2009

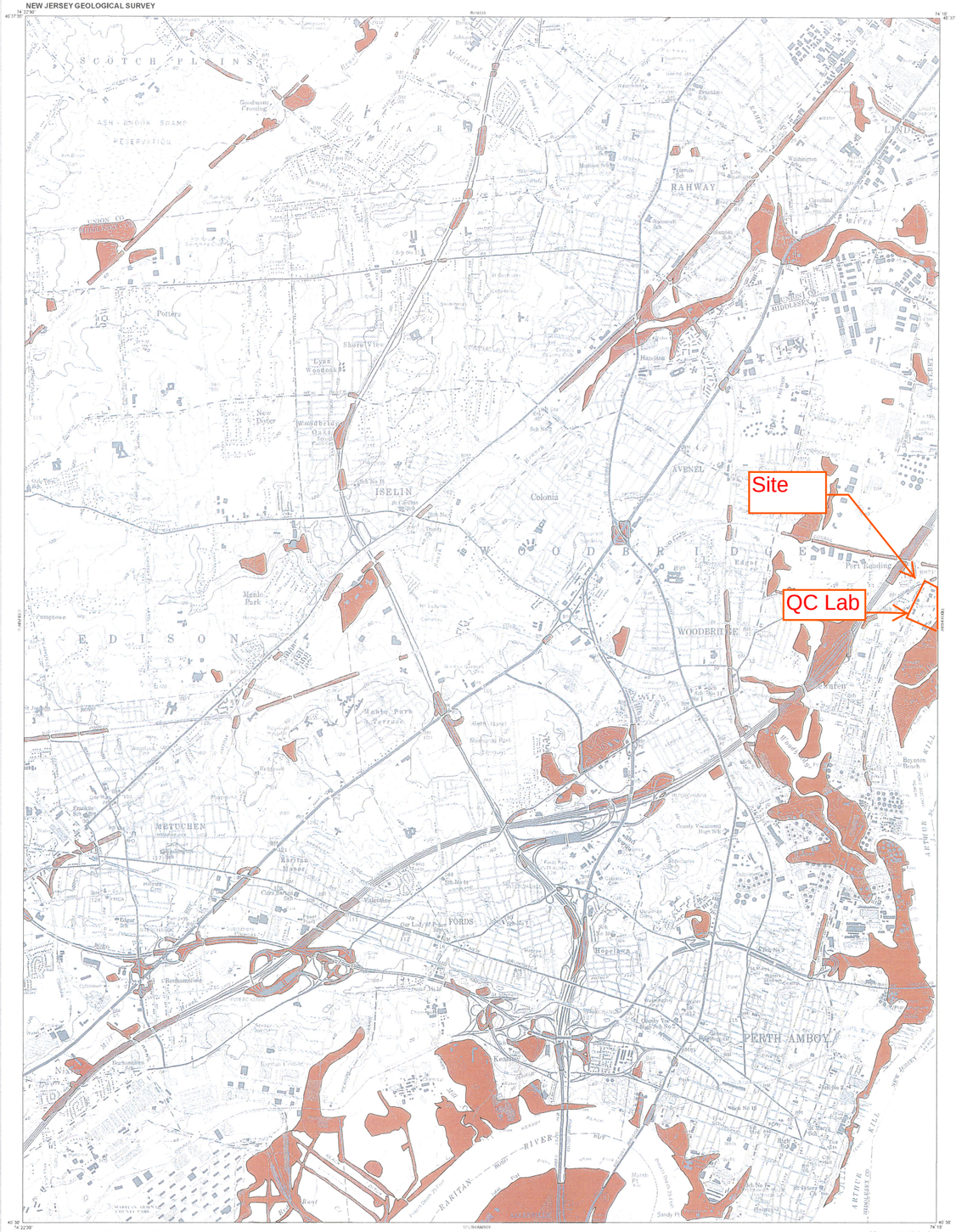
Historical Topographic Map



N	TARGET QUAD NAME: ARTHUR KILL MAP YEAR: 1981 PHOTOREVISED FROM:1966 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Coal Dock Area ADDRESS: 1000 West Middlesex Avenue Woodbridge, NJ 07077 LAT/LONG: 40.5644 / 74.24	CLIENT: EnviroTrac Environmental Svcs. CONTACT: Dave Carlson INQUIRY#: 2445975.4 RESEARCH DATE: 03/19/2009

APPENDIX III

Historic Fill Quadrangle Maps (Arthur Kill and Perth Amboy)



The information shown here is subject to periodic update and revision. Base map from U.S. Geological Survey, 1956. Photorevised 1981. Digital data is available upon request from the New Jersey Geological Survey.

Fill mapping by S.D. Stanford
GIS cartography by M. Grold

EXPLANATION

The "Brownfield and Contaminated Site Remediation Act" (N.J.S.A. 58:10B-1 et seq.) requires the Department of Environmental Protection to map regions of the state where large areas of historic fill exist and make this information available to the public. This map shows areas of historic fill covering more than approximately 5 acres. For the purposes of this map, historic fill is non-indigenous material placed on a site in order to raise the topographic elevation of the site. No representation is made as to the composition of the fill or presence of contamination in the fill. Some areas mapped as fill may contain chemical-production waste or ore-processing waste that exclude them from the legislative definition of historic fill.

Fill was mapped from stereo aerial photography taken in March 1979, supplemented in places by planimetric aerial photography taken in the spring of 1991 and 1992. Additional areas of fill were mapped by comparing areas of swamp, marsh, and floodplain shown on archival topographic and geologic maps on file at the N. J. Geological Survey, dated between 1840 and 1910, to their modern extent. In a few places, fill was mapped from field observations and from drillers' logs of wells and borings.

Most urban and suburban areas are underlain by a discontinuous layer of excavated indigenous soil mixed with varying amounts of non-indigenous material. This material generally does not meet the definition of historic fill and is not depicted on this map. Also, there may be historic fills that are not detectable on aerial photography or by archival map interpretation and so are not shown on this map, particularly along streams in urban and suburban areas.

Use of the maps related to the Technical Rules, N.J.A.C. 7:26E

This map is provided for informational purposes only. The use of this map as the only source of information regarding the presence of historic fill at a site does not fulfill the diligent inquiry requirements of the Preliminary Assessment set forth at, N.J.A.C. 7:26E-3.1(c). This map may be used as one source of information to fulfill the requirements of the Site Investigation at, N.J.A.C. 7:26E-3.12. **This map is not intended to fulfill the Remedial Investigation requirements associated with historic fill at, N.J.A.C. 7:26E-4.6(b).**

Historic Fill
Non-Fill Area

APPROXIMATE MEAN DECLINATION, 1998

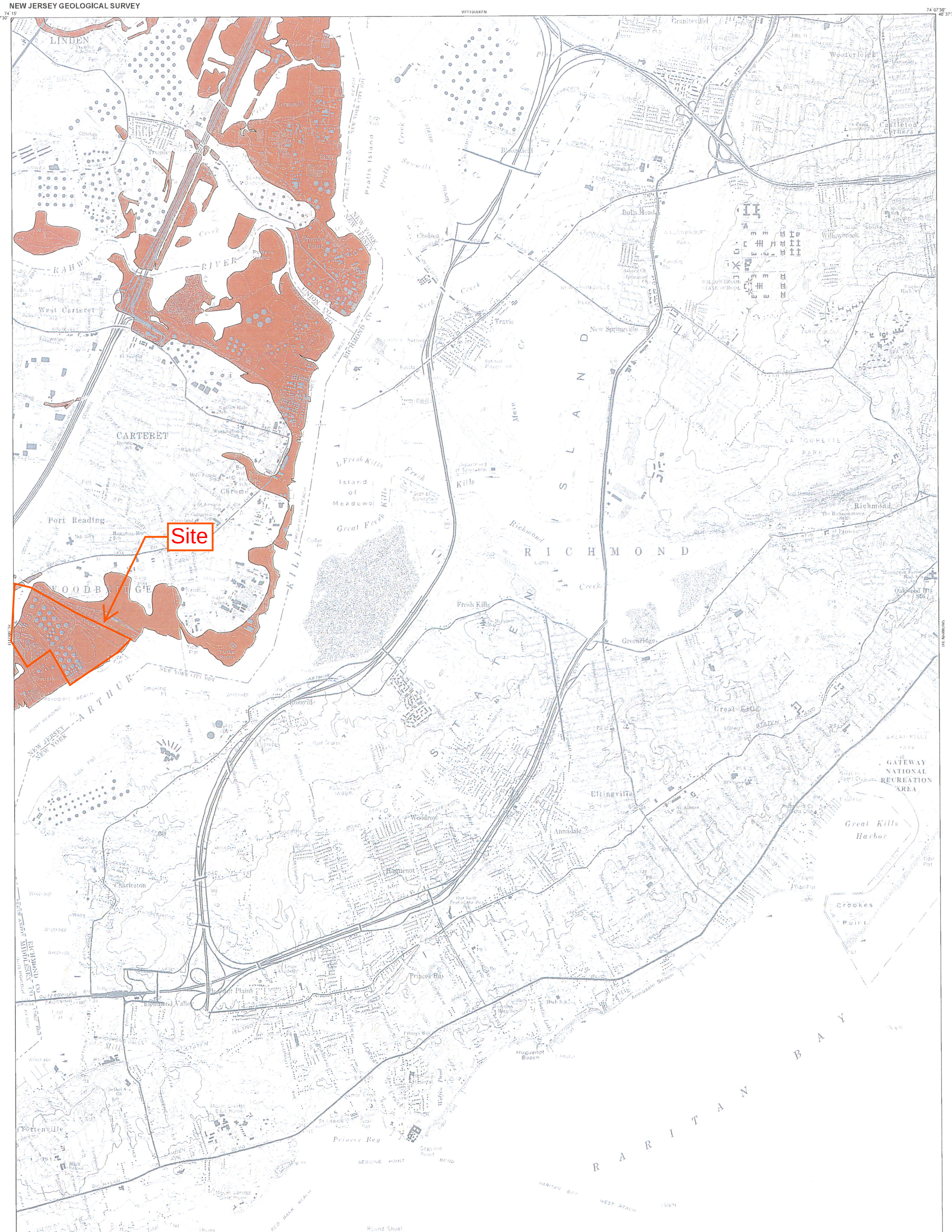
SCALE 1:24 000

CONTOUR INTERVAL, 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

HISTORIC FILL OF THE PERTH AMBOY QUADRANGLE

2004

DEPARTMENT OF ENVIRONMENTAL PROTECTION
LAND USE MANAGEMENT
NEW JERSEY GEOLOGICAL SURVEY



The information shown here is subject to periodic update and revision. Base map from U.S. Geological Survey, 1966. Photorevised 1981. Digital data is available upon request from the New Jersey Geological Survey.

Fill mapping by S.D. Stanford
GIS cartography by M. Girard

EXPLANATION

The "Brownfield and Contaminated Site Remediation Act" (N.J.S.A. 58:10B-1 et seq.) requires the Department of Environmental Protection to map regions of the state where large areas of historic fill exist and make this information available to the public. This map shows areas of historic fill covering more than approximately 5 acres. For the purposes of this map, historic fill is non-indigenous material placed on a site in order to raise the topographic elevation of the site. No representation is made as to the composition of the fill or presence of contamination in the fill. Some areas mapped as fill may contain chemical-production waste or ore-processing waste that exclude them from the legislative definition of historic fill.

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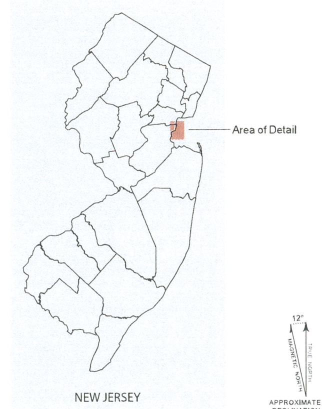
Use of the maps related to the Technical Rules, N.J.A.C. 7:26E

This map is provided for informational purposes only. The use of this map as the only source of information regarding the presence of historic fill at a site does not fulfill the diligent inquiry requirements of the Preliminary Assessment set forth at, N.J.A.C. 7:26E-3.1(c). This map may be used as one source of information to fulfill the requirements of the Site Investigation at, N.J.A.C. 7:26E-3.12. **This map is not intended to fulfill the Remedial Investigation requirements associated with historic fill at, N.J.A.C. 7:26E-4.6(b).**

Historic Fill
Non-Fill Area



APPROXIMATE MEAN DECLINATION 1998

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

HISTORIC FILL OF THE ARTHUR KILL QUADRANGLE

2004

APPENDIX IV

NJDEP 2001 Geologic Survey Map

Prepared in cooperation with the
U. S. GEOLOGICAL SURVEY
NATIONAL GEOLOGIC MAPPING PROGRAM

INTRODUCTION

Surficial materials in the Perth Amboy and Arthur Kill quadrangles consist of glacial, stream, wetland, and weathered bedrock sediment. The glacial sediment includes sand, gravel, silt, and clay laid down by meltwater in glacial lakes and river plains, and till laid down by glacial ice as a sheet on the bedrock surface and as the terminal moraine. The sand, gravel, silt, and clay, known collectively as stratified drift, are as much as 90 feet thick. Till is as much as 130 feet thick. The stream sediment includes sand, gravel, and silt deposited in floodplains, stream terraces, and former river plains. It is as much as 40 feet thick. The wetland sediment includes peat and organic silt and clay deposited in freshwater swamps and saltwater marshes and estuaries. It is as much as 100 feet thick. The weathered bedrock consists of silty clay and shale fragments formed by chemical and mechanical decomposition of shale bedrock of Triassic and Jurassic age. It is generally less than 10 feet thick.

The accompanying map and sections show the surface extent and subsurface relations of these deposits. Figure 1 shows the extent of glacial lakes and river plains, the terminal moraine, and recessional ice margins. Table 1 lists water-well and test-boring logs used to plot bedrock-surface topography and to infer the subsurface distribution of deposits. Table 2 lists the composition of pebbles in the glacial deposits. The correlation chart shows the temporal relationships and age of the deposits.

DESCRIPTION OF MAP UNITS

Postglacial Deposits—These include artificial fill, stream, wetland, and beach sediment deposited since retreat of the late Wisconsinan glacier. Although wind-swamp deposits began to accumulate shortly after deglaciation, Estuarine and salt-marsh deposits began to accumulate as sea level neared the Raritan Valley. This occurred as early as 11,500 radiocarbon years before present (yrs B. P.) as indicated by a radiocarbon date of 11,420±600 yrs B. P. (GX-2403) on organic clay at the base of the estuarine deposit at a depth of 96.100 feet in a boring adjacent to boring 139 (table 1) (Lippmann, Jacobs, and Gonda, Inc., 1995, boring B25).

af **ARTIFICIAL FILL**—Excavated sand, silt, clay, gravel, rock, and till, and man-made materials (bricks, cinders, ash, slag, glass, construction materials) and minor amounts of peat. Color is variable, but generally gray to black. In orchard and road embankment, and swale land. As much as 50 feet thick but generally less than 20 feet thick. Mapped only where it forms distinct landforms, or where it covers sub-marsh deposits and large floodplains. The extent of fill is based on aerial photographs taken in 1979 and 1986. The extent of fill over sub-marsh deposits and floodplains is based, in part, on the position of shoreline silt markers, and artificial dikes(?) shown on maps by Darton and others (1906) and Rice and Kummel (1908). Fill also occurs in all urban areas, and as most former clay and sand pits, as a thin layer generally less than 10 feet thick; of fill, or mixed fill and natural material, overlying the mapped surficial material.

ash **TRASH FILL**—Trash and construction materials mixed and covered with excavated clay, silt, sand, gravel, rock, and till. As much as 50 feet thick.

Qb **BEACH DEPOSITS**—Sand and pebble gravel. As much as 15 feet thick (estimated).

Qal **ALLUVIUM**—Sand, silt, clay, pebble gravel, minor cobble gravel. Contains variable amounts of organic matter. Fine sediment is reddish-brown to dark brown. Gravel and sand composition similar to that of surficial deposits and underlying bedrock in the drainage basin. Here sediment is deposited as overbank material on the floodplain and may be as much as 15 feet thick. It generally overlies sand and gravel deposited in the stream channel. The gravel is generally less than 5 feet thick.

Qs **SWAMP AND MARSH DEPOSITS**—Gray to brown organic silt and clay overlain by dark-brown to black peat. As much as 15 feet thick (estimated).

Qse **ESTUARINE AND SALT-MARSH DEPOSITS**—Peat and organic clay and silt, brown to dark gray; minor sand and shells. Locally, at base, may include silt and sand and gravel deposited before sunken shorelines. As much as 500 feet thick.

Glacial Deposits—These include till and stratified drift deposited by ice and meltwater during the late Wisconsinan glaciation. The till is a reddish-brown to reddish, poorly-sorted sediment consisting of pebbles, cobbles, and a few boulders scattered in a compact matrix of mixed silt, sand, and clay. It is deposited by glacial ice. Stratified drift includes reddish-brown to gray, moderately to well-sorted, cross- to plane-bedded sand and gravel deposited in deltas and fans in glacial lakes and in glacial river plains, and reddish-brown to gray, well-sorted, laminated to varved silt, clay, and fine sand deposited in the bottoms of glacial lakes. The sand fraction in both till and stratified drift is predominantly quartz and red and gray shale fragments. The composition of pebbles in these deposits is provided in table 2.

Late Wisconsinan ice advanced initially to southwesterly across the map area to the southern edge of the terminal moraine. As the glacier advanced, it overrode and tied glacial lake deposits in lakes and river plains in valleys in front of the ice margin. Records of such events are lacking, indicate that these deposits are preserved beneath ice a few places, chiefly where valleys drained toward the advancing glacier. These include the preglacial valley in the northeastern part of the map area (unit Qpf and Qta in cols. 4-7, 80, 82, 83, 89), the preglacial valley extending from Metuchen to the Raritan area (units Qpf and Qta, sections C-C', cols. 42, 47, 67, 260, 268-270, 221, 318), and in the lowland between the Arthur Kill and Woodbridge Creek (cols. 178-182, 237-246, 241, 242, 244-246, 249, 256, 305, 309, 311). In addition to the glacial sand and gravel in Perth Amboy (unit Qgs, section B-B', cols. 174-177, 151, 158, 159, 161).

Ice also overrode, eroded, and deformed unconsolidated Cretaceous deposits and Pensauken Formation sediment to and south of Carteret, Woodbridge, and Metuchen (K and Tp on sections A-A', B-B'). Folded Cretaceous sand and clay, and, in places, Pensauken sand and gravel, were formally well-exposed in the clay pits at Woodbridge, Perth Amboy, and Fords (Barg and others, 1984) and were also observed in several excavations between 1987 and 1995. The base fills mapped as ice-contact deposits (Qk) in Woodbridge and Carteret may contain or consist largely of deformed Cretaceous sediment.

North of the Cretaceous outcrop belt the ice advanced across bedrock. Glacial erosion of bedrock in the preglacial valleys was minimal because the valleys were sediment-filled. On low uplands between the valleys, though, ice eroded rock and deposited till in farm fields, smoothed ridges with a rough northeast-southwest trend parallel to the ice flow and rock striae.

The terminal moraine (Qtm) was deposited while the ice margin stood at and melted back from its maximum position. The moraine is a broad belt of knolls, ridges, and basins, composed mostly of till, extending in an arc from Perth Amboy to South Plainfield. A prominent frontal ridge as much as 100 feet high marks the south edge of the moraine between Metuchen and Fords, but elsewhere it generally has less than 50 feet of relief. The back edge of the moraine is a gradual transition from constructional moraine hummocks to recessional till. An ice stood at the moraine, meltwater deposited sand and gravel in front glacial river plains (Qpf, Qtd, Qpo).

The ice margin was probably in retreat from the moraine by 20,000 years ago (Stanford and Harper, 1991). The retreating ice margin had roughly the same arc like orientation as the terminal moraine, and these glacial lakes formed as basins below and the retreating ice front and the moraine (fig. 1).

Lake Ashbrook occupied the Robinsons Branch valley. It was controlled first by a spillway at an elevation of about 90 feet across the terminal moraine in Oak Tree, about half a mile west of Oak Tree School, just west of the map boundary (spillway AB1 on fig. 1). Most of the Lake Ashbrook deposits in the map area (Qob, Qsb) were probably deposited in this higher lake stage. As the ice margin retreated a lower spillway at an elevation of about 80 feet was uncovered on the divide between the Robinsons Branch and South Branch of the Rahway valleys, just north of Shore View (spillway AB2 on fig. 1). Lake Ashbrook lowered to the level of Lake Woodbridge when the retreating ice front uncovered the Robinsons Branch valley in the vicinity of the present Middlesex Reservoir.

Lake Woodbridge occupied the South Branch valley and, later, the Robinsons Branch valley and main Rahway valley upstream of Rahway. It was controlled by a spillway at an elevation of about 60 feet on the Rahway-Woodbridge Creek divide near Colonia (WB on fig. 1), and formed when the ice front retreated north of the low upland between the South Branch and Woodbridge Creek valleys between Avenel and Rahway. Deposits in this lake in the map area include delthic sediment near Rahway (Qob).

Lake Bloomfield occupied the lowland along the Arthur Kill, Woodbridge Creek, and lower Rahway River. It was controlled at first by a spillway across the terminal moraine at Richmond Valley on Staten Island at an elevation of 25-30 feet. This spillway was succeeded by one across the lowland divide between Perth Amboy and Staten Island (BF) on fig. 1), which gradually lowered as the overflow eroded the moraine. Deposits in Lake Bloomfield in the map area are primarily lake bottom silt and clay (Qbb) and select deltaic or fan sand and gravel (Qbd). With continued erosion the spillway migrated northward along the present Arthur Kill and exhibited when it uncovered shallow bedrock near Tremley Point at an elevation of 30 feet. This formed the spillway for Lake Hackensack (HK on fig. 1). Only the southernmost tip of Lake Hackensack extended into the map area, in shallow water along the Arthur Kill north of Tremley Point. Because the ice margin at this time was about 15 miles northwest of Tremley Point there was little or no glacial sediment deposited in this lake in the map area.

Lake in the map area had drained by 10,000 years ago (Stanford and Harper, 1991), although meltwater continued to drain down the Raritan, Raritan, and Arthur Kill valleys for a period after lake drainage. In the Raritan valley this meltwater deposited sand and gravel (Qrs). In the Raritan valley the meltwater, mixed mainly from glacial lake overflows in headwater areas, was combined with nonglacial drainage and deposited nonglacial and reworked glacial sediment (Qrt). This deposition likely spanned most of the period when ice was in the Raritan basin. In the Arthur Kill the meltwater was glacial-lake overflow from Lake Hackensack. This drainage carried little sediment and so deepened the channel through the narrows at Perth Amboy and the Kill plain to the south.

Qrw **RAHWAY OUTWASH**—Sand, pebble to cobble gravel, minor silt. As much as 45 feet thick.

GLACIAL LAKE BAYONNE DEPOSITS—Include lake-bottom deposits (Qbsb), and some minor lacustrine fan deposits (Qbsf) beneath mouth deposits in the Woodbridge Creek, Arthur Kill, and lower Rahway valleys (sections A-A', B-B'), and some outcropping lake bottom deposits near Port Reading. A deltaic deposit mapped by Darton and others (1908) south of Perth Amboy (the "Manor delta", indicated as Qbbs) on the map) has been mined away.

Qbs **Sand and gravel.** As much as 30 feet thick.

Qbsl **Silt, clay, fine sand.** As much as 40 feet thick.

GLACIAL LAKE ASHBROOK DEPOSITS—Include delthic and lacustrine fan deposits (Qsb), and lake-bottom deposits (Qsbl). In addition to their outcrop, lake-bottom deposits probably underlie swamp and alluvial deposits in Oak Brook swamp.

Qsb **Sand, pebbly sand, minor pebble-to-cobble gravel.** As much as 30 feet thick (estimated).

Qsbl **Silt, clay, fine sand.** As much as 30 feet thick (estimated).

GLACIAL LAKE WOODBRIDGE DEPOSIT—Includes delthic and lacustrine fan deposits (Qob) in the Oak Branch valley, fan and lake-bottom deposits may underlie alluvium in this valley, especially in the floodplain south of Menlo Park, but do not crop out.

Qwb **Sand, pebbly sand, minor pebble-to-cobble gravel.** As much as 30 feet thick (estimated).

Qur **UNCORRELATED SAND AND GRAVEL DEPOSITS**—Sand, pebbly sand, minor pebble-to-cobble gravel. As much as 20 feet thick. Include small delthic deposits laid down in glacial ponds on uplands above the levels of lakes Ashbrook, Woodbridge, and Bayonne, and overwhelm sand and gravel deposits beneath till (sections C-C'). These overwhelm sediments are also mapped probably delthic deposits laid down in lakes ponded in front of advancing ice.

Qrf **PLAINFIELD OUTWASH**—Pebbly sand, minor pebble-to-cobble gravel. May include lacustrine sand and silt in the subsurface. Total thickness as much as 60 feet. Crops out as a plain west of Metuchen and occurs in preglacial valleys beneath the terminal moraine southeast of Metuchen (section C-C') and west of Fords (wells 4-7).

Qrm **METUCHEN OUTWASH**—Pebble-to-cobble gravel and pebbly sand. As much as 40 feet thick (estimated). Forms a river plain feeding from the terminal moraine down the Mill Brook valley.

Qpw **PERTH AMBOY OUTWASH**—Pebble-to-cobble gravel and pebbly sand. As much as 70 feet thick (estimated). Crops out as a plain leading down the terminal moraine at Perth Amboy and occurs beneath the moraine to the south (wells 151, 157-159, 343).

Qkc **ICE-CONTACT DEPOSITS**—Pebble-to-cobble gravel and pebbly sand, reddish-brown, poorly to moderately sorted, weakly stratified to massive. Stratum may be steeply dipping, or deformed. Contains beds and lenses of till and deformed Cretaceous sand and clay. As much as 40 feet thick (occasionally. Forms two hills: in Carteret and Woodbridge, these hills may contain or consist largely of Cretaceous sediment. They may have been deposited in ice-walled basins, or by ice-push at recessional ice margins.

Qt, Qtt **RAHWAY TILL**—Reddish-brown clayey, silty sand to clayey, sandy silt with some to many subrounded and subangular pebbles and cobbles and very few subrounded boulders. Gravel includes, in approximate order of abundance: red and gray sandstone and conglomerate, quartz, gneiss, amphibolite, and basalt (table 2). Boulders are chiefly gneiss and quartzite. The clasts are derived from bedrock and nonglacial surficial deposits to the north and northeast along the line of ice flow. The quartz pebbles are eroded from the Pensauken Formation, which formerly covered the entire quadrangle. Where till overlies Cretaceous deposits, it includes blocks, deformed layers, and pebble-sized pieces of gray clay, akin to yellow kaolinitic quartz sand, and brown nonmarine siltstone from the Cretaceous formations. Where it overlies Pensauken Formation, it may include lenses and blocks of yellow-jarosite sand and quartz gravel. The till includes both compact, moisture-supported zones, which may have a weak subhorizontal fissility, and nonstratified, unfractured zones that may be weakly stratified in places. As much as 70 feet thick generally 10 to 30 feet thick. Qt delineates areas where till is continuous and generally thinner.

Qtm **TILL OF THE TERMINAL MORAINE**—Till as above, forming knoll, ridge and basin topography of the terminal moraine. As much as 130 feet thick.

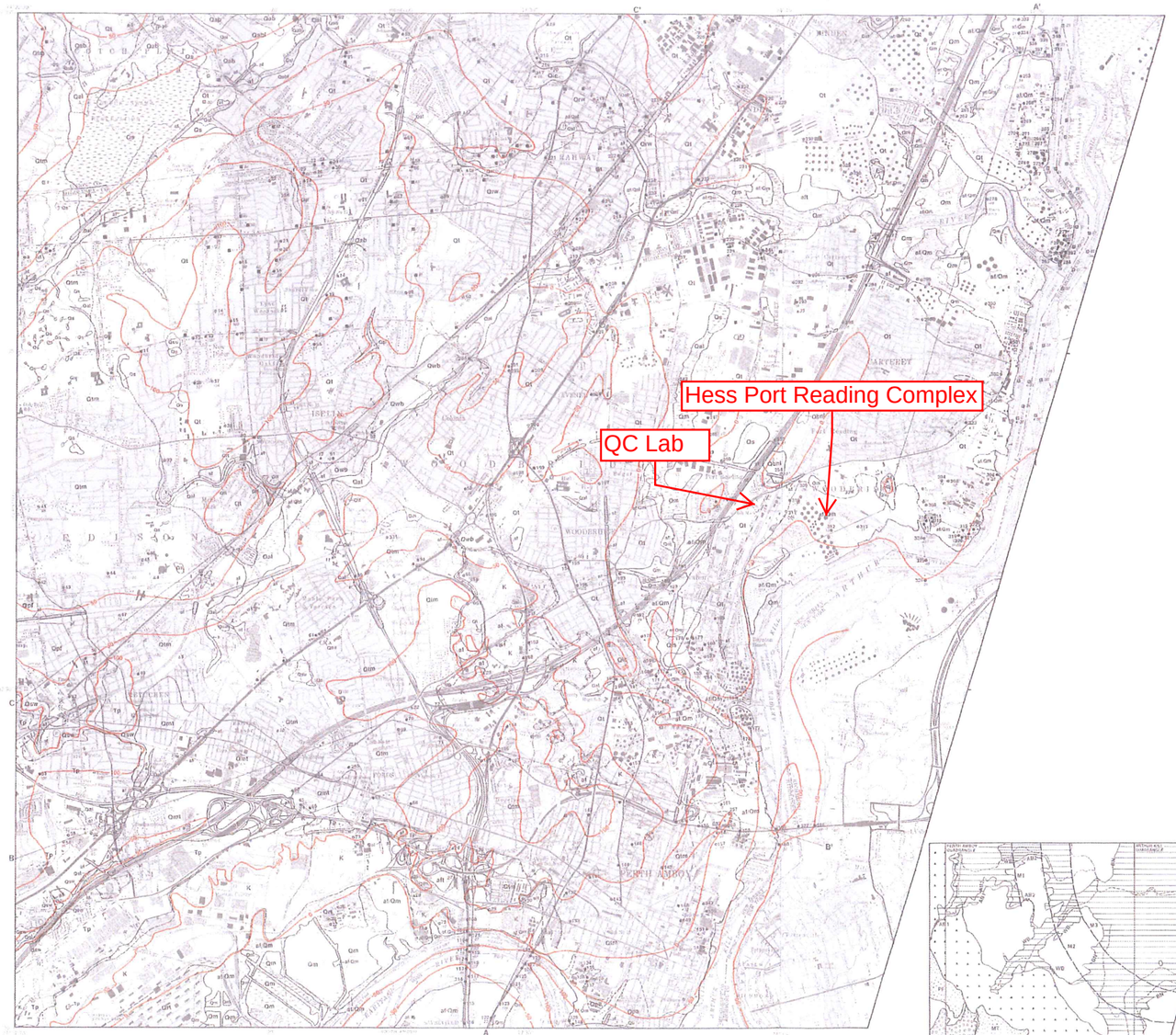
Qrt **RARITAN TERRACE DEPOSIT**—Sand, silt, pebble gravel, minor clay and cobble gravel. Fine sediment is gray, brown, and reddish-brown. Sand is predominantly quartz, with some shale fragments and feldspar and minor glauconite and mica. Gravel is predominantly quartz and quartzite, with some red and gray sandstone and shale, and minor chert, gneiss, and sandstone. As much as 40 feet thick. Deposit is on grade with the Hazelhurst outwash upstream in the Raritan valley and so is, in part, of late Wisconsinan age. It includes both locally derived sediment from bedrock in the north and east of the Raritan basin, and nonglacial sediment from bedrock, Coastal Plain formations, and surficial deposits within the basin.

Preglacial Deposits—These include sand and gravel deposited by a preglacial river (Tp), weathered shale bedrock (Qwb), and outcropping sand and clay of Cretaceous age (K).

The preglacial river, which may have included drainage from the Hudson valley and southern New England, flowed across the region from northwest to southeast between about 5 and 2 million years ago and deposited a broad plain of sand and gravel that covered the entire map area. This river was diverted, possibly by glacial blockage, about 2 million years ago. Local drainage then eroded valleys into and through the former river plain, leaving remnants of the deposit on uplands. These remnants, except for a small area in the southwest corner of the map area, beyond the glacial limit, were then overridden by the late Wisconsinan glacier.

Tp **PENSAUKEN FORMATION**—Sand, pebbly sand, and minor pebble-to-cobble gravel, reddish-yellow to yellow. Sand is predominantly quartz, with some feldspar and minor red shale, mica, and glauconite. Some of the feldspar in the sand is weathered to clay. Gravel is predominantly white to light gray veined reddish-yellow to yellow quartz and quartzite, with some chert, and to gray mudstone and sandstone, and minor brownish-yellow Coastal Plain formations, gneiss, schist, and diabase. All the clasts except quartz, quartzite, chert, and limestone generally have thick weathering rinds or are fully decomposed. Cobble gravel channel deposits are represented in the basal few feet of the deposit and contain abundant clasts of quartzite, sandstone, and mudstone, and scattered clasts of gneiss, schist, and diabase. Tabular, planar cross-bedded sand with minor pebble gravel dominates the deposit above the basal gravel. The pebble gravel is chiefly quartz and quartzite with some chert and minor weathering.

Salisbury and Knapp (1917) defined and mapped the Pensauken Formation. Owens and Minard (1979) reassigned the Pensauken deposits north of Trenton to the Bridgeton Formation, a higher fluvial sand and gravel in southern New Jersey, based on projection of the elevations of the deposits from their type area in southern New Jersey. This usage was followed by Markley (1981) and Stanford (1987, 1999). However, the deposits north of Trenton are continuous in both extent and elevation with those at the Pensauken type locality, so the original nomenclature is used here. The age of the Pensauken is not firmly established. Berry and Hawkins (1937) identified plant fossils from the New Brunswick area that they consider to be of early Pleistocene age. Owens and Minard (1979) assign a late Miocene age based on correlation to sands in the Delmarva Peninsula. Pollen from the Pensauken near Hightstown, New Jersey (about 18 miles southwest of Metuchen), include a few pre-Pleistocene species, suggesting a Pliocene age (G. Brenner, written communication, 1981). This age is also consistent with the geomorphic and stratigraphic relations of the Pensauken to late Pliocene or early Pleistocene till and middle to late Miocene marine and fluvial deposits (Stanford, 1993).



Base map from U. S. Geological Survey 1956 (Perth Amboy) and 1966 (Arthur Kill)
Photorevised 1981

Geology mapped 1982, 1995
This interpretation presented here are provisional pending peer review.
There may be revisions prior to publication.

MAP SYMBOLS

Contact—Solid where well-defined; long-dashed where approximate, short-dashed where gradational or feather-edged, dotted where concealed or projected under fill.

Limit of excavation—Tick point into excavation. Dotted where obscured by operating or filling. Marks extent of former clay, sand and gravel pits. Those areas have undergone some type of artificial fill and displaced and regraded surficial and bedrock materials as much as 20 feet thick. Contours within these areas show the approximate extent of natural material beneath this man-made layer. Fill is mapped separately only where it has a distinct landform of its own based, in part, on Rice and others (1904). In places, the base map topography within the excavation has been significantly altered since the date of the topographic survey (1954). Contours within excavated areas show the location of materials at the time of mapping rather than with respect to the base topography.

Unit to left of slash overlies unit to right—Shows extent of natural material beneath large areas of fill. Extent of natural materials is based, in part, on Rice and others (1904) and Darton and others (1908).

Unit formerly present—Unit in parentheses removed by excavation. Shows location of Manor delta deposited in Lake Bayonne, based on Darton and others (1908).

Well or boring with log in table 1—Location accurate to within 100 feet. Elevation of bedrock surface in italics.

Well or boring with log in table 1—Location accurate to within 500 feet. Elevation of bedrock surface in italics.

Elevation of bedrock surface in well or boring—Data from Nemickas (1974).

Elevation of bedrock surface in well or boring—Data from N. J. Geological Survey files.

Site of pebble count—Data in table 2.

Bedrock outcrop—Some outcrop locations from R. A. Volkert and D. H. Monteverde, N. J. Geological Survey (personal communication, 1999).

Former bedrock outcrop—No longer exposed. From field maps of H. B. Kummel, N. J. Geological Survey (undated).

Elevation of bedrock surface—Contour interval 50 feet. Includes surface of Cretaceous deposits.

Spillway for glacial lake—Symbol in spillway area, arrow shows direction of drainage. Spillway also lists associated deposits.

Well or boring—On section, projected to line of section.

Depth to bedrock in well or boring—On section, projected to line of section.

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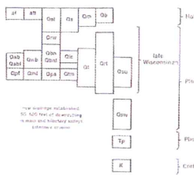
CORRELATION OF MAP UNITS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Prepared in cooperation with the
U. S. GEOLOGICAL SURVEY
NATIONAL GEOLOGIC MAPPING PROGRAM

SURFICIAL GEOLOGY OF THE PERTH AMBOY AND ARTHUR KILL QUADRANGLES
MIDDLESEX AND UNION COUNTIES, NEW JERSEY

OPEN FILE MAP OFM 28

SHEET 2 OF 2

APPENDIX V

Quality Control and Assurance Plan

EnviroTrac

Quality Assurance Project Plan

Hess Corporation- Quality Control Laboratory
835 West Ave
Port Reading, Middlesex County, New Jersey

A Quality Assurance Control Project Plan, in accordance with NJDEP Technical Requirements for Site Remediation N.J.A.C. 7.26E-2.2 is provided below.

Principal Personnel

Provided in the table below are the individuals involved in the completion of this remedial action listed by specific task.

Name	Company	Responsibility	Contact Information
James C. Coyne	EnviroTrac Ltd.	Regional Operations Manager / LSRP	(609) 387-5553
Dave Carlson	EnviroTrac Ltd.	Senior Project Manager/LSRP	(609) 387-5553
Sarah Dyson	EnviroTrac Ltd.	Project Manager	(609) 387-5553
John Engdahl	Hess Corporation	Senior Specialist	(732) 750-6934

Should the principal personnel listed above change, the NJDEP will be notified within 30 days.

Analytical Method/Quality Assurance

As indicated in the Site Investigation/Remedial Action Report, soil and groundwater characterization activities required the collection of samples for laboratory analysis. The sampling requirements, including matrix, frequency of collection, analytical parameter, analytical method, sample preservation, sample container volume and type, and holding time is provided in the Analytical Methods/Quality Assurance summary table below.

SOIL SAMPLING SUMMARY							
Matrix Type	**No. of Samples**	**Sampling Frequency**	**Analytical Parameter**	**Analytical Method**	**Sample Preserv-ation**	**Sample Container**	**Sample Holding Time**
Soil	21	One Time	TAL Metals	200.8	Cool, 4ºC	2 oz. Glass	Metals(-Hg) 180 days leach, 180 days analysis; Hg 28 days leach, 28 days analysis

Soil	18	One Time	TCL Volatile Organics+ TICs	8260B	Cool, 4ºC	Encore Samplers/2 oz glass jars with no headspace	48 hours, preservation, 14 days leach, 14 days analysis
Soil	22	One Time	TCL Base Neutrals +TICs	8270C	Cool, 4ºC	8 oz. Glass	14 days leach, 7 days extraction, 40 days analysis
Soil	17	One Time	EPH Category 2	NJEPH 10/08 Rev. 3	Cool, 4ºC	4 oz Glass	14 days extract, 40 days analysis
Soil	3	One Time	TOC	415.3	Cool, 4ºC	2 oz. Glass	28 Days

GROUNDWATERSAMPLING SUMMARY

Matrix Type	No. of Samples	Sampling Frequency	Analytical Parameter	Analytical Method	Sample Preserv-ation	Sample Container	Sample Holding Time
Groundwater	1	One Time	TCL Volatile Organics +TICs	8260B	HCL, Cool, 4ºC	3 x 40 ml Glass	14 days
Groundwater	1	One Time	TCL Base Neutrals +TICs	8270D	Cool, 4ºC	2 x 1 liter Glass	7 days extract, 40 days analysis
Groundwater	1	One Time	TAL Metals	6010C	HNO_3, Cool, 4ºC	250 ml Plastic	180 days
Groundwater	1	One Time	Ammonia	SM4500	H_2SO_4 Cool, 4 ºC	200 ml Plastic	28 Days

Sampling Methodology

All sampling was conducted in accordance with the NJDEP Field Sampling Procedures Manual (August 2005). Samples were collected with dedicated nitrile gloves for each sample location. Samples were collected with dedicated equipment for each sample location. Samples will be collected in dedicated laboratory-provided glassware for each sample location. Once collected, all samples will be placed in a storage/transportation cooler and be brought to 4º Celsius prior to transport to the laboratory. In the event that samples could not be delivered directly to the laboratory by the field sampling technician, a field courier transported the samples following proper chain of custody protocols. The field team or courier will relinquish custody to the log-in sample custodian upon arrival at the laboratory.

Equipment Summary

The following mechanical equipment was utilized during the field work associated with the sampling: a Photo-Ionization Detector, an oil/water interface probe, and a hand auger. All equipment was cleaned between sampling locations. Equipment will be operated in accordance with the manufacturer specifications, including calibration of all field instruments, which is performed prior to the initiation of field work and on a schedule indicated by the manufacturer.

Laboratory Summary

Collected samples will be submitted under proper chain-of-custody protocols to Accutest Laboratories (Dayton, New Jersey), a New Jersey-certified laboratory (No. 12129). All analytical results generated during the remedial investigation activities is presented to the NJDEP as a reduced deliverable package in accordance with N.J.A.C. 7:26E-2.1(a)16. Results will be submitted in both hard copy form and in an electronic format as specified in the NJDEP Electronic Data Interchange Handbook.

APPENDIX VI

Soil Sampling Analytical Data Packages- June 2013

EnviroTrac

New Jersey
ACCUTEST LABORATORIES

08/02/13

Technical Report for

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Accutest Job Number: JB40127

Sampling Date: 06/19/13

Report to:

EnviroTrac, Ltd

justinp@envirotrac.com

ATTN: Justin Piegaro

Total number of pages in report: **723**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kevin Dovedytis 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV

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Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

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Accutest LabLink@745274 12:28 02-Aug-2013

Sample Summary

EnviroTrac, Ltd.

Job No: JB40127

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB40127-1	06/19/13	09:59	JP	06/20/13	SO	Soil	UST-1
JB40127-2	06/19/13	10:14	JP	06/20/13	SO	Soil	UST-2
JB40127-3	06/19/13	10:49	JP	06/20/13	SO	Soil	UST-3
JB40127-4	06/19/13	11:12	JP	06/20/13	SO	Soil	UST-4
JB40127-5	06/19/13	10:32	JP	06/20/13	SO	Soil	UST-5
JB40127-6	06/19/13	09:34	JP	06/20/13	SO	Soil	UST-6
JB40127-7	06/19/13	10:55	JP	06/21/13	SO	Soil	P-1

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	EnviroTrac, Ltd.	**Job No**	JB40127
Site:	Hess QC Lab, 835 West Avenue, Port Reading, NJ	**Report Date**	7/9/2013 7:19:13 AM

Between 06/20/2013 and 06/21/2013, 7 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 4 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB40127 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** V3C4446

- All samples were analyzed within the recommended method holding time.
- Sample(s) JB39919-1MS, JB39919-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: SO **Batch ID:** V3C4450

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40368-9MS, JB40368-9MSD were used as the QC samples indicated.
- V3C4450-BS for 1,2-Dichloroethane: High percent recoveries and no associated positive found in the QC batch.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** F:OP47508

- The data for SW846 8270D meets quality control requirements.
- JB40127-2: Analysis performed at Accutest Laboratories, Orlando FL.
- JB40127-3: Analysis performed at Accutest Laboratories, Orlando FL.
- JB40127-4: Analysis performed at Accutest Laboratories, Orlando FL.
- JB40127-5: Analysis performed at Accutest Laboratories, Orlando FL.
- JB40127-6: Analysis performed at Accutest Laboratories, Orlando FL.
- JB40127-1: Analysis performed at Accutest Laboratories, Orlando FL.

Matrix: SO **Batch ID:** OP66993

- All samples were extracted within the recommended method holding time.
- Sample(s) JB39700-1MS, JB39700-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method NJDEP EPH

Matrix: SO **Batch ID:** OP66957

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40127-3MS, JB40127-3MSD, JB40171-3DUP were used as the QC samples indicated.

Matrix: SO **Batch ID:** OP67031

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40175-1MS, JB40175-1MSD, JB40175-2DUP were used as the QC samples indicated.
- RPD(s) for Duplicate for EPH (>C28-C40), EPH (C9-C28), Total EPH (C9-C40) are outside control limits for sample OP67031-DUP.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP72807

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40127-1MS, JB40127-1MSD, JB40127-1SDL were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Antimony, Iron are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Antimony, Iron are outside control limits. Probable cause due to matrix interference.
- RPD(s) for Serial Dilution for Antimony, Selenium, Thallium are outside control limits for sample MP72807-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Matrix: SO **Batch ID:** MP72852

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40236-10MS, JB40236-10MSD, JB40236-10SDL were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Aluminum, Antimony, Calcium, Iron, Lead, Magnesium, Manganese, Potassium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Aluminum, Antimony, Lead are outside control limits. Probable cause due to matrix interference.
- RPD(s) for MSD for Calcium are outside control limits for sample MP72852-S2. High rpd due to possible sample nonhomogeneity.
- RPD(s) for Serial Dilution for Selenium, Silver, Thallium are outside control limits for sample MP72852-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP72852-SD1 for Beryllium: Serial dilution indicates possible matrix interference.
- MP72852-SD1 for Zinc: Serial dilution indicates possible matrix interference.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP72970

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40214-1MS, JB40214-1MSD were used as the QC samples for metals.

Wet Chemistry By Method SM2540 G-97

Matrix: SO	**Batch ID:** GN87170

- The data for SM2540 G-97 meets quality control requirements.

Matrix: SO	**Batch ID:** GN87223

- The data for SM2540 G-97 meets quality control requirements.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Accutest New Jersey **Job No:** JB40127

Site: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ **Report Date:** 7/8/2013 5:59:50 PM

6 Sample(s) were collected on 06/19/2013 and were received at Accutest SE on 06/21/2013 properly preserved, at 2.8 Deg. C and intact. These Samples received an Accutest job number of JB40127. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP47508

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA5845-11MS, FA5845-11MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: July 8, 2013

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: JB40127
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/19/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB40127-1	**UST-1**					
Methylene chloride		0.0077	0.0049	0.0012	mg/kg	SW846 8260B
Toluene		0.00026 J	0.00097	0.00010	mg/kg	SW846 8260B
Aluminum		9740	58		mg/kg	SW846 6010C
Arsenic		3.0	2.3		mg/kg	SW846 6010C
Barium		42.7	23		mg/kg	SW846 6010C
Beryllium		0.61	0.23		mg/kg	SW846 6010C
Calcium		828	580		mg/kg	SW846 6010C
Chromium		14.7	1.2		mg/kg	SW846 6010C
Cobalt		5.8	5.8		mg/kg	SW846 6010C
Copper		9.1	2.9		mg/kg	SW846 6010C
Iron		17000	58		mg/kg	SW846 6010C
Lead		7.9	2.3		mg/kg	SW846 6010C
Magnesium		2670	580		mg/kg	SW846 6010C
Manganese		156	1.8		mg/kg	SW846 6010C
Nickel		13.3	4.7		mg/kg	SW846 6010C
Potassium		1480	1200		mg/kg	SW846 6010C
Vanadium		20.1	5.8		mg/kg	SW846 6010C
Zinc		39.1	2.3		mg/kg	SW846 6010C
JB40127-2	**UST-2**					
Acetone		0.0129	0.010	0.0017	mg/kg	SW846 8260B
Methylene chloride		0.0067	0.0051	0.0013	mg/kg	SW846 8260B
Toluene		0.00023 J	0.0010	0.00011	mg/kg	SW846 8260B
Aluminum		11700	60		mg/kg	SW846 6010C
Arsenic		3.8	2.4		mg/kg	SW846 6010C
Barium		66.5	24		mg/kg	SW846 6010C
Beryllium		0.75	0.24		mg/kg	SW846 6010C
Calcium		1220	600		mg/kg	SW846 6010C
Chromium		15.6	1.2		mg/kg	SW846 6010C
Copper		12.5	3.0		mg/kg	SW846 6010C
Iron		18500	60		mg/kg	SW846 6010C
Lead		8.5	2.4		mg/kg	SW846 6010C
Magnesium		3230	600		mg/kg	SW846 6010C
Manganese		293	1.8		mg/kg	SW846 6010C
Nickel		14.9	4.8		mg/kg	SW846 6010C
Potassium		1940	1200		mg/kg	SW846 6010C
Vanadium		23.6	6.0		mg/kg	SW846 6010C
Zinc		35.2	2.4		mg/kg	SW846 6010C
JB40127-3	**UST-3**					
Methylene chloride		0.0067	0.0050	0.0013	mg/kg	SW846 8260B

Summary of Hits

Job Number: JB40127
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/19/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Toluene		0.00024 J	0.00099	0.00010	mg/kg	SW846 8260B
Aluminum		11700	57		mg/kg	SW846 6010C
Arsenic		3.5	2.3		mg/kg	SW846 6010C
Barium		80.1	23		mg/kg	SW846 6010C
Beryllium		0.88	0.23		mg/kg	SW846 6010C
Calcium		1660	570		mg/kg	SW846 6010C
Chromium		17.9	1.1		mg/kg	SW846 6010C
Cobalt		8.1	5.7		mg/kg	SW846 6010C
Copper		13.6	2.9		mg/kg	SW846 6010C
Iron		20800	57		mg/kg	SW846 6010C
Lead		10.5	2.3		mg/kg	SW846 6010C
Magnesium		4340	570		mg/kg	SW846 6010C
Manganese		201	1.7		mg/kg	SW846 6010C
Nickel		19.4	4.6		mg/kg	SW846 6010C
Potassium		2550	1100		mg/kg	SW846 6010C
Vanadium		25.6	5.7		mg/kg	SW846 6010C
Zinc		43.2	2.3		mg/kg	SW846 6010C
JB40127-4	**UST-4**					
Carbon disulfide		0.0010 J	0.0056	0.00013	mg/kg	SW846 8260B
Methylene chloride		0.0078	0.0056	0.0014	mg/kg	SW846 8260B
Toluene		0.00041 J	0.0011	0.00012	mg/kg	SW846 8260B
Total TIC, Volatile		0.0069 J			mg/kg	
Total TIC, Semi-Volatile		0.72 J			mg/kg	
Aluminum		8580	64		mg/kg	SW846 6010C
Beryllium		0.36	0.26		mg/kg	SW846 6010C
Calcium		713	640		mg/kg	SW846 6010C
Chromium		9.9	1.3		mg/kg	SW846 6010C
Copper		6.8	3.2		mg/kg	SW846 6010C
Iron		8600	64		mg/kg	SW846 6010C
Lead		5.1	2.6		mg/kg	SW846 6010C
Magnesium		1720	640		mg/kg	SW846 6010C
Manganese		60.5	1.9		mg/kg	SW846 6010C
Nickel		8.6	5.1		mg/kg	SW846 6010C
Vanadium		13.3	6.4		mg/kg	SW846 6010C
Zinc		28.6	2.6		mg/kg	SW846 6010C
JB40127-5	**UST-5**					
Methylene chloride		0.0084	0.0058	0.0015	mg/kg	SW846 8260B
Toluene		0.00044 J	0.0012	0.00012	mg/kg	SW846 8260B
Total TIC, Semi-Volatile		0.82 J			mg/kg	
Aluminum		4980	65		mg/kg	SW846 6010C
Beryllium		0.27	0.26		mg/kg	SW846 6010C

Summary of Hits

Job Number: JB40127
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/19/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chromium		6.7	1.3		mg/kg	SW846 6010C
Copper		6.3	3.2		mg/kg	SW846 6010C
Iron		7570	65		mg/kg	SW846 6010C
Lead		3.9	2.6		mg/kg	SW846 6010C
Magnesium		1570	650		mg/kg	SW846 6010C
Manganese		68.1	1.9		mg/kg	SW846 6010C
Nickel		6.9	5.2		mg/kg	SW846 6010C
Vanadium		8.8	6.5		mg/kg	SW846 6010C
Zinc		17.1	2.6		mg/kg	SW846 6010C
JB40127-6	**UST-6**					
Methylene chloride		0.0077	0.0052	0.0013	mg/kg	SW846 8260B
Toluene		0.00031 J	0.0010	0.00011	mg/kg	SW846 8260B
Total TIC, Semi-Volatile		0.64 J			mg/kg	
Aluminum		8500	62		mg/kg	SW846 6010C
Barium		36.9	25		mg/kg	SW846 6010C
Beryllium		0.39	0.25		mg/kg	SW846 6010C
Calcium		702	620		mg/kg	SW846 6010C
Chromium		10.9	1.2		mg/kg	SW846 6010C
Copper		8.0	3.1		mg/kg	SW846 6010C
Iron		12100	62		mg/kg	SW846 6010C
Lead		6.0	2.5		mg/kg	SW846 6010C
Magnesium		2250	620		mg/kg	SW846 6010C
Manganese		175	1.8		mg/kg	SW846 6010C
Nickel		10.3	4.9		mg/kg	SW846 6010C
Potassium		1250	1200		mg/kg	SW846 6010C
Vanadium		14.5	6.2		mg/kg	SW846 6010C
Zinc		23.6	2.5		mg/kg	SW846 6010C
JB40127-7	**P-1**					
Acetone		0.0162	0.0097	0.0016	mg/kg	SW846 8260B
Methylene chloride		0.0037 J	0.0048	0.0012	mg/kg	SW846 8260B
Toluene		0.00034 J	0.00097	0.00010	mg/kg	SW846 8260B
Total TIC, Semi-Volatile		0.25 J			mg/kg	
EPH (> C28-C40)		32.5	7.6	3.4	mg/kg	NJDEP EPH
Total EPH (C9-C40)		32.5	7.6	2.7	mg/kg	NJDEP EPH
Aluminum		18300	59		mg/kg	SW846 6010C
Arsenic		4.8	2.3		mg/kg	SW846 6010C
Barium		82.8	23		mg/kg	SW846 6010C
Beryllium		0.61	0.23		mg/kg	SW846 6010C
Calcium		892	590		mg/kg	SW846 6010C
Chromium		22.1	1.2		mg/kg	SW846 6010C
Cobalt		7.6	5.9		mg/kg	SW846 6010C

Summary of Hits

Job Number: JB40127
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/19/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Copper		12.9	2.9		mg/kg	SW846 6010C
Iron		28600	59		mg/kg	SW846 6010C
Lead		12.4	2.3		mg/kg	SW846 6010C
Magnesium		3500	590		mg/kg	SW846 6010C
Manganese		1320	3.5		mg/kg	SW846 6010C
Nickel		14.9	4.7		mg/kg	SW846 6010C
Potassium		1650	1200		mg/kg	SW846 6010C
Vanadium		32.0	5.9		mg/kg	SW846 6010C
Zinc		52.0	2.3		mg/kg	SW846 6010C

New Jersey

ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest LabLink@745274 12:28 02-Aug-2013

Report of Analysis

Client Sample ID:	UST-1		
Lab Sample ID:	JB40127-1	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	85.7
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C100037.D	1	06/22/13	PS	n/a	n/a	V3C4446
Run #2							

	Initial Weight
Run #1	6.0 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.0097	0.0016	mg/kg	
71-43-2	Benzene	ND	0.00097	0.00012	mg/kg	
74-97-5	Bromochloromethane	ND	0.0049	0.00026	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0049	0.00010	mg/kg	
75-25-2	Bromoform	ND	0.0049	0.00015	mg/kg	
74-83-9	Bromomethane	ND	0.0049	0.00027	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0097	0.0023	mg/kg	
75-15-0	Carbon disulfide	ND	0.0049	0.00011	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0049	0.00013	mg/kg	
108-90-7	Chlorobenzene	ND	0.0049	0.00011	mg/kg	
75-00-3	Chloroethane	ND	0.0049	0.00022	mg/kg	
67-66-3	Chloroform	ND	0.0049	0.000080	mg/kg	
74-87-3	Chloromethane	ND	0.0049	0.00018	mg/kg	
110-82-7	Cyclohexane	ND	0.0049	0.00012	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0049	0.00016	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0049	0.00018	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0049	0.00018	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0049	0.00017	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0049	0.00022	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0049	0.00013	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00097	0.00013	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0049	0.00025	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0049	0.00018	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0049	0.00023	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0049	0.00015	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0049	0.00014	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0049	0.00015	mg/kg	
100-41-4	Ethylbenzene	ND	0.00097	0.00026	mg/kg	
76-13-1	Freon 113	ND	0.0049	0.00042	mg/kg	
591-78-6	2-Hexanone	ND	0.0049	0.00060	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0049	0.000072	mg/kg	
79-20-9	Methyl Acetate	ND	0.0049	0.0025	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-1		
Lab Sample ID:	JB40127-1	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	85.7
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0049	0.00016	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00097	0.00023	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0049	0.00073	mg/kg	
75-09-2	Methylene chloride	0.0077	0.0049	0.0012	mg/kg	
100-42-5	Styrene	ND	0.0049	0.000089	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0049	0.00013	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0049	0.00017	mg/kg	
108-88-3	Toluene	0.00026	0.00097	0.00010	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0049	0.00016	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0049	0.00014	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0049	0.00010	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0049	0.00017	mg/kg	
79-01-6	Trichloroethene	ND	0.0049	0.00017	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0049	0.00029	mg/kg	
75-01-4	Vinyl chloride	ND	0.0049	0.00014	mg/kg	
	m,p-Xylene	ND	0.00097	0.00017	mg/kg	
95-47-6	o-Xylene	ND	0.00097	0.00014	mg/kg	
1330-20-7	Xylene (total)	ND	0.00097	0.00014	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		65-131%
17060-07-0	1,2-Dichloroethane-D4	84%		70-121%
2037-26-5	Toluene-D8	89%		80-128%
460-00-4	4-Bromofluorobenzene	91%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@745274 12:28 02-Aug-2013

Report of Analysis

Client Sample ID:	UST-1		
Lab Sample ID:	JB40127-1	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	85.7
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L064522.D	1	07/03/13	AFL	06/26/13	F:OP47508	F:SL3253
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.19	0.023	mg/kg	
208-96-8	Acenaphthylene	ND	0.19	0.022	mg/kg	
98-86-2	Acetophenone	ND	0.19	0.023	mg/kg	
120-12-7	Anthracene	ND	0.19	0.019	mg/kg	
1912-24-9	Atrazine	ND	0.19	0.019	mg/kg	
100-52-7	Benzaldehyde	ND	0.97	0.19	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.19	0.019	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.19	0.019	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.019	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.019	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.023	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.19	0.025	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.19	0.039	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.19	0.026	mg/kg	
105-60-2	Caprolactam	ND	0.19	0.021	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.19	0.025	mg/kg	
106-47-8	4-Chloroaniline	ND	0.19	0.029	mg/kg	
86-74-8	Carbazole	ND	0.19	0.021	mg/kg	
218-01-9	Chrysene	ND	0.19	0.019	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.19	0.027	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.19	0.026	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.19	0.022	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.19	0.020	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.19	0.020	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.19	0.023	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.19	0.032	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.019	mg/kg	
132-64-9	Dibenzofuran	ND	0.19	0.020	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.39	0.039	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.19	0.039	mg/kg	
84-66-2	Diethyl phthalate	ND	0.39	0.039	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.19	0.039	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-1		
Lab Sample ID:	JB40127-1	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	85.7
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.39	0.039	mg/kg	
206-44-0	Fluoranthene	ND	0.19	0.019	mg/kg	
86-73-7	Fluorene	ND	0.19	0.021	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.19	0.019	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.19	0.021	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.19	0.027	mg/kg	
67-72-1	Hexachloroethane	ND	0.19	0.022	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.019	mg/kg	
78-59-1	Isophorone	ND	0.19	0.021	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.19	0.022	mg/kg	
88-74-4	2-Nitroaniline	ND	0.19	0.028	mg/kg	
99-09-2	3-Nitroaniline	ND	0.19	0.027	mg/kg	
100-01-6	4-Nitroaniline	ND	0.19	0.041	mg/kg	
91-20-3	Naphthalene	ND	0.19	0.020	mg/kg	
98-95-3	Nitrobenzene	ND	0.19	0.028	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.19	0.021	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.19	0.039	mg/kg	
85-01-8	Phenanthrene	ND	0.19	0.019	mg/kg	
129-00-0	Pyrene	ND	0.19	0.019	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.19	0.024	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	58%		40-105%
321-60-8	2-Fluorobiphenyl	64%		43-107%
1718-51-0	Terphenyl-d14	78%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [b]		0	mg/kg	
	Total Alkanes		0	mg/kg	

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) No TICs detected.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-1		
Lab Sample ID:	JB40127-1	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	85.7
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Z9185.D	1	06/24/13	KD	06/22/13	OP66957	G5Z309
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	5.8	2.6	mg/kg	
	EPH (> C28-C40)	ND	5.8	3.2	mg/kg	
	Total EPH (C9-C40)	ND	5.8	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		40-140%
3386-33-2	1-Chlorooctadecane	72%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-1		
Lab Sample ID:	JB40127-1	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
		Percent Solids:	85.7
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9740	58	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Arsenic	3.0	2.3	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Barium	42.7	23	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.61	0.23	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Cadmium	< 0.58	0.58	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Calcium	828	580	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Chromium	14.7	1.2	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Cobalt	5.8	5.8	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Copper	9.1	2.9	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Iron	17000	58	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Lead	7.9	2.3	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Magnesium	2670	580	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Manganese	156	1.8	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Mercury	< 0.037	0.037	mg/kg	1	07/02/13	07/02/13	AA	SW846 7471B [2]	SW846 7471B [4]
Nickel	13.3	4.7	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Potassium	1480	1200	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Silver	< 0.58	0.58	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Vanadium	20.1	5.8	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]
Zinc	39.1	2.3	mg/kg	1	06/24/13	06/26/13	ND	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA31529
(2) Instrument QC Batch: MA31569
(3) Prep QC Batch: MP72807
(4) Prep QC Batch: MP72970

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	UST-2		
Lab Sample ID:	JB40127-2	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	83.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C100038.D	1	06/22/13	PS	n/a	n/a	V3C4446
Run #2							

	Initial Weight
Run #1	5.8 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0129	0.010	0.0017	mg/kg	
71-43-2	Benzene	ND	0.0010	0.00012	mg/kg	
74-97-5	Bromochloromethane	ND	0.0051	0.00027	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0051	0.00011	mg/kg	
75-25-2	Bromoform	ND	0.0051	0.00016	mg/kg	
74-83-9	Bromomethane	ND	0.0051	0.00028	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.010	0.0025	mg/kg	
75-15-0	Carbon disulfide	ND	0.0051	0.00012	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0051	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0051	0.00011	mg/kg	
75-00-3	Chloroethane	ND	0.0051	0.00023	mg/kg	
67-66-3	Chloroform	ND	0.0051	0.000085	mg/kg	
74-87-3	Chloromethane	ND	0.0051	0.00019	mg/kg	
110-82-7	Cyclohexane	ND	0.0051	0.00013	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0051	0.00017	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0051	0.00019	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0051	0.00019	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0051	0.00018	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0051	0.00023	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0051	0.00014	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00014	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0051	0.00026	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0051	0.00019	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0051	0.00024	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0051	0.00016	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0051	0.00014	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0051	0.00016	mg/kg	
100-41-4	Ethylbenzene	ND	0.0010	0.00027	mg/kg	
76-13-1	Freon 113	ND	0.0051	0.00044	mg/kg	
591-78-6	2-Hexanone	ND	0.0051	0.00064	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0051	0.000076	mg/kg	
79-20-9	Methyl Acetate	ND	0.0051	0.0027	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-2		
Lab Sample ID:	JB40127-2	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	83.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0051	0.00017	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00024	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0051	0.00077	mg/kg	
75-09-2	Methylene chloride	0.0067	0.0051	0.0013	mg/kg	
100-42-5	Styrene	ND	0.0051	0.000094	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0051	0.00014	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0051	0.00018	mg/kg	
108-88-3	Toluene	0.00023	0.0010	0.00011	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0051	0.00017	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0051	0.00014	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0051	0.00011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0051	0.00018	mg/kg	
79-01-6	Trichloroethene	ND	0.0051	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0051	0.00031	mg/kg	
75-01-4	Vinyl chloride	ND	0.0051	0.00015	mg/kg	
	m,p-Xylene	ND	0.0010	0.00018	mg/kg	
95-47-6	o-Xylene	ND	0.0010	0.00014	mg/kg	
1330-20-7	Xylene (total)	ND	0.0010	0.00014	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		65-131%
17060-07-0	1,2-Dichloroethane-D4	82%		70-121%
2037-26-5	Toluene-D8	88%		80-128%
460-00-4	4-Bromofluorobenzene	90%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-2		
Lab Sample ID:	JB40127-2	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	83.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L064523.D	1	07/03/13	AFL	06/26/13	F:OP47508	F:SL3253
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.023	mg/kg	
208-96-8	Acenaphthylene	ND	0.20	0.023	mg/kg	
98-86-2	Acetophenone	ND	0.20	0.023	mg/kg	
120-12-7	Anthracene	ND	0.20	0.020	mg/kg	
1912-24-9	Atrazine	ND	0.20	0.020	mg/kg	
100-52-7	Benzaldehyde	ND	0.98	0.20	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.20	0.020	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.20	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.020	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.020	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.023	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.20	0.025	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.20	0.039	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.20	0.027	mg/kg	
105-60-2	Caprolactam	ND	0.20	0.022	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.20	0.026	mg/kg	
106-47-8	4-Chloroaniline	ND	0.20	0.030	mg/kg	
86-74-8	Carbazole	ND	0.20	0.022	mg/kg	
218-01-9	Chrysene	ND	0.20	0.020	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.20	0.028	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.20	0.027	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.20	0.022	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.20	0.021	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.020	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.024	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.20	0.033	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.020	mg/kg	
132-64-9	Dibenzofuran	ND	0.20	0.020	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.39	0.039	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.20	0.039	mg/kg	
84-66-2	Diethyl phthalate	ND	0.39	0.039	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.20	0.039	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-2		
Lab Sample ID:	JB40127-2	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	83.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.39	0.039	mg/kg	
206-44-0	Fluoranthene	ND	0.20	0.020	mg/kg	
86-73-7	Fluorene	ND	0.20	0.022	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.20	0.020	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.20	0.022	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.20	0.027	mg/kg	
67-72-1	Hexachloroethane	ND	0.20	0.022	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.020	mg/kg	
78-59-1	Isophorone	ND	0.20	0.022	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.20	0.023	mg/kg	
88-74-4	2-Nitroaniline	ND	0.20	0.029	mg/kg	
99-09-2	3-Nitroaniline	ND	0.20	0.028	mg/kg	
100-01-6	4-Nitroaniline	ND	0.20	0.042	mg/kg	
91-20-3	Naphthalene	ND	0.20	0.020	mg/kg	
98-95-3	Nitrobenzene	ND	0.20	0.029	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.20	0.022	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.20	0.039	mg/kg	
85-01-8	Phenanthrene	ND	0.20	0.020	mg/kg	
129-00-0	Pyrene	ND	0.20	0.020	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.20	0.025	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		40-105%
321-60-8	2-Fluorobiphenyl	78%		43-107%
1718-51-0	Terphenyl-d14	88%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [b]		0	mg/kg	
	Total Alkanes		0	mg/kg	

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) No TICs detected.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-2		
Lab Sample ID:	JB40127-2	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	83.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Z9186.D	1	06/24/13	KD	06/22/13	OP66957	G5Z309
Run #2							

	Initial Weight	Final Volume
Run #1	16.9 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	5.6	2.5	mg/kg	
	EPH (> C28-C40)	ND	5.6	3.1	mg/kg	
	Total EPH (C9-C40)	ND	5.6	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		40-140%
3386-33-2	1-Chlorooctadecane	83%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-2		
Lab Sample ID:	JB40127-2	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
		Percent Solids:	83.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11700	60	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Arsenic	3.8	2.4	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Barium	66.5	24	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.75	0.24	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Calcium	1220	600	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Chromium	15.6	1.2	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Copper	12.5	3.0	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Iron	18500	60	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Lead	8.5	2.4	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Magnesium	3230	600	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Manganese	293	1.8	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.035	0.035	mg/kg	1	07/02/13	07/02/13	AA	SW846 7471B [1]	SW846 7471B [4]
Nickel	14.9	4.8	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Potassium	1940	1200	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Vanadium	23.6	6.0	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Zinc	35.2	2.4	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31569
(2) Instrument QC Batch: MA31592
(3) Prep QC Batch: MP72807
(4) Prep QC Batch: MP72970

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	UST-3		
Lab Sample ID:	JB40127-3	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	84.0
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C100039.D	1	06/22/13	PS	n/a	n/a	V3C4446
Run #2							

	Initial Weight
Run #1	6.0 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.0099	0.0017	mg/kg	
71-43-2	Benzene	ND	0.00099	0.00012	mg/kg	
74-97-5	Bromochloromethane	ND	0.0050	0.00026	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0050	0.00010	mg/kg	
75-25-2	Bromoform	ND	0.0050	0.00015	mg/kg	
74-83-9	Bromomethane	ND	0.0050	0.00027	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0099	0.0024	mg/kg	
75-15-0	Carbon disulfide	ND	0.0050	0.00012	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0050	0.00013	mg/kg	
108-90-7	Chlorobenzene	ND	0.0050	0.00011	mg/kg	
75-00-3	Chloroethane	ND	0.0050	0.00023	mg/kg	
67-66-3	Chloroform	ND	0.0050	0.000082	mg/kg	
74-87-3	Chloromethane	ND	0.0050	0.00018	mg/kg	
110-82-7	Cyclohexane	ND	0.0050	0.00012	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0050	0.00016	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0050	0.00019	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0050	0.00019	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0050	0.00017	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0050	0.00023	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0050	0.00014	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00099	0.00013	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0050	0.00025	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0050	0.00018	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0050	0.00024	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0050	0.00015	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0050	0.00014	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0050	0.00015	mg/kg	
100-41-4	Ethylbenzene	ND	0.00099	0.00026	mg/kg	
76-13-1	Freon 113	ND	0.0050	0.00043	mg/kg	
591-78-6	2-Hexanone	ND	0.0050	0.00062	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0050	0.000074	mg/kg	
79-20-9	Methyl Acetate	ND	0.0050	0.0026	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-3		
Lab Sample ID:	JB40127-3	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	84.0
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0050	0.00017	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00099	0.00023	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0050	0.00075	mg/kg	
75-09-2	Methylene chloride	0.0067	0.0050	0.0013	mg/kg	
100-42-5	Styrene	ND	0.0050	0.000091	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0050	0.00013	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0050	0.00017	mg/kg	
108-88-3	Toluene	0.00024	0.00099	0.00010	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0050	0.00016	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0050	0.00014	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0050	0.00011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0050	0.00017	mg/kg	
79-01-6	Trichloroethene	ND	0.0050	0.00017	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0050	0.00030	mg/kg	
75-01-4	Vinyl chloride	ND	0.0050	0.00014	mg/kg	
	m,p-Xylene	ND	0.00099	0.00017	mg/kg	
95-47-6	o-Xylene	ND	0.00099	0.00014	mg/kg	
1330-20-7	Xylene (total)	ND	0.00099	0.00014	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		65-131%
17060-07-0	1,2-Dichloroethane-D4	85%		70-121%
2037-26-5	Toluene-D8	89%		80-128%
460-00-4	4-Bromofluorobenzene	89%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-3		
Lab Sample ID:	JB40127-3	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	84.0
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L064524.D	1	07/04/13	AFL	06/26/13	F:OP47508	F:SL3253
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.023	mg/kg	
208-96-8	Acenaphthylene	ND	0.20	0.023	mg/kg	
98-86-2	Acetophenone	ND	0.20	0.023	mg/kg	
120-12-7	Anthracene	ND	0.20	0.020	mg/kg	
1912-24-9	Atrazine	ND	0.20	0.020	mg/kg	
100-52-7	Benzaldehyde	ND	0.98	0.20	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.20	0.020	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.20	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.020	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.020	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.023	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.20	0.025	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.20	0.039	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.20	0.026	mg/kg	
105-60-2	Caprolactam	ND	0.20	0.022	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.20	0.025	mg/kg	
106-47-8	4-Chloroaniline	ND	0.20	0.030	mg/kg	
86-74-8	Carbazole	ND	0.20	0.022	mg/kg	
218-01-9	Chrysene	ND	0.20	0.020	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.20	0.027	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.20	0.026	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.20	0.022	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.20	0.020	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.020	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.024	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.20	0.033	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.020	mg/kg	
132-64-9	Dibenzofuran	ND	0.20	0.020	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.39	0.039	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.20	0.039	mg/kg	
84-66-2	Diethyl phthalate	ND	0.39	0.039	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.20	0.039	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-3		
Lab Sample ID:	JB40127-3	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	84.0
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.39	0.039	mg/kg	
206-44-0	Fluoranthene	ND	0.20	0.020	mg/kg	
86-73-7	Fluorene	ND	0.20	0.022	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.20	0.020	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.20	0.021	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.20	0.027	mg/kg	
67-72-1	Hexachloroethane	ND	0.20	0.022	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.020	mg/kg	
78-59-1	Isophorone	ND	0.20	0.021	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.20	0.023	mg/kg	
88-74-4	2-Nitroaniline	ND	0.20	0.029	mg/kg	
99-09-2	3-Nitroaniline	ND	0.20	0.027	mg/kg	
100-01-6	4-Nitroaniline	ND	0.20	0.042	mg/kg	
91-20-3	Naphthalene	ND	0.20	0.020	mg/kg	
98-95-3	Nitrobenzene	ND	0.20	0.028	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.20	0.021	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.20	0.039	mg/kg	
85-01-8	Phenanthrene	ND	0.20	0.020	mg/kg	
129-00-0	Pyrene	ND	0.20	0.020	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.20	0.025	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	55%		40-105%
321-60-8	2-Fluorobiphenyl	63%		43-107%
1718-51-0	Terphenyl-d14	85%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [b]		0	mg/kg	
	Total Alkanes		0	mg/kg	

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) No TICs detected.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-3		
Lab Sample ID:	JB40127-3	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	84.0
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Z9187.D	1	06/24/13	KD	06/22/13	OP66957	G5Z309
Run #2							

	Initial Weight	Final Volume
Run #1	16.5 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	5.8	2.6	mg/kg	
	EPH (> C28-C40)	ND	5.8	3.2	mg/kg	
	Total EPH (C9-C40)	ND	5.8	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	68%		40-140%
3386-33-2	1-Chlorooctadecane	67%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-3		
Lab Sample ID:	JB40127-3	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
		Percent Solids:	84.0
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11700	57	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Arsenic	3.5	2.3	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Barium	80.1	23	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.88	0.23	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Calcium	1660	570	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Chromium	17.9	1.1	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cobalt	8.1	5.7	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Copper	13.6	2.9	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Iron	20800	57	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Lead	10.5	2.3	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Magnesium	4340	570	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Manganese	201	1.7	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.040	0.040	mg/kg	1	07/02/13	07/02/13	AA	SW846 7471B [1]	SW846 7471B [4]
Nickel	19.4	4.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Potassium	2550	1100	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Vanadium	25.6	5.7	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Zinc	43.2	2.3	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31569
(2) Instrument QC Batch: MA31592
(3) Prep QC Batch: MP72807
(4) Prep QC Batch: MP72970

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	UST-4		
Lab Sample ID:	JB40127-4	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	81.6
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C100040.D	1	06/22/13	PS	n/a	n/a	V3C4446
Run #2							

	Initial Weight
Run #1	5.5 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.011	0.0019	mg/kg	
71-43-2	Benzene	ND	0.0011	0.00013	mg/kg	
74-97-5	Bromochloromethane	ND	0.0056	0.00030	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0056	0.00012	mg/kg	
75-25-2	Bromoform	ND	0.0056	0.00017	mg/kg	
74-83-9	Bromomethane	ND	0.0056	0.00030	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0027	mg/kg	
75-15-0	Carbon disulfide	0.0010	0.0056	0.00013	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0056	0.00015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0056	0.00012	mg/kg	
75-00-3	Chloroethane	ND	0.0056	0.00025	mg/kg	
67-66-3	Chloroform	ND	0.0056	0.000092	mg/kg	
74-87-3	Chloromethane	ND	0.0056	0.00021	mg/kg	
110-82-7	Cyclohexane	ND	0.0056	0.00014	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0056	0.00018	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0056	0.00021	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0056	0.00021	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0056	0.00020	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0056	0.00025	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0056	0.00015	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00015	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0056	0.00029	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0056	0.00020	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0056	0.00027	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0056	0.00017	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0056	0.00015	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0056	0.00017	mg/kg	
100-41-4	Ethylbenzene	ND	0.0011	0.00029	mg/kg	
76-13-1	Freon 113	ND	0.0056	0.00048	mg/kg	
591-78-6	2-Hexanone	ND	0.0056	0.00069	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0056	0.000083	mg/kg	
79-20-9	Methyl Acetate	ND	0.0056	0.0029	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-4		
Lab Sample ID:	JB40127-4	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	81.6
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0056	0.00019	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0011	0.00026	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0056	0.00084	mg/kg	
75-09-2	Methylene chloride	0.0078	0.0056	0.0014	mg/kg	
100-42-5	Styrene	ND	0.0056	0.00010	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0056	0.00015	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0056	0.00019	mg/kg	
108-88-3	Toluene	0.00041	0.0011	0.00012	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0056	0.00018	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0056	0.00015	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0056	0.00012	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0056	0.00019	mg/kg	
79-01-6	Trichloroethene	ND	0.0056	0.00019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0056	0.00033	mg/kg	
75-01-4	Vinyl chloride	ND	0.0056	0.00016	mg/kg	
	m,p-Xylene	ND	0.0011	0.00019	mg/kg	
95-47-6	o-Xylene	ND	0.0011	0.00015	mg/kg	
1330-20-7	Xylene (total)	ND	0.0011	0.00015	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%		65-131%
17060-07-0	1,2-Dichloroethane-D4	83%		70-121%
2037-26-5	Toluene-D8	88%		80-128%
460-00-4	4-Bromofluorobenzene	90%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	7.61	.0069	mg/kg	J
	Total TIC, Volatile		.0069	mg/kg	J
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-4		
Lab Sample ID:	JB40127-4	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	81.6
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X029288.D	1	07/05/13	AFL	06/26/13	F:OP47508	F:SX1399
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.024	mg/kg	
208-96-8	Acenaphthylene	ND	0.20	0.024	mg/kg	
98-86-2	Acetophenone	ND	0.20	0.024	mg/kg	
120-12-7	Anthracene	ND	0.20	0.020	mg/kg	
1912-24-9	Atrazine	ND	0.20	0.020	mg/kg	
100-52-7	Benzaldehyde	ND	1.0	0.20	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.20	0.020	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.20	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.020	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.020	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.024	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.20	0.026	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.20	0.041	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.20	0.027	mg/kg	
105-60-2	Caprolactam	ND	0.20	0.023	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.20	0.027	mg/kg	
106-47-8	4-Chloroaniline	ND	0.20	0.031	mg/kg	
86-74-8	Carbazole	ND	0.20	0.023	mg/kg	
218-01-9	Chrysene	ND	0.20	0.020	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.20	0.029	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.20	0.028	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.20	0.023	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.20	0.021	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.021	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.025	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.20	0.034	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.020	mg/kg	
132-64-9	Dibenzofuran	ND	0.20	0.021	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.41	0.041	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.20	0.041	mg/kg	
84-66-2	Diethyl phthalate	ND	0.41	0.041	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.20	0.041	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-4		
Lab Sample ID:	JB40127-4	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	81.6
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.41	0.041	mg/kg	
206-44-0	Fluoranthene	ND	0.20	0.020	mg/kg	
86-73-7	Fluorene	ND	0.20	0.023	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.20	0.020	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.20	0.022	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.20	0.028	mg/kg	
67-72-1	Hexachloroethane	ND	0.20	0.023	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.020	mg/kg	
78-59-1	Isophorone	ND	0.20	0.022	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.20	0.024	mg/kg	
88-74-4	2-Nitroaniline	ND	0.20	0.030	mg/kg	
99-09-2	3-Nitroaniline	ND	0.20	0.029	mg/kg	
100-01-6	4-Nitroaniline	ND	0.20	0.044	mg/kg	
91-20-3	Naphthalene	ND	0.20	0.021	mg/kg	
98-95-3	Nitrobenzene	ND	0.20	0.030	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.20	0.022	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.20	0.041	mg/kg	
85-01-8	Phenanthrene	ND	0.20	0.020	mg/kg	
129-00-0	Pyrene	ND	0.20	0.020	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.20	0.026	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	52%		40-105%
321-60-8	2-Fluorobiphenyl	54%		43-107%
1718-51-0	Terphenyl-d14	75%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
10544-50-0	Cyclic octaatomic sulfur	10.67	.27	mg/kg	JN
111-06-8	Hexadecanoic acid, butyl ester	11.61	.24	mg/kg	JN
123-95-5	Octadecanoic acid, butyl ester	13.07	.21	mg/kg	JN
	Total TIC, Semi-Volatile		.72	mg/kg	J
	Total Alkanes		0	mg/kg	

(a) Analysis performed at Accutest Laboratories, Orlando FL.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-4		
Lab Sample ID:	JB40127-4	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	81.6
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Z9188.D	1	06/24/13	KD	06/22/13	OP66957	G5Z309
Run #2							

	Initial Weight	Final Volume
Run #1	17.0 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	5.8	2.6	mg/kg	
	EPH (> C28-C40)	ND	5.8	3.2	mg/kg	
	Total EPH (C9-C40)	ND	5.8	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		40-140%
3386-33-2	1-Chlorooctadecane	79%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-4		
Lab Sample ID:	JB40127-4	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
		Percent Solids:	81.6
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8580	64	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.6	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.6	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Barium	< 26	26	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.36	0.26	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.64	0.64	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Calcium	713	640	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Chromium	9.9	1.3	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 6.4	6.4	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Copper	6.8	3.2	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Iron	8600	64	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Lead	5.1	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1720	640	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Manganese	60.5	1.9	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.038	0.038	mg/kg	1	07/02/13	07/02/13	AA	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.6	5.1	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.6	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.64	0.64	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Vanadium	13.3	6.4	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Zinc	28.6	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31569
(2) Instrument QC Batch: MA31592
(3) Prep QC Batch: MP72807
(4) Prep QC Batch: MP72970

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	UST-5		
Lab Sample ID:	JB40127-5	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	80.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C100041.D	1	06/22/13	PS	n/a	n/a	V3C4446
Run #2							

	Initial Weight
Run #1	5.4 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.012	0.0019	mg/kg	
71-43-2	Benzene	ND	0.0012	0.00014	mg/kg	
74-97-5	Bromochloromethane	ND	0.0058	0.00030	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0058	0.00012	mg/kg	
75-25-2	Bromoform	ND	0.0058	0.00017	mg/kg	
74-83-9	Bromomethane	ND	0.0058	0.00031	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.012	0.0027	mg/kg	
75-15-0	Carbon disulfide	ND	0.0058	0.00013	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0058	0.00015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0058	0.00012	mg/kg	
75-00-3	Chloroethane	ND	0.0058	0.00026	mg/kg	
67-66-3	Chloroform	ND	0.0058	0.000095	mg/kg	
74-87-3	Chloromethane	ND	0.0058	0.00021	mg/kg	
110-82-7	Cyclohexane	ND	0.0058	0.00014	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0058	0.00019	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0058	0.00022	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0058	0.00022	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0058	0.00020	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0058	0.00026	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0058	0.00016	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0012	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0058	0.00030	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0058	0.00021	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0058	0.00027	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0058	0.00018	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0058	0.00016	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0058	0.00018	mg/kg	
100-41-4	Ethylbenzene	ND	0.0012	0.00030	mg/kg	
76-13-1	Freon 113	ND	0.0058	0.00049	mg/kg	
591-78-6	2-Hexanone	ND	0.0058	0.00072	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0058	0.000085	mg/kg	
79-20-9	Methyl Acetate	ND	0.0058	0.0030	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-5		
Lab Sample ID:	JB40127-5	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	80.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0058	0.00019	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0012	0.00027	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0058	0.00086	mg/kg	
75-09-2	Methylene chloride	0.0084	0.0058	0.0015	mg/kg	
100-42-5	Styrene	ND	0.0058	0.00011	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0058	0.00015	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0058	0.00020	mg/kg	
108-88-3	Toluene	0.00044	0.0012	0.00012	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0058	0.00019	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0058	0.00016	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0058	0.00012	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0058	0.00020	mg/kg	
79-01-6	Trichloroethene	ND	0.0058	0.00020	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0058	0.00034	mg/kg	
75-01-4	Vinyl chloride	ND	0.0058	0.00017	mg/kg	
	m,p-Xylene	ND	0.0012	0.00020	mg/kg	
95-47-6	o-Xylene	ND	0.0012	0.00016	mg/kg	
1330-20-7	Xylene (total)	ND	0.0012	0.00016	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		65-131%
17060-07-0	1,2-Dichloroethane-D4	82%		70-121%
2037-26-5	Toluene-D8	89%		80-128%
460-00-4	4-Bromofluorobenzene	89%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-5		
Lab Sample ID:	JB40127-5	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	80.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X029289.D	1	07/05/13	AFL	06/26/13	F:OP47508	F:SX1399
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.21	0.025	mg/kg	
208-96-8	Acenaphthylene	ND	0.21	0.024	mg/kg	
98-86-2	Acetophenone	ND	0.21	0.025	mg/kg	
120-12-7	Anthracene	ND	0.21	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.21	0.021	mg/kg	
100-52-7	Benzaldehyde	ND	1.0	0.21	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.21	0.021	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.21	0.021	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.21	0.021	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.21	0.021	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.21	0.025	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.21	0.026	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.21	0.042	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.21	0.028	mg/kg	
105-60-2	Caprolactam	ND	0.21	0.023	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.21	0.027	mg/kg	
106-47-8	4-Chloroaniline	ND	0.21	0.031	mg/kg	
86-74-8	Carbazole	ND	0.21	0.023	mg/kg	
218-01-9	Chrysene	ND	0.21	0.021	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.21	0.029	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.21	0.028	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.21	0.024	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.21	0.022	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.21	0.022	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.21	0.025	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.21	0.035	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.21	0.021	mg/kg	
132-64-9	Dibenzofuran	ND	0.21	0.021	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.42	0.042	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.21	0.042	mg/kg	
84-66-2	Diethyl phthalate	ND	0.42	0.042	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.21	0.042	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-5		
Lab Sample ID:	JB40127-5	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	80.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.42	0.042	mg/kg	
206-44-0	Fluoranthene	ND	0.21	0.021	mg/kg	
86-73-7	Fluorene	ND	0.21	0.023	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.21	0.021	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.21	0.023	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.21	0.029	mg/kg	
67-72-1	Hexachloroethane	ND	0.21	0.024	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.21	0.021	mg/kg	
78-59-1	Isophorone	ND	0.21	0.023	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.21	0.024	mg/kg	
88-74-4	2-Nitroaniline	ND	0.21	0.031	mg/kg	
99-09-2	3-Nitroaniline	ND	0.21	0.029	mg/kg	
100-01-6	4-Nitroaniline	ND	0.21	0.044	mg/kg	
91-20-3	Naphthalene	ND	0.21	0.021	mg/kg	
98-95-3	Nitrobenzene	ND	0.21	0.030	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.21	0.023	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.21	0.042	mg/kg	
85-01-8	Phenanthrene	ND	0.21	0.021	mg/kg	
129-00-0	Pyrene	ND	0.21	0.021	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.21	0.026	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		40-105%
321-60-8	2-Fluorobiphenyl	68%		43-107%
1718-51-0	Terphenyl-d14	81%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
79-34-5	Ethane, 1,1,2,2-tetrachloro-	2.80	.26	mg/kg	JN
31158-91-5	Hexadecanoic acid, 1,1-dimethylethyl est	11.61	.3	mg/kg	JN
110-36-1	n-Butyl myristate	13.07	.26	mg/kg	JN
	Total TIC, Semi-Volatile		.82	mg/kg	J
	Total Alkanes		0	mg/kg	

(a) Analysis performed at Accutest Laboratories, Orlando FL.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-5		
Lab Sample ID:	JB40127-5	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	80.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Z9189.D	1	06/24/13	KD	06/22/13	OP66957	G5Z309
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	6.3	2.8	mg/kg	
	EPH (> C28-C40)	ND	6.3	3.5	mg/kg	
	Total EPH (C9-C40)	ND	6.3	2.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	65%		40-140%
3386-33-2	1-Chlorooctadecane	67%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-5		
Lab Sample ID:	JB40127-5	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
		Percent Solids:	80.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4980	65	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.6	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.6	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Barium	< 26	26	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.27	0.26	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.65	0.65	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Calcium	< 650	650	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Chromium	6.7	1.3	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 6.5	6.5	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Copper	6.3	3.2	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Iron	7570	65	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Lead	3.9	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1570	650	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Manganese	68.1	1.9	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.041	0.041	mg/kg	1	07/02/13	07/02/13	AA	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.9	5.2	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.6	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.65	0.65	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Vanadium	8.8	6.5	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Zinc	17.1	2.6	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31569
(2) Instrument QC Batch: MA31592
(3) Prep QC Batch: MP72807
(4) Prep QC Batch: MP72970

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	UST-6		
Lab Sample ID:	JB40127-6	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	83.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C100042.D	1	06/22/13	PS	n/a	n/a	V3C4446
Run #2							

	Initial Weight
Run #1	5.8 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.010	0.0017	mg/kg	
71-43-2	Benzene	ND	0.0010	0.00012	mg/kg	
74-97-5	Bromochloromethane	ND	0.0052	0.00027	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0052	0.00011	mg/kg	
75-25-2	Bromoform	ND	0.0052	0.00016	mg/kg	
74-83-9	Bromomethane	ND	0.0052	0.00028	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.010	0.0025	mg/kg	
75-15-0	Carbon disulfide	ND	0.0052	0.00012	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0052	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0052	0.00011	mg/kg	
75-00-3	Chloroethane	ND	0.0052	0.00023	mg/kg	
67-66-3	Chloroform	ND	0.0052	0.000085	mg/kg	
74-87-3	Chloromethane	ND	0.0052	0.00019	mg/kg	
110-82-7	Cyclohexane	ND	0.0052	0.00013	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0052	0.00017	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0052	0.00020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0052	0.00019	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0052	0.00018	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0052	0.00024	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0052	0.00014	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00014	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0052	0.00027	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0052	0.00019	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0052	0.00025	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0052	0.00016	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0052	0.00014	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0052	0.00016	mg/kg	
100-41-4	Ethylbenzene	ND	0.0010	0.00027	mg/kg	
76-13-1	Freon 113	ND	0.0052	0.00044	mg/kg	
591-78-6	2-Hexanone	ND	0.0052	0.00064	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0052	0.000077	mg/kg	
79-20-9	Methyl Acetate	ND	0.0052	0.0027	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-6		
Lab Sample ID:	JB40127-6	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8260B	**Percent Solids:**	83.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0052	0.00017	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00024	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0052	0.00078	mg/kg	
75-09-2	Methylene chloride	0.0077	0.0052	0.0013	mg/kg	
100-42-5	Styrene	ND	0.0052	0.000095	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0052	0.00014	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0052	0.00018	mg/kg	
108-88-3	Toluene	0.00031	0.0010	0.00011	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0052	0.00017	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0052	0.00014	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0052	0.00011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0052	0.00018	mg/kg	
79-01-6	Trichloroethene	ND	0.0052	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0052	0.00031	mg/kg	
75-01-4	Vinyl chloride	ND	0.0052	0.00015	mg/kg	
	m,p-Xylene	ND	0.0010	0.00018	mg/kg	
95-47-6	o-Xylene	ND	0.0010	0.00014	mg/kg	
1330-20-7	Xylene (total)	ND	0.0010	0.00014	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		65-131%
17060-07-0	1,2-Dichloroethane-D4	85%		70-121%
2037-26-5	Toluene-D8	89%		80-128%
460-00-4	4-Bromofluorobenzene	91%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-6		
Lab Sample ID:	JB40127-6	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	83.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X029290.D	1	07/05/13	AFL	06/26/13	F:OP47508	F:SX1399
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.024	mg/kg	
208-96-8	Acenaphthylene	ND	0.20	0.023	mg/kg	
98-86-2	Acetophenone	ND	0.20	0.024	mg/kg	
120-12-7	Anthracene	ND	0.20	0.020	mg/kg	
1912-24-9	Atrazine	ND	0.20	0.020	mg/kg	
100-52-7	Benzaldehyde	ND	1.0	0.20	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.20	0.020	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.20	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.020	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.020	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.024	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.20	0.025	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.20	0.040	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.20	0.027	mg/kg	
105-60-2	Caprolactam	ND	0.20	0.022	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.20	0.026	mg/kg	
106-47-8	4-Chloroaniline	ND	0.20	0.030	mg/kg	
86-74-8	Carbazole	ND	0.20	0.022	mg/kg	
218-01-9	Chrysene	ND	0.20	0.020	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.20	0.028	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.20	0.027	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.20	0.023	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.20	0.021	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.021	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.024	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.20	0.033	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.020	mg/kg	
132-64-9	Dibenzofuran	ND	0.20	0.020	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.40	0.040	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.20	0.040	mg/kg	
84-66-2	Diethyl phthalate	ND	0.40	0.040	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.20	0.040	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-6		
Lab Sample ID:	JB40127-6	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	83.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.40	0.040	mg/kg	
206-44-0	Fluoranthene	ND	0.20	0.020	mg/kg	
86-73-7	Fluorene	ND	0.20	0.022	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.20	0.020	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.20	0.022	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.20	0.028	mg/kg	
67-72-1	Hexachloroethane	ND	0.20	0.023	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.020	mg/kg	
78-59-1	Isophorone	ND	0.20	0.022	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.20	0.023	mg/kg	
88-74-4	2-Nitroaniline	ND	0.20	0.029	mg/kg	
99-09-2	3-Nitroaniline	ND	0.20	0.028	mg/kg	
100-01-6	4-Nitroaniline	ND	0.20	0.043	mg/kg	
91-20-3	Naphthalene	ND	0.20	0.020	mg/kg	
98-95-3	Nitrobenzene	ND	0.20	0.029	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.20	0.022	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.20	0.040	mg/kg	
85-01-8	Phenanthrene	ND	0.20	0.020	mg/kg	
129-00-0	Pyrene	ND	0.20	0.020	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.20	0.025	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		40-105%
321-60-8	2-Fluorobiphenyl	66%		43-107%
1718-51-0	Terphenyl-d14	72%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
31158-91-5	Hexadecanoic acid, 1,1-dimethylethyl est	11.61	.35	mg/kg	JN
123-95-5	Octadecanoic acid, butyl ester	13.06	.29	mg/kg	JN
	Total TIC, Semi-Volatile		.64	mg/kg	J
	Total Alkanes		0	mg/kg	

(a) Analysis performed at Accutest Laboratories, Orlando FL.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	UST-6		
Lab Sample ID:	JB40127-6	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	83.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Z9190.D	1	06/24/13	KD	06/22/13	OP66957	G5Z309
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	7.4	2.7	mg/kg	
	EPH (> C28-C40)	ND	7.4	3.3	mg/kg	
	Total EPH (C9-C40)	ND	7.4	2.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	67%		40-140%
3386-33-2	1-Chlorooctadecane	70%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	UST-6		
Lab Sample ID:	JB40127-6	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/20/13
		Percent Solids:	83.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8500	62	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.5	2.5	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Barium	36.9	25	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.39	0.25	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.62	0.62	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Calcium	702	620	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Chromium	10.9	1.2	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 6.2	6.2	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Copper	8.0	3.1	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Iron	12100	62	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Lead	6.0	2.5	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Magnesium	2250	620	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Manganese	175	1.8	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.035	0.035	mg/kg	1	07/02/13	07/02/13	AA	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.3	4.9	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Potassium	1250	1200	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.62	0.62	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Vanadium	14.5	6.2	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]
Zinc	23.6	2.5	mg/kg	1	06/24/13	07/04/13	ND	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31569
(2) Instrument QC Batch: MA31592
(3) Prep QC Batch: MP72807
(4) Prep QC Batch: MP72970

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	P-1		
Lab Sample ID:	JB40127-7	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B	**Percent Solids:**	83.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C100127.D	1	06/25/13	PS	n/a	n/a	V3C4450
Run #2							

	Initial Weight
Run #1	6.2 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0162	0.0097	0.0016	mg/kg	
71-43-2	Benzene	ND	0.00097	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0048	0.00026	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0048	0.00010	mg/kg	
75-25-2	Bromoform	ND	0.0048	0.00015	mg/kg	
74-83-9	Bromomethane	ND	0.0048	0.00026	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0097	0.0023	mg/kg	
75-15-0	Carbon disulfide	ND	0.0048	0.00011	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0048	0.00013	mg/kg	
108-90-7	Chlorobenzene	ND	0.0048	0.00010	mg/kg	
75-00-3	Chloroethane	ND	0.0048	0.00022	mg/kg	
67-66-3	Chloroform	ND	0.0048	0.000080	mg/kg	
74-87-3	Chloromethane	ND	0.0048	0.00018	mg/kg	
110-82-7	Cyclohexane	ND	0.0048	0.00012	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0048	0.00016	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0048	0.00018	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0048	0.00018	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0048	0.00017	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0048	0.00022	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0048	0.00013	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00097	0.00013	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0048	0.00025	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0048	0.00018	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0048	0.00023	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0048	0.00015	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0048	0.00013	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0048	0.00015	mg/kg	
100-41-4	Ethylbenzene	ND	0.00097	0.00025	mg/kg	
76-13-1	Freon 113	ND	0.0048	0.00042	mg/kg	
591-78-6	2-Hexanone	ND	0.0048	0.00060	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0048	0.000072	mg/kg	
79-20-9	Methyl Acetate	ND	0.0048	0.0025	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-1		
Lab Sample ID:	JB40127-7	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B	**Percent Solids:**	83.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0048	0.00016	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00097	0.00023	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0048	0.00073	mg/kg	
75-09-2	Methylene chloride	0.0037	0.0048	0.0012	mg/kg	J
100-42-5	Styrene	ND	0.0048	0.000089	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0048	0.00013	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0048	0.00017	mg/kg	
108-88-3	Toluene	0.00034	0.00097	0.00010	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0048	0.00016	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0048	0.00013	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0048	0.00010	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0048	0.00017	mg/kg	
79-01-6	Trichloroethene	ND	0.0048	0.00017	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0048	0.00029	mg/kg	
75-01-4	Vinyl chloride	ND	0.0048	0.00014	mg/kg	
	m,p-Xylene	ND	0.00097	0.00017	mg/kg	
95-47-6	o-Xylene	ND	0.00097	0.00013	mg/kg	
1330-20-7	Xylene (total)	ND	0.00097	0.00013	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		65-131%
17060-07-0	1,2-Dichloroethane-D4	100%		70-121%
2037-26-5	Toluene-D8	91%		80-128%
460-00-4	4-Bromofluorobenzene	93%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	P-1		
Lab Sample ID:	JB40127-7	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	83.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P1122.D	1	06/26/13	AD	06/25/13	OP66993	E5P54
Run #2							

	Initial Weight	Final Volume
Run #1	34.4 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.035	0.010	mg/kg	
208-96-8	Acenaphthylene	ND	0.035	0.011	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0061	mg/kg	
120-12-7	Anthracene	ND	0.035	0.012	mg/kg	
1912-24-9	Atrazine	ND	0.17	0.0069	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.035	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.035	0.011	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.035	0.012	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.035	0.013	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.035	0.013	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.070	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.070	0.020	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.070	0.0040	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0080	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.070	0.011	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.011	mg/kg	
86-74-8	Carbazole	ND	0.070	0.016	mg/kg	
105-60-2	Caprolactam	ND	0.070	0.011	mg/kg	
218-01-9	Chrysene	ND	0.035	0.012	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.070	0.014	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.070	0.010	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.070	0.010	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.070	0.010	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.070	0.015	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.070	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.17	0.0088	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.035	0.012	mg/kg	
132-64-9	Dibenzofuran	ND	0.070	0.010	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.070	0.0077	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.070	0.017	mg/kg	
84-66-2	Diethyl phthalate	ND	0.070	0.012	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.070	0.012	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-1		
Lab Sample ID:	JB40127-7	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	83.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.070	0.031	mg/kg	
206-44-0	Fluoranthene	ND	0.035	0.015	mg/kg	
86-73-7	Fluorene	ND	0.035	0.011	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.070	0.011	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.035	0.0097	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.35	0.036	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.0097	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.035	0.012	mg/kg	
78-59-1	Isophorone	ND	0.070	0.0094	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.070	0.019	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.015	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.014	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.014	mg/kg	
91-20-3	Naphthalene	ND	0.035	0.0095	mg/kg	
98-95-3	Nitrobenzene	ND	0.070	0.010	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.070	0.0085	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.021	mg/kg	
85-01-8	Phenanthrene	ND	0.035	0.016	mg/kg	
129-00-0	Pyrene	ND	0.035	0.013	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	42%		11-119%
321-60-8	2-Fluorobiphenyl	44%		17-115%
1718-51-0	Terphenyl-d14	68%		30-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	2.51	.31	mg/kg	J
	system artifact	3.47	.25	mg/kg	J
	system artifact/aldol-condensation	3.86	5.5	mg/kg	J
	system artifact/aldol-condensation	4.01	.72	mg/kg	J
10544-50-0	Cyclic octaatomic sulfur	13.20	.25	mg/kg	JN
	Total TIC, Semi-Volatile		.25	mg/kg	J
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	P-1		
Lab Sample ID:	JB40127-7	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	83.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y12942.D	1	06/27/13	KD	06/26/13	OP67031	G5Y386
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	7.6	2.7	mg/kg	
	EPH (> C28-C40)	32.5	7.6	3.4	mg/kg	
	Total EPH (C9-C40)	32.5	7.6	2.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		40-140%
3386-33-2	1-Chlorooctadecane	85%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-1		
Lab Sample ID:	JB40127-7	**Date Sampled:**	06/19/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	83.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	18300	59	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Antimony	< 2.3	2.3	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Arsenic	4.8	2.3	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Barium	82.8	23	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.61	0.23	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Cadmium	< 0.59	0.59	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Calcium	892	590	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Chromium	22.1	1.2	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Cobalt	7.6	5.9	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Copper	12.9	2.9	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Iron	28600	59	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Lead	12.4	2.3	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Magnesium	3500	590	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Manganese	1320	3.5	mg/kg	2	06/26/13	07/05/13	GT	SW846 6010C [3]	SW846 3050B [4]
Mercury	< 0.036	0.036	mg/kg	1	07/02/13	07/02/13	AA	SW846 7471B [1]	SW846 7471B [5]
Nickel	14.9	4.7	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Potassium	1650	1200	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Selenium	< 2.3	2.3	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Silver	< 0.59	0.59	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Thallium	< 1.2	1.2	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Vanadium	32.0	5.9	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]
Zinc	52.0	2.3	mg/kg	1	06/26/13	07/03/13	GT	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA31569
(2) Instrument QC Batch: MA31586
(3) Instrument QC Batch: MA31590
(4) Prep QC Batch: MP72852
(5) Prep QC Batch: MP72970

RL = Reporting Limit

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JB40127

Client / Reporting Information

Company Name: EnviroTrac
Street Address: 40a Corporate Court, Suite E
City: South Plainfield State: NJ Zip: 07080
Project Contact: Drew Daly E-mail: drewd@envirotrac.com
Phone #: 908-757-1900 Fax #: 908-757-0017
Sampler(s) Name(s): Justin Piegaro Phone #: 908-757-1900

Project Information

Project Name: Hess QC Lab
Street: 835 West Avenue
City: Port Reading State: NJ
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name: Hess Corporation
Street Address: One Hess Plaza
City: Woodbridge State: NJ Zip:
Attention: Mike Matri

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	EPH Cat 2, NJ Fractionation	Volatiles (plus TICs)	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,4-Dioxane	SVOC+TICs	TAL Metals		* 3 Encores per sample on 6/20/13		LAB USE ONLY
-1	UST-1		6/19/13	9:59	JP	SO	5					2			3	X	X	X	X	X	X	X		*		DIZ
-2	UST-2		6/19/13	10:14	JP	SO	5					2			3	X	X	X	X	X	X	X				PHOTY
-3	UST-3		6/19/13	10:49	JP	SO	5					2			3	X	X	X	X	X	X	X				1901
-4	UST-4		6/19/13	11:12	JP	SO	5					2			3	X	X	X	X	X	X	X				4981
-5	UST-5		6/19/13	10:32	JP	SO	5					2			3	X	X	X	X	X	X	X				
-6	UST-6		6/19/13	9:34	JP	SO	5					2			3	X	X	X	X	X	X	X				

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] other _____

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format _____
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

-Crude oil parameters, see attached table.
* Hold EPH ~~results~~ samples for fractionization pending results

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/19/13 15:00	1	2	6/20/13	2
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3	6/20/13 12:10	3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact / Not intact	Preserved where applicable	On Ice	Cooler Temp.
5		5	417	[x] Intact [ ] Not intact	[ ]	[x]	4.0°C

2A

RUSH

5.1 5

JB40127: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB40127 **Client:** **Project:**

Date / Time Received: 6/20/2013 **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (4/4); 0

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB40127: Chain of Custody
Page 2 of 3

CHAIN OF CUSTODY

ACCUTEST Laboratories

SIL

2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

FED-EX Tracking #

Bottle Order Control #

Accutest Quote #

Accutest Job # JB40127

Client / Reporting Information

Company Name: EnviroTrac
Address: 400 Corporate Ct, Suite E
City: South Plainfield State: NJ Zip: 07080
Project Contact: Drew Daly E-mail:
Phone #: 908-757-1900
Samplers's Name: Justin Piegaro

Project Information

Project Name: Hess QC Lab
Street: 835 West Avenue
City: Port Reading State: NJ
Project #:
Fax #:
Client Purchase Order #:

Requested Analysis

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	EPH Cat 2, No Fractionation	VO+15	SVO+TICs	TAL Metals					LAB USE ONLY
-7	P-1		6/19/2013	10:55	JP	SO	5					2			3	X	X	X	X					
																								B15
																								M3OT3
																								14D4
																								4984

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*
- [ ] Other

Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [x] NJ Reduced
- [ ] NJ Full
- [ ] Other _____
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format_____

Commercial "A" = Results Only

Comments / Remarks

Bill to Hess Corp., atten: Mike Matri

Do not fractionate sample, hold pending EPH resluts

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Justin Pieagero	6/20/2013 7:00	1	2		2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☑ Temperature 3.0

5.1

5

JB40127: Chain of Custody

Page 3 of 3

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Job No: JB40127

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40127-1 UST-1	Collected: 19-JUN-13 09:59 By: JP		Received: 20-JUN-13 By: TH			
JB40127-1	SW846 8260B	22-JUN-13 05:14	PS			V8260NJPTCL11+
JB40127-1	NJDEP EPH	24-JUN-13 11:11	KD	22-JUN-13	RP	BNJEPHCAT2NF
JB40127-1	SM2540 G-97	25-JUN-13 17:10	WR			%SOL
JB40127-1	SW846 6010C	26-JUN-13 21:47	ND	24-JUN-13	WWZ	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JB40127-1	SW846 7471B	02-JUL-13 14:00	AA	02-JUL-13	AA	HG
JB40127-1	SW846 8270D	03-JUL-13 23:14	AFL	26-JUN-13	AFL	B8270TCL11+
JB40127-2 UST-2	Collected: 19-JUN-13 10:14 By: JP		Received: 20-JUN-13 By: TH			
JB40127-2	SW846 8260B	22-JUN-13 05:44	PS			V8260NJPTCL11+
JB40127-2	NJDEP EPH	24-JUN-13 11:33	KD	22-JUN-13	RP	BNJEPHCAT2NF
JB40127-2	SM2540 G-97	25-JUN-13 17:10	WR			%SOL
JB40127-2	SW846 7471B	02-JUL-13 14:06	AA	02-JUL-13	AA	HG
JB40127-2	SW846 8270D	03-JUL-13 23:38	AFL	26-JUN-13	AFL	B8270TCL11+
JB40127-2	SW846 6010C	04-JUL-13 21:06	ND	24-JUN-13	WWZ	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JB40127-3 UST-3	Collected: 19-JUN-13 10:49 By: JP		Received: 20-JUN-13 By: TH			
JB40127-3	SW846 8260B	22-JUN-13 06:13	PS			V8260NJPTCL11+
JB40127-3	NJDEP EPH	24-JUN-13 11:54	KD	22-JUN-13	RP	BNJEPHCAT2NF
JB40127-3	SM2540 G-97	25-JUN-13 17:10	WR			%SOL
JB40127-3	SW846 7471B	02-JUL-13 14:10	AA	02-JUL-13	AA	HG
JB40127-3	SW846 8270D	04-JUL-13 00:01	AFL	26-JUN-13	AFL	B8270TCL11+
JB40127-3	SW846 6010C	04-JUL-13 21:12	ND	24-JUN-13	WWZ	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JB40127-4 UST-4	Collected: 19-JUN-13 11:12 By: JP		Received: 20-JUN-13 By: TH			
JB40127-4	SW846 8260B	22-JUN-13 06:43	PS			V8260NJPTCL11+

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Job No: JB40127

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40127-4	NJDEP EPH	24-JUN-13 12:16	KD	22-JUN-13	RP	BNJEPHCAT2NF
JB40127-4	SM2540 G-97	25-JUN-13 17:10	WR			%SOL
JB40127-4	SW846 7471B	02-JUL-13 14:16	AA	02-JUL-13	AA	HG
JB40127-4	SW846 6010C	04-JUL-13 21:18	ND	24-JUN-13	WWZ	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB40127-4	SW846 8270D	05-JUL-13 17:06	AFL	26-JUN-13	AFL	B8270TCL11+
JB40127-5 UST-5	Collected: 19-JUN-13 10:32 By: JP		Received: 20-JUN-13 By: TH			
JB40127-5	SW846 8260B	22-JUN-13 07:12	PS			V8260NJPTCL11+
JB40127-5	NJDEP EPH	24-JUN-13 12:38	KD	22-JUN-13	RP	BNJEPHCAT2NF
JB40127-5	SM2540 G-97	25-JUN-13 17:10	WR			%SOL
JB40127-5	SW846 7471B	02-JUL-13 14:17	AA	02-JUL-13	AA	HG
JB40127-5	SW846 6010C	04-JUL-13 21:24	ND	24-JUN-13	WWZ	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB40127-5	SW846 8270D	05-JUL-13 17:33	AFL	26-JUN-13	AFL	B8270TCL11+
JB40127-6 UST-6	Collected: 19-JUN-13 09:34 By: JP		Received: 20-JUN-13 By: TH			
JB40127-6	SW846 8260B	22-JUN-13 07:41	PS			V8260NJPTCL11+
JB40127-6	NJDEP EPH	24-JUN-13 13:00	KD	22-JUN-13	RP	BNJEPHCAT2NF
JB40127-6	SM2540 G-97	26-JUN-13 12:55	PD			%SOL
JB40127-6	SW846 7471B	02-JUL-13 14:19	AA	02-JUL-13	AA	HG
JB40127-6	SW846 6010C	04-JUL-13 21:42	ND	24-JUN-13	WWZ	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB40127-6	SW846 8270D	05-JUL-13 18:00	AFL	26-JUN-13	AFL	B8270TCL11+
JB40127-7 P-1	Collected: 19-JUN-13 10:55 By: JP		Received: 21-JUN-13 By: AS			
JB40127-7	SW846 8260B	25-JUN-13 13:58	PS			V8260NJPTCL11+
JB40127-7	SW846 8270D	26-JUN-13 06:57	AD	25-JUN-13	TM	B8270TCL11+
JB40127-7	SM2540 G-97	26-JUN-13 12:55	PD			%SOL
JB40127-7	NJDEP EPH	27-JUN-13 12:23	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40127-7	SW846 7471B	02-JUL-13 14:20	AA	02-JUL-13	AA	HG

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Job No: JB40127

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40127-7	SW846 6010C	03-JUL-13 23:05	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,NA,NI,PB,SB,SE, TL,V,ZN
JB40127-7	SW846 6010C	05-JUL-13 05:55	GT	26-JUN-13	RP	MN

Accutest Internal Chain of Custody

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40127-1.1	Secured Storage	Richa Patel	06/22/13 06:48	Retrieve from Storage
JB40127-1.1	Richa Patel	Secured Storage	06/22/13 08:50	Return to Storage
JB40127-1.1	Secured Storage	Donald Phelps	06/24/13 15:16	Retrieve from Storage
JB40127-1.1	Donald Phelps	Secured Staging Area	06/24/13 15:17	Return to Storage
JB40127-1.1	Secured Staging Area	Michael Bunza	06/24/13 15:18	Retrieve from Storage
JB40127-1.1	Michael Bunza	Secured Storage	06/24/13 17:16	Return to Storage
JB40127-1.1	Secured Storage	Akim Abduliahi	07/02/13 08:12	Retrieve from Storage
JB40127-1.1	Akim Abduliahi	Secured Storage	07/02/13 15:32	Return to Storage
JB40127-1.1	Darnell Brown		07/29/13 15:51	Disposed
JB40127-1.1.1	Richa Patel	Organics Prep	06/22/13 06:50	Extract from JB40127-1.1
JB40127-1.1.1	Organics Prep	Richa Patel	06/22/13 14:14	Extract from JB40127-1.1
JB40127-1.1.1	Richa Patel	Extract Storage	06/22/13 14:15	Return to Storage
JB40127-1.1.1	Extract Storage	Khaliah Douglas	06/24/13 10:19	Retrieve from Storage
JB40127-1.1.1	Khaliah Douglas	GC5Z	06/24/13 10:19	Load on Instrument
JB40127-1.1.1	GC5Z	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40127-1.1.1	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40127-1.1.1	Extract Freezer		08/02/13 09:00	Disposed
JB40127-1.1.2	Michael Bunza	Metals Digestion	06/24/13 17:15	Digestate from JB40127-1.1
JB40127-1.1.2	Metals Digestion	Michael Bunza	06/24/13 17:15	Digestate from JB40127-1.1
JB40127-1.1.2	Michael Bunza	Metals Digestate Storage	06/24/13 17:15	Return to Storage
JB40127-1.2	Secured Storage	Wojciech Rodzik	06/25/13 12:59	Retrieve from Storage
JB40127-1.2	Wojciech Rodzik	Secured Storage	06/25/13 17:12	Return to Storage
JB40127-1.2	Darnell Brown		07/29/13 15:51	Disposed
JB40127-1.4	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-1.4	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-1.4	Darnell Brown		07/29/13 15:51	Disposed
JB40127-1.5	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-1.5	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-1.5	Darnell Brown		07/29/13 15:51	Disposed
JB40127-1.6	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-1.6	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-1.6	Secured Storage	Prashant Shukla	06/21/13 17:02	Retrieve from Storage
JB40127-1.6	Prashant Shukla	GCMS3C	06/21/13 17:02	Load on Instrument
JB40127-1.6	GCMS3C	Juntae Park	06/25/13 10:54	Unload from Instrument
JB40127-1.6	Juntae Park	Secured Storage	06/25/13 10:54	Return to Storage
JB40127-1.6	Darnell Brown		07/29/13 15:51	Disposed
JB40127-1.7	Secured Storage	Robert Lofrano	06/20/13 16:27	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40127-1.7	Robert Lofrano		06/20/13 16:27	Subcontract
JB40127-2.1	Secured Storage	Richa Patel	06/22/13 06:48	Retrieve from Storage
JB40127-2.1	Richa Patel	Secured Storage	06/22/13 08:50	Return to Storage
JB40127-2.1	Secured Storage	Donald Phelps	06/24/13 15:16	Retrieve from Storage
JB40127-2.1	Donald Phelps	Secured Staging Area	06/24/13 15:17	Return to Storage
JB40127-2.1	Secured Staging Area	Michael Bunza	06/24/13 15:18	Retrieve from Storage
JB40127-2.1	Michael Bunza	Secured Storage	06/24/13 17:16	Return to Storage
JB40127-2.1	Secured Storage	Akim Abduliahi	07/02/13 08:12	Retrieve from Storage
JB40127-2.1	Akim Abduliahi	Secured Storage	07/02/13 15:32	Return to Storage
JB40127-2.1	Darnell Brown		07/29/13 15:51	Disposed
JB40127-2.1.1	Richa Patel	Organics Prep	06/22/13 06:50	Extract from JB40127-2.1
JB40127-2.1.1	Organics Prep	Richa Patel	06/22/13 14:14	Extract from JB40127-2.1
JB40127-2.1.1	Richa Patel	Extract Storage	06/22/13 14:15	Return to Storage
JB40127-2.1.1	Extract Storage	Khaliah Douglas	06/24/13 10:19	Retrieve from Storage
JB40127-2.1.1	Khaliah Douglas	GC5Z	06/24/13 10:19	Load on Instrument
JB40127-2.1.1	GC5Z	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40127-2.1.1	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40127-2.1.1	Extract Freezer		08/02/13 09:00	Disposed
JB40127-2.1.2	Michael Bunza	Metals Digestion	06/24/13 17:15	Digestate from JB40127-2.1
JB40127-2.1.2	Metals Digestion	Michael Bunza	06/24/13 17:15	Digestate from JB40127-2.1
JB40127-2.1.2	Michael Bunza	Metals Digestate Storage	06/24/13 17:15	Return to Storage
JB40127-2.4	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-2.4	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-2.4	Darnell Brown		07/29/13 15:51	Disposed
JB40127-2.5	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-2.5	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-2.5	Secured Storage	Prashant Shukla	06/21/13 17:02	Retrieve from Storage
JB40127-2.5	Prashant Shukla	GCMS3C	06/21/13 17:02	Load on Instrument
JB40127-2.5	GCMS3C	Juntae Park	06/25/13 10:54	Unload from Instrument
JB40127-2.5	Juntae Park	Secured Storage	06/25/13 10:54	Return to Storage
JB40127-2.5	Darnell Brown		07/29/13 15:51	Disposed
JB40127-2.6	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-2.6	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-2.6	Darnell Brown		07/29/13 15:51	Disposed
JB40127-2.7	Secured Storage	Robert Lofrano	06/20/13 16:27	Retrieve from Storage
JB40127-2.7	Robert Lofrano		06/20/13 16:27	Subcontract

Accutest Internal Chain of Custody

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40127-3.1	Secured Storage	Richa Patel	06/22/13 06:48	Retrieve from Storage
JB40127-3.1	Richa Patel	Secured Storage	06/22/13 08:50	Return to Storage
JB40127-3.1	Secured Storage	Donald Phelps	06/24/13 15:16	Retrieve from Storage
JB40127-3.1	Donald Phelps	Secured Staging Area	06/24/13 15:17	Return to Storage
JB40127-3.1	Secured Staging Area	Michael Bunza	06/24/13 15:18	Retrieve from Storage
JB40127-3.1	Michael Bunza	Secured Storage	06/24/13 17:16	Return to Storage
JB40127-3.1	Secured Storage	Akim Abduliahi	07/02/13 08:12	Retrieve from Storage
JB40127-3.1	Akim Abduliahi	Secured Storage	07/02/13 15:32	Return to Storage
JB40127-3.1	Darnell Brown		07/29/13 15:51	Disposed
JB40127-3.1.1	Richa Patel	Organics Prep	06/22/13 06:50	Extract from JB40127-3.1
JB40127-3.1.1	Organics Prep	Richa Patel	06/22/13 14:14	Extract from JB40127-3.1
JB40127-3.1.1	Richa Patel	Extract Storage	06/22/13 14:15	Return to Storage
JB40127-3.1.1	Extract Storage	Khaliah Douglas	06/24/13 10:19	Retrieve from Storage
JB40127-3.1.1	Khaliah Douglas	GC5Z	06/24/13 10:19	Load on Instrument
JB40127-3.1.1	GC5Z	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40127-3.1.1	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40127-3.1.1	Extract Freezer		08/02/13 09:00	Disposed
JB40127-3.1.2	Michael Bunza	Metals Digestion	06/24/13 17:15	Digestate from JB40127-3.1
JB40127-3.1.2	Metals Digestion	Michael Bunza	06/24/13 17:15	Digestate from JB40127-3.1
JB40127-3.1.2	Michael Bunza	Metals Digestate Storage	06/24/13 17:15	Return to Storage
JB40127-3.2	Secured Storage	Wojciech Rodzik	06/25/13 12:59	Retrieve from Storage
JB40127-3.2	Wojciech Rodzik	Secured Storage	06/25/13 17:12	Return to Storage
JB40127-3.2	Darnell Brown		07/29/13 15:51	Disposed
JB40127-3.4	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-3.4	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-3.4	Darnell Brown		07/29/13 15:51	Disposed
JB40127-3.5	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-3.5	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-3.5	Darnell Brown		07/29/13 15:51	Disposed
JB40127-3.6	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-3.6	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-3.6	Secured Storage	Prashant Shukla	06/21/13 17:02	Retrieve from Storage
JB40127-3.6	Prashant Shukla	GCMS3C	06/21/13 17:02	Load on Instrument
JB40127-3.6	GCMS3C	Juntae Park	06/25/13 10:54	Unload from Instrument
JB40127-3.6	Juntae Park	Secured Storage	06/25/13 10:54	Return to Storage
JB40127-3.6	Darnell Brown		07/29/13 15:51	Disposed
JB40127-3.7	Secured Storage	Robert Lofrano	06/20/13 16:27	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40127-3.7	Robert Lofrano		06/20/13 16:27	Subcontract
JB40127-4.1	Secured Storage	Richa Patel	06/22/13 06:48	Retrieve from Storage
JB40127-4.1	Richa Patel	Secured Storage	06/22/13 08:50	Return to Storage
JB40127-4.1	Secured Storage	Donald Phelps	06/24/13 15:16	Retrieve from Storage
JB40127-4.1	Donald Phelps	Secured Staging Area	06/24/13 15:17	Return to Storage
JB40127-4.1	Secured Staging Area	Michael Bunza	06/24/13 15:18	Retrieve from Storage
JB40127-4.1	Michael Bunza	Secured Storage	06/24/13 17:16	Return to Storage
JB40127-4.1	Secured Storage	Akim Abduliahi	07/02/13 08:12	Retrieve from Storage
JB40127-4.1	Akim Abduliahi	Secured Storage	07/02/13 15:32	Return to Storage
JB40127-4.1	Darnell Brown		07/29/13 15:51	Disposed
JB40127-4.1.1	Richa Patel	Organics Prep	06/22/13 06:50	Extract from JB40127-4.1
JB40127-4.1.1	Organics Prep	Richa Patel	06/22/13 14:14	Extract from JB40127-4.1
JB40127-4.1.1	Richa Patel	Extract Storage	06/22/13 14:15	Return to Storage
JB40127-4.1.1	Extract Storage	Khaliah Douglas	06/24/13 10:19	Retrieve from Storage
JB40127-4.1.1	Khaliah Douglas	GC5Z	06/24/13 10:19	Load on Instrument
JB40127-4.1.1	GC5Z	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40127-4.1.1	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40127-4.1.1	Extract Freezer		08/02/13 09:00	Disposed
JB40127-4.1.2	Michael Bunza	Metals Digestion	06/24/13 17:15	Digestate from JB40127-4.1
JB40127-4.1.2	Metals Digestion	Michael Bunza	06/24/13 17:15	Digestate from JB40127-4.1
JB40127-4.1.2	Michael Bunza	Metals Digestate Storage	06/24/13 17:15	Return to Storage
JB40127-4.2	Secured Storage	Wojciech Rodzik	06/25/13 12:59	Retrieve from Storage
JB40127-4.2	Wojciech Rodzik	Secured Storage	06/25/13 17:12	Return to Storage
JB40127-4.2	Darnell Brown		07/29/13 15:51	Disposed
JB40127-4.4	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-4.4	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-4.4	Darnell Brown		07/29/13 15:51	Disposed
JB40127-4.5	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-4.5	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-4.5	Darnell Brown		07/29/13 15:51	Disposed
JB40127-4.6	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-4.6	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-4.6	Secured Storage	Prashant Shukla	06/21/13 17:02	Retrieve from Storage
JB40127-4.6	Prashant Shukla	GCMS3C	06/21/13 17:02	Load on Instrument
JB40127-4.6	GCMS3C	Juntae Park	06/25/13 10:54	Unload from Instrument
JB40127-4.6	Juntae Park	Secured Storage	06/25/13 10:54	Return to Storage
JB40127-4.6	Darnell Brown		07/29/13 15:51	Disposed

Accutest Internal Chain of Custody

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40127-4.7	Secured Storage	Robert Lofrano	06/20/13 16:27	Retrieve from Storage
JB40127-4.7	Robert Lofrano		06/20/13 16:27	Subcontract
JB40127-5.1	Secured Storage	Richa Patel	06/22/13 06:48	Retrieve from Storage
JB40127-5.1	Richa Patel	Secured Storage	06/22/13 08:50	Return to Storage
JB40127-5.1	Secured Storage	Donald Phelps	06/24/13 15:16	Retrieve from Storage
JB40127-5.1	Donald Phelps	Secured Staging Area	06/24/13 15:17	Return to Storage
JB40127-5.1	Secured Staging Area	Michael Bunza	06/24/13 15:18	Retrieve from Storage
JB40127-5.1	Michael Bunza	Secured Storage	06/24/13 17:16	Return to Storage
JB40127-5.1	Secured Storage	Akim Abduliahi	07/02/13 08:12	Retrieve from Storage
JB40127-5.1	Akim Abduliahi	Secured Storage	07/02/13 15:32	Return to Storage
JB40127-5.1	Darnell Brown		07/29/13 15:51	Disposed
JB40127-5.1.1	Richa Patel	Organics Prep	06/22/13 06:50	Extract from JB40127-5.1
JB40127-5.1.1	Organics Prep	Richa Patel	06/22/13 14:14	Extract from JB40127-5.1
JB40127-5.1.1	Richa Patel	Extract Storage	06/22/13 14:15	Return to Storage
JB40127-5.1.1	Extract Storage	Khaliah Douglas	06/24/13 10:19	Retrieve from Storage
JB40127-5.1.1	Khaliah Douglas	GC5Z	06/24/13 10:19	Load on Instrument
JB40127-5.1.1	GC5Z	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40127-5.1.1	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40127-5.1.1	Extract Freezer		08/02/13 09:00	Disposed
JB40127-5.1.2	Michael Bunza	Metals Digestion	06/24/13 17:15	Digestate from JB40127-5.1
JB40127-5.1.2	Metals Digestion	Michael Bunza	06/24/13 17:15	Digestate from JB40127-5.1
JB40127-5.1.2	Michael Bunza	Metals Digestate Storage	06/24/13 17:15	Return to Storage
JB40127-5.2	Secured Storage	Wojciech Rodzik	06/25/13 12:59	Retrieve from Storage
JB40127-5.2	Wojciech Rodzik	Secured Storage	06/25/13 17:12	Return to Storage
JB40127-5.2	Darnell Brown		07/29/13 15:51	Disposed
JB40127-5.4	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-5.4	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-5.4	Darnell Brown		07/29/13 15:51	Disposed
JB40127-5.5	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-5.5	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-5.5	Darnell Brown		07/29/13 15:51	Disposed
JB40127-5.6	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-5.6	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-5.6	Secured Storage	Prashant Shukla	06/21/13 17:02	Retrieve from Storage
JB40127-5.6	Prashant Shukla	GCMS3C	06/21/13 17:02	Load on Instrument
JB40127-5.6	GCMS3C	Juntae Park	06/25/13 10:54	Unload from Instrument

Accutest Internal Chain of Custody

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40127-5.6	Juntae Park	Secured Storage	06/25/13 10:54	Return to Storage
JB40127-5.6	Darnell Brown		07/29/13 15:51	Disposed
JB40127-5.7	Secured Storage	Robert Lofrano	06/20/13 16:27	Retrieve from Storage
JB40127-5.7	Robert Lofrano		06/20/13 16:27	Subcontract
JB40127-6.1	Secured Storage	Richa Patel	06/22/13 06:48	Retrieve from Storage
JB40127-6.1	Richa Patel	Secured Storage	06/22/13 08:50	Return to Storage
JB40127-6.1	Secured Storage	Donald Phelps	06/24/13 15:16	Retrieve from Storage
JB40127-6.1	Donald Phelps	Secured Staging Area	06/24/13 15:17	Return to Storage
JB40127-6.1	Secured Staging Area	Michael Bunza	06/24/13 15:18	Retrieve from Storage
JB40127-6.1	Michael Bunza	Secured Storage	06/24/13 17:16	Return to Storage
JB40127-6.1	Secured Storage	Akim Abduliahi	07/02/13 08:12	Retrieve from Storage
JB40127-6.1	Akim Abduliahi	Secured Storage	07/02/13 15:32	Return to Storage
JB40127-6.1	Darnell Brown		07/29/13 15:52	Disposed
JB40127-6.1.1	Richa Patel	Organics Prep	06/22/13 06:50	Extract from JB40127-6.1
JB40127-6.1.1	Organics Prep	Richa Patel	06/22/13 14:14	Extract from JB40127-6.1
JB40127-6.1.1	Richa Patel	Extract Storage	06/22/13 14:15	Return to Storage
JB40127-6.1.1	Extract Storage	Khaliah Douglas	06/24/13 10:19	Retrieve from Storage
JB40127-6.1.1	Khaliah Douglas	GC5Z	06/24/13 10:19	Load on Instrument
JB40127-6.1.1	GC5Z	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40127-6.1.1	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40127-6.1.1	Extract Freezer		08/02/13 09:00	Disposed
JB40127-6.1.2	Michael Bunza	Metals Digestion	06/24/13 17:15	Digestate from JB40127-6.1
JB40127-6.1.2	Metals Digestion	Michael Bunza	06/24/13 17:15	Digestate from JB40127-6.1
JB40127-6.1.2	Michael Bunza	Metals Digestate Storage	06/24/13 17:15	Return to Storage
JB40127-6.2	Secured Storage	Brian Racin	06/26/13 12:16	Retrieve from Storage
JB40127-6.2	Brian Racin	Pratik Doshi	06/26/13 12:19	Custody Transfer
JB40127-6.2	Pratik Doshi	Secured Storage	06/26/13 16:22	Return to Storage
JB40127-6.2	Darnell Brown		07/29/13 15:52	Disposed
JB40127-6.4	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-6.4	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-6.4	Darnell Brown		07/29/13 15:52	Disposed
JB40127-6.5	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-6.5	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage
JB40127-6.5	Darnell Brown		07/29/13 15:52	Disposed
JB40127-6.6	Secured Storage	Jayna Patel	06/20/13 15:27	Retrieve from Storage
JB40127-6.6	Jayna Patel	Secured Storage	06/20/13 15:43	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40127-6.6	Secured Storage	Prashant Shukla	06/21/13 17:02	Retrieve from Storage
JB40127-6.6	Prashant Shukla	GCMS3C	06/21/13 17:02	Load on Instrument
JB40127-6.6	GCMS3C	Juntae Park	06/25/13 10:54	Unload from Instrument
JB40127-6.6	Juntae Park	Secured Storage	06/25/13 10:54	Return to Storage
JB40127-6.6	Darnell Brown		07/29/13 15:52	Disposed
JB40127-6.7	Secured Storage	Robert Lofrano	06/20/13 16:27	Retrieve from Storage
JB40127-6.7	Robert Lofrano		06/20/13 16:27	Subcontract
JB40127-7.1	Secured Storage	Zachary Mokrycki	06/25/13 06:13	Retrieve from Storage
JB40127-7.1	Zachary Mokrycki	Secured Storage	06/25/13 12:25	Return to Storage
JB40127-7.1	Secured Storage	Donald Phelps	06/25/13 15:57	Retrieve from Storage
JB40127-7.1	Donald Phelps	Secured Staging Area	06/25/13 15:58	Return to Storage
JB40127-7.1	Secured Staging Area	Michael Bunza	06/25/13 16:00	Retrieve from Storage
JB40127-7.1	Michael Bunza	Secured Storage	06/25/13 17:47	Return to Storage
JB40127-7.1	Secured Storage	Todd Shoemaker	06/26/13 08:08	Retrieve from Storage
JB40127-7.1	Todd Shoemaker	Secured Staging Area	06/26/13 08:08	Return to Storage
JB40127-7.1	Secured Staging Area	Rinku Patel	06/26/13 08:25	Retrieve from Storage
JB40127-7.1	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40127-7.1	Secured Storage	Donald Phelps	06/26/13 16:44	Retrieve from Storage
JB40127-7.1	Donald Phelps	Secured Staging Area	06/26/13 16:44	Return to Storage
JB40127-7.1	Secured Staging Area	Allan Chung-yew	06/26/13 16:48	Retrieve from Storage
JB40127-7.1	Allan Chung-yew	Secured Storage	06/27/13 14:50	Return to Storage
JB40127-7.1	Secured Storage	Akim Abduliahi	07/02/13 08:12	Retrieve from Storage
JB40127-7.1	Akim Abduliahi	Secured Storage	07/02/13 15:32	Return to Storage
JB40127-7.1	Darnell Brown		07/29/13 15:52	Disposed
JB40127-7.1.1	Zachary Mokrycki	Organics Prep	06/25/13 06:16	Extract from JB40127-7.1
JB40127-7.1.1	Organics Prep	Tin Marlar	06/25/13 15:36	Extract from JB40127-7.1
JB40127-7.1.1	Tin Marlar	Extract Storage	06/25/13 15:36	Return to Storage
JB40127-7.1.1	Extract Storage	Ashley Dye	06/25/13 22:38	Retrieve from Storage
JB40127-7.1.1	Ashley Dye	GCMS5P	06/25/13 22:38	Load on Instrument
JB40127-7.1.1	GCMS5P	Elwira Antonik	06/26/13 12:57	Unload from Instrument
JB40127-7.1.1	Elwira Antonik	Extract Freezer	06/26/13 12:57	Return to Storage
JB40127-7.1.2	Rinku Patel	Metals Digestion	06/26/13 09:34	Digestate from JB40127-7.1
JB40127-7.1.3	Allan Chung-yew	Organics Prep	06/26/13 16:49	Extract from JB40127-7.1
JB40127-7.1.3	Organics Prep	Kyle Sanford	06/26/13 23:29	Extract from JB40127-7.1
JB40127-7.1.3	Kyle Sanford	Extract Storage	06/26/13 23:29	Return to Storage
JB40127-7.1.3	Extract Storage	Khaliah Douglas	06/27/13 10:38	Retrieve from Storage
JB40127-7.1.3	Khaliah Douglas	GC5Y	06/27/13 10:38	Load on Instrument
JB40127-7.1.3	GC5Y	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40127-7.1.3	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40127-7.2	Secured Storage	Wojciech Rodzik	06/25/13 12:59	Retrieve from Storage
JB40127-7.2	Wojciech Rodzik	Secured Storage	06/25/13 17:12	Return to Storage
JB40127-7.2	Secured Storage	Brian Racin	06/26/13 12:16	Retrieve from Storage
JB40127-7.2	Brian Racin	Pratik Doshi	06/26/13 12:19	Custody Transfer
JB40127-7.2	Pratik Doshi	Secured Storage	06/26/13 16:22	Return to Storage
JB40127-7.2	Darnell Brown		07/29/13 15:52	Disposed
JB40127-7.4	Secured Storage	Prashant Shukla	06/24/13 20:13	Retrieve from Storage
JB40127-7.4	Prashant Shukla	GCMS3C	06/24/13 20:13	Load on Instrument
JB40127-7.4	GCMS3C	Juntae Park	06/25/13 10:54	Unload from Instrument
JB40127-7.4	Juntae Park	Secured Storage	06/25/13 10:54	Return to Storage
JB40127-7.4	Secured Storage	Juntae Park	06/25/13 11:19	Retrieve from Storage
JB40127-7.4	Juntae Park	GCMS3C	06/25/13 11:19	Load on Instrument
JB40127-7.4	GCMS3C	Juntae Park	06/27/13 11:05	Unload from Instrument
JB40127-7.4	Juntae Park	Secured Storage	06/27/13 11:05	Return to Storage
JB40127-7.4	Darnell Brown		07/29/13 15:52	Disposed

New Jersey
ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C4446-MB	3C100024.D	1	06/21/13	PS	n/a	n/a	V3C4446

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	1.7	ug/kg	
71-43-2	Benzene	ND	1.0	0.12	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.27	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.11	ug/kg	
75-25-2	Bromoform	ND	5.0	0.15	ug/kg	
74-83-9	Bromomethane	ND	5.0	0.27	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	2.4	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.12	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.13	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.11	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.23	ug/kg	
67-66-3	Chloroform	ND	5.0	0.083	ug/kg	
74-87-3	Chloromethane	ND	5.0	0.19	ug/kg	
110-82-7	Cyclohexane	ND	5.0	0.12	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.18	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.23	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.14	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.14	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.0	0.26	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	0.18	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	0.24	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.15	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.14	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.16	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.26	ug/kg	
76-13-1	Freon 113	ND	5.0	0.43	ug/kg	
591-78-6	2-Hexanone	ND	5.0	0.62	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.074	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	2.6	ug/kg	
108-87-2	Methylcyclohexane	ND	5.0	0.17	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	0.75	ug/kg	
75-09-2	Methylene chloride	3.3	5.0	1.3	ug/kg	J

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C4446-MB	3C100024.D	1	06/21/13	PS	n/a	n/a	V3C4446

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Result	RL	MDL	Units	Q
100-42-5	Styrene	ND	5.0	0.092	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.13	ug/kg	
127-18-4	Tetrachloroethene	ND	5.0	0.17	ug/kg	
108-88-3	Toluene	ND	1.0	0.11	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.16	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.14	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.11	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.17	ug/kg	
79-01-6	Trichloroethene	ND	5.0	0.17	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.30	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	0.14	ug/kg	
	m,p-Xylene	ND	1.0	0.17	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.14	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.14	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	83%	65-131%
17060-07-0	1,2-Dichloroethane-D4	79%	70-121%
2037-26-5	Toluene-D8	89%	80-128%
460-00-4	4-Bromofluorobenzene	91%	67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C4450-MB	3C100120.D	1	06/25/13	PS	n/a	n/a	V3C4450

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	1.7	ug/kg	
71-43-2	Benzene	ND	1.0	0.12	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.27	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.11	ug/kg	
75-25-2	Bromoform	ND	5.0	0.15	ug/kg	
74-83-9	Bromomethane	ND	5.0	0.27	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	2.4	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.12	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.13	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.11	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.23	ug/kg	
67-66-3	Chloroform	ND	5.0	0.083	ug/kg	
74-87-3	Chloromethane	ND	5.0	0.19	ug/kg	
110-82-7	Cyclohexane	ND	5.0	0.12	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.18	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.23	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.14	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.14	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.0	0.26	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	0.18	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	0.24	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.15	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.14	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.16	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.26	ug/kg	
76-13-1	Freon 113	ND	5.0	0.43	ug/kg	
591-78-6	2-Hexanone	ND	5.0	0.62	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.074	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	2.6	ug/kg	
108-87-2	Methylcyclohexane	ND	5.0	0.17	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	0.75	ug/kg	
75-09-2	Methylene chloride	ND	5.0	1.3	ug/kg	

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C4450-MB	3C100120.D	1	06/25/13	PS	n/a	n/a	V3C4450

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-7

CAS No.	Compound	Result	RL	MDL	Units	Q
100-42-5	Styrene	ND	5.0	0.092	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.13	ug/kg	
127-18-4	Tetrachloroethene	ND	5.0	0.17	ug/kg	
108-88-3	Toluene	ND	1.0	0.11	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.16	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.14	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.11	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.17	ug/kg	
79-01-6	Trichloroethene	ND	5.0	0.17	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.30	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	0.14	ug/kg	
	m,p-Xylene	ND	1.0	0.17	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.14	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.14	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	84%	65-131%
17060-07-0	1,2-Dichloroethane-D4	92%	70-121%
2037-26-5	Toluene-D8	90%	80-128%
460-00-4	4-Bromofluorobenzene	93%	67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C4446-BS	3C100025.D	1	06/21/13	PS	n/a	n/a	V3C4446

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	47.5	95	49-150
71-43-2	Benzene	50	46.7	93	79-121
74-97-5	Bromochloromethane	50	53.1	106	81-127
75-27-4	Bromodichloromethane	50	52.2	104	78-129
75-25-2	Bromoform	50	53.0	106	73-135
74-83-9	Bromomethane	50	46.8	94	58-145
78-93-3	2-Butanone (MEK)	50	46.6	93	66-138
75-15-0	Carbon disulfide	50	48.2	96	69-134
56-23-5	Carbon tetrachloride	50	56.7	113	73-140
108-90-7	Chlorobenzene	50	49.6	99	81-119
75-00-3	Chloroethane	50	43.0	86	65-138
67-66-3	Chloroform	50	49.5	99	79-124
74-87-3	Chloromethane	50	36.0	72	53-136
110-82-7	Cyclohexane	50	50.7	101	71-133
124-48-1	Dibromochloromethane	50	53.4	107	77-127
95-50-1	1,2-Dichlorobenzene	50	47.8	96	78-120
541-73-1	1,3-Dichlorobenzene	50	48.5	97	77-120
106-46-7	1,4-Dichlorobenzene	50	46.6	93	74-118
75-71-8	Dichlorodifluoromethane	50	32.7	65	33-144
75-34-3	1,1-Dichloroethane	50	47.3	95	77-131
107-06-2	1,2-Dichloroethane	50	52.2	104	73-132
75-35-4	1,1-Dichloroethene	50	48.8	98	72-131
156-59-2	cis-1,2-Dichloroethene	50	46.8	94	77-125
156-60-5	trans-1,2-Dichloroethene	50	47.7	95	74-126
78-87-5	1,2-Dichloropropane	50	45.2	90	78-125
10061-01-5	cis-1,3-Dichloropropene	50	43.7	87	76-122
10061-02-6	trans-1,3-Dichloropropene	50	49.5	99	78-126
100-41-4	Ethylbenzene	50	48.6	97	78-119
76-13-1	Freon 113	50	52.9	106	61-138
591-78-6	2-Hexanone	50	41.8	84	64-134
98-82-8	Isopropylbenzene	50	49.7	99	75-122
79-20-9	Methyl Acetate	50	46.0	92	53-134
108-87-2	Methylcyclohexane	50	49.1	98	62-134
1634-04-4	Methyl Tert Butyl Ether	100	98.1	98	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	50	43.1	86	69-136
75-09-2	Methylene chloride	50	50.3	101	72-124

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C4446-BS	3C100025.D	1	06/21/13	PS	n/a	n/a	V3C4446

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
100-42-5	Styrene	50	48.5	97	78-121
79-34-5	1,1,2,2-Tetrachloroethane	50	44.1	88	71-118
127-18-4	Tetrachloroethene	50	50.5	101	71-130
108-88-3	Toluene	50	50.6	101	78-121
87-61-6	1,2,3-Trichlorobenzene	50	45.4	91	66-134
120-82-1	1,2,4-Trichlorobenzene	50	45.1	90	70-135
71-55-6	1,1,1-Trichloroethane	50	54.3	109	76-132
79-00-5	1,1,2-Trichloroethane	50	49.7	99	79-124
79-01-6	Trichloroethene	50	51.4	103	81-127
75-69-4	Trichlorofluoromethane	50	46.8	94	63-144
75-01-4	Vinyl chloride	50	33.0	66	58-137
	m,p-Xylene	100	97.9	98	78-120
95-47-6	o-Xylene	50	49.1	98	79-122
1330-20-7	Xylene (total)	150	147	98	79-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	83%	65-131%
17060-07-0	1,2-Dichloroethane-D4	79%	70-121%
2037-26-5	Toluene-D8	88%	80-128%
460-00-4	4-Bromofluorobenzene	83%	67-131%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C4450-BS	3C100121.D	1	06/25/13	PS	n/a	n/a	V3C4450

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	42.2	84	49-150
71-43-2	Benzene	50	47.0	94	79-121
74-97-5	Bromochloromethane	50	55.6	111	81-127
75-27-4	Bromodichloromethane	50	60.0	120	78-129
75-25-2	Bromoform	50	57.3	115	73-135
74-83-9	Bromomethane	50	53.2	106	58-145
78-93-3	2-Butanone (MEK)	50	49.3	99	66-138
75-15-0	Carbon disulfide	50	46.3	93	69-134
56-23-5	Carbon tetrachloride	50	67.3	135	73-140
108-90-7	Chlorobenzene	50	51.5	103	81-119
75-00-3	Chloroethane	50	45.1	90	65-138
67-66-3	Chloroform	50	55.0	110	79-124
74-87-3	Chloromethane	50	39.9	80	53-136
110-82-7	Cyclohexane	50	50.4	101	71-133
124-48-1	Dibromochloromethane	50	59.2	118	77-127
95-50-1	1,2-Dichlorobenzene	50	47.5	95	78-120
541-73-1	1,3-Dichlorobenzene	50	48.3	97	77-120
106-46-7	1,4-Dichlorobenzene	50	46.6	93	74-118
75-71-8	Dichlorodifluoromethane	50	45.8	92	33-144
75-34-3	1,1-Dichloroethane	50	49.4	99	77-131
107-06-2	1,2-Dichloroethane	50	68.6	137* [a]	73-132
75-35-4	1,1-Dichloroethene	50	48.0	96	72-131
156-59-2	cis-1,2-Dichloroethene	50	47.9	96	77-125
156-60-5	trans-1,2-Dichloroethene	50	47.3	95	74-126
78-87-5	1,2-Dichloropropane	50	44.7	89	78-125
10061-01-5	cis-1,3-Dichloropropene	50	49.2	98	76-122
10061-02-6	trans-1,3-Dichloropropene	50	58.0	116	78-126
100-41-4	Ethylbenzene	50	49.7	99	78-119
76-13-1	Freon 113	50	54.4	109	61-138
591-78-6	2-Hexanone	50	45.2	90	64-134
98-82-8	Isopropylbenzene	50	49.4	99	75-122
79-20-9	Methyl Acetate	50	45.9	92	53-134
108-87-2	Methylcyclohexane	50	48.5	97	62-134
1634-04-4	Methyl Tert Butyl Ether	100	110	110	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	50	43.3	87	69-136
75-09-2	Methylene chloride	50	46.9	94	72-124

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C4450-BS	3C100121.D	1	06/25/13	PS	n/a	n/a	V3C4450

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
100-42-5	Styrene	50	49.6	99	78-121
79-34-5	1,1,2,2-Tetrachloroethane	50	43.2	86	71-118
127-18-4	Tetrachloroethene	50	51.6	103	71-130
108-88-3	Toluene	50	52.2	104	78-121
87-61-6	1,2,3-Trichlorobenzene	50	49.6	99	66-134
120-82-1	1,2,4-Trichlorobenzene	50	47.1	94	70-135
71-55-6	1,1,1-Trichloroethane	50	63.2	126	76-132
79-00-5	1,1,2-Trichloroethane	50	52.5	105	79-124
79-01-6	Trichloroethene	50	54.9	110	81-127
75-69-4	Trichlorofluoromethane	50	59.1	118	63-144
75-01-4	Vinyl chloride	50	35.6	71	58-137
	m,p-Xylene	100	101	101	78-120
95-47-6	o-Xylene	50	50.5	101	79-122
1330-20-7	Xylene (total)	150	151	101	79-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	88%	65-131%
17060-07-0	1,2-Dichloroethane-D4	100%	70-121%
2037-26-5	Toluene-D8	92%	80-128%
460-00-4	4-Bromofluorobenzene	85%	67-131%

(a) High percent recoveries and no associated positive found in the QC batch.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB39919-1MS	3C100026.D	1	06/21/13	PS	n/a	n/a	V3C4446
JB39919-1MSD	3C100027.D	1	06/22/13	PS	n/a	n/a	V3C4446
JB39919-1	3C100029.D	1	06/22/13	PS	n/a	n/a	V3C4446

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	JB39919-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		59.9	50.7	85	59.2	97	15	10-189/35
71-43-2	Benzene	ND		59.9	49.4	82	52.4	86	6	47-130/22
74-97-5	Bromochloromethane	ND		59.9	56.5	94	61.1	100	8	51-136/21
75-27-4	Bromodichloromethane	ND		59.9	58.4	97	60.5	99	4	45-138/22
75-25-2	Bromoform	ND		59.9	54.0	90	58.1	95	7	37-141/23
74-83-9	Bromomethane	ND		59.9	61.5	103	62.9	103	2	10-155/31
78-93-3	2-Butanone (MEK)	ND		59.9	47.8	80	52.4	86	9	23-173/30
75-15-0	Carbon disulfide	ND		59.9	50.5	84	53.2	87	5	34-143/27
56-23-5	Carbon tetrachloride	ND		59.9	64.5	108	67.4	110	4	36-150/25
108-90-7	Chlorobenzene	ND		59.9	54.4	91	56.9	93	4	36-138/24
75-00-3	Chloroethane	ND		59.9	53.9	90	56.4	92	5	29-144/29
67-66-3	Chloroform	ND		59.9	57.1	95	60.1	98	5	50-131/22
74-87-3	Chloromethane	ND		59.9	55.1	92	58.7	96	6	40-142/24
110-82-7	Cyclohexane	ND		59.9	57.1	95	60.2	98	5	25-150/27
124-48-1	Dibromochloromethane	ND		59.9	56.4	94	61.5	100	9	42-139/22
95-50-1	1,2-Dichlorobenzene	ND		59.9	52.0	87	51.3	84	1	24-142/27
541-73-1	1,3-Dichlorobenzene	ND		59.9	52.3	87	51.7	84	1	23-142/27
106-46-7	1,4-Dichlorobenzene	ND		59.9	49.2	82	49.1	80	0	22-141/27
75-71-8	Dichlorodifluoromethane	ND		59.9	54.6	91	57.6	94	5	24-164/28
75-34-3	1,1-Dichloroethane	ND		59.9	53.4	89	57.1	93	7	50-134/23
107-06-2	1,2-Dichloroethane	ND		59.9	56.4	94	59.2	97	5	46-135/21
75-35-4	1,1-Dichloroethene	ND		59.9	54.4	91	58.4	95	7	39-143/26
156-59-2	cis-1,2-Dichloroethene	ND		59.9	51.7	86	54.2	88	5	47-133/22
156-60-5	trans-1,2-Dichloroethene	ND		59.9	52.3	87	54.3	89	4	44-135/25
78-87-5	1,2-Dichloropropane	ND		59.9	50.5	84	54.7	89	8	50-131/21
10061-01-5	cis-1,3-Dichloropropene	ND		59.9	51.3	86	53.6	88	4	42-135/23
10061-02-6	trans-1,3-Dichloropropene	ND		59.9	51.0	85	52.9	86	4	38-138/23
100-41-4	Ethylbenzene	0.85	J	59.9	56.0	92	58.3	94	4	30-139/25
76-13-1	Freon 113	ND		59.9	57.8	96	60.0	98	4	29-154/27
591-78-6	2-Hexanone	ND		59.9	43.6	73	46.8	76	7	20-162/29
98-82-8	Isopropylbenzene	ND		59.9	58.2	97	59.9	98	3	30-140/27
79-20-9	Methyl Acetate	ND		59.9	80.5	134	75.4	123	7	24-175/29
108-87-2	Methylcyclohexane	ND		59.9	54.3	91	57.1	93	5	15-153/29
1634-04-4	Methyl Tert Butyl Ether	ND		59.9	54.1	90	58.0	95	7	50-127/21
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		59.9	44.4	74	47.3	77	6	37-141/24
75-09-2	Methylene chloride	4.6	J	59.9	57.5	88	60.6	91	5	50-127/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB39919-1MS	3C100026.D	1	06/21/13	PS	n/a	n/a	V3C4446
JB39919-1MSD	3C100027.D	1	06/22/13	PS	n/a	n/a	V3C4446
JB39919-1	3C100029.D	1	06/22/13	PS	n/a	n/a	V3C4446

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	JB39919-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
100-42-5	Styrene	ND		59.9	52.2	87	53.7	88	3	30-143/26
79-34-5	1,1,2,2-Tetrachloroethane	ND		59.9	39.7	66	41.7	68	5	35-132/26
127-18-4	Tetrachloroethene	ND		59.9	103	172	107	175	4	20-175/26
108-88-3	Toluene	ND		59.9	54.9	92	57.4	94	4	38-136/24
87-61-6	1,2,3-Trichlorobenzene	ND		59.9	43.7	73	42.3	69	3	10-160/33
120-82-1	1,2,4-Trichlorobenzene	ND		59.9	44.0	73	41.1	67	7	10-157/33
71-55-6	1,1,1-Trichloroethane	ND		59.9	62.4	104	66.1	108	6	44-142/24
79-00-5	1,1,2-Trichloroethane	ND		59.9	51.4	86	55.8	91	8	43-135/22
79-01-6	Trichloroethene	ND		59.9	64.8	108	68.9	112	6	31-158/25
75-69-4	Trichlorofluoromethane	ND		59.9	63.9	107	67.1	110	5	31-156/28
75-01-4	Vinyl chloride	ND		59.9	51.9	87	54.7	89	5	38-151/25
	m,p-Xylene	2.5		120	115	94	116	93	1	30-140/26
95-47-6	o-Xylene	1.3		59.9	57.7	94	59.5	95	3	33-139/25
1330-20-7	Xylene (total)	3.9		180	173	94	175	93	1	31-140/26

CAS No.	Surrogate Recoveries	MS	MSD	JB39919-1	Limits
1868-53-7	Dibromofluoromethane	82%	82%	86%	65-131%
17060-07-0	1,2-Dichloroethane-D4	77%	76%	84%	70-121%
2037-26-5	Toluene-D8	88%	88%	86%	80-128%
460-00-4	4-Bromofluorobenzene	86%	85%	89%	67-131%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40368-9MS	3C100124.D	1	06/25/13	PS	n/a	n/a	V3C4450
JB40368-9MSD	3C100125.D	1	06/25/13	PS	n/a	n/a	V3C4450
JB40368-9	3C100123.D	1	06/25/13	PS	n/a	n/a	V3C4450

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-7

CAS No.	Compound	JB40368-9 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		63.3	53.5	84	50.9	82	5	10-189/35
71-43-2	Benzene	ND		63.3	58.4	92	55.2	89	6	47-130/22
74-97-5	Bromochloromethane	ND		63.3	66.3	105	63.1	102	5	51-136/21
75-27-4	Bromodichloromethane	ND		63.3	74.2	117	70.6	114	5	45-138/22
75-25-2	Bromoform	ND		63.3	66.7	105	65.4	105	2	37-141/23
74-83-9	Bromomethane	ND		63.3	62.1	98	59.7	96	4	10-155/31
78-93-3	2-Butanone (MEK)	ND		63.3	55.1	87	55.2	89	0	23-173/30
75-15-0	Carbon disulfide	ND		63.3	58.7	93	55.0	89	7	34-143/27
56-23-5	Carbon tetrachloride	ND		63.3	85.8	135	80.4	130	6	36-150/25
108-90-7	Chlorobenzene	ND		63.3	64.6	102	60.5	98	7	36-138/24
75-00-3	Chloroethane	ND		63.3	51.7	82	50.4	81	3	29-144/29
67-66-3	Chloroform	ND		63.3	66.7	105	63.4	102	5	50-131/22
74-87-3	Chloromethane	ND		63.3	50.6	80	48.8	79	4	40-142/24
110-82-7	Cyclohexane	ND		63.3	61.5	97	59.1	95	4	25-150/27
124-48-1	Dibromochloromethane	ND		63.3	72.0	114	67.3	109	7	42-139/22
95-50-1	1,2-Dichlorobenzene	ND		63.3	59.8	94	55.5	90	7	24-142/27
541-73-1	1,3-Dichlorobenzene	ND		63.3	62.8	99	56.1	90	11	23-142/27
106-46-7	1,4-Dichlorobenzene	ND		63.3	60.7	96	54.9	89	10	22-141/27
75-71-8	Dichlorodifluoromethane	ND		63.3	66.1	104	61.2	99	8	24-164/28
75-34-3	1,1-Dichloroethane	ND		63.3	59.8	94	56.5	91	6	50-134/23
107-06-2	1,2-Dichloroethane	ND		63.3	80.3	127	78.0	126	3	46-135/21
75-35-4	1,1-Dichloroethene	ND		63.3	59.7	94	56.5	91	6	39-143/26
156-59-2	cis-1,2-Dichloroethene	ND		63.3	59.1	93	55.1	89	7	47-133/22
156-60-5	trans-1,2-Dichloroethene	ND		63.3	59.2	93	56.1	90	5	44-135/25
78-87-5	1,2-Dichloropropane	ND		63.3	54.5	86	53.1	86	3	50-131/21
10061-01-5	cis-1,3-Dichloropropene	ND		63.3	64.8	102	62.0	100	4	42-135/23
10061-02-6	trans-1,3-Dichloropropene	ND		63.3	70.8	112	67.6	109	5	38-138/23
100-41-4	Ethylbenzene	ND		63.3	65.1	103	60.4	97	7	30-139/25
76-13-1	Freon 113	ND		63.3	66.1	104	61.9	100	7	29-154/27
591-78-6	2-Hexanone	ND		63.3	51.8	82	52.9	85	2	20-162/29
98-82-8	Isopropylbenzene	ND		63.3	65.2	103	58.9	95	10	30-140/27
79-20-9	Methyl Acetate	ND		63.3	57.5	91	61.0	98	6	24-175/29
108-87-2	Methylcyclohexane	ND		63.3	60.9	96	57.8	93	5	15-153/29
1634-04-4	Methyl Tert Butyl Ether	ND		63.3	66.3	105	65.9	106	1	50-127/21
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		63.3	50.2	79	53.3	86	6	37-141/24
75-09-2	Methylene chloride	2.8		63.3	56.6	85	55.8	85	1	50-127/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40368-9MS	3C100124.D	1	06/25/13	PS	n/a	n/a	V3C4450
JB40368-9MSD	3C100125.D	1	06/25/13	PS	n/a	n/a	V3C4450
JB40368-9	3C100123.D	1	06/25/13	PS	n/a	n/a	V3C4450

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40127-7

CAS No.	Compound	JB40368-9 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
100-42-5	Styrene	ND		63.3	63.0	99	58.2	94	8	30-143/26
79-34-5	1,1,2,2-Tetrachloroethane	ND		63.3	52.6	83	50.1	81	5	35-132/26
127-18-4	Tetrachloroethene	ND		63.3	67.8	107	61.6	99	10	20-175/26
108-88-3	Toluene	0.43		63.3	66.5	104	62.4	100	6	38-136/24
87-61-6	1,2,3-Trichlorobenzene	ND		63.3	59.3	94	54.1	87	9	10-160/33
120-82-1	1,2,4-Trichlorobenzene	ND		63.3	60.7	96	54.5	88	11	10-157/33
71-55-6	1,1,1-Trichloroethane	ND		63.3	79.0	125	74.1	120	6	44-142/24
79-00-5	1,1,2-Trichloroethane	ND		63.3	61.2	97	59.6	96	3	43-135/22
79-01-6	Trichloroethene	ND		63.3	68.7	108	64.4	104	6	31-158/25
75-69-4	Trichlorofluoromethane	ND		63.3	77.5	122	71.6	115	8	31-156/28
75-01-4	Vinyl chloride	ND		63.3	50.5	80	49.2	79	3	38-151/25
	m,p-Xylene	1.4		127	133	104	123	98	8	30-140/26
95-47-6	o-Xylene	0.50		63.3	65.4	102	61.4	98	6	33-139/25
1330-20-7	Xylene (total)	1.9		190	198	103	184	98	7	31-140/26

CAS No.	Surrogate Recoveries	MS	MSD	JB40368-9	Limits
1868-53-7	Dibromofluoromethane	85%	85%	83%	65-131%
17060-07-0	1,2-Dichloroethane-D4	99%	101%	95%	70-121%
2037-26-5	Toluene-D8	90%	92%	90%	80-128%
460-00-4	4-Bromofluorobenzene	87%	84%	88%	67-131%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: V3C4359-BFB
Lab File ID: 3C98231.D
Instrument ID: GCMS3C
Injection Date: 05/07/13
Injection Time: 09:38

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	9537	18.0		Pass
75	30.0 - 60.0% of mass 95	24826	46.8		Pass
95	Base peak, 100% relative abundance	53021	100.0		Pass
96	5.0 - 9.0% of mass 95	3626	6.84		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	45546	85.9		Pass
175	5.0 - 9.0% of mass 174	3521	6.64	(7.73) [a]	Pass
176	95.0 - 101.0% of mass 174	44570	84.1	(97.9) [a]	Pass
177	5.0 - 9.0% of mass 176	3147	5.94	(7.06) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3C4359-IC4359	3C98232.D	05/07/13	10:08	00:30	Initial cal 5
V3C4359-IC4359	3C98233.D	05/07/13	10:38	01:00	Initial cal 2
V3C4359-IC4359	3C98234.D	05/07/13	11:07	01:29	Initial cal 1
V3C4359-IC4359	3C98235.D	05/07/13	11:37	01:59	Initial cal 0.5
V3C4359-IC4359	3C98236.D	05/07/13	12:06	02:28	Initial cal 10
V3C4359-IC4359	3C98237.D	05/07/13	12:36	02:58	Initial cal 20
V3C4359-ICC4359	3C98238.D	05/07/13	13:05	03:27	Initial cal 50
V3C4359-IC4359	3C98239.D	05/07/13	13:35	03:57	Initial cal 100
V3C4359-IC4359	3C98240.D	05/07/13	14:04	04:26	Initial cal 200
V3C4359-ICV4359	3C98243.D	05/07/13	19:06	09:28	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: V3C4446-BFB
Lab File ID: 3C100021.D
Instrument ID: GCMS3C
Injection Date: 06/21/13
Injection Time: 21:25

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	8002	17.3		Pass
75	30.0 - 60.0% of mass 95	22531	48.6		Pass
95	Base peak, 100% relative abundance	46363	100.0		Pass
96	5.0 - 9.0% of mass 95	3355	7.24		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	39797	85.8		Pass
175	5.0 - 9.0% of mass 174	3296	7.11	(8.28) [a]	Pass
176	95.0 - 101.0% of mass 174	38901	83.9	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	2435	5.25	(6.26) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3C4446-CC4359	3C100022.D	06/21/13	21:54	00:29	Continuing cal 50
V3C4446-MB	3C100024.D	06/21/13	22:53	01:28	Method Blank
V3C4446-BS	3C100025.D	06/21/13	23:22	01:57	Blank Spike
JB39919-1MS	3C100026.D	06/21/13	23:51	02:26	Matrix Spike
JB39919-1MSD	3C100027.D	06/22/13	00:21	02:56	Matrix Spike Duplicate
JB39919-1	3C100029.D	06/22/13	01:19	03:54	(used for QC only; not part of job JB40127)
ZZZZZZ	3C100030.D	06/22/13	01:49	04:24	(unrelated sample)
ZZZZZZ	3C100031.D	06/22/13	02:18	04:53	(unrelated sample)
ZZZZZZ	3C100032.D	06/22/13	02:48	05:23	(unrelated sample)
ZZZZZZ	3C100033.D	06/22/13	03:17	05:52	(unrelated sample)
ZZZZZZ	3C100034.D	06/22/13	03:46	06:21	(unrelated sample)
ZZZZZZ	3C100035.D	06/22/13	04:16	06:51	(unrelated sample)
ZZZZZZ	3C100036.D	06/22/13	04:45	07:20	(unrelated sample)
JB40127-1	3C100037.D	06/22/13	05:14	07:49	UST-1
JB40127-2	3C100038.D	06/22/13	05:44	08:19	UST-2
JB40127-3	3C100039.D	06/22/13	06:13	08:48	UST-3
JB40127-4	3C100040.D	06/22/13	06:43	09:18	UST-4
JB40127-5	3C100041.D	06/22/13	07:12	09:47	UST-5
JB40127-6	3C100042.D	06/22/13	07:41	10:16	UST-6
ZZZZZZ	3C100043.D	06/22/13	08:11	10:46	(unrelated sample)
ZZZZZZ	3C100044.D	06/22/13	08:40	11:15	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: V3C4450-BFB
Lab File ID: 3C100117A.D
Instrument ID: GCMS3C
Injection Date: 06/25/13
Injection Time: 08:39

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	10295	19.3		Pass
75	30.0 - 60.0% of mass 95	28472	53.3		Pass
95	Base peak, 100% relative abundance	53381	100.0		Pass
96	5.0 - 9.0% of mass 95	3666	6.87		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	43667	81.8		Pass
175	5.0 - 9.0% of mass 174	3777	7.08	(8.65) [a]	Pass
176	95.0 - 101.0% of mass 174	42603	79.8	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	2818	5.28	(6.61) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3C4450-CC4359	3C100118.D	06/25/13	09:15	00:36	Continuing cal 20
V3C4450-MB	3C100120.D	06/25/13	10:23	01:44	Method Blank
V3C4450-BS	3C100121.D	06/25/13	10:59	02:20	Blank Spike
JB40368-9	3C100123.D	06/25/13	11:59	03:20	(used for QC only; not part of job JB40127)
JB40368-9MS	3C100124.D	06/25/13	12:28	03:49	Matrix Spike
JB40368-9MSD	3C100125.D	06/25/13	12:58	04:19	Matrix Spike Duplicate
JB40127-7	3C100127.D	06/25/13	13:58	05:19	P-1
ZZZZZZ	3C100128.D	06/25/13	14:28	05:49	(unrelated sample)
ZZZZZZ	3C100129.D	06/25/13	14:57	06:18	(unrelated sample)
ZZZZZZ	3C100130.D	06/25/13	15:27	06:48	(unrelated sample)
ZZZZZZ	3C100131.D	06/25/13	15:57	07:18	(unrelated sample)
ZZZZZZ	3C100133.D	06/25/13	16:57	08:18	(unrelated sample)
ZZZZZZ	3C100134.D	06/25/13	17:27	08:48	(unrelated sample)
ZZZZZZ	3C100135.D	06/25/13	17:56	09:17	(unrelated sample)
ZZZZZZ	3C100137.D	06/25/13	18:56	10:17	(unrelated sample)
ZZZZZZ	3C100138.D	06/25/13	19:26	10:47	(unrelated sample)
ZZZZZZ	3C100139.D	06/25/13	19:56	11:17	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	V3C4446-CC4359	**Injection Date:**	06/21/13
Lab File ID:	3C100022.D	**Injection Time:**	21:54
Instrument ID:	GCMS3C	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	47404	7.35	171662	9.58	240691	10.50	194486	13.63	95738	15.92
Upper Limit [a]	94808	7.85	343324	10.08	481382	11.00	388972	14.13	191476	16.42
Lower Limit [b]	23702	6.85	85831	9.08	120346	10.00	97243	13.13	47869	15.42

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3C4446-MB	37345	7.37	169250	9.58	232167	10.50	185320	13.63	79143	15.92
V3C4446-BS	46660	7.36	177138	9.58	246370	10.50	198147	13.63	97911	15.92
JB39919-1MS	40792	7.36	181888	9.58	253612	10.50	201376	13.63	95206	15.92
JB39919-1MSD	46709	7.37	184360	9.58	257616	10.50	203780	13.63	98059	15.92
JB39919-1	52943	7.36	179326	9.58	253215	10.50	199141	13.63	87285	15.92
ZZZZZZ	51913	7.36	183378	9.59	253386	10.50	204812	13.63	88648	15.92
ZZZZZZ	50251	7.36	183985	9.59	259106	10.50	203538	13.63	90889	15.92
ZZZZZZ	47487	7.36	179255	9.58	252184	10.50	198524	13.63	86881	15.92
ZZZZZZ	46593	7.36	179941	9.58	251017	10.50	198402	13.63	87390	15.92
ZZZZZZ	53612	7.36	182645	9.58	256284	10.50	201256	13.63	87928	15.92
ZZZZZZ	47075	7.36	179920	9.59	253644	10.50	200506	13.63	87825	15.92
ZZZZZZ	49855	7.35	178177	9.58	246468	10.50	196424	13.63	82974	15.92
JB40127-1	45807	7.36	182230	9.59	255933	10.50	200906	13.63	87987	15.92
JB40127-2	50211	7.36	181783	9.58	252717	10.50	199654	13.63	88015	15.92
JB40127-3	46244	7.36	179887	9.59	249252	10.50	200030	13.63	89509	15.92
JB40127-4	49365	7.36	182758	9.59	257681	10.50	205136	13.63	89052	15.92
JB40127-5	43659	7.37	178497	9.59	249936	10.50	200301	13.63	88125	15.92
JB40127-6	49046	7.37	181284	9.59	256030	10.50	207398	13.63	90334	15.93
ZZZZZZ	54060	7.36	186882	9.58	257006	10.50	207239	13.63	94582	15.92
ZZZZZZ	49413	7.36	187327	9.59	261930	10.50	209449	13.63	91234	15.93

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	V3C4450-CC4359	**Injection Date:**	06/25/13
Lab File ID:	3C100118.D	**Injection Time:**	09:15
Instrument ID:	GCMS3C	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	60435	7.36	190351	9.58	265282	10.50	220535	13.63	113700	15.92
Upper Limit [a]	120870	7.86	380702	10.08	530564	11.00	441070	14.13	227400	16.42
Lower Limit [b]	30218	6.86	95176	9.08	132641	10.00	110268	13.13	56850	15.42

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V3C4450-MB	46905	7.37	187014	9.58	253586	10.50	202578	13.63	92801	15.92
V3C4450-BS	58951	7.37	191508	9.58	265640	10.50	222704	13.63	115729	15.92
JB40368-9	55629	7.37	194145	9.59	265900	10.50	216758	13.63	107553	15.92
JB40368-9MS	52769	7.37	195623	9.58	269322	10.50	221538	13.63	113054	15.92
JB40368-9MSD	59612	7.37	202700	9.59	275631	10.50	231640	13.63	120849	15.92
JB40127-7	63152	7.36	199335	9.59	274910	10.50	227414	13.63	102985	15.92
ZZZZZZ	54246	7.36	190368	9.59	262002	10.50	217452	13.63	100404	15.93
ZZZZZZ	59144	7.37	191961	9.59	264714	10.50	216497	13.63	100639	15.92
ZZZZZZ	57694	7.36	187121	9.58	260380	10.50	214082	13.63	99150	15.92
ZZZZZZ	60031	7.36	190313	9.59	264433	10.50	218373	13.63	99251	15.92
ZZZZZZ	42466	7.36	121373	9.59	167047	10.50	139687	13.63	61375	15.93
ZZZZZZ	52385	7.36	180597	9.59	249071	10.50	195212	13.63	80824	15.93
ZZZZZZ	57361	7.37	182589	9.59	247685	10.50	201046	13.63	92414	15.92
ZZZZZZ	56546	7.37	188063	9.59	256372	10.50	211421	13.63	99507	15.92
ZZZZZZ	58462	7.36	183090	9.59	255600	10.50	206539	13.63	93121	15.92
ZZZZZZ	56918	7.36	185114	9.59	255331	10.50	210079	13.63	99041	15.93

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB40127-1	3C100037.D	85.0	84.0	89.0	91.0
JB40127-2	3C100038.D	85.0	82.0	88.0	90.0
JB40127-3	3C100039.D	84.0	85.0	89.0	89.0
JB40127-4	3C100040.D	84.0	83.0	88.0	90.0
JB40127-5	3C100041.D	86.0	82.0	89.0	89.0
JB40127-6	3C100042.D	85.0	85.0	89.0	91.0
JB40127-7	3C100127.D	87.0	100.0	91.0	93.0
JB39919-1MS	3C100026.D	82.0	77.0	88.0	86.0
JB39919-1MSD	3C100027.D	82.0	76.0	88.0	85.0
JB40368-9MS	3C100124.D	85.0	99.0	90.0	87.0
JB40368-9MSD	3C100125.D	85.0	101.0	92.0	84.0
V3C4446-BS	3C100025.D	83.0	79.0	88.0	83.0
V3C4446-MB	3C100024.D	83.0	79.0	89.0	91.0
V3C4450-BS	3C100121.D	88.0	100.0	92.0	85.0
V3C4450-MB	3C100120.D	84.0	92.0	90.0	93.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	65-131%
S2 = 1,2-Dichloroethane-D4	70-121%
S3 = Toluene-D8	80-128%
S4 = 4-Bromofluorobenzene	67-131%

Initial Calibration Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: V3C4359-ICC4359
Lab FileID: 3C98238.D

Response Factor Report MS3C

```
Method       : C:\MSDCHEM\1\METHODS\M3C4359.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
Last Update  : Mon May 13 17:58:56 2013
Response via : Initial Calibration

Calibration Files
5   =3C98232.D   10  =3C98236.D   0.5 =3C98235.D   50  =3C98238.D
100 =3C98239.D   1   =3C98234.D   200 =3C98240.D   20  =3C98237.D
2   =3C98233.D       =
```

Compound	5	10	0.5	50	100	1	200	20	2	Avg	%RSD
1) I Tert Butyl Alcohol-d9 ----------ISTD----------											
2) 1,4-dioxane	0.110	0.132		0.133	0.123		0.134	0.132		0.127	7.27
3) tertiary butyl alcohol	1.946	2.238		2.089	1.958	2.207	2.006	2.229	1.715	2.048	8.79
4) Ethanol										0.000	-1.00
5) I pentafluorobenzene ----------ISTD----------											
6) chlorodifluoromethane	0.517	0.534		0.513	0.504	0.540	0.520	0.508	0.518	0.519	2.37
7) dichlorodifluoromethane	0.753	0.775		0.742	0.734	0.742	0.740	0.765	0.643	0.737	5.51
8) chloromethane	0.731	0.725		0.692	0.682	0.878	0.688	0.726	0.733	0.732	8.56
9) vinyl chloride	0.826	0.839	0.994	0.821	0.821	0.955	0.840	0.859	0.845	0.866	7.28
10) bromomethane	0.403	0.418	0.456	0.394	0.393	0.463	0.395	0.409	0.391	0.414	6.67
11) chloroethane	0.384	0.406	0.431	0.385	0.380	0.461	0.380	0.401	0.388	0.402	6.89
12) Vinyl Bromide	0.374	0.410		0.397		0.404		0.400	0.416	0.400	3.61
13) Pentane	0.975	0.971		0.896		0.948		0.886	0.975	0.942	4.31
14) trichlorofluoromethane	0.834	0.864	0.909	0.821	0.806	0.862	0.817	0.854	0.771	0.837	4.78
15) ethyl ether	0.281	0.277		0.257	0.254		0.251	0.262	0.282	0.266	5.01
16) acrolein	0.067	0.066		0.069		0.066		0.066	0.071	0.067	3.10
17) 1,1-dichloroethene	0.469	0.449		0.440	0.434	0.587	0.444	0.434	0.449	0.463	11.09
18) acetone		0.026		0.030	0.028		0.027	0.030		0.028	5.75
19) allyl chloride	0.297	0.312	0.220	0.294	0.291	0.309	0.299	0.283	0.277	0.287	9.57
20) acetonitrile	0.028	0.030		0.033	0.032		0.031	0.030	0.041	0.032	12.53
21) iodomethane	0.753	0.775	0.628	0.761	0.760	0.823	0.774	0.742	0.687	0.745	7.55
22) iso-butyl alcohol	0.014	0.013		0.013	0.014		0.012	0.013		0.013	4.57
23) carbon disulfide											

Initial Calibration Summary

Job Number: JB40127 **Sample:** V3C4359-ICC4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C98238.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

		1.632	1.654	1.425	1.603	1.589	1.775	1.625	1.569	1.523	1.599	5.96
24)	methylene chloride											
		0.536	0.522		0.478	0.472		0.473	0.484	0.561	0.504	7.11
25)	methyl acetate											
		0.045	0.053		0.058	0.059		0.056	0.055		0.054	8.98
26)	methyl tert butyl ether											
		1.145	1.127	1.179	1.118	1.118	1.213	1.081	1.076	1.098	1.128	3.97
27)	trans-1,2-dichloroethene											
		0.532	0.528	0.484	0.499	0.491	0.662	0.500	0.485	0.513	0.522	10.63
28)	di-isopropyl ether											
		1.668	1.789	1.690	1.739	1.722	1.686	1.716	1.748	1.643	1.711	2.61
29)	ethyl tert-butyl ether											
		1.301	1.357	1.304	1.315	1.285	1.210	1.262	1.312	1.234	1.287	3.51
30)	2-butanone											
		0.035	0.039		0.042	0.043		0.040	0.038		0.040	7.87
31)	1,1-dichloroethane											
		0.907	0.932	0.840	0.894	0.882	0.995	0.892	0.867	0.843	0.895	5.34
32)	chloroprene											
		0.748	0.808	0.563	0.787	0.760	0.725	0.774	0.781	0.761	0.745	9.71
33)	acrylonitrile											
		0.116	0.117		0.122	0.124	0.106	0.117	0.116	0.090	0.114	9.46
34)	vinyl acetate											
		0.065	0.074		0.079	0.082		0.079	0.074		0.076	7.81
35)	ethyl acetate											
		0.050	0.049		0.051	0.053		0.048	0.048		0.050	3.52
36)	2,2-dichloropropane											
		0.783	0.773	0.708	0.731	0.707	0.859	0.716	0.713	0.719	0.745	6.84
37)	cis-1,2-dichloroethene											
		0.550	0.554	0.569	0.530	0.524	0.676	0.533	0.527	0.547	0.557	8.49
38)	propionitrile											
		0.046	0.046		0.048	0.049	0.041	0.046	0.045	0.040	0.045	6.74
39)	Methyl Acrylate											
		0.040	0.046		0.053	0.054		0.051	0.046		0.048	10.99
40)	bromochloromethane											
		0.219	0.225	0.185	0.226	0.223	0.217	0.225	0.220	0.212	0.217	5.87
41)	tetrahydrofuran											
		0.147	0.130		0.129	0.129		0.118	0.127	0.165	0.135	11.59
42)	chloroform											
		0.804	0.859	0.879	0.830	0.821	0.960	0.827	0.813	0.826	0.846	5.71
43)	tert-Butyl Formate											
		0.304	0.314		0.320	0.320		0.307	0.318	0.314	0.314	1.98
44)	dibromofluoromethane (s)											
		0.409	0.410	0.518	0.425	0.418	0.431	0.433	0.426	0.463	0.437	7.85
45)	1,2-dichloroethane-d4 (s)											
		0.440	0.428	0.445	0.437	0.432	0.452	0.427	0.426	0.475	0.440	3.57
46)	freon 113											
		0.339	0.384		0.373	0.359		0.366	0.368	0.332	0.360	5.20
47)	methacrylonitrile											
		0.209	0.209		0.216	0.217		0.205	0.204	0.211	0.210	2.34
48)	1,1,1-trichloroethane											
		0.765	0.785	0.636	0.759	0.745	0.814	0.760	0.740	0.724	0.748	6.59
49)	Cyclohexane											
		0.822	0.821	0.747	0.807	0.792	0.912	0.811	0.786	0.764	0.807	5.83
50)	Tert Amyl Alcohol											
		0.047	0.047		0.052	0.053		0.050	0.048	0.041	0.048	8.25
51)	2,2,4-trimethylpentane											
		2.019	2.114		2.009	1.933		1.986	1.987	2.404	2.065	7.72
52)	tert-amyl methyl ether											
		1.185	1.213	1.379	1.138	1.142	1.240	1.108	1.172	1.160	1.193	6.74

Initial Calibration Summary

Job Number: JB40127 **Sample:** V3C4359-ICC4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C98238.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
53) I   1,4-difluorobenzene   ----------------ISTD--------------------
54)  epichlorohydrin
           0.022 0.024       0.025 0.025       0.023 0.023 0.023   0.024    4.39
55)  n-butyl alcohol
           0.007 0.007       0.008 0.009 0.007 0.008 0.008 0.007   0.008    9.58
56)  carbon tetrachloride
           0.482 0.491 0.403 0.476 0.462 0.523 0.474 0.462 0.438   0.468    7.22
57)  1,1-dichloropropene
           0.494 0.513 0.427 0.498 0.476 0.543 0.491 0.481 0.476   0.489    6.39
58)  hexane
           0.577 0.568       0.505 0.472       0.477 0.508 0.670   0.539   13.12
59)  benzene
           1.487 1.505 1.483 1.454 1.405 1.744 1.438 1.411 1.421   1.483    7.02
60)  heptane
           0.311 0.319 0.228 0.309 0.311 0.325 0.326 0.304 0.302   0.304    9.73
61)  isopropyl acetate
           0.491 0.517       0.542 0.555 0.481 0.524 0.522 0.439   0.509    7.29
62)  1,2-dichloroethane
           0.383 0.385 0.294 0.384 0.375 0.416 0.370 0.376 0.347   0.370    9.12
63)  trichloroethene
           0.353 0.360 0.315 0.352 0.341 0.397 0.351 0.333 0.319   0.347    7.03
64)  ethyl acrylate
           0.301 0.317       0.343 0.341 0.324 0.329 0.311 0.334   0.325    4.52
65)  Tert-Amyl ethyl ether
           0.468 0.480       0.460 0.440       0.433 0.463 0.441   0.455    3.79
66)  2-nitropropane
           0.089 0.090       0.087 0.085       0.079 0.082 0.099   0.087    7.40
67)  2-chloroethyl vinyl ether
           0.112 0.119 0.113 0.127 0.126 0.109 0.125 0.122 0.111   0.118    6.02
68)  methyl methacrylate
           0.057 0.066       0.073 0.074       0.071 0.066 0.050   0.065   13.55
69)  1,2-dichloropropane
           0.345 0.356       0.356 0.348 0.375 0.356 0.345 0.334   0.352    3.42
70)  methylcyclohexane
           0.633 0.685 0.511 0.642 0.616 0.667 0.632 0.646 0.629   0.629    7.78
71)  dibromomethane
           0.162 0.164 0.145 0.163 0.162 0.178 0.160 0.157 0.146   0.160    6.19
72)  bromodichloromethane
           0.409 0.417 0.351 0.425 0.418 0.469 0.426 0.408 0.376   0.411    8.04
73)  cis-1,3-dichloropropene
           0.528 0.537 0.505 0.537 0.525 0.575 0.532 0.517 0.488   0.527    4.58
74)  toluene-d8 (s)
           1.209 1.175       1.221 1.184 1.422 1.238 1.222 1.317   1.249    6.58
75)  4-methyl-2-pentanone
           0.096 0.098       0.099 0.103       0.096 0.093 0.086   0.096    5.72
76)  toluene
           0.867 0.891 0.765 0.870 0.849 0.994 0.877 0.845 0.808   0.863    7.27
77)  3-methyl-1-butanol
           0.007 0.007       0.008 0.008 0.007 0.008 0.007 0.006   0.007   11.35
78)  trans-1,3-dichloropropene
           0.443 0.445 0.359 0.450 0.441 0.507 0.440 0.428 0.410   0.436    8.91
79)  ethyl methacrylate
           0.334 0.348 0.270 0.360 0.364 0.351 0.354 0.342 0.297   0.336    9.38
80)  1,1,2-trichloroethane
           0.198 0.204 0.174 0.202 0.197 0.213 0.194 0.190 0.180   0.195    6.25
81)  2-hexanone
           0.077 0.081       0.088 0.089       0.085 0.080 0.070   0.081    8.18

82) I   chlorobenzene-d5      ----------------ISTD--------------------
83)  tetrachloroethene
```

Initial Calibration Summary

Job Number: JB40127 **Sample:** V3C4359-ICC4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C98238.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
            0.495 0.500 0.424 0.506 0.497 0.533 0.515 0.484 0.458   0.490    6.58
 84)  1,3-dichloropropane
            0.540 0.544 0.462 0.544 0.537 0.593 0.529 0.520 0.496   0.529    6.83
 85)  butyl acetate
            0.207 0.208       0.223 0.228 0.211 0.215 0.217 0.194   0.213    4.94
 86)  dibromochloromethane
            0.357 0.364 0.355 0.375 0.378 0.381 0.378 0.348 0.312   0.361    6.01
 87)  1,2-dibromoethane
            0.291 0.291 0.241 0.299 0.297 0.304 0.287 0.284 0.260   0.284    7.13
 88)  3,3-Dimethyl-1-Butanol
            0.032 0.030 0.029 0.035 0.036 0.030 0.034 0.032 0.030   0.032    8.05
 89)  chlorobenzene
            1.144 1.186 1.003 1.160 1.131 1.309 1.151 1.126 1.071   1.142    7.25
 90)  1,1,1,2-tetrachloroethane
            0.414 0.421 0.367 0.430 0.427 0.456 0.435 0.413 0.378   0.416    6.65
 91)  ethylbenzene
            2.071 2.086 1.945 2.056 2.010 2.313 2.057 2.013 1.967   2.058    5.19
 92)  m,p-xylene
            0.799 0.801 0.720 0.797 0.776 0.857 0.801 0.764 0.753   0.785    4.89
 93)  o-xylene
            0.779 0.776 0.655 0.781 0.767 0.876 0.789 0.748 0.756   0.770    7.38
 94)  styrene
            1.201 1.236 1.186 1.272 1.257 1.404 1.294 1.219 1.152   1.247    5.92
 95)  BUTYL ACRYLATE
            0.596 0.627       0.673       0.663       0.627 0.686   0.645    5.31
 96)  bromoform
            0.215 0.224       0.238 0.244 0.222 0.241 0.220 0.201   0.226    6.51

 97) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
 98)  isopropylbenzene
            4.322 4.379 3.876 4.149 4.056 4.793 4.089 4.124 3.986   4.197    6.47
 99)  4-bromofluorobenzene (s)
            1.282 1.124       1.085 1.051       1.077 1.109         1.121    7.39
100)  bromobenzene
            0.966 1.007 0.912 0.946 0.936 1.079 0.936 0.949 0.913   0.960    5.51
101)  cyclohexanone
            0.050 0.043       0.048 0.039       0.036 0.040 0.043   0.043   11.05
102)  1,1,2,2-tetrachloroethane
            0.799 0.777 0.781 0.773 0.770 0.842 0.726 0.739 0.722   0.770    4.89
103)  trans-1,4-dichloro-2-butene
            0.211 0.201       0.205 0.204 0.237 0.194 0.192 0.224   0.209    7.31
104)  1,2,3-trichloropropane
            0.222 0.210       0.208 0.207 0.166 0.194 0.199 0.209   0.202    8.27
105)  n-propylbenzene
            4.963 4.937 4.645 4.727 4.566 5.577 4.598 4.684 4.610   4.812    6.66
106)  4-Ethyltoluene
            3.896 4.170 4.616 3.977 3.856 4.094 3.914 3.992 4.002   4.057    5.70
107)  2-chlorotoluene
            0.986 1.007 0.908 0.963 0.942 1.174 0.968 0.944 0.925   0.980    8.04
108)  4-chlorotoluene
            1.015 0.982 0.989 0.967 0.934 1.102 0.963 0.933 0.985   0.986    5.17
109)  1,3,5-trimethylbenzene
            3.566 3.574 3.538 3.402 3.353 4.062 3.431 3.391 3.317   3.515    6.42
110)  tert-butylbenzene
            3.130 3.220 2.893 3.018 2.954 3.496 3.052 2.942 2.849   3.061    6.53
111)  pentachloroethane
            0.632 0.646 0.629 0.625 0.631 0.649 0.636 0.607 0.553   0.623    4.66
112)  1,2,4-trimethylbenzene
            3.555 3.494 3.508 3.410 3.320 3.975 3.382 3.346 3.357   3.483    5.79
113)  sec-butylbenzene
```

Initial Calibration Summary

Job Number: JB40127 **Sample:** V3C4359-ICC4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C98238.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
            4.623 4.652 4.380 4.483 4.381 5.244 4.455 4.390 4.276   4.543    6.36
114)  1,3-dichlorobenzene
            1.887 1.881 1.709 1.828 1.789 2.102 1.826 1.813 1.804   1.849    5.86
115)  p-isopropyltoluene
            3.845 3.846 3.743 3.687 3.617 4.356 3.705 3.580 3.558   3.771    6.43
116)  1,4-dichlorobenzene
            1.839 1.899 1.860 1.818 1.797 2.293 1.834 1.788 1.860   1.888    8.25
117)  1,2-dichlorobenzene
            1.736 1.743 1.757 1.702 1.699 2.025 1.699 1.683 1.640   1.743    6.40
118)  1,4-Diethylbenzene
            2.076 2.333 2.709 2.264 2.219 2.361 2.303 2.280 2.255   2.311    7.36
119)  n-butylbenzene
            1.965 2.016 1.755 1.945 1.890 2.351 1.966 1.893 1.904   1.965    8.26
120)  1,2,4,5-Tetramethylbenzene
            3.428 3.756 3.995 3.675 3.534 3.709 3.470 3.622 3.711   3.655    4.68
121)  1,2-dibromo-3-chloropropane
            0.147 0.139       0.132 0.136       0.119 0.132 0.158   0.138    9.10
122)  1,3,5-Trichlorobenzene
            1.463 1.498 1.435 1.476 1.416 1.730 1.353 1.416 1.433   1.469    7.23
123)  1,2,4-trichlorobenzene
            1.144 1.148 1.048 1.200 1.152 1.320 1.056 1.122 1.060   1.139    7.52
124)  hexachlorobutadiene
            0.831 0.837 0.797 0.794 0.761 1.006 0.711 0.810 0.786   0.815    9.93
125)  naphthalene
            2.008 2.014 2.413 2.208 2.155 2.362 1.853 2.016 1.972   2.111    8.86
126)  1,2,3-trichlorobenzene
            1.014 0.982 0.991 1.041 0.980 1.095 0.850 0.996 0.957   0.990    6.67
127)  hexachloroethane
            0.764 0.730 0.763 0.715 0.699 0.783 0.708 0.693 0.699   0.728    4.61
128)  Benzyl chloride
            1.562 1.485 1.729 1.503 1.503 1.668 1.445 1.485 1.535   1.546    6.06
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M3C4359.M         Mon May 13 18:10:51 2013   MS3C
```

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: V3C4359-ICV4359
Lab FileID: 3C98243.D

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\3C98243.D Vial: 13
Acq On : 7 May 2013 7:06 pm Operator: juntaep
Sample : icv4359-50 Inst : MS3C
Misc : MS47462,V3C4359,5.0,,,,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3C4359.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
Last Update : Mon May 13 17:58:56 2013
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	107	0.00	7.37
2		1,4-dioxane	0.127	0.133	-4.7	107	0.00	11.24
3		tertiary butyl alcohol	2.048	2.279	-11.3	117	0.00	7.49
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	9.59
6		chlorodifluoromethane	0.519	0.611	-17.7	125	0.00	3.98
7		dichlorodifluoromethane	0.737	0.717	2.7	101	0.00	3.96
8		chloromethane	0.732	0.665	9.2	101	0.00	4.32
9		vinyl chloride	0.866	0.801	7.5	102	0.00	4.57
10		bromomethane	0.414	0.386	6.8	103	0.00	5.23
11		chloroethane	0.402	0.375	6.7	102	0.00	5.41
12		Vinyl Bromide	0.400	0.390	2.5	103	0.00	5.76
13		Pentane	0.942	0.894	5.1	105	0.00	5.94
14		trichlorofluoromethane	0.837	0.799	4.5	102	0.01	5.85
15		ethyl ether	0.266	0.255	4.1	104	0.00	6.27
16		acrolein	0.067	0.070	-4.5	107	0.00	6.53
17		1,1-dichloroethene	0.463	0.439	5.2	104	0.00	6.70
18		acetone	0.028	0.032	-14.3	114	-0.01	6.75
19		allyl chloride	0.287	0.297	-3.5	106	0.00	7.23
20		acetonitrile	0.032	0.032	0.0	104	0.00	7.20
21		iodomethane	0.745	0.750	-0.7	103	0.00	6.98
22		iso-butyl alcohol	0.013	0.013	0.0	103	0.00	9.88
23		carbon disulfide	1.599	1.599	0.0	105	0.00	7.10
24		methylene chloride	0.504	0.477	5.4	104	0.00	7.42
25		methyl acetate	0.054	0.059	-9.3	106	0.00	7.21
26		methyl tert butyl ether	1.128	1.131	-0.3	106	0.00	7.74
27		trans-1,2-dichloroethene	0.522	0.490	6.1	103	0.00	7.79
28		di-isopropyl ether	1.711	1.803	-5.4	109	0.00	8.32
29		ethyl tert-butyl ether	1.287	1.353	-5.1	108	0.00	8.78
30		2-butanone	0.040	0.043	-7.5	106	0.00	9.06
31		1,1-dichloroethane	0.895	0.884	1.2	104	0.00	8.35
32		chloroprene	0.745	0.811	-8.9	108	0.00	8.46
33		acrylonitrile	0.114	0.125	-9.6	107	0.00	7.75
34		vinyl acetate	0.076	0.077	-1.3	101	0.00	8.33
35		ethyl acetate	0.050	0.052	-4.0	107	0.00	9.07
36		2,2-dichloropropane	0.745	0.743	0.3	106	0.00	9.09
37		cis-1,2-dichloroethene	0.557	0.527	5.4	104	0.00	9.09
38		propionitrile	0.045	0.047	-4.4	104	0.00	9.16
39		Methyl Acrylate	0.048	0.051	-6.2	101	0.00	9.14
40		bromochloromethane	0.217	0.220	-1.4	102	0.00	9.40
41		tetrahydrofuran	0.135	0.130	3.7	105	0.00	9.44

Initial Calibration Verification

Job Number: JB40127 **Sample:** V3C4359-ICV4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C98243.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

42		chloroform	0.846	0.812	4.0	102	0.00	9.46
43		tert-Butyl Formate	0.314	0.340	-8.3	112	0.00	9.48
44	S	dibromofluoromethane (s)	0.437	0.440	-0.7	108	0.00	9.66
45	S	1,2-dichloroethane-d4 (s)	0.440	0.451	-2.5	108	0.00	10.08
46		freon 113	0.360	0.367	-1.9	103	0.00	6.66
47		methacrylonitrile	0.210	0.211	-0.5	102	0.00	9.34
48		1,1,1-trichloroethane	0.748	0.749	-0.1	103	0.00	9.71
49		Cyclohexane	0.807	0.797	1.2	104	0.00	9.78
50		Tert Amyl Alcohol	0.048	0.049	-2.1	99	0.00	10.01
51		2,2,4-trimethylpentane	2.065	2.074	-0.4	108	0.00	10.13
52		tert-amyl methyl ether	1.193	1.215	-1.8	112	0.00	10.16
53	I	1,4-difluorobenzene	1.000	1.000	0.0	105	0.00	10.52
54		epichlorohydrin	0.024	0.027	-12.5	113	0.00	11.77
55		n-butyl alcohol	0.008	0.009	-12.5	107	0.00	10.64
56		carbon tetrachloride	0.468	0.466	0.4	102	0.00	9.91
57		1,1-dichloropropene	0.489	0.489	0.0	103	0.00	9.88
58		hexane	0.539	0.604	-12.1	125	0.00	8.08
59		benzene	1.483	1.420	4.2	102	0.00	10.15
60		heptane	0.304	0.309	-1.6	104	0.00	10.31
61		isopropyl acetate	0.509	0.579	-13.8	112	0.00	10.06
62		1,2-dichloroethane	0.370	0.369	0.3	101	0.00	10.16
63		trichloroethene	0.347	0.342	1.4	102	0.00	10.86
64		ethyl acrylate	0.325	0.339	-4.3	103	0.00	10.85
65		Tert-Amyl ethyl ether	0.455	0.471	-2.6	107	0.00	11.01
66		2-nitropropane	0.087	0.086	1.1	104	0.00	11.63
67		2-chloroethyl vinyl ether	0.118	0.136	-15.3	111	0.00	11.64
68		methyl methacrylate	0.065	0.071	-9.2	102	0.00	11.12
69		1,2-dichloropropane	0.352	0.349	0.9	103	0.00	11.13
70		methylcyclohexane	0.629	0.718	-14.1	117	0.00	11.07
71		dibromomethane	0.160	0.161	-0.6	103	0.00	11.29
72		bromodichloromethane	0.411	0.416	-1.2	102	0.00	11.41
73		cis-1,3-dichloropropene	0.527	0.532	-0.9	104	0.00	11.86
74	S	toluene-d8 (s)	1.249	1.266	-1.4	108	0.00	12.15
75		4-methyl-2-pentanone	0.096	0.101	-5.2	107	0.00	11.95
76		toluene	0.863	0.862	0.1	104	0.00	12.22
77		3-methyl-1-butanol	0.007	0.008	-14.3	107	0.00	11.97
78		trans-1,3-dichloropropene	0.436	0.446	-2.3	104	0.00	12.41
79		ethyl methacrylate	0.336	0.359	-6.8	104	0.00	12.40
80		1,1,2-trichloroethane	0.195	0.201	-3.1	104	0.00	12.63
81		2-hexanone	0.081	0.089	-9.9	106	0.00	12.79
82	I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	13.64
83		tetrachloroethene	0.490	0.495	-1.0	103	0.00	12.80
84		1,3-dichloropropane	0.529	0.532	-0.6	102	0.00	12.81
85		butyl acetate	0.213	0.220	-3.3	103	0.00	12.86
86		dibromochloromethane	0.361	0.365	-1.1	102	0.00	13.07
87		1,2-dibromoethane	0.284	0.291	-2.5	102	0.00	13.22
88		3,3-Dimethyl-1-Butanol	0.032	0.034	-6.3	103	0.00	12.96
89		chlorobenzene	1.142	1.131	1.0	102	0.00	13.67
90		1,1,1,2-tetrachloroethane	0.416	0.425	-2.2	104	0.00	13.73
91		ethylbenzene	2.058	2.038	1.0	104	0.00	13.72
92		m,p-xylene	0.785	0.782	0.4	103	0.00	13.83
93		o-xylene	0.770	0.769	0.1	103	0.00	14.24
94		styrene	1.247	1.246	0.1	103	0.00	14.25
95		BUTYL ACRYLATE	0.645	0.662	-2.6	103	0.00	14.06
96		bromoform	0.226	0.237	-4.9	105	0.00	14.52
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	105	0.00	15.93
98		isopropylbenzene	4.197	4.102	2.3	104	0.00	14.57

Initial Calibration Verification

Job Number: JB40127 **Sample:** V3C4359-ICV4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C98243.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

99	S	4-bromofluorobenzene (s)	1.121	1.140	-1.7	111	0.00	14.78
100		bromobenzene	0.960	0.929	3.2	103	0.00	14.98
101		cyclohexanone	0.043	0.096	-123.3#	212#	0.00	14.75
102		1,1,2,2-tetrachloroethane	0.770	0.760	1.3	103	0.00	14.88
103		trans-1,4-dichloro-2-bute	0.209	0.203	2.9	104	0.00	14.92
104		1,2,3-trichloropropane	0.202	0.204	-1.0	103	0.00	14.96
105		n-propylbenzene	4.812	4.676	2.8	104	0.00	14.98
106		4-Ethyltoluene	4.057	4.044	0.3	107	0.00	15.08
107		2-chlorotoluene	0.980	0.953	2.8	104	0.00	15.13
108		4-chlorotoluene	0.986	0.954	3.2	104	0.00	15.23
109		1,3,5-trimethylbenzene	3.515	3.376	4.0	104	0.00	15.13
110		tert-butylbenzene	3.061	2.979	2.7	104	0.00	15.47
111		pentachloroethane	0.623	0.627	-0.6	106	0.00	15.56
112		1,2,4-trimethylbenzene	3.483	3.336	4.2	103	0.00	15.52
113		sec-butylbenzene	4.543	4.446	2.1	104	0.00	15.68
114		1,3-dichlorobenzene	1.849	1.814	1.9	104	0.00	15.88
115		p-isopropyltoluene	3.771	3.660	2.9	104	0.00	15.80
116		1,4-dichlorobenzene	1.888	1.808	4.2	105	0.00	15.96
117		1,2-dichlorobenzene	1.743	1.689	3.1	104	0.00	16.35
118		1,4-Diethylbenzene	2.311	2.349	-1.6	109	0.00	16.18
119		n-butylbenzene	1.965	1.943	1.1	105	0.00	16.21
120		1,2,4,5-Tetramethylbenzen	3.655	3.766	-3.0	108	0.00	16.96
121		1,2-dibromo-3-chloropropa	0.138	0.136	1.4	108	0.00	17.12
122		1,3,5-Trichlorobenzene	1.469	1.508	-2.7	107	0.00	17.30
123		1,2,4-trichlorobenzene	1.139	1.213	-6.5	106	0.00	17.93
124		hexachlorobutadiene	0.815	0.794	2.6	105	0.00	18.04
125		naphthalene	2.111	2.162	-2.4	103	0.00	18.21
126		1,2,3-trichlorobenzene	0.990	1.038	-4.8	105	0.00	18.46
127		hexachloroethane	0.728	0.697	4.3	102	0.00	16.60
128		Benzyl chloride	1.546	1.764	-14.1	124	0.00	16.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3C98238.D M3C4359.M Mon May 13 18:02:41 2013 MS3C

6.7.2 6

Continuing Calibration Summary

Job Number: JB40127 **Sample:** V3C4446-CC4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C100022.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\3C\v3c4445-4446\3C100022.D Vial: 25
Acq On : 21 Jun 2013 9:54 pm Operator: prashans
Sample : CC4359-50 Inst : MS3C
Misc : MS50258,V3C4446,5.0,,,,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3C4359.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
Last Update : Mon Sep 13 11:48:20 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	100	-0.02	7.35
2		1,4-dioxane	0.127	0.128	-0.8	96	-0.01	11.22
3		tertiary butyl alcohol	2.048	1.796	12.3	86	-0.01	7.48
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	107	-0.02	9.58
6		chlorodifluoromethane	0.519	0.430	17.1	90	-0.02	3.97
7		dichlorodifluoromethane	0.737	0.733	0.5	106	0.00	3.96
8		chloromethane	0.732	0.727	0.7	113	0.00	4.32
9		vinyl chloride	0.866	0.804	7.2	105	-0.01	4.56
10		bromomethane	0.414	0.461	-11.4	126	-0.01	5.23
11		chloroethane	0.402	0.388	3.5	108	0.00	5.41
12		Vinyl Bromide		----------NA----------				
13		Pentane		----------NA----------				
14		trichlorofluoromethane	0.837	0.958	-14.5	125	0.00	5.84
15		ethyl ether	0.266	0.234	12.0	98	-0.02	6.25
16		acrolein	0.067	0.051	23.9#	79	-0.02	6.52
17		1,1-dichloroethene	0.463	0.460	0.6	112	-0.01	6.69
18		acetone	0.028	0.026	7.1	93	-0.02	6.74
19		allyl chloride	0.287	0.271	5.6	99	-0.02	7.21
20		acetonitrile	0.032	0.025	21.9#	81	-0.03	7.18
21		iodomethane	0.745	0.849	-14.0	120	-0.01	6.97
22		iso-butyl alcohol	0.013	0.010	23.1#	84	-0.02	9.87
23		carbon disulfide	1.599	1.620	-1.3	109	-0.01	7.09
24		methylene chloride	0.504	0.527	-4.6	119	-0.02	7.40
25		methyl acetate	0.054	0.053	1.9	97	-0.02	7.19
26		methyl tert butyl ether	1.128	1.161	-2.9	112	-0.01	7.72
27		trans-1,2-dichloroethene	0.522	0.517	1.0	111	-0.02	7.77
28		di-isopropyl ether	1.711	1.403	18.0	87	-0.02	8.31
29		ethyl tert-butyl ether	1.287	1.297	-0.8	106	-0.02	8.77
30		2-butanone	0.040	0.037	7.5	93	-0.02	9.04
31		1,1-dichloroethane	0.895	0.862	3.7	104	-0.01	8.34
32		chloroprene	0.745	0.732	1.7	100	-0.02	8.45
33		acrylonitrile	0.114	0.099	13.2	87	-0.02	7.73
34		vinyl acetate	0.076	0.066	13.2	89	-0.01	8.32
35		ethyl acetate	0.050	0.037	26.0#	78	-0.01	9.06
36		2,2-dichloropropane	0.745	0.695	6.7	102	0.00	9.08
37		cis-1,2-dichloroethene	0.557	0.540	3.1	110	-0.02	9.08
38		propionitrile	0.045	0.038	15.6	86	-0.02	9.14
39		Methyl Acrylate	0.048	0.045	6.3	92	-0.02	9.13
40		bromochloromethane	0.217	0.235	-8.3	112	-0.01	9.39
41		tetrahydrofuran	0.135	0.098	27.4#	81	-0.02	9.42

Continuing Calibration Summary

Job Number: JB40127 **Sample:** V3C4446-CC4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C100022.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

42		chloroform	0.846	0.860	-1.7	111	-0.01	9.44
43		tert-Butyl Formate	0.314	0.325	-3.5	109	-0.02	9.46
44	S	dibromofluoromethane (s)	0.437	0.372	14.9	94	-0.02	9.64
45	S	1,2-dichloroethane-d4 (s)	0.440	0.359	18.4	88	-0.01	10.06
46		freon 113	0.360	0.365	-1.4	105	-0.01	6.65
47		methacrylonitrile	0.210	0.164	21.9#	82	-0.02	9.32
48		1,1,1-trichloroethane	0.748	0.843	-12.7	119	-0.02	9.69
49		Cyclohexane	0.807	0.827	-2.5	110	-0.01	9.77
50		Tert Amyl Alcohol		----------NA----------				
51		2,2,4-trimethylpentane	2.065	1.801	12.8	96	0.00	10.13
52		tert-amyl methyl ether	1.193	1.174	1.6	111	0.00	10.16
53	I	1,4-difluorobenzene	1.000	1.000	0.0	106	-0.01	10.50
54		epichlorohydrin	0.024	0.019	20.8#	84	-0.02	11.75
55		n-butyl alcohol	0.008	0.006	25.0#	79	-0.01	10.62
56		carbon tetrachloride	0.468	0.541	-15.6	121	-0.01	9.90
57		1,1-dichloropropene	0.489	0.491	-0.4	105	-0.01	9.87
58		hexane	0.539	0.395	26.7#	83	-0.01	8.07
59		benzene	1.483	1.427	3.8	104	-0.02	10.13
60		heptane	0.304	0.246	19.1	85	0.00	10.30
61		isopropyl acetate	0.509	0.393	22.8#	77	-0.02	10.04
62		1,2-dichloroethane	0.370	0.394	-6.5	109	-0.01	10.15
63		trichloroethene	0.347	0.363	-4.6	110	-0.02	10.84
64		ethyl acrylate		----------NA----------				
65		Tert-Amyl ethyl ether		----------NA----------				
66		2-nitropropane	0.087	0.080	8.0	98	-0.01	11.62
67		2-chloroethyl vinyl ether	0.118	0.117	0.8	98	-0.01	11.63
68		methyl methacrylate	0.065	0.069	-6.2	101	-0.01	11.11
69		1,2-dichloropropane	0.352	0.326	7.4	97	-0.02	11.11
70		methylcyclohexane	0.629	0.633	-0.6	105	-0.01	11.06
71		dibromomethane	0.160	0.163	-1.9	106	-0.01	11.27
72		bromodichloromethane	0.411	0.441	-7.3	110	-0.01	11.40
73		cis-1,3-dichloropropene	0.527	0.515	2.3	102	-0.01	11.85
74	S	toluene-d8 (s)	1.249	1.099	12.0	96	-0.01	12.14
75		4-methyl-2-pentanone	0.096	0.081	15.6	88	-0.01	11.94
76		toluene	0.863	0.888	-2.9	108	0.00	12.21
77		3-methyl-1-butanol	0.007	0.006	14.3	85	-0.01	11.95
78		trans-1,3-dichloropropene	0.436	0.438	-0.5	104	-0.01	12.40
79		ethyl methacrylate	0.336	0.319	5.1	94	-0.01	12.39
80		1,1,2-trichloroethane	0.195	0.195	0.0	103	-0.01	12.62
81		2-hexanone	0.081	0.070	13.6	85	0.00	12.79
82	I	chlorobenzene-d5	1.000	1.000	0.0	111	-0.01	13.63
83		tetrachloroethene	0.490	0.507	-3.5	111	-0.01	12.79
84		1,3-dichloropropane	0.529	0.497	6.0	101	0.00	12.80
85		butyl acetate	0.213	0.169	20.7#	84	-0.01	12.85
86		dibromochloromethane	0.361	0.386	-6.9	114	-0.01	13.06
87		1,2-dibromoethane	0.284	0.285	-0.4	106	-0.01	13.21
88		3,3-Dimethyl-1-Butanol	0.032	0.025	21.9#	79	0.00	12.95
89		chlorobenzene	1.142	1.156	-1.2	110	-0.01	13.66
90		1,1,1,2-tetrachloroethane	0.416	0.443	-6.5	114	-0.01	13.72
91		ethylbenzene	2.058	2.049	0.4	110	-0.01	13.71
92		m,p-xylene	0.785	0.783	0.3	109	-0.01	13.82
93		o-xylene	0.770	0.773	-0.4	110	-0.01	14.23
94		styrene	1.247	1.234	1.0	107	0.00	14.24
95		BUTYL ACRYLATE		----------NA----------				
96		bromoform	0.226	0.239	-5.8	111	-0.01	14.51
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	110	-0.01	15.92
98		isopropylbenzene	4.197	4.274	-1.8	113	0.00	14.57

Continuing Calibration Summary

Job Number: JB40127 **Sample:** V3C4446-CC4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C100022.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

99	S	4-bromofluorobenzene (s)	1.121	0.928	17.2	94	-0.01	14.77
100		bromobenzene	0.960	0.971	-1.1	113	-0.01	14.97
101		cyclohexanone	0.043	0.019	55.8#	44#	0.00	14.74
102		1,1,2,2-tetrachloroethane	0.770	0.699	9.2	99	0.00	14.88
103		trans-1,4-dichloro-2-bute	0.209	0.167	20.1#	89	-0.01	14.91
104		1,2,3-trichloropropane	0.202	0.202	0.0	107	-0.01	14.95
105		n-propylbenzene	4.812	4.610	4.2	107	0.00	14.97
106		4-Ethyltoluene		----------NA----------				
107		2-chlorotoluene	0.980	0.976	0.4	111	-0.01	15.12
108		4-chlorotoluene	0.986	0.957	2.9	109	-0.01	15.22
109		1,3,5-trimethylbenzene	3.515	3.507	0.2	113	-0.01	15.12
110		tert-butylbenzene	3.061	3.241	-5.9	118	-0.01	15.46
111		pentachloroethane	0.623	0.669	-7.4	117	-0.01	15.55
112		1,2,4-trimethylbenzene	3.483	3.409	2.1	110	0.00	15.51
113		sec-butylbenzene	4.543	4.540	0.1	111	0.00	15.68
114		1,3-dichlorobenzene	1.849	1.800	2.7	108	-0.01	15.87
115		p-isopropyltoluene	3.771	3.765	0.2	112	-0.01	15.79
116		1,4-dichlorobenzene	1.888	1.777	5.9	107	-0.01	15.95
117		1,2-dichlorobenzene	1.743	1.670	4.2	108	0.00	16.34
118		1,4-Diethylbenzene		----------NA----------				
119		n-butylbenzene	1.965	1.745	11.2	98	0.00	16.21
120		1,2,4,5-Tetramethylbenzen		----------NA----------				
121		1,2-dibromo-3-chloropropa	0.138	0.124	10.1	102	0.00	17.11
122		1,3,5-Trichlorobenzene	1.469	1.340	8.8	100	-0.01	17.29
123		1,2,4-trichlorobenzene	1.139	1.024	10.1	94	-0.01	17.92
124		hexachlorobutadiene	0.815	0.835	-2.5	115	-0.01	18.03
125		naphthalene	2.111	1.901	9.9	95	-0.01	18.20
126		1,2,3-trichlorobenzene	0.990	0.926	6.5	98	-0.01	18.45
127		hexachloroethane	0.728	0.769	-5.6	118	-0.01	16.59
128		Benzyl chloride	1.546	1.051	32.0#	77	-0.01	16.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3C98238.D M3C4359.M Wed Jun 26 14:27:51 2013 ACCNJ

6.7.3

6

Continuing Calibration Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: V3C4450-CC4359
Lab FileID: 3C100118.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\3C\v3c4450\3C100118.D Vial: 2
Acq On : 25 Jun 2013 9:15 am Operator: prashans
Sample : CC4359-20 Inst : MS3C
Misc : MS50429,V3C4450,5.0,,,,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3C4359.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
Last Update : Mon Sep 13 11:48:20 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	143	-0.02	7.36
2		1,4-dioxane	0.127	0.122	3.9	132	0.00	11.23
3		tertiary butyl alcohol	2.048	1.833	10.5	117	0.00	7.49
4		Ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	122	-0.02	9.58
6		chlorodifluoromethane	0.519	0.510	1.7	122	0.00	3.98
7		dichlorodifluoromethane	0.737	0.786	-6.6	125	0.00	3.97
8		chloromethane	0.732	0.613	16.3	103	0.00	4.32
9		vinyl chloride	0.866	0.696	19.6	99	0.00	4.57
10		bromomethane	0.414	0.432	-4.3	128	0.00	5.23
11		chloroethane	0.402	0.339	15.7	103	0.00	5.41
12		Vinyl Bromide		----------NA----------				
13		Pentane		----------NA----------				
14		trichlorofluoromethane	0.837	1.059	-26.5#	151	0.00	5.84
15		ethyl ether	0.266	0.236	11.3	110	-0.01	6.26
16		acrolein	0.067	0.046	31.3#	85	-0.02	6.52
17		1,1-dichloroethene	0.463	0.453	2.2	127	-0.01	6.69
18		acetone	0.028	0.032	-14.3	129	-0.02	6.74
19		allyl chloride	0.287	0.264	8.0	113	-0.02	7.21
20		acetonitrile	0.032	0.030	6.3	120	-0.01	7.19
21		iodomethane	0.745	0.839	-12.6	137	-0.01	6.97
22		iso-butyl alcohol	0.013	0.011	15.4	101	-0.01	9.88
23		carbon disulfide	1.599	1.510	5.6	117	0.00	7.10
24		methylene chloride	0.504	0.591	-17.3	148	-0.01	7.41
25		methyl acetate	0.054	0.052	3.7	116	0.00	7.20
26		methyl tert butyl ether	1.128	1.311	-16.2	148	0.00	7.73
27		trans-1,2-dichloroethene	0.522	0.508	2.7	127	-0.02	7.77
28		di-isopropyl ether	1.711	1.309	23.5#	91	-0.02	8.31
29		ethyl tert-butyl ether	1.287	1.337	-3.9	124	-0.02	8.77
30		2-butanone	0.040	0.041	-2.5	132	-0.02	9.04
31		1,1-dichloroethane	0.895	0.878	1.9	123	-0.01	8.34
32		chloroprene	0.745	0.786	-5.5	122	-0.02	8.45
33		acrylonitrile	0.114	0.100	12.3	105	0.00	7.74
34		vinyl acetate	0.076	0.077	-1.3	125	0.00	8.33
35		ethyl acetate	0.050	0.046	8.0	116	-0.02	9.05
36		2,2-dichloropropane	0.745	0.896	-20.3#	153	-0.01	9.08
37		cis-1,2-dichloroethene	0.557	0.520	6.6	120	-0.02	9.08
38		propionitrile	0.045	0.040	11.1	108	-0.02	9.14
39		Methyl Acrylate	0.048	0.049	-2.1	130	0.00	9.14
40		bromochloromethane	0.217	0.250	-15.2	138	0.00	9.40
41		tetrahydrofuran	0.135	0.102	24.4#	98	-0.01	9.43

Continuing Calibration Summary

Job Number: JB40127 **Sample:** V3C4450-CC4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C100118.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

42		chloroform	0.846	0.941	-11.2	141	-0.01	9.44
43		tert-Butyl Formate	0.314	0.376	-19.7	144	0.00	9.47
44	S	dibromofluoromethane (s)	0.437	0.386	11.7	110	-0.02	9.64
45	S	1,2-dichloroethane-d4 (s)	0.440	0.460	-4.5	131	-0.01	10.06
46		freon 113	0.360	0.388	-7.8	128	0.00	6.66
47		methacrylonitrile	0.210	0.173	17.6	103	-0.01	9.33
48		1,1,1-trichloroethane	0.748	0.957	-27.9#	157	-0.01	9.70
49		Cyclohexane	0.807	0.800	0.9	124	-0.01	9.77
50		Tert Amyl Alcohol		----------NA----------				
51		2,2,4-trimethylpentane	2.065	1.824	11.7	112	0.00	10.13
52		tert-amyl methyl ether	1.193	1.241	-4.0	129	0.00	10.16
53	I	1,4-difluorobenzene	1.000	1.000	0.0	120	-0.01	10.50
54		epichlorohydrin	0.024	0.022	8.3	114	-0.01	11.76
55		n-butyl alcohol	0.008	0.006	25.0#	99	-0.02	10.62
56		carbon tetrachloride	0.468	0.639	-36.5#	166	-0.01	9.90
57		1,1-dichloropropene	0.489	0.522	-6.7	130	-0.01	9.87
58		hexane	0.539	0.389	27.8#	92	-0.01	8.07
59		benzene	1.483	1.383	6.7	118	-0.02	10.13
60		heptane	0.304	0.238	21.7#	94	0.00	10.30
61		isopropyl acetate	0.509	0.927	-82.1#	213#	-0.01	10.05
62		1,2-dichloroethane	0.370	0.509	-37.6#	162	-0.02	10.15
63		trichloroethene	0.347	0.380	-9.5	137	-0.02	10.84
64		ethyl acrylate		----------NA----------				
65		Tert-Amyl ethyl ether		----------NA----------				
66		2-nitropropane	0.087	0.119	-36.8#	176	-0.02	11.62
67		2-chloroethyl vinyl ether	0.118	0.129	-9.3	126	-0.01	11.63
68		methyl methacrylate	0.065	0.076	-16.9	139	-0.01	11.11
69		1,2-dichloropropane	0.352	0.310	11.9	108	-0.02	11.11
70		methylcyclohexane	0.629	0.637	-1.3	119	-0.01	11.06
71		dibromomethane	0.160	0.183	-14.4	140	-0.01	11.27
72		bromodichloromethane	0.411	0.490	-19.2	144	-0.01	11.40
73		cis-1,3-dichloropropene	0.527	0.553	-4.9	129	-0.01	11.85
74	S	toluene-d8 (s)	1.249	1.140	8.7	112	-0.01	12.14
75		4-methyl-2-pentanone	0.096	0.083	13.5	107	0.00	11.94
76		toluene	0.863	1.004	-16.3	143	0.00	12.21
77		3-methyl-1-butanol	0.007	0.007	0.0	114	-0.01	11.95
78		trans-1,3-dichloropropene	0.436	0.508	-16.5	143	-0.01	12.40
79		ethyl methacrylate	0.336	0.332	1.2	117	0.00	12.39
80		1,1,2-trichloroethane	0.195	0.199	-2.1	126	-0.01	12.62
81		2-hexanone	0.081	0.079	2.5	119	0.00	12.79
82	I	chlorobenzene-d5	1.000	1.000	0.0	129	-0.01	13.63
83		tetrachloroethene	0.490	0.529	-8.0	141	-0.01	12.79
84		1,3-dichloropropane	0.529	0.523	1.1	130	-0.01	12.80
85		butyl acetate	0.213	0.181	15.0	108	0.00	12.85
86		dibromochloromethane	0.361	0.415	-15.0	154	-0.01	13.06
87		1,2-dibromoethane	0.284	0.307	-8.1	139	-0.01	13.21
88		3,3-Dimethyl-1-Butanol	0.032	0.026	18.8	103	0.00	12.96
89		chlorobenzene	1.142	1.183	-3.6	135	-0.01	13.66
90		1,1,1,2-tetrachloroethane	0.416	0.477	-14.7	149	-0.01	13.72
91		ethylbenzene	2.058	2.130	-3.5	136	-0.01	13.71
92		m,p-xylene	0.785	0.820	-4.5	138	-0.01	13.82
93		o-xylene	0.770	0.810	-5.2	139	0.00	14.23
94		styrene	1.247	1.229	1.4	130	0.00	14.24
95		BUTYL ACRYLATE		----------NA----------				
96		bromoform	0.226	0.260	-15.0	152	-0.01	14.51
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	136	-0.01	15.92
98		isopropylbenzene	4.197	4.216	-0.5	139	0.00	14.57

Continuing Calibration Summary

Job Number: JB40127 **Sample:** V3C4450-CC4359
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 3C100118.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

99	S	4-bromofluorobenzene (s)	1.121	0.961	14.3	118	-0.01	14.77
100		bromobenzene	0.960	0.925	3.6	133	-0.01	14.97
101		cyclohexanone	0.043	0.029	32.6#	98	-0.01	14.74
102		1,1,2,2-tetrachloroethane	0.770	0.688	10.6	127	-0.01	14.87
103		trans-1,4-dichloro-2-bute	0.209	0.196	6.2	138	-0.01	14.91
104		1,2,3-trichloropropane	0.202	0.213	-5.4	146	0.00	14.95
105		n-propylbenzene	4.812	4.517	6.1	131	0.00	14.97
106		4-Ethyltoluene	4.057	3.548	12.5	121	0.04	15.12
107		2-chlorotoluene	0.980	0.949	3.2	137	-0.01	15.12
108		4-chlorotoluene	0.986	0.948	3.9	138	-0.01	15.22
109		1,3,5-trimethylbenzene	3.515	3.548	-0.9	142	-0.01	15.12
110		tert-butylbenzene	3.061	3.141	-2.6	145	-0.01	15.46
111		pentachloroethane	0.623	0.673	-8.0	151	-0.01	15.55
112		1,2,4-trimethylbenzene	3.483	3.523	-1.1	143	0.00	15.51
113		sec-butylbenzene	4.543	4.468	1.7	139	0.00	15.68
114		1,3-dichlorobenzene	1.849	1.767	4.4	133	-0.01	15.87
115		p-isopropyltoluene	3.771	3.744	0.7	142	-0.01	15.79
116		1,4-dichlorobenzene	1.888	1.781	5.7	136	-0.01	15.95
117		1,2-dichlorobenzene	1.743	1.659	4.8	134	0.00	16.34
118		1,4-Diethylbenzene		----------NA----------				
119		n-butylbenzene	1.965	1.696	13.7	122	0.00	16.21
120		1,2,4,5-Tetramethylbenzen		----------NA----------				
121		1,2-dibromo-3-chloropropa	0.138	0.159	-15.2	164	0.00	17.11
122		1,3,5-Trichlorobenzene	1.469	1.398	4.8	134	-0.01	17.29
123		1,2,4-trichlorobenzene	1.139	1.051	7.7	128	-0.01	17.92
124		hexachlorobutadiene	0.815	0.830	-1.8	139	-0.01	18.03
125		naphthalene	2.111	1.906	9.7	129	-0.01	18.20
126		1,2,3-trichlorobenzene	0.990	0.914	7.7	125	-0.01	18.45
127		hexachloroethane	0.728	0.748	-2.7	147	-0.01	16.59
128		Benzyl chloride	1.546	1.467	5.1	134	-0.01	16.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3C98237.D M3C4359.M Thu Jun 27 15:32:19 2013 ACCNJ

6.7.4

6

New Jersey

ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100037.D
Acq On : 22 Jun 2013 5:14 am
Operator : prashans
Sample : JB40127-1
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Jun 26 14:36:32 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

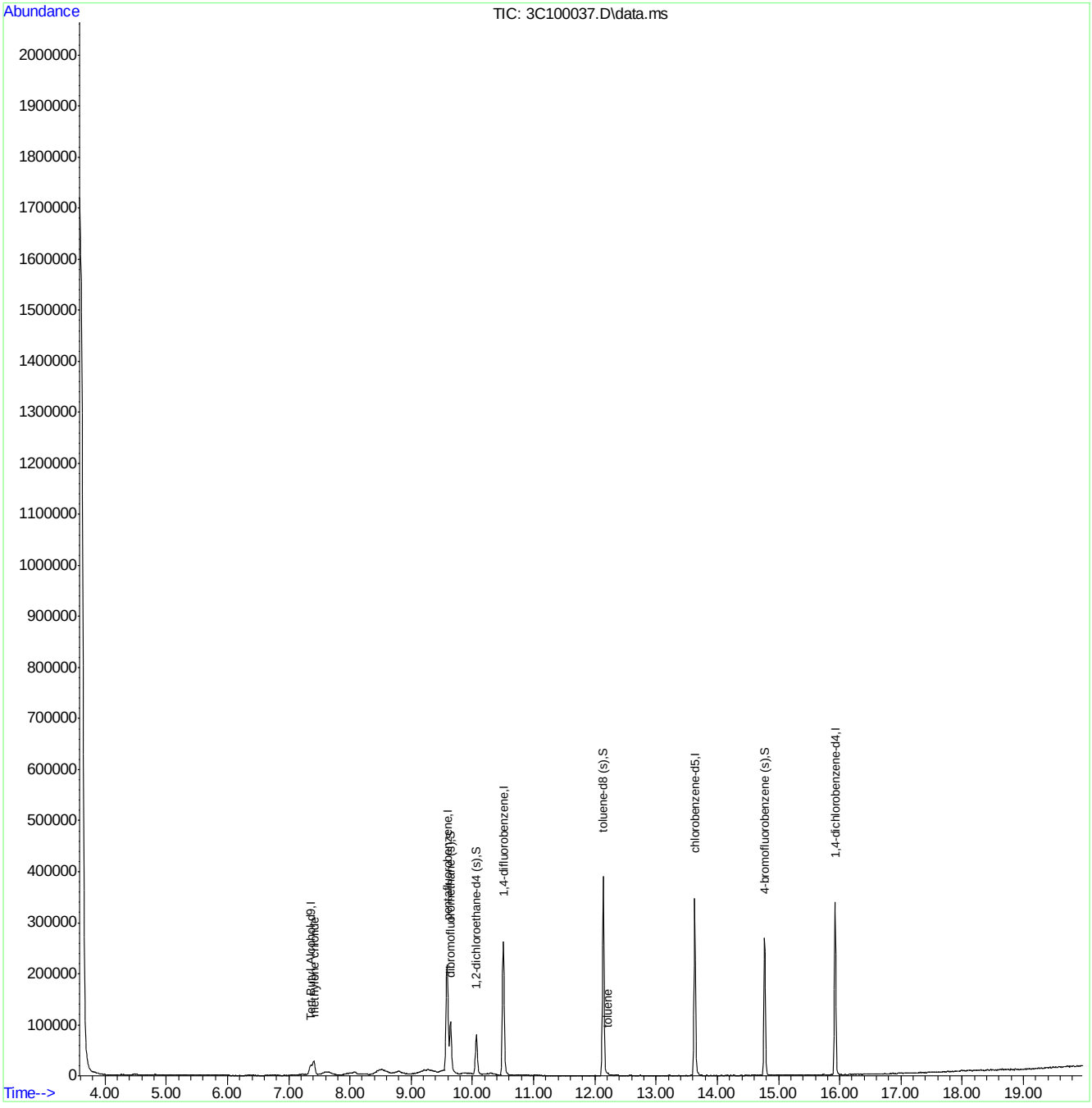
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.361	65	45807	500.00	ug/L	-0.01
5) pentafluorobenzene	9.589	168	182230	50.00	ug/L	-0.01
53) 1,4-difluorobenzene	10.505	114	255933	50.00	ug/L	-0.01
82) chlorobenzene-d5	13.632	117	200906	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	15.923	152	87987	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.642	113	67623	42.46	ug/L	-0.02
Spiked Amount 50.000	Range 65 - 131		Recovery = 84.92%			
45) 1,2-dichloroethane-d4 (s)	10.065	65	67404	41.99	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 83.98%			
74) toluene-d8 (s)	12.136	98	283470	44.35	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 128		Recovery = 88.70%			
99) 4-bromofluorobenzene (s)	14.772	95	89986	45.60	ug/L	-0.01
Spiked Amount 50.000	Range 67 - 131		Recovery = 91.20%			
Target Compounds						Qvalue
24) methylene chloride	7.413	84	14467	7.88	ug/L	87
76) toluene	12.210	92	1193	0.27	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

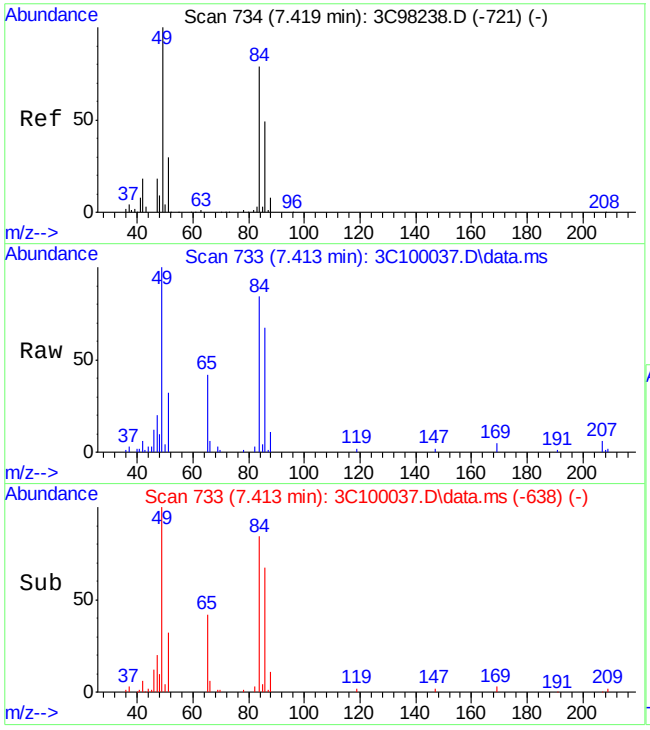
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100037.D
Acq On : 22 Jun 2013 5:14 am
Operator : prashans
Sample : JB40127-1
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Jun 26 14:36:32 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration



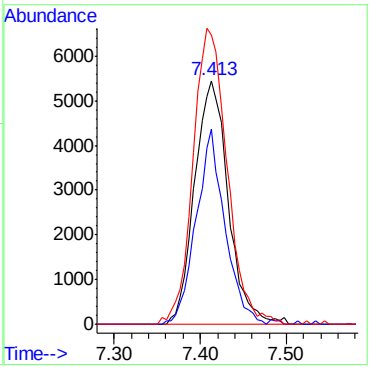
M3C4359.M Wed Jun 26 14:45:30 2013 ACCNJ Page: 2

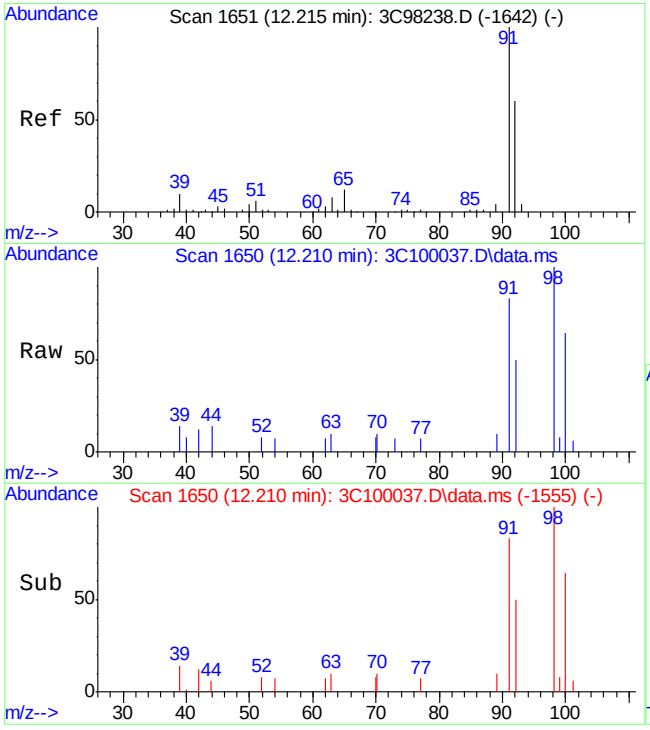


#24
methylene chloride
Concen: 7.88 ug/L
RT: 7.413 min Scan# 733
Delta R.T. -0.005 min
Lab File: 3C100037.D
Acq: 22 Jun 2013 5:14 am

Tgt Ion: 84 Resp: 14467

Ion	Ratio	Lower	Upper
84	100		
86	80.0	43.6	81.0
49	118.5	89.0	165.2

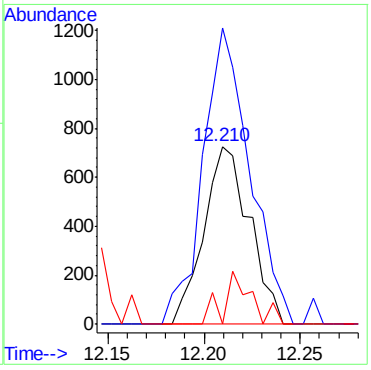




#76
toluene
Concen: 0.27 ug/L
RT: 12.210 min Scan# 1650
Delta R.T. -0.005 min
Lab File: 3C100037.D
Acq: 22 Jun 2013 5:14 am

Tgt Ion: 92 Resp: 1193

Ion	Ratio	Lower	Upper
92	100		
91	166.9	136.1	196.1
65	0.0	0.0	49.4



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100037.D
Acq On : 22 Jun 2013 5:14 am
Operator : prashans
Sample : JB40127-1
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: 3C100037.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.453	165	167	169	rBV3	810	801	0.11%	0.020%
2	4.694	210	213	217	rBV4	951	1256	0.18%	0.031%
3	5.060	282	283	289	rBV3	692	1046	0.15%	0.026%
4	5.285	324	326	329	rBV3	794	675	0.09%	0.017%
5	5.400	345	348	351	rBV5	810	936	0.13%	0.023%
6	5.426	351	353	360	rVV4	1010	1437	0.20%	0.036%
7	5.504	364	368	370	rBV4	673	701	0.10%	0.017%
8	5.546	374	376	378	rVB2	960	799	0.11%	0.020%
9	5.567	378	380	383	rBV3	1088	1106	0.15%	0.028%
10	5.672	397	400	405	rBV5	655	883	0.12%	0.022%
11	5.750	412	415	418	rBV3	717	874	0.12%	0.022%
12	5.996	460	462	469	rVB5	1002	1055	0.15%	0.026%
13	6.132	485	488	491	rVB3	351	382	0.05%	0.010%
14	6.169	491	495	498	rVB2	436	619	0.09%	0.015%
15	6.200	500	501	503	rBV	811	440	0.06%	0.011%
16	6.409	538	541	545	rBV2	1044	1424	0.20%	0.035%
17	6.571	569	572	574	rBV2	427	415	0.06%	0.010%
18	6.645	585	586	592	rVB3	538	790	0.11%	0.020%
19	6.686	592	594	598	rBV2	483	743	0.10%	0.019%
20	6.744	598	605	607	rBV4	1152	1982	0.28%	0.049%
21	6.833	620	622	626	rVB3	745	742	0.10%	0.018%
22	6.864	626	628	631	rVB	436	406	0.06%	0.010%
23	6.917	634	638	640	rVV3	589	616	0.09%	0.015%
24	6.964	643	647	648	rBV2	370	368	0.05%	0.009%
25	7.032	654	660	661	rBV3	884	1020	0.14%	0.025%
26	7.089	668	671	672	rBV3	576	579	0.08%	0.014%
27	7.105	672	674	677	rVV3	748	833	0.12%	0.021%
28	7.152	680	683	684	rBV3	635	540	0.08%	0.013%
29	7.361	711	723	726	rBV2	18384	48956	6.85%	1.219%
30	7.408	727	732	745	rVB	26264	72624	10.16%	1.809%
31	7.586	751	766	767	rBV6	4432	10886	1.52%	0.271%
32	7.895	819	825	826	rBV4	1553	1807	0.25%	0.045%
33	7.984	830	842	844	rVV6	2510	6551	0.92%	0.163%
34	8.067	853	858	869	rVB7	4495	13880	1.94%	0.346%

M3C4359.M Wed Jun 26 14:43:22 2013 ACCNJ

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100037.D
Acq On : 22 Jun 2013 5:14 am
Operator : prashans
Sample : JB40127-1
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

35	8.324	905	907	908	rBV	1084	541	0.08%	0.013%
36	8.480	909	937	939	rBV4	9919	42004	5.88%	1.046%
37	9.024	1039	1041	1042	rBV	1504	877	0.12%	0.022%
38	9.584	1139	1148	1155	rBV	207373	489605	68.49%	12.193%
39	9.642	1155	1159	1183	rVB	102388	242385	33.91%	6.036%
40	10.065	1231	1240	1258	rVB	78944	178867	25.02%	4.454%
41	10.505	1314	1324	1343	rVB2	262275	555283	77.68%	13.829%
42	10.703	1357	1362	1364	rBV3	650	959	0.13%	0.024%
43	10.787	1375	1378	1381	rVB2	767	735	0.10%	0.018%
44	11.017	1416	1422	1424	rBV5	538	657	0.09%	0.016%
45	11.326	1478	1481	1485	rBV	390	375	0.05%	0.009%
46	11.362	1485	1488	1491	rVV2	449	376	0.05%	0.009%
47	11.561	1522	1526	1528	rVV3	414	405	0.06%	0.010%
48	11.613	1533	1536	1540	rVB2	489	451	0.06%	0.011%
49	11.660	1540	1545	1547	rVB2	374	437	0.06%	0.011%
50	11.781	1566	1568	1572	rBV2	401	393	0.05%	0.010%
51	11.901	1587	1591	1593	rBV	552	369	0.05%	0.009%
52	12.006	1604	1611	1617	rVB3	744	1284	0.18%	0.032%
53	12.136	1626	1636	1647	rBV	390459	714859	100.00%	17.803%
54	12.346	1669	1676	1685	rVB3	2094	5018	0.70%	0.125%
55	12.403	1685	1687	1691	rVB3	490	566	0.08%	0.014%
56	12.523	1706	1710	1715	rVB3	763	1201	0.17%	0.030%
57	12.576	1715	1720	1721	rBV	1407	1604	0.22%	0.040%
58	12.665	1736	1737	1741	rVB2	483	420	0.06%	0.010%
59	12.738	1749	1751	1755	rVB2	542	573	0.08%	0.014%
60	12.879	1772	1778	1781	rBV2	348	649	0.09%	0.016%
61	13.130	1821	1826	1829	rBV4	427	629	0.09%	0.016%
62	13.203	1835	1840	1846	rVB3	1491	2634	0.37%	0.066%
63	13.261	1847	1851	1854	rVV2	324	454	0.06%	0.011%
64	13.371	1867	1872	1876	rVV3	652	808	0.11%	0.020%
65	13.475	1888	1892	1894	rBV3	436	580	0.08%	0.014%
66	13.564	1905	1909	1913	rVV3	1225	1497	0.21%	0.037%
67	13.632	1913	1922	1942	rVV	347561	592953	82.95%	14.767%
68	13.820	1954	1958	1968	rVB5	1038	1803	0.25%	0.045%
69	13.894	1968	1972	1974	rBV3	534	425	0.06%	0.011%
70	14.129	2015	2017	2020	rBV	661	655	0.09%	0.016%
71	14.244	2033	2039	2040	rBV4	472	540	0.08%	0.013%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100037.D
Acq On : 22 Jun 2013 5:14 am
Operator : prashans
Sample : JB40127-1
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

72	14.255	2040	2041	2048	rBV4	628	609	0.09%	0.015%
73	14.401	2066	2069	2074	rVB4	629	598	0.08%	0.015%
74	14.453	2074	2079	2080	rBV4	595	593	0.08%	0.015%
75	14.563	2096	2100	2106	rBV5	1360	2186	0.31%	0.054%
76	14.605	2106	2108	2115	rVV3	1010	1493	0.21%	0.037%
77	14.663	2118	2119	2123	rBV3	369	381	0.05%	0.009%
78	14.772	2130	2140	2154	rBV	268822	430692	60.25%	10.726%
79	14.908	2163	2166	2170	rVB3	883	1219	0.17%	0.030%
80	14.940	2170	2172	2174	rBV2	875	671	0.09%	0.017%
81	14.961	2174	2176	2179	rVV2	636	841	0.12%	0.021%
82	15.013	2183	2186	2187	rVV3	758	601	0.08%	0.015%
83	15.044	2189	2192	2197	rVB5	1765	2677	0.37%	0.067%
84	15.238	2226	2229	2233	rVB4	980	1277	0.18%	0.032%
85	15.285	2236	2238	2242	rBV4	713	620	0.09%	0.015%
86	15.337	2246	2248	2250	rBV3	435	382	0.05%	0.010%
87	15.410	2259	2262	2267	rBV3	520	525	0.07%	0.013%
88	15.531	2281	2285	2286	rVB3	877	811	0.11%	0.020%
89	15.609	2299	2300	2302	rBV	716	420	0.06%	0.010%
90	15.730	2319	2323	2324	rBV5	1189	1213	0.17%	0.030%
91	15.792	2332	2335	2337	rVB4	711	781	0.11%	0.019%
92	15.818	2337	2340	2342	rBV3	1167	1248	0.17%	0.031%
93	15.860	2345	2348	2350	rVV3	1340	1570	0.22%	0.039%
94	15.923	2352	2360	2375	rVV	338857	533610	74.65%	13.289%
95	16.017	2375	2378	2379	rVB3	832	786	0.11%	0.020%
96	16.169	2403	2407	2413	rVB8	1712	2394	0.33%	0.060%
97	16.205	2413	2414	2417	rBV2	890	836	0.12%	0.021%
98	16.310	2426	2434	2437	rVB7	657	955	0.13%	0.024%
99	16.430	2452	2457	2460	rVB6	1228	1681	0.24%	0.042%
100	16.655	2499	2500	2505	rBV4	1152	1734	0.24%	0.043%

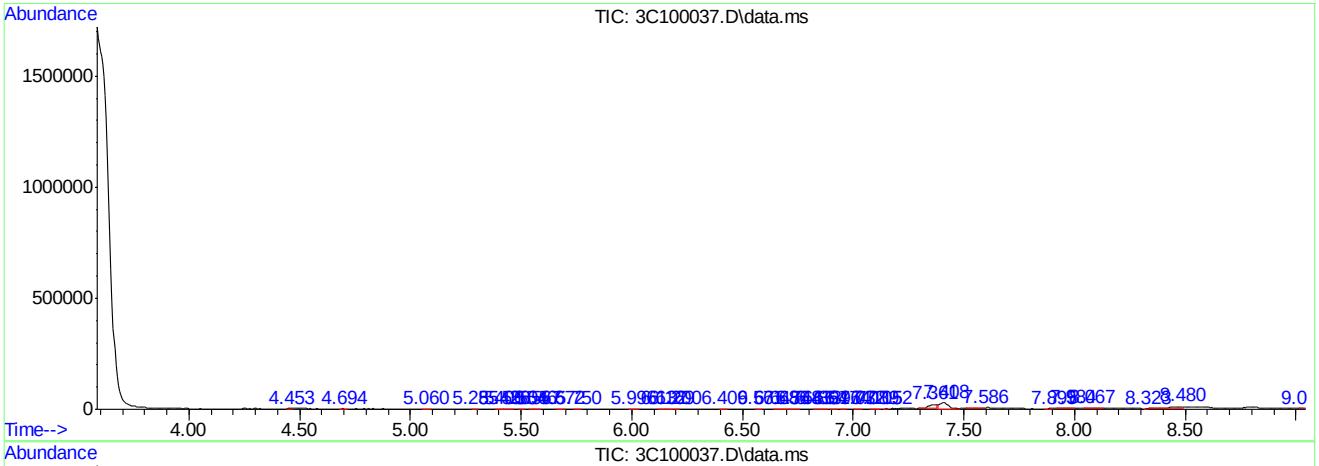
Sum of corrected areas: 4015447

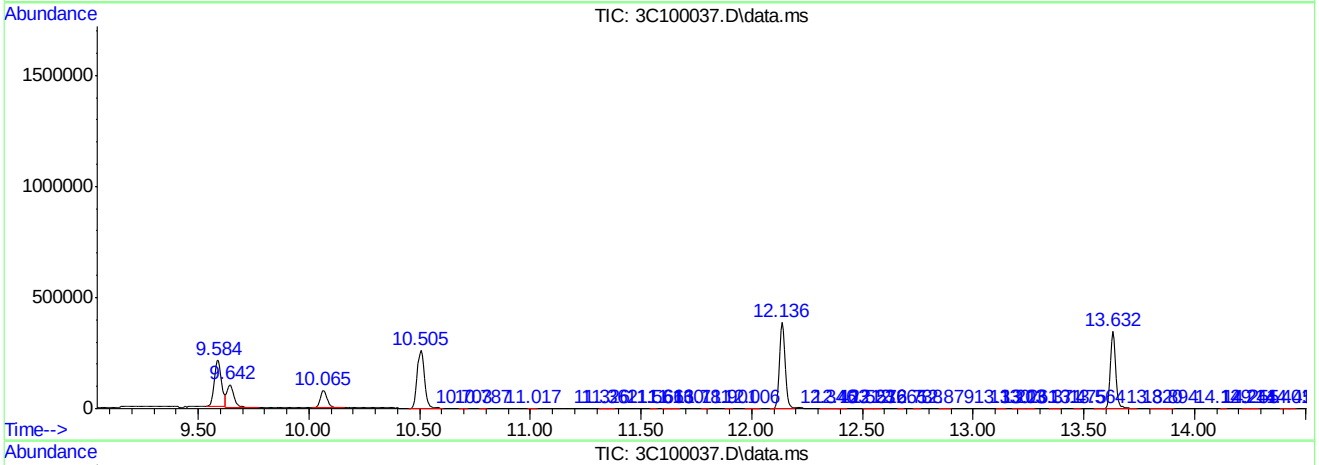
LSC Report - Integrated Chromatogram

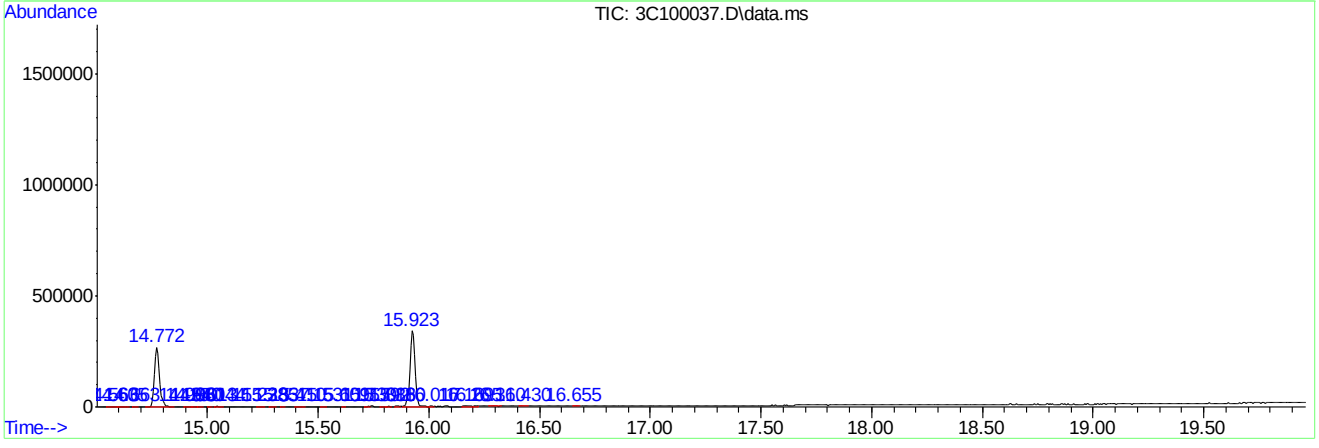
Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100037.D
Acq On : 22 Jun 2013 5:14 am
Operator : prashans
Sample : JB40127-1
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p







Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100037.D
Acq On : 22 Jun 2013 5:14 am
Operator : prashans
Sample : JB40127-1
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
  Data File : 3C100037.D
  Acq On    : 22 Jun 2013   5:14 am
  Operator  : prashans
  Sample    : JB40127-1
  Misc      : MS50297,V3C4446,6.0,,,,1
  ALS Vial  : 40   Sample Multiplier: 1

  Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
  Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

  TIC Library   : C:\DATABASE\NIST08.L
  TIC Integration Parameters: lscint.p

                                                    |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100038.D
Acq On : 22 Jun 2013 5:44 am
Operator : prashans
Sample : JB40127-2
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Time: Jun 26 14:37:03 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

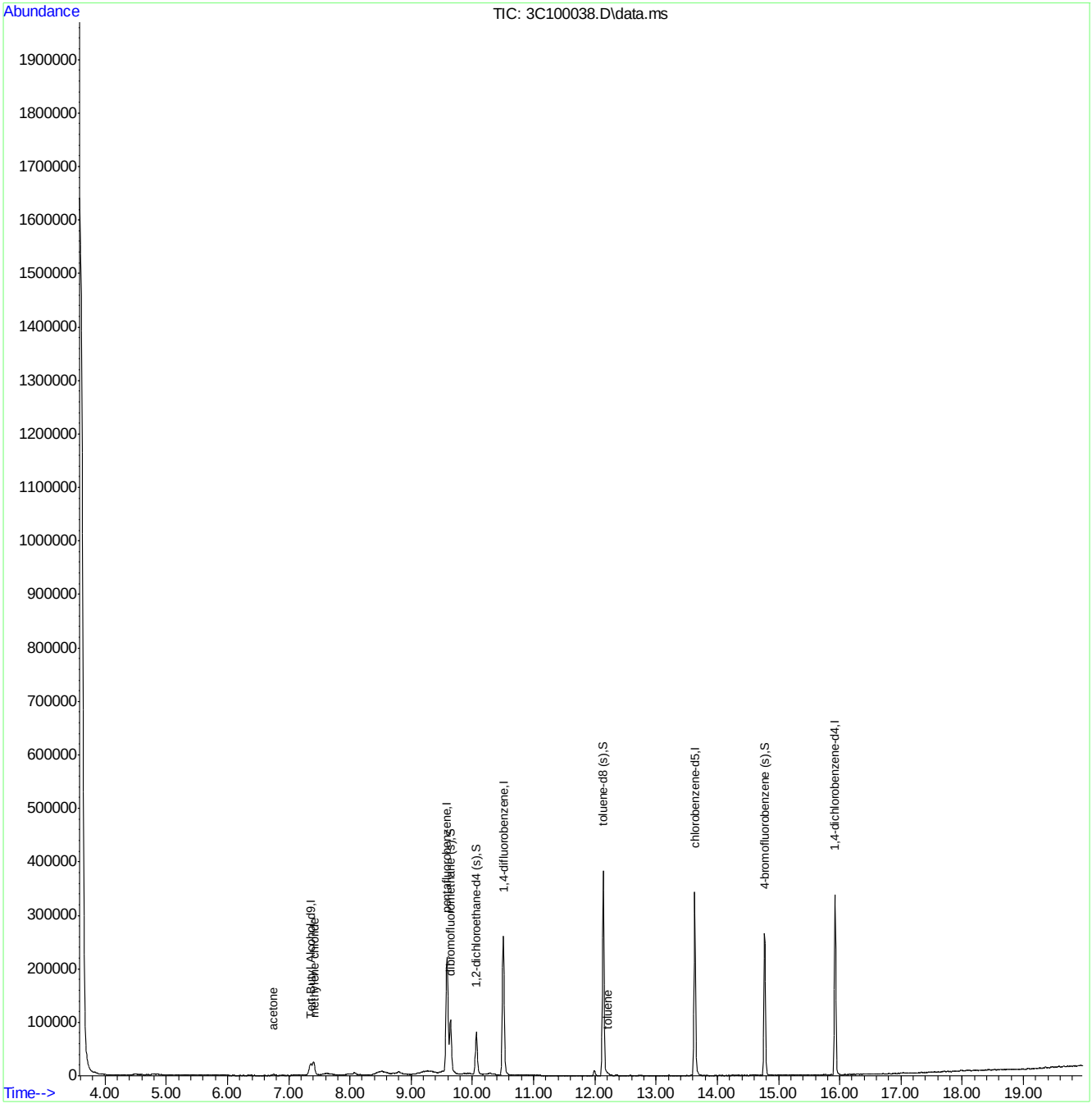
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.361	65	50211	500.00	ug/L	-0.01
5) pentafluorobenzene	9.584	168	181783	50.00	ug/L	-0.02
53) 1,4-difluorobenzene	10.505	114	252717	50.00	ug/L	-0.01
82) chlorobenzene-d5	13.632	117	199654	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	15.923	152	88015	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.642	113	67895	42.74	ug/L	-0.02
Spiked Amount 50.000	Range 65 - 131		Recovery = 85.48%			
45) 1,2-dichloroethane-d4 (s)	10.065	65	66013	41.22	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 82.44%			
74) toluene-d8 (s)	12.136	98	278873	44.18	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 128		Recovery = 88.36%			
99) 4-bromofluorobenzene (s)	14.773	95	89043	45.11	ug/L	-0.01
Spiked Amount 50.000	Range 67 - 131		Recovery = 90.22%			
Target Compounds						Qvalue
18) acetone	6.749	58	1299	12.58	ug/L #	77
24) methylene chloride	7.414	84	11986	6.54	ug/L	91
76) toluene	12.215	92	989	0.23	ug/L	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100038.D
Acq On : 22 Jun 2013 5:44 am
Operator : prashans
Sample : JB40127-2
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Time: Jun 26 14:37:03 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration



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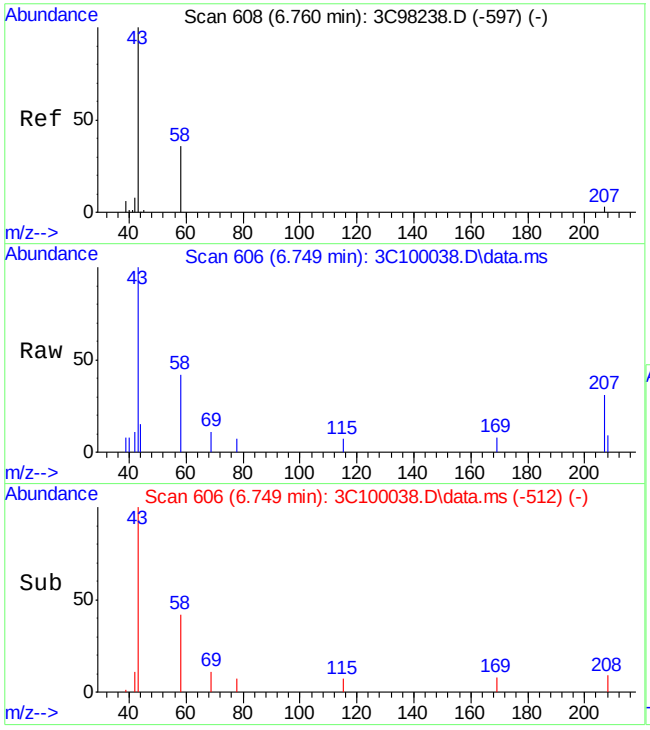
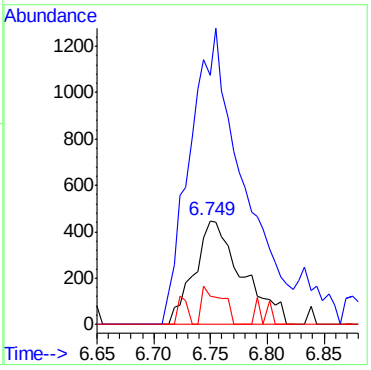
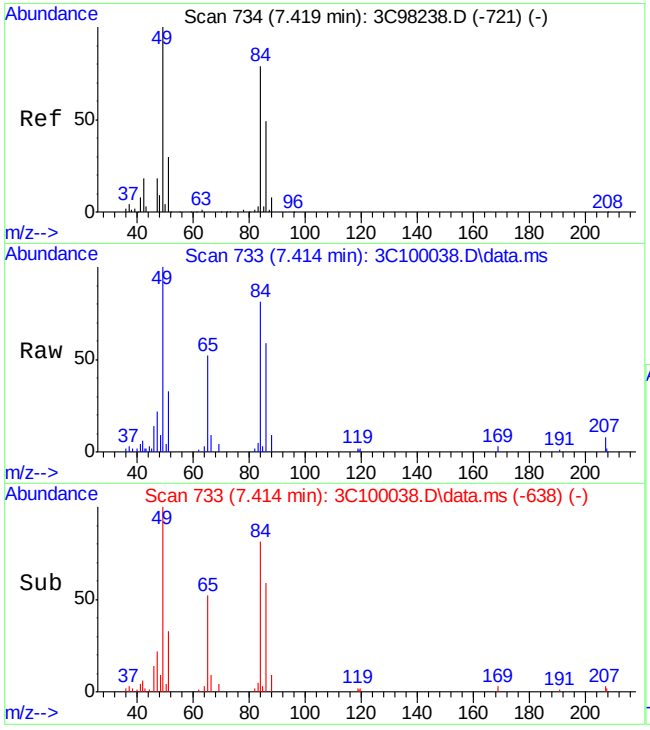


#18
acetone
Concen: 12.58 ug/L
RT: 6.749 min Scan# 606
Delta R.T. -0.011 min
Lab File: 3C100038.D
Acq: 22 Jun 2013 5:44 am

Tgt Ion: 58 Resp: 1299

Ion	Ratio	Lower	Upper
58	100		
43	240.9	259.1	319.1#
42	26.8	0.0	57.9

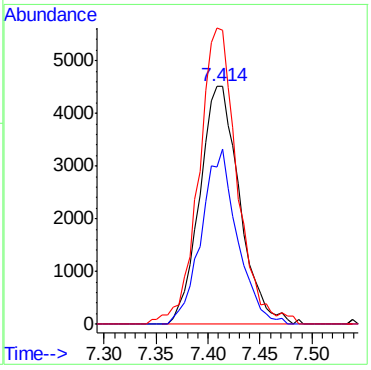


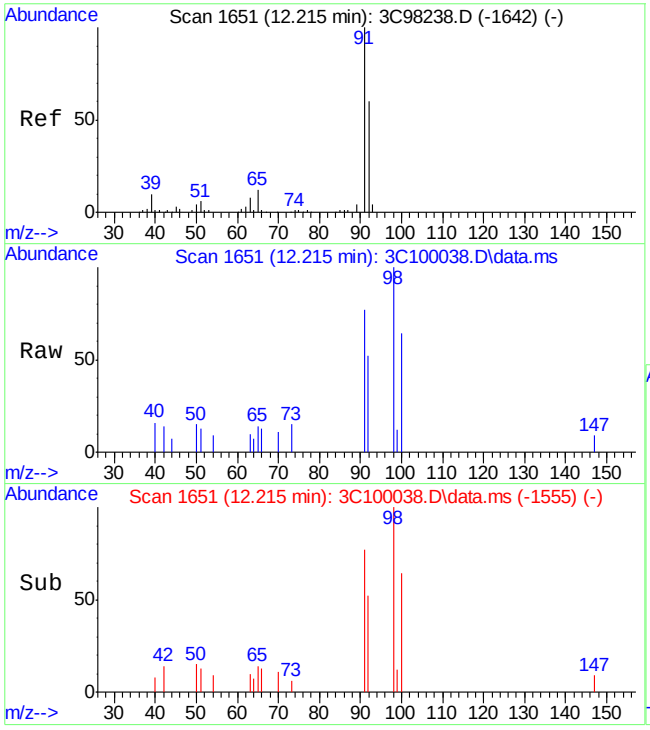


#24
methylene chloride
Concen: 6.54 ug/L
RT: 7.414 min Scan# 733
Delta R.T. -0.005 min
Lab File: 3C100038.D
Acq: 22 Jun 2013 5:44 am

Tgt Ion: 84 Resp: 11986

Ion	Ratio	Lower	Upper
84	100		
86	73.4	43.6	81.0
49	120.2	89.0	165.2

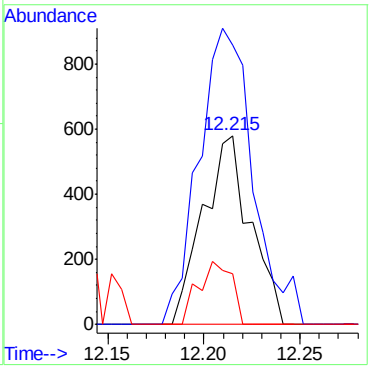




#76
toluene
Concen: 0.23 ug/L
RT: 12.215 min Scan# 1651
Delta R.T. -0.000 min
Lab File: 3C100038.D
Acq: 22 Jun 2013 5:44 am

Tgt Ion: 92 Resp: 989

Ion	Ratio	Lower	Upper
92	100		
91	148.3	136.1	196.1
65	26.7	0.0	49.4



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100038.D
Acq On : 22 Jun 2013 5:44 am
Operator : prashans
Sample : JB40127-2
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 41 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: 3C100038.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.066	88	93	95	rBV2	693	894	0.12%	0.023%
2	4.469	166	170	182	rBV8	1543	4431	0.62%	0.112%
3	4.704	212	215	217	rBV	678	607	0.08%	0.015%
4	4.772	223	228	229	rBV4	903	1210	0.17%	0.031%
5	4.914	252	255	258	rVV4	810	555	0.08%	0.014%
6	4.987	262	269	272	rBV4	819	1831	0.25%	0.046%
7	5.060	280	283	284	rBV3	842	561	0.08%	0.014%
8	5.185	303	307	309	rBV2	978	990	0.14%	0.025%
9	5.253	316	320	323	rBV3	1168	1598	0.22%	0.040%
10	5.280	323	325	327	rVV3	678	584	0.08%	0.015%
11	5.301	328	329	333	rVB4	734	738	0.10%	0.019%
12	5.457	355	359	361	rVB4	637	623	0.09%	0.016%
13	5.473	361	362	366	rBV2	731	898	0.12%	0.023%
14	5.693	403	404	409	rBV3	844	740	0.10%	0.019%
15	5.928	448	449	451	rBV2	909	542	0.08%	0.014%
16	5.986	457	460	466	rVB3	1087	2070	0.29%	0.052%
17	6.080	476	478	481	rBV2	610	517	0.07%	0.013%
18	6.252	508	511	513	rBV	829	724	0.10%	0.018%
19	6.399	535	539	542	rVB3	547	728	0.10%	0.018%
20	6.436	545	546	556	rVB2	587	1013	0.14%	0.026%
21	6.493	556	557	561	rBV2	354	473	0.07%	0.012%
22	6.598	574	577	582	rVB3	602	823	0.11%	0.021%
23	6.755	598	607	611	rBV3	2343	4857	0.67%	0.123%
24	6.786	611	613	623	rVB	1167	1477	0.21%	0.037%
25	6.870	627	629	631	rBV2	494	511	0.07%	0.013%
26	6.985	648	651	654	rBV	544	508	0.07%	0.013%
27	7.047	660	663	665	rVB3	492	521	0.07%	0.013%
28	7.074	665	668	671	rBV2	879	1223	0.17%	0.031%
29	7.115	674	676	680	rVV3	605	631	0.09%	0.016%
30	7.173	684	687	688	rBV2	514	449	0.06%	0.011%
31	7.189	688	690	692	rBV2	804	459	0.06%	0.012%
32	7.220	692	696	699	rBV4	666	990	0.14%	0.025%
33	7.361	710	723	727	rBV2	21145	64887	9.02%	1.644%
34	7.518	751	753	754	rBV	778	458	0.06%	0.012%

M3C4359.M Wed Jun 26 14:43:31 2013 ACCNJ Page: 1

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100038.D
Acq On : 22 Jun 2013 5:44 am
Operator : prashans
Sample : JB40127-2
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 41 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

35	7.560	756	761	762	rBV4	1547	1769	0.25%	0.045%
36	7.822	810	811	814	rBB3	681	464	0.06%	0.012%
37	8.073	853	859	868	rVB6	3860	10547	1.47%	0.267%
38	8.282	898	899	904	rVB2	570	628	0.09%	0.016%
39	8.481	912	937	938	rBV4	6095	24249	3.37%	0.614%
40	8.800	989	998	1017	rVB4	4481	17272	2.40%	0.437%
41	9.584	1138	1148	1155	rBV	213041	495576	68.85%	12.552%
42	9.642	1155	1159	1178	rVB	101069	231041	32.10%	5.852%
43	9.830	1193	1195	1196	rBV2	894	808	0.11%	0.020%
44	10.065	1231	1240	1260	rVB	79332	177038	24.60%	4.484%
45	10.505	1314	1324	1349	rVB	259828	554297	77.01%	14.040%
46	10.709	1360	1363	1366	rBV3	547	522	0.07%	0.013%
47	10.913	1398	1402	1404	rVB3	561	505	0.07%	0.013%
48	11.022	1419	1423	1426	rBV3	497	679	0.09%	0.017%
49	11.111	1435	1440	1442	rVB5	455	659	0.09%	0.017%
50	11.258	1466	1468	1471	rVV	541	500	0.07%	0.013%
51	11.326	1477	1481	1483	rVV3	477	644	0.09%	0.016%
52	11.446	1497	1504	1506	rBV3	419	690	0.10%	0.017%
53	11.634	1538	1540	1546	rVB2	317	480	0.07%	0.012%
54	11.838	1575	1579	1584	rBV3	403	618	0.09%	0.016%
55	11.885	1584	1588	1592	rVV3	447	481	0.07%	0.012%
56	11.990	1598	1608	1619	rVB2	9404	17659	2.45%	0.447%
57	12.136	1626	1636	1666	rBV	383815	719740	100.00%	18.230%
58	12.340	1669	1675	1686	rBV3	1264	2659	0.37%	0.067%
59	12.571	1714	1719	1720	rBV2	689	654	0.09%	0.017%
60	12.670	1736	1738	1743	rVB3	448	463	0.06%	0.012%
61	12.717	1744	1747	1753	rBV4	726	1239	0.17%	0.031%
62	12.764	1753	1756	1758	rVV2	645	497	0.07%	0.013%
63	12.921	1780	1786	1787	rBV3	447	511	0.07%	0.013%
64	12.963	1791	1794	1796	rBV2	482	604	0.08%	0.015%
65	13.156	1826	1831	1832	rVB3	647	638	0.09%	0.016%
66	13.209	1838	1841	1845	rVB4	882	1219	0.17%	0.031%
67	13.575	1903	1911	1913	rBV3	1586	2634	0.37%	0.067%
68	13.632	1913	1922	1944	rVB	342411	587381	81.61%	14.878%
69	13.763	1946	1947	1950	rBV2	517	449	0.06%	0.011%
70	13.962	1981	1985	1988	rBV2	640	545	0.08%	0.014%
71	14.077	2003	2007	2014	rVB4	547	1031	0.14%	0.026%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100038.D
Acq On : 22 Jun 2013 5:44 am
Operator : prashans
Sample : JB40127-2
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 41 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

72	14.145	2015	2020	2023	rBV3	440	507	0.07%	0.013%
73	14.244	2033	2039	2045	rBV5	563	1218	0.17%	0.031%
74	14.365	2059	2062	2065	rBV3	646	850	0.12%	0.022%
75	14.412	2065	2071	2073	rVV3	694	946	0.13%	0.024%
76	14.433	2073	2075	2077	rVB	757	480	0.07%	0.012%
77	14.474	2081	2083	2088	rBV2	977	1367	0.19%	0.035%
78	14.527	2092	2093	2097	rVB3	407	439	0.06%	0.011%
79	14.563	2097	2100	2104	rBV5	672	1144	0.16%	0.029%
80	14.773	2131	2140	2157	rVV	265735	428238	59.50%	10.847%
81	14.924	2168	2169	2173	rBV3	698	784	0.11%	0.020%
82	14.992	2178	2182	2184	rVB4	591	553	0.08%	0.014%
83	15.044	2189	2192	2201	rVB4	1030	1988	0.28%	0.050%
84	15.123	2205	2207	2210	rBV2	786	679	0.09%	0.017%
85	15.259	2230	2233	2234	rVB2	1131	793	0.11%	0.020%
86	15.348	2247	2250	2252	rBV	917	967	0.13%	0.024%
87	15.557	2285	2290	2296	rBV6	1153	2661	0.37%	0.067%
88	15.604	2296	2299	2300	rVB3	816	596	0.08%	0.015%
89	15.635	2301	2305	2306	rVB3	513	609	0.08%	0.015%
90	15.740	2320	2325	2328	rBV3	950	1183	0.16%	0.030%
91	15.824	2336	2341	2343	rBV5	1036	1491	0.21%	0.038%
92	15.866	2346	2349	2353	rVV5	1098	1970	0.27%	0.050%
93	15.923	2353	2360	2376	rVB	336923	530510	73.71%	13.437%
94	16.080	2388	2390	2391	rBV2	1086	478	0.07%	0.012%
95	16.164	2403	2406	2410	rVB5	1039	1209	0.17%	0.031%
96	16.211	2410	2415	2416	rBV4	1035	1202	0.17%	0.030%
97	16.389	2444	2449	2450	rBV4	1324	2009	0.28%	0.051%
98	16.519	2473	2474	2476	rBV2	1157	771	0.11%	0.020%
99	16.791	2525	2526	2527	rBV	1445	528	0.07%	0.013%
100	17.037	2570	2573	2584	rVB	2003	4386	0.61%	0.111%

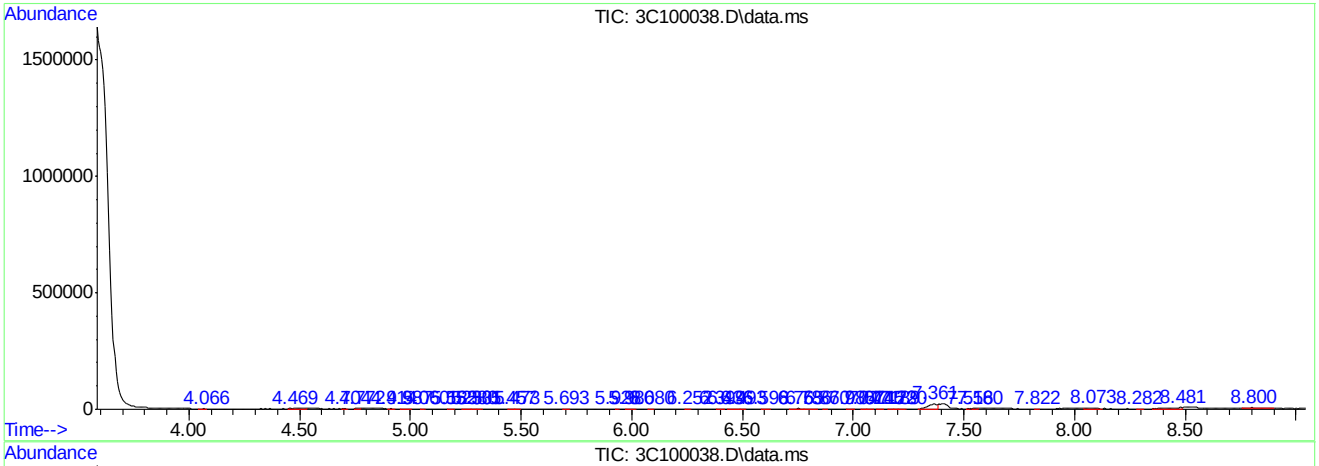
Sum of corrected areas: 3948067

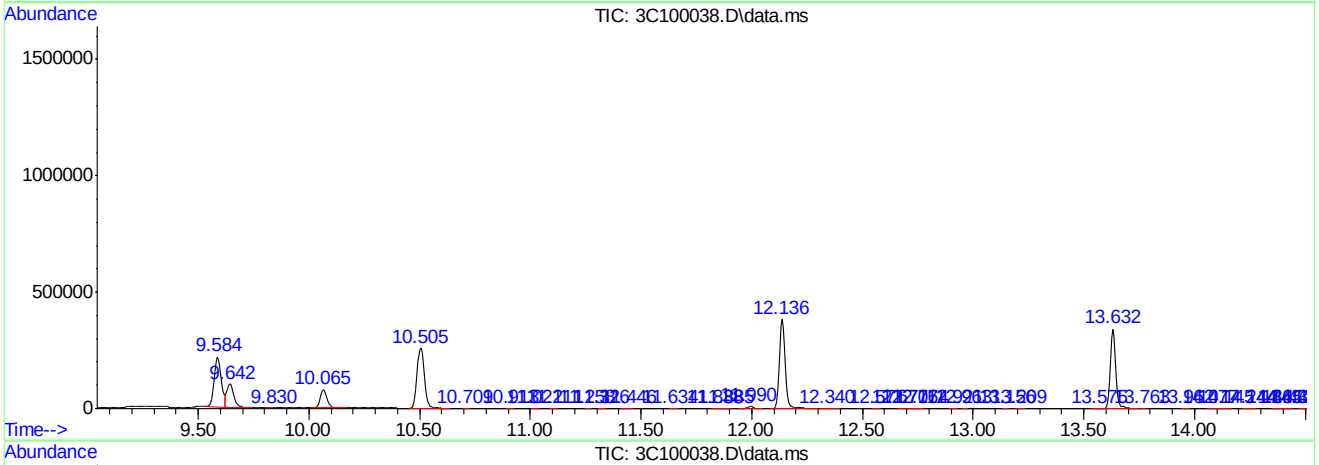
LSC Report - Integrated Chromatogram

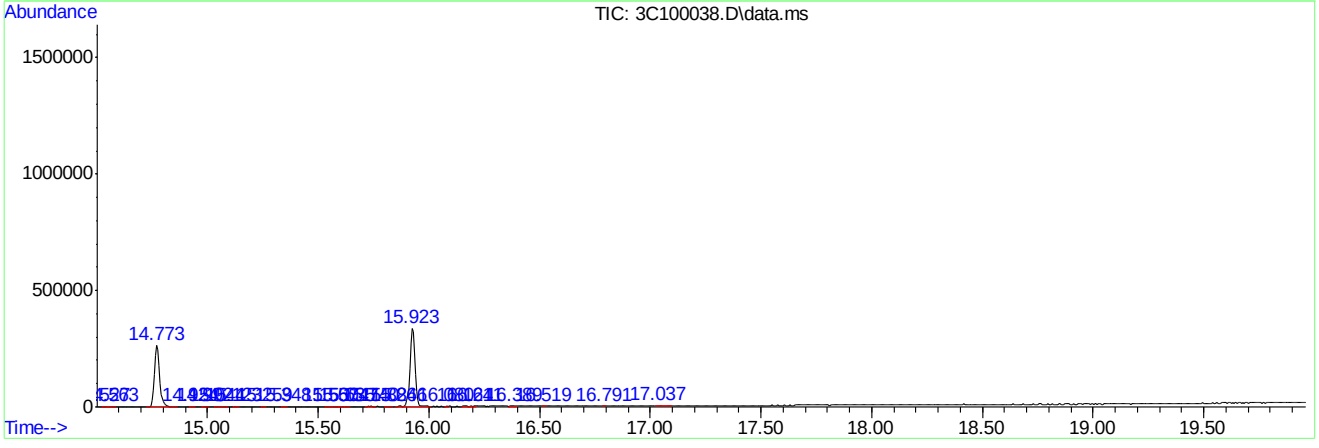
Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100038.D
Acq On : 22 Jun 2013 5:44 am
Operator : prashans
Sample : JB40127-2
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p







Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100038.D
Acq On    : 22 Jun 2013   5:44 am
Operator  : prashans
Sample    : JB40127-2
Misc      : MS50297,V3C4446,5.8,,,,1
ALS Vial  : 41   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library    : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p
```

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
  Data File : 3C100038.D
  Acq On    : 22 Jun 2013   5:44 am
  Operator  : prashans
  Sample    : JB40127-2
  Misc      : MS50297,V3C4446,5.8,,,,1
  ALS Vial  : 41   Sample Multiplier: 1

  Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
  Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

  TIC Library   : C:\DATABASE\NIST08.L
  TIC Integration Parameters: lscint.p

                                                    |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

7.1.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100039.D
Acq On : 22 Jun 2013 6:13 am
Operator : prashans
Sample : JB40127-3
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Jun 26 14:37:36 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

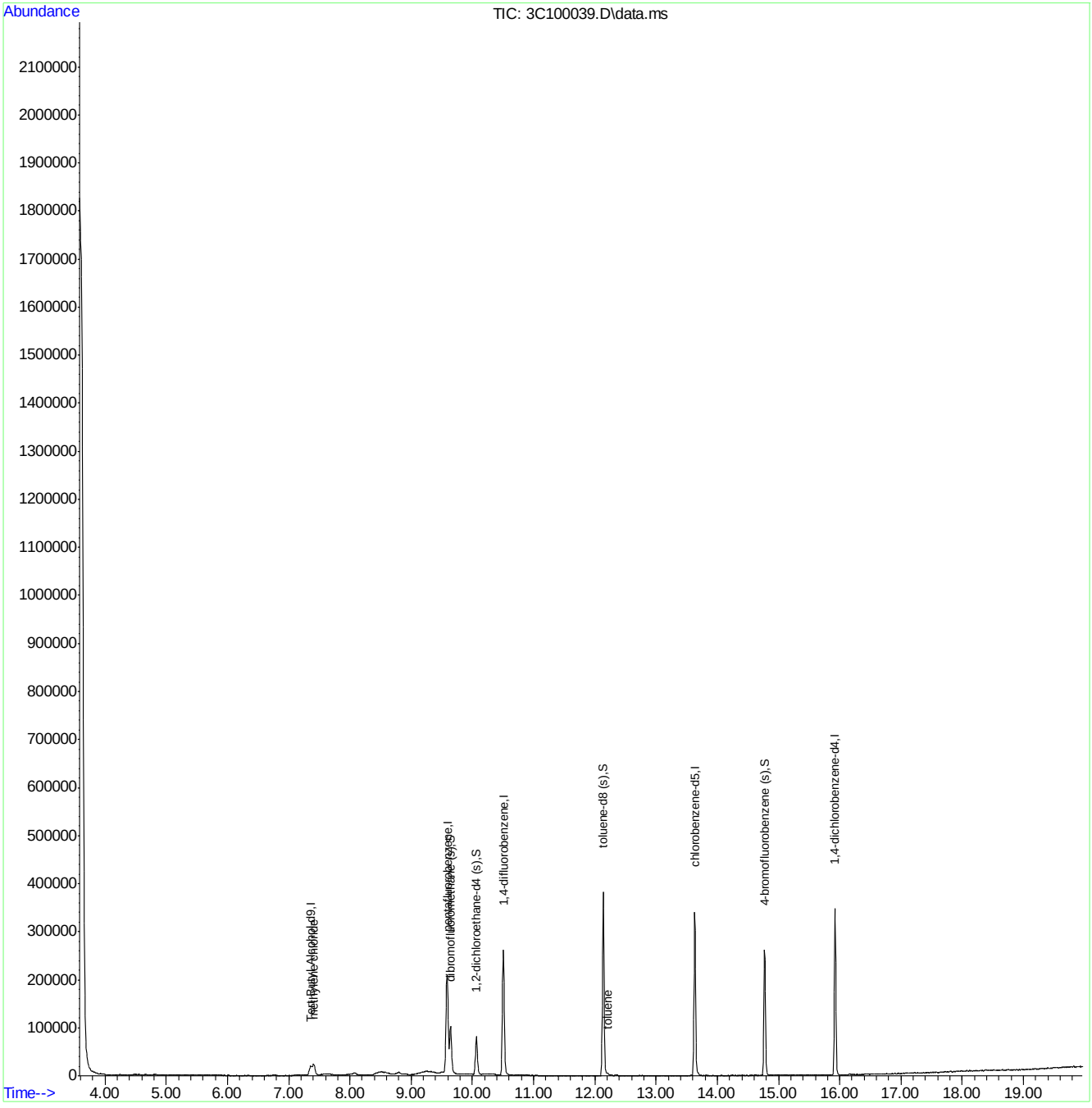
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.361	65	46244	500.00	ug/L	-0.01
5) pentafluorobenzene	9.589	168	179887	50.00	ug/L	-0.01
53) 1,4-difluorobenzene	10.505	114	249252	50.00	ug/L	-0.01
82) chlorobenzene-d5	13.632	117	200030	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	15.923	152	89509	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.642	113	65933	41.94	ug/L	-0.02
Spiked Amount 50.000	Range 65 - 131		Recovery = 83.88%			
45) 1,2-dichloroethane-d4 (s)	10.065	65	67376	42.52	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 85.04%			
74) toluene-d8 (s)	12.136	98	276762	44.46	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 128		Recovery = 88.92%			
99) 4-bromofluorobenzene (s)	14.773	95	89736	44.70	ug/L	-0.01
Spiked Amount 50.000	Range 67 - 131		Recovery = 89.40%			
Target Compounds						Qvalue
24) methylene chloride	7.408	84	12176	6.72	ug/L	89
76) toluene	12.215	92	1052	0.24	ug/L	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

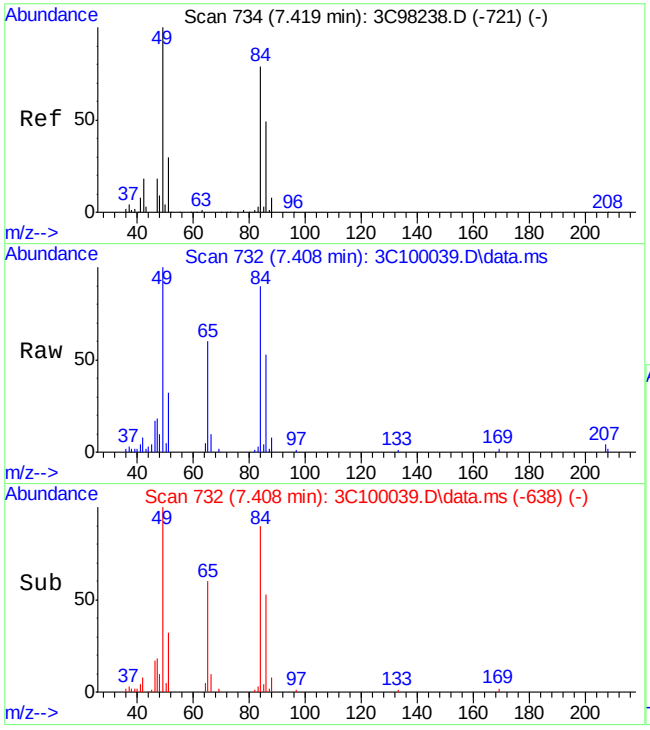
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100039.D
Acq On : 22 Jun 2013 6:13 am
Operator : prashans
Sample : JB40127-3
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Jun 26 14:37:36 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration



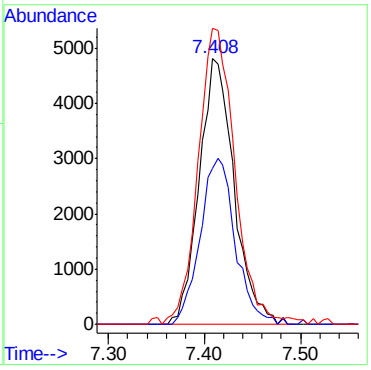
M3C4359.M Wed Jun 26 14:45:37 2013 ACCNJ Page: 2

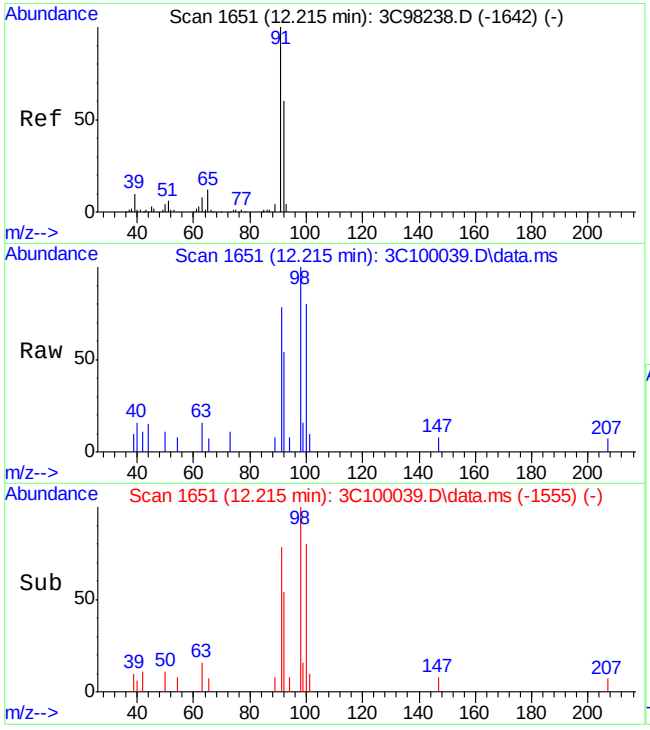


#24
methylene chloride
Concen: 6.72 ug/L
RT: 7.408 min Scan# 732
Delta R.T. -0.011 min
Lab File: 3C100039.D
Acq: 22 Jun 2013 6:13 am

Tgt Ion: 84 Resp: 12176

Ion	Ratio	Lower	Upper
84	100		
86	58.5	43.6	81.0
49	111.2	89.0	165.2

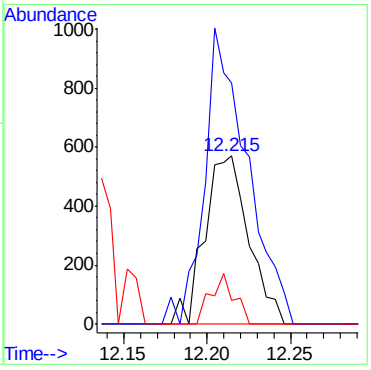




#76
toluene
Concen: 0.24 ug/L
RT: 12.215 min Scan# 1651
Delta R.T. -0.000 min
Lab File: 3C100039.D
Acq: 22 Jun 2013 6:13 am

Tgt Ion: 92 Resp: 1052

Ion	Ratio	Lower	Upper
92	100		
91	143.3	136.1	196.1
65	13.9	0.0	49.4



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100039.D
Acq On : 22 Jun 2013 6:13 am
Operator : prashans
Sample : JB40127-3
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 42 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: 3C100039.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.296	136	137	141	rVB2	497	536	0.08%	0.014%
2	4.652	203	205	207	rVB3	1033	433	0.06%	0.011%
3	4.673	207	209	211	rBV3	873	502	0.07%	0.013%
4	5.070	283	285	287	rVB	645	419	0.06%	0.011%
5	5.159	300	302	304	rBV2	815	494	0.07%	0.013%
6	5.363	338	341	344	rVB3	782	881	0.12%	0.023%
7	5.400	347	348	351	rBV3	601	479	0.07%	0.012%
8	5.447	355	357	361	rBV2	664	981	0.14%	0.025%
9	5.604	384	387	390	rBV3	556	630	0.09%	0.016%
10	5.635	390	393	395	rBV4	539	570	0.08%	0.015%
11	5.703	405	406	410	rVV3	715	616	0.09%	0.016%
12	5.750	413	415	417	rBV3	677	616	0.09%	0.016%
13	6.012	462	465	468	rVB3	484	621	0.09%	0.016%
14	6.148	487	491	496	rVB2	547	883	0.12%	0.023%
15	6.404	537	540	542	rVB2	520	460	0.06%	0.012%
16	6.524	559	563	566	rVB3	464	556	0.08%	0.014%
17	6.676	589	592	594	rBV2	546	556	0.08%	0.014%
18	6.739	601	604	605	rBV2	922	1000	0.14%	0.026%
19	6.917	632	638	641	rVV5	289	454	0.06%	0.012%
20	7.011	650	656	658	rBV2	512	741	0.10%	0.019%
21	7.121	668	677	679	rBV5	980	1859	0.26%	0.048%
22	7.168	682	686	687	rVB4	646	594	0.08%	0.015%
23	7.241	696	700	701	rBV3	648	461	0.06%	0.012%
24	7.356	711	722	724	rBV	18810	39585	5.54%	1.024%
25	7.534	755	756	759	rBV3	802	694	0.10%	0.018%
26	7.586	759	766	767	rBV5	1793	3337	0.47%	0.086%
27	7.926	826	831	833	rBV4	928	1348	0.19%	0.035%
28	7.952	833	836	837	rBV3	970	726	0.10%	0.019%
29	8.083	853	861	870	rVB8	3901	11567	1.62%	0.299%
30	8.266	894	896	902	rVB6	869	947	0.13%	0.025%
31	8.334	906	909	910	rBV2	559	638	0.09%	0.017%
32	8.481	914	937	939	rBV4	5836	24743	3.46%	0.640%
33	9.192	1065	1073	1074	rBV4	3214	5654	0.79%	0.146%
34	9.584	1138	1148	1155	rBV	203421	483092	67.62%	12.502%

M3C4359.M Wed Jun 26 14:43:40 2013 ACCNJ

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100039.D
Acq On : 22 Jun 2013 6:13 am
Operator : prashans
Sample : JB40127-3
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 42 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

35	9.642	1155	1159	1185	rVB	100178	237137	33.19%	6.137%
36	10.065	1231	1240	1256	rVB	79032	173939	24.35%	4.501%
37	10.243	1271	1274	1275	rBV2	864	719	0.10%	0.019%
38	10.505	1314	1324	1345	rBV	260846	545783	76.39%	14.124%
39	10.693	1357	1360	1362	rBV3	727	584	0.08%	0.015%
40	10.714	1362	1364	1368	rBV3	634	615	0.09%	0.016%
41	10.813	1379	1383	1389	rVB4	1078	2105	0.29%	0.054%
42	10.855	1389	1391	1393	rBV2	742	722	0.10%	0.019%
43	10.991	1416	1417	1419	rVB2	989	468	0.07%	0.012%
44	11.012	1419	1421	1422	rBV	607	419	0.06%	0.011%
45	11.038	1422	1426	1428	rBV3	676	839	0.12%	0.022%
46	11.117	1438	1441	1446	rVB4	459	716	0.10%	0.019%
47	11.174	1451	1452	1454	rBV	661	506	0.07%	0.013%
48	11.195	1454	1456	1461	rVB3	556	779	0.11%	0.020%
49	11.242	1461	1465	1469	rBV3	449	718	0.10%	0.019%
50	11.289	1469	1474	1476	rBV2	475	520	0.07%	0.013%
51	11.373	1486	1490	1492	rVB	571	562	0.08%	0.015%
52	11.394	1492	1494	1498	rBV4	441	462	0.06%	0.012%
53	11.613	1534	1536	1539	rBV	581	523	0.07%	0.014%
54	11.723	1554	1557	1559	rBV	382	421	0.06%	0.011%
55	11.781	1559	1568	1571	rVB3	429	794	0.11%	0.021%
56	12.136	1627	1636	1668	rVV	381701	714425	100.00%	18.488%
57	12.356	1668	1678	1683	rVB5	1920	4769	0.67%	0.123%
58	12.456	1695	1697	1702	rVB2	527	555	0.08%	0.014%
59	12.571	1714	1719	1726	rBV2	518	948	0.13%	0.025%
60	12.733	1748	1750	1756	rVV3	626	795	0.11%	0.021%
61	12.900	1777	1782	1788	rVB2	388	620	0.09%	0.016%
62	13.141	1825	1828	1830	rVB3	557	555	0.08%	0.014%
63	13.156	1830	1831	1835	rBV3	369	422	0.06%	0.011%
64	13.209	1839	1841	1845	rBV3	428	446	0.06%	0.012%
65	13.360	1864	1870	1877	rBV5	520	1452	0.20%	0.038%
66	13.502	1893	1897	1902	rVB2	699	1286	0.18%	0.033%
67	13.533	1902	1903	1905	rBV2	618	504	0.07%	0.013%
68	13.580	1907	1912	1914	rBV4	819	1344	0.19%	0.035%
69	13.632	1914	1922	1940	rVB	340355	587872	82.29%	15.213%
70	13.815	1954	1957	1959	rBV2	500	583	0.08%	0.015%
71	13.951	1981	1983	1985	rBV2	525	451	0.06%	0.012%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100039.D
Acq On : 22 Jun 2013 6:13 am
Operator : prashans
Sample : JB40127-3
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 42 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

72	14.385	2065	2066	2069	rVV2	597	437	0.06%	0.011%
73	14.412	2069	2071	2073	rVV2	619	434	0.06%	0.011%
74	14.474	2080	2083	2087	rBV2	504	546	0.08%	0.014%
75	14.558	2096	2099	2105	rBV4	587	962	0.13%	0.025%
76	14.610	2105	2109	2112	rVV5	429	569	0.08%	0.015%
77	14.773	2129	2140	2156	rVB	260849	429053	60.06%	11.103%
78	14.867	2156	2158	2160	rBV2	533	465	0.07%	0.012%
79	15.050	2188	2193	2198	rVB5	1596	2531	0.35%	0.065%
80	15.139	2207	2210	2214	rVB4	668	744	0.10%	0.019%
81	15.170	2214	2216	2220	rBV3	900	1084	0.15%	0.028%
82	15.222	2224	2226	2229	rBV3	1096	1169	0.16%	0.030%
83	15.285	2236	2238	2241	rBV4	647	721	0.10%	0.019%
84	15.337	2247	2248	2250	rBV2	763	570	0.08%	0.015%
85	15.416	2262	2263	2267	rVV3	470	477	0.07%	0.012%
86	15.463	2271	2272	2275	rBV2	795	503	0.07%	0.013%
87	15.541	2284	2287	2290	rBV3	948	885	0.12%	0.023%
88	15.573	2291	2293	2296	rVB4	806	513	0.07%	0.013%
89	15.604	2296	2299	2301	rBV4	682	531	0.07%	0.014%
90	15.751	2323	2327	2330	rVB4	1149	1684	0.24%	0.044%
91	15.792	2334	2335	2342	rBV5	1230	1900	0.27%	0.049%
92	15.866	2345	2349	2352	rBV3	951	860	0.12%	0.022%
93	15.923	2352	2360	2373	rVB	345513	532471	74.53%	13.780%
94	16.028	2379	2380	2385	rBV4	1037	1156	0.16%	0.030%
95	16.111	2393	2396	2399	rVB4	1014	1235	0.17%	0.032%
96	16.164	2399	2406	2410	rBV6	2258	4746	0.66%	0.123%
97	16.274	2425	2427	2429	rBV3	898	672	0.09%	0.017%
98	16.399	2449	2451	2452	rBV2	1219	504	0.07%	0.013%
99	16.859	2537	2539	2543	rBV5	1244	1223	0.17%	0.032%
100	16.948	2552	2556	2558	rBV4	1249	1541	0.22%	0.040%

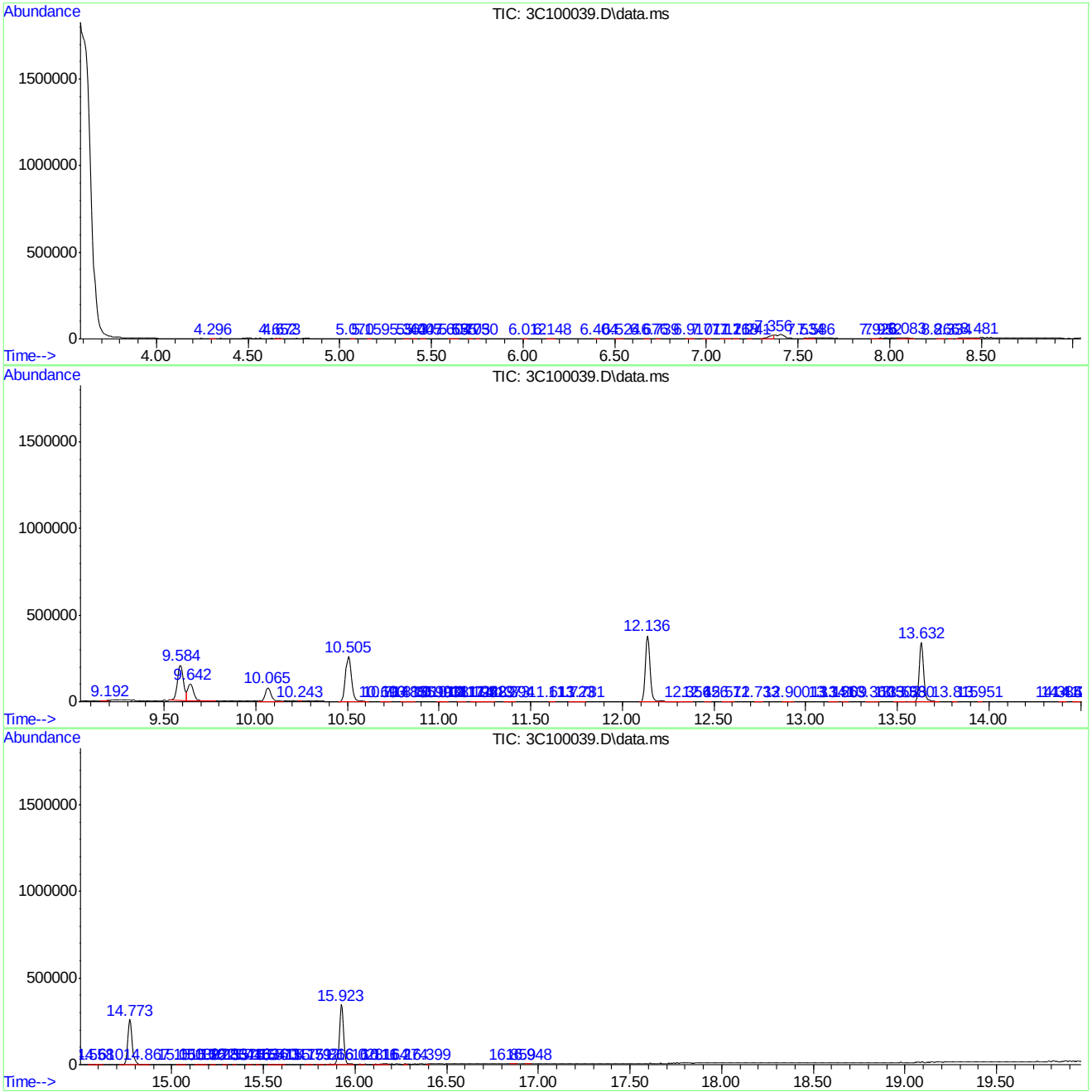
Sum of corrected areas: 3864217

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100039.D
Acq On : 22 Jun 2013 6:13 am
Operator : prashans
Sample : JB40127-3
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



M3C4359.M Wed Jun 26 14:43:40 2013 ACCNJ

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100039.D
Acq On : 22 Jun 2013 6:13 am
Operator : prashans
Sample : JB40127-3
Misc : MS50297,V3C4446,6.0,,,,1
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
  Data File : 3C100039.D
  Acq On    : 22 Jun 2013   6:13 am
  Operator  : prashans
  Sample    : JB40127-3
  Misc      : MS50297,V3C4446,6.0,,,,1
  ALS Vial  : 42   Sample Multiplier: 1

  Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
  Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

  TIC Library   : C:\DATABASE\NIST08.L
  TIC Integration Parameters: lscint.p

                                                    |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100040.D
Acq On : 22 Jun 2013 6:43 am
Operator : prashans
Sample : JB40127-4
Misc : MS50297,V3C4446,5.5,,,,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Jun 26 14:38:09 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

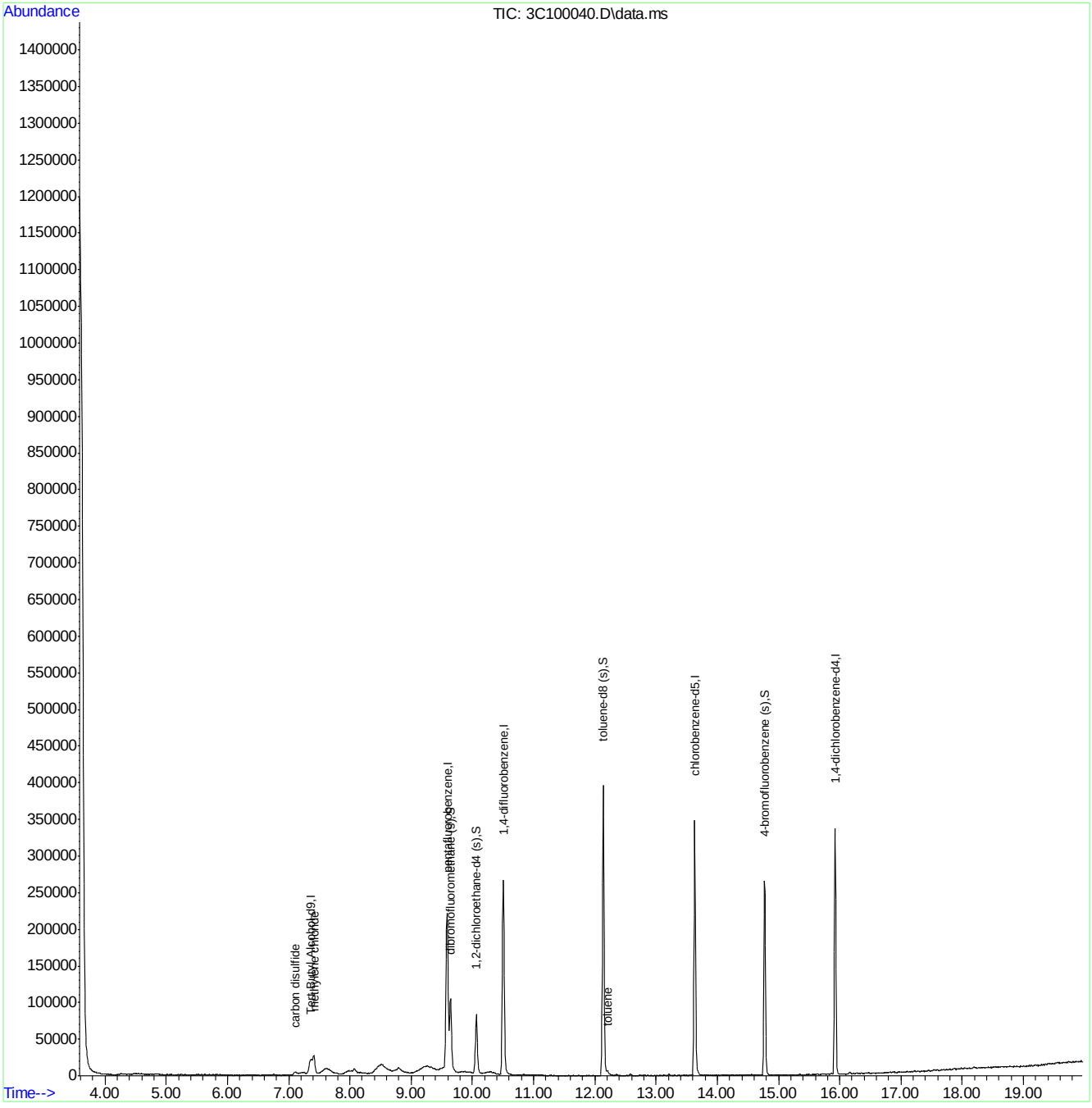
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.361	65	49365	500.00	ug/L	-0.01
5) pentafluorobenzene	9.589	168	182758	50.00	ug/L	-0.01
53) 1,4-difluorobenzene	10.505	114	257681	50.00	ug/L	-0.01
82) chlorobenzene-d5	13.632	117	205136	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	15.923	152	89052	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.642	113	67200	42.07	ug/L	-0.02
Spiked Amount 50.000	Range 65 - 131		Recovery = 84.14%			
45) 1,2-dichloroethane-d4 (s)	10.065	65	67171	41.72	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 83.44%			
74) toluene-d8 (s)	12.136	98	284002	44.13	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 128		Recovery = 88.26%			
99) 4-bromofluorobenzene (s)	14.773	95	89976	45.05	ug/L	-0.01
Spiked Amount 50.000	Range 67 - 131		Recovery = 90.10%			
Target Compounds						Qvalue
23) carbon disulfide	7.105	76	5283	0.90	ug/L	93
24) methylene chloride	7.414	84	12831	6.97	ug/L	91
76) toluene	12.210	92	1648	0.37	ug/L #	78

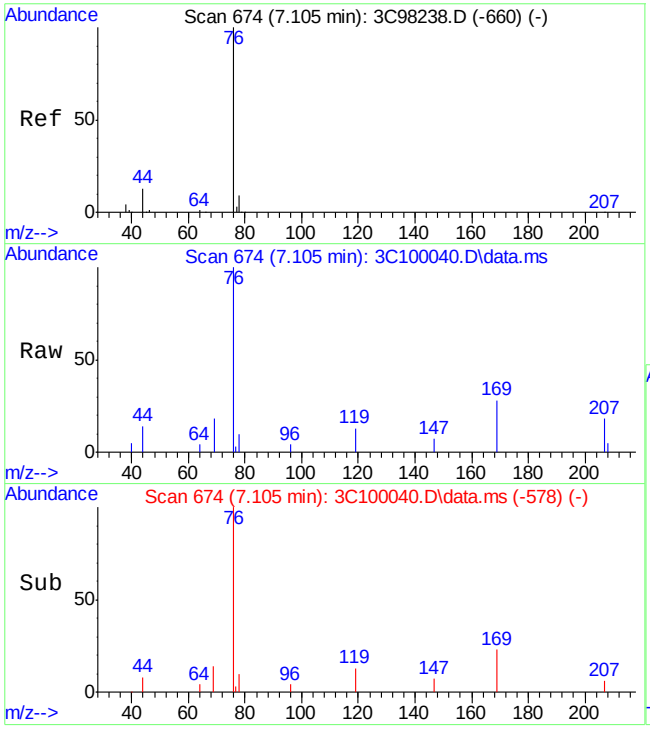
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100040.D
Acq On : 22 Jun 2013 6:43 am
Operator : prashans
Sample : JB40127-4
Misc : MS50297,V3C4446,5.5,,,,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Jun 26 14:38:09 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

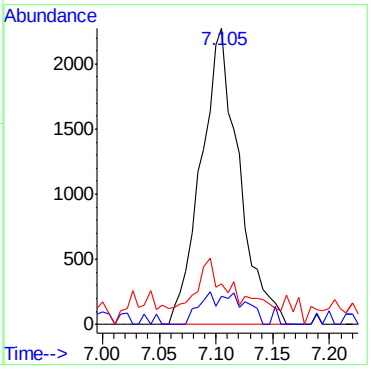


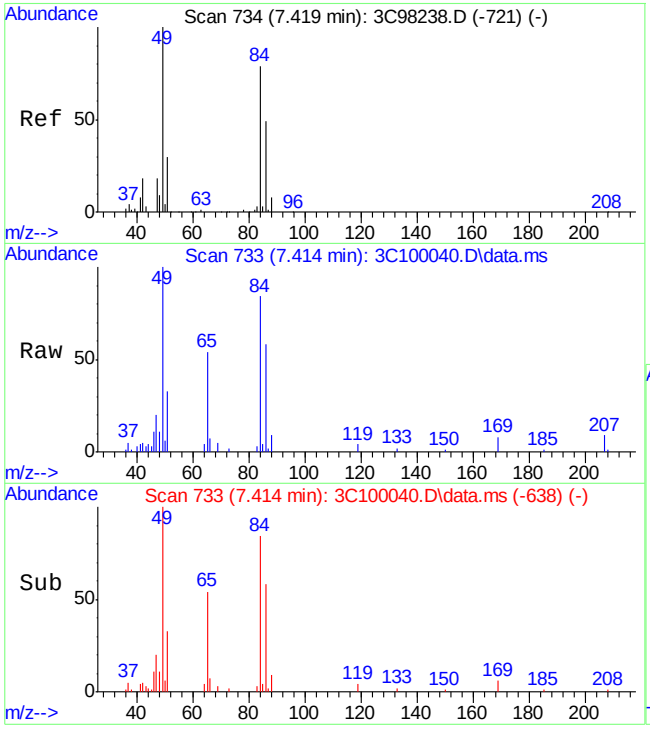


#23
carbon disulfide
Concen: 0.90 ug/L
RT: 7.105 min Scan# 674
Delta R.T. -0.000 min
Lab File: 3C100040.D
Acq: 22 Jun 2013 6:43 am

Tgt Ion: 76 Resp: 5283

Ion	Ratio	Lower	Upper
76	100		
78	9.6	0.0	39.3
44	8.2	0.0	42.5

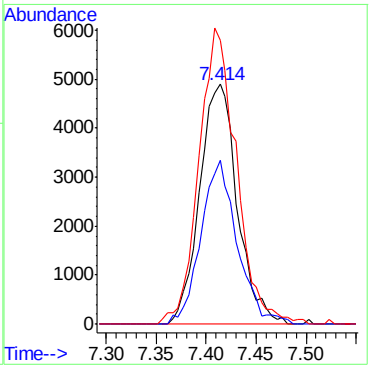


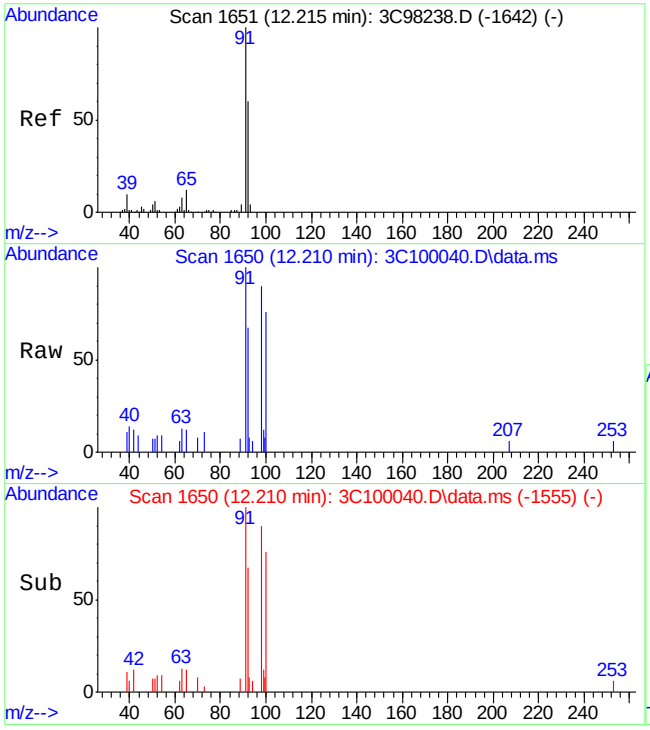


#24
methylene chloride
Concen: 6.97 ug/L
RT: 7.414 min Scan# 733
Delta R.T. -0.005 min
Lab File: 3C100040.D
Acq: 22 Jun 2013 6:43 am

Tgt Ion: 84 Resp: 12831

Ion	Ratio	Lower	Upper
84	100		
86	68.5	43.6	81.0
49	117.0	89.0	165.2

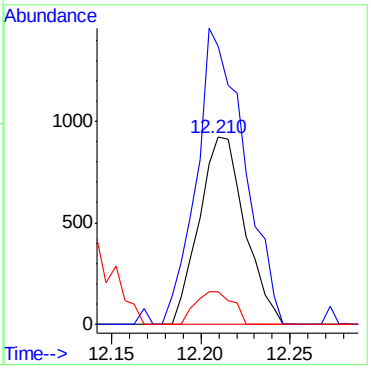




#76
toluene
Concen: 0.37 ug/L
RT: 12.210 min Scan# 1650
Delta R.T. -0.005 min
Lab File: 3C100040.D
Acq: 22 Jun 2013 6:43 am

Tgt Ion: 92 Resp: 1648

Ion	Ratio	Lower	Upper
92	100		
91	134.0	136.1	196.1#
65	15.9	0.0	49.4



7.1.7

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100040.D
Acq On : 22 Jun 2013 6:43 am
Operator : prashans
Sample : JB40127-4
Misc : MS50297,V3C4446,5.5,,,,1
ALS Vial : 43 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: 3C100040.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.223	120	123	124	rBV3	744	685	0.09%	0.017%
2	4.359	148	149	150	rBV	900	380	0.05%	0.009%
3	4.443	164	165	168	rBV2	864	735	0.10%	0.018%
4	4.474	169	171	172	rBV2	794	492	0.07%	0.012%
5	4.778	227	229	233	rVB3	891	905	0.12%	0.022%
6	4.929	256	258	262	rVB2	743	910	0.13%	0.022%
7	4.955	262	263	266	rBV2	562	508	0.07%	0.013%
8	5.353	337	339	343	rBV4	627	702	0.10%	0.017%
9	5.494	360	366	369	rBV4	460	618	0.09%	0.015%
10	5.813	426	427	428	rBV	840	379	0.05%	0.009%
11	6.106	482	483	487	rBV	705	639	0.09%	0.016%
12	6.263	511	513	517	rVB4	707	718	0.10%	0.018%
13	6.326	517	525	526	rBV2	914	1505	0.21%	0.037%
14	6.420	542	543	547	rVB3	592	411	0.06%	0.010%
15	6.566	568	571	573	rBV3	388	387	0.05%	0.010%
16	6.613	574	580	583	rVB2	491	708	0.10%	0.017%
17	6.634	583	584	589	rBV4	516	650	0.09%	0.016%
18	6.681	589	593	594	rBV3	604	683	0.09%	0.017%
19	6.749	602	606	610	rBV6	773	1290	0.18%	0.032%
20	6.849	622	625	629	rVB2	973	1202	0.17%	0.030%
21	6.880	629	631	636	rBV3	730	1265	0.17%	0.031%
22	6.917	636	638	643	rVB2	770	918	0.13%	0.023%
23	7.000	649	654	659	rBV4	860	1807	0.25%	0.045%
24	7.105	665	674	681	rBV3	3755	11580	1.60%	0.286%
25	7.189	688	690	693	rBV4	1011	1049	0.14%	0.026%
26	7.361	711	723	727	rBV	19356	60260	8.32%	1.487%
27	7.612	746	771	801	rVB4	7207	61802	8.53%	1.526%
28	7.963	821	838	840	rBV6	4403	13858	1.91%	0.342%
29	8.491	916	939	940	rBV2	10219	42566	5.88%	1.051%
30	9.072	1043	1050	1051	rBV5	2104	3154	0.44%	0.078%
31	9.584	1139	1148	1155	rBV	210362	496273	68.51%	12.250%
32	9.642	1155	1159	1183	rVB2	101570	242816	33.52%	5.994%
33	10.065	1231	1240	1258	rVB	81537	176930	24.43%	4.367%
34	10.290	1280	1283	1293	rVB8	2314	4683	0.65%	0.116%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100040.D
Acq On : 22 Jun 2013 6:43 am
Operator : prashans
Sample : JB40127-4
Misc : MS50297,V3C4446,5.5,,,,1
ALS Vial : 43 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

35	10.505	1313	1324	1356	rVB	266232	567486	78.34%	14.008%
36	10.787	1375	1378	1383	rBV3	582	762	0.11%	0.019%
37	11.012	1416	1421	1422	rBV3	507	586	0.08%	0.014%
38	11.226	1459	1462	1465	rVV	330	464	0.06%	0.011%
39	11.326	1478	1481	1482	rBV2	408	384	0.05%	0.009%
40	11.373	1487	1490	1492	rVB2	443	486	0.07%	0.012%
41	11.399	1494	1495	1500	rBV3	331	422	0.06%	0.010%
42	11.509	1512	1516	1520	rVB3	437	607	0.08%	0.015%
43	11.551	1520	1524	1526	rBV	335	478	0.07%	0.012%
44	11.572	1526	1528	1532	rVB4	524	447	0.06%	0.011%
45	11.619	1535	1537	1538	rVB	618	374	0.05%	0.009%
46	11.629	1538	1539	1541	rBV	613	452	0.06%	0.011%
47	11.650	1541	1543	1548	rVB	402	498	0.07%	0.012%
48	11.729	1557	1558	1564	rVB2	475	514	0.07%	0.013%
49	11.776	1564	1567	1572	rBV3	337	477	0.07%	0.012%
50	11.870	1581	1585	1590	rBV3	482	586	0.08%	0.014%
51	11.953	1597	1601	1603	rBV	455	601	0.08%	0.015%
52	11.974	1603	1605	1608	rBV2	482	375	0.05%	0.009%
53	12.136	1625	1636	1648	rBV	395821	724362	100.00%	17.881%
54	12.356	1669	1678	1685	rBB4	1812	4198	0.58%	0.104%
55	12.524	1707	1710	1714	rVB3	406	401	0.06%	0.010%
56	12.576	1714	1720	1734	rVB5	1798	3998	0.55%	0.099%
57	12.665	1734	1737	1741	rVB2	393	574	0.08%	0.014%
58	12.707	1741	1745	1747	rBV3	427	657	0.09%	0.016%
59	12.733	1747	1750	1755	rVB5	520	648	0.09%	0.016%
60	12.858	1772	1774	1776	rBV2	805	457	0.06%	0.011%
61	12.973	1795	1796	1801	rBV3	677	819	0.11%	0.020%
62	13.015	1801	1804	1808	rBV4	684	779	0.11%	0.019%
63	13.052	1809	1811	1815	rVB2	592	459	0.06%	0.011%
64	13.203	1834	1840	1848	rBV6	1694	3361	0.46%	0.083%
65	13.366	1866	1871	1878	rBB3	796	929	0.13%	0.023%
66	13.570	1904	1910	1914	rBV4	1252	2151	0.30%	0.053%
67	13.632	1914	1922	1945	rVV	347982	603244	83.28%	14.891%
68	13.774	1948	1949	1952	rVV3	521	366	0.05%	0.009%
69	13.815	1952	1957	1962	rVV5	983	1648	0.23%	0.041%
70	13.889	1969	1971	1974	rBV2	542	387	0.05%	0.010%
71	13.972	1984	1987	1988	rBV2	637	396	0.05%	0.010%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100040.D
Acq On : 22 Jun 2013 6:43 am
Operator : prashans
Sample : JB40127-4
Misc : MS50297,V3C4446,5.5,,,,1
ALS Vial : 43 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

72	14.025	1994	1997	1999	rVB3	664	603	0.08%	0.015%
73	14.056	1999	2003	2008	rBV3	550	1098	0.15%	0.027%
74	14.087	2008	2009	2012	rVV	508	512	0.07%	0.013%
75	14.114	2012	2014	2019	rVB3	660	819	0.11%	0.020%
76	14.150	2019	2021	2023	rBV	488	477	0.07%	0.012%
77	14.187	2023	2028	2031	rVV4	534	838	0.12%	0.021%
78	14.250	2035	2040	2045	rVB6	1006	1808	0.25%	0.045%
79	14.286	2045	2047	2049	rBV2	517	452	0.06%	0.011%
80	14.344	2056	2058	2062	rBV2	318	380	0.05%	0.009%
81	14.406	2069	2070	2073	rBV2	531	378	0.05%	0.009%
82	14.464	2073	2081	2083	rVV4	585	1052	0.15%	0.026%
83	14.521	2090	2092	2095	rVB3	470	448	0.06%	0.011%
84	14.563	2095	2100	2105	rBV	1271	2129	0.29%	0.053%
85	14.605	2106	2108	2115	rVB2	655	777	0.11%	0.019%
86	14.773	2132	2140	2154	rBV	264616	431106	59.52%	10.642%
87	15.008	2181	2185	2188	rBV3	817	1272	0.18%	0.031%
88	15.050	2188	2193	2197	rVB4	945	1942	0.27%	0.048%
89	15.118	2205	2206	2209	rBV3	773	648	0.09%	0.016%
90	15.170	2215	2216	2220	rVB2	752	637	0.09%	0.016%
91	15.269	2232	2235	2237	rBV2	749	604	0.08%	0.015%
92	15.348	2247	2250	2251	rVB2	778	529	0.07%	0.013%
93	15.479	2268	2275	2277	rBV6	796	1209	0.17%	0.030%
94	15.505	2277	2280	2283	rVV4	606	749	0.10%	0.018%
95	15.724	2315	2322	2323	rBV5	1018	1462	0.20%	0.036%
96	15.866	2345	2349	2352	rVB7	1031	1333	0.18%	0.033%
97	15.923	2352	2360	2372	rBV	335873	533034	73.59%	13.158%
98	16.049	2382	2384	2385	rBV2	886	674	0.09%	0.017%
99	16.164	2401	2406	2411	rVB6	2326	3496	0.48%	0.086%
100	16.760	2516	2520	2521	rBV3	1449	1349	0.19%	0.033%

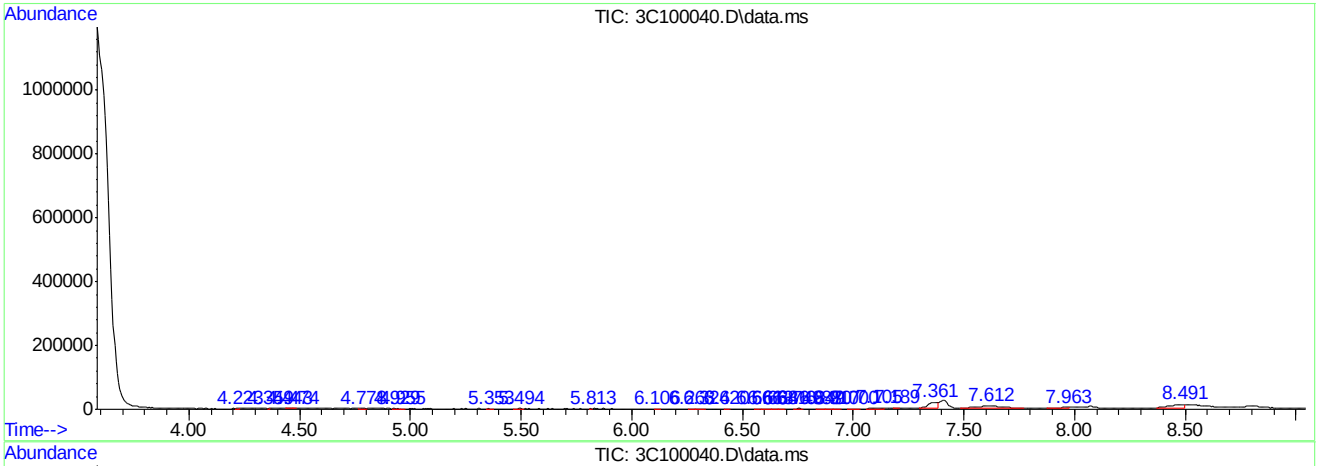
Sum of corrected areas: 4051116

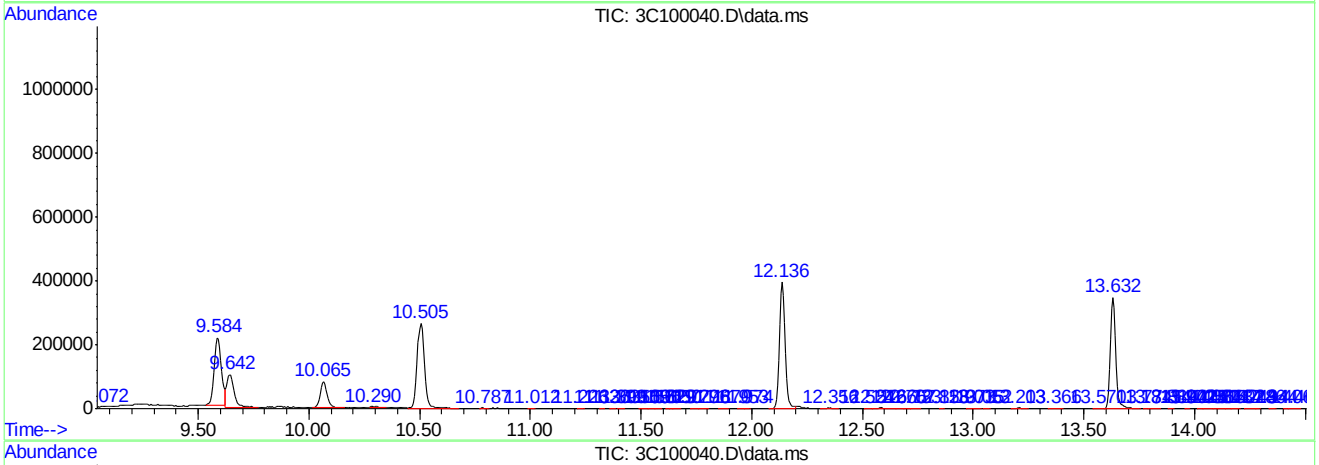
LSC Report - Integrated Chromatogram

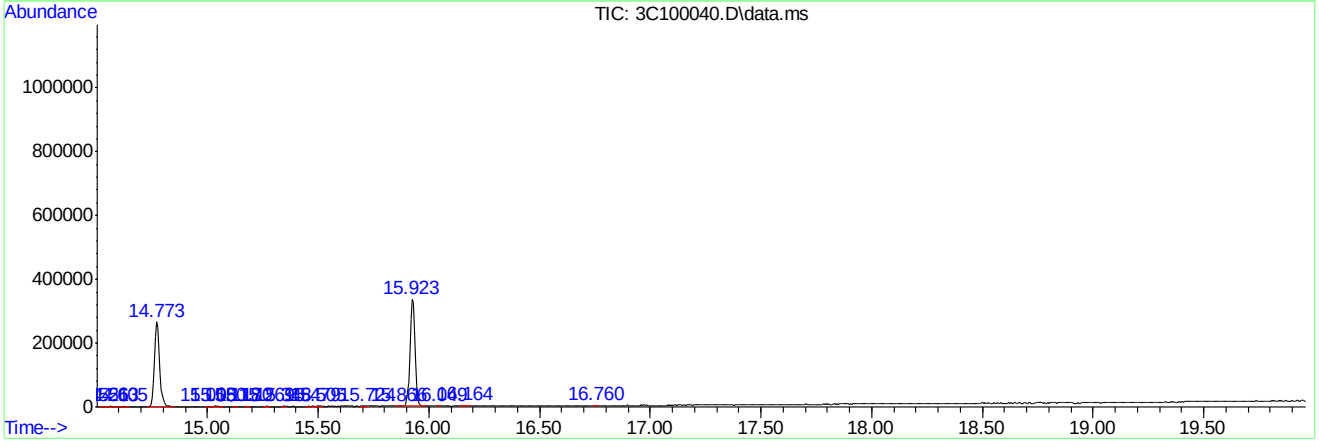
Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100040.D
Acq On : 22 Jun 2013 6:43 am
Operator : prashans
Sample : JB40127-4
Misc : MS50297,V3C4446,5.5,,,,1
ALS Vial : 43 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p







Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100040.D
Acq On : 22 Jun 2013 6:43 am
Operator : prashans
Sample : JB40127-4
Misc : MS50297,V3C4446,5.5,,,,1
ALS Vial : 43 Sample Multiplier: 1

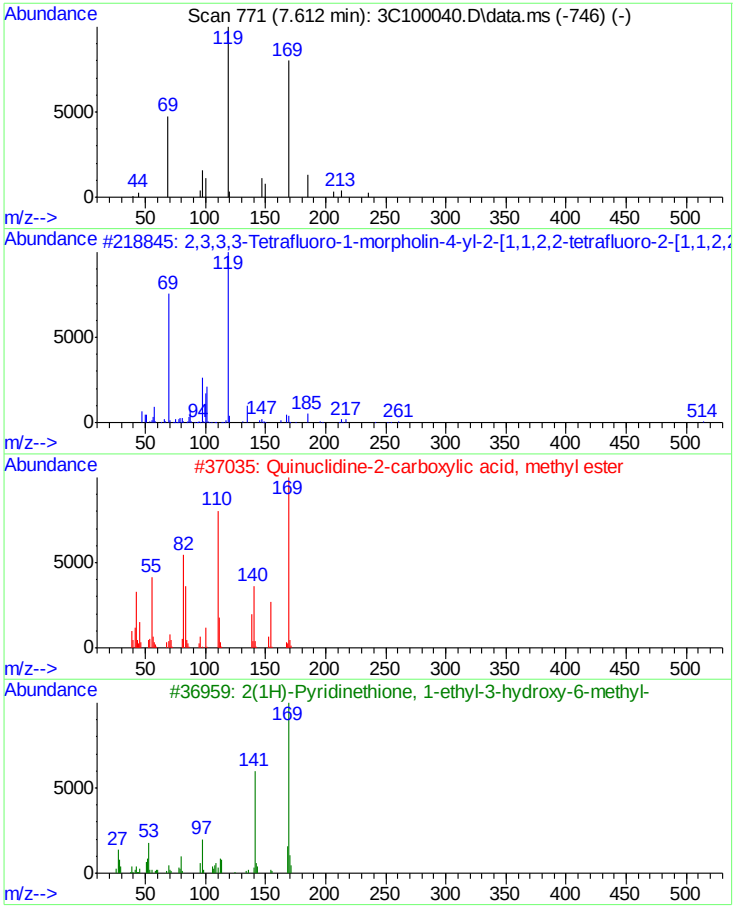
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

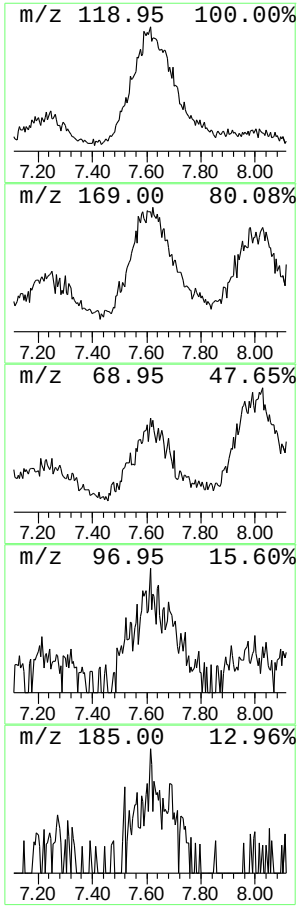
TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

****
Peak Number 1 2,3,3,3-Tetrafluoro-1-morph... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.612	6.23 ug/L	61802	pentafluorobenzene	9.589

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,3,3,3-Tetrafluoro-1-morpholin-...	647	C14H8F19NO6	1000283-99-8	9
2	Quinuclidine-2-carboxylic acid, ...	169	C9H15NO2	1000311-38-8	7
3	2(1H)-Pyridinethione, 1-ethyl-3-...	169	C8H11NOS	024207-15-6	5
4	2-Butynenitrile, 4,4,4-trifluoro-	119	C4F3N	066051-48-7	4
5	2-Toluic hydrazide	150	C8H10N2O	007658-80-2	4





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100040.D
Acq On : 22 Jun 2013 6:43 am
Operator : prashans
Sample : JB40127-4
Misc : MS50297,V3C4446,5.5,,,,1
ALS Vial : 43 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
2,3,3,3-Tetrafl...	7.612	6.2	ug/L	61802	2	9.589	496273	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100041.D
Acq On : 22 Jun 2013 7:12 am
Operator : prashans
Sample : JB40127-5
Misc : MS50297,V3C4446,5.4,,,,1
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Jun 26 14:38:43 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

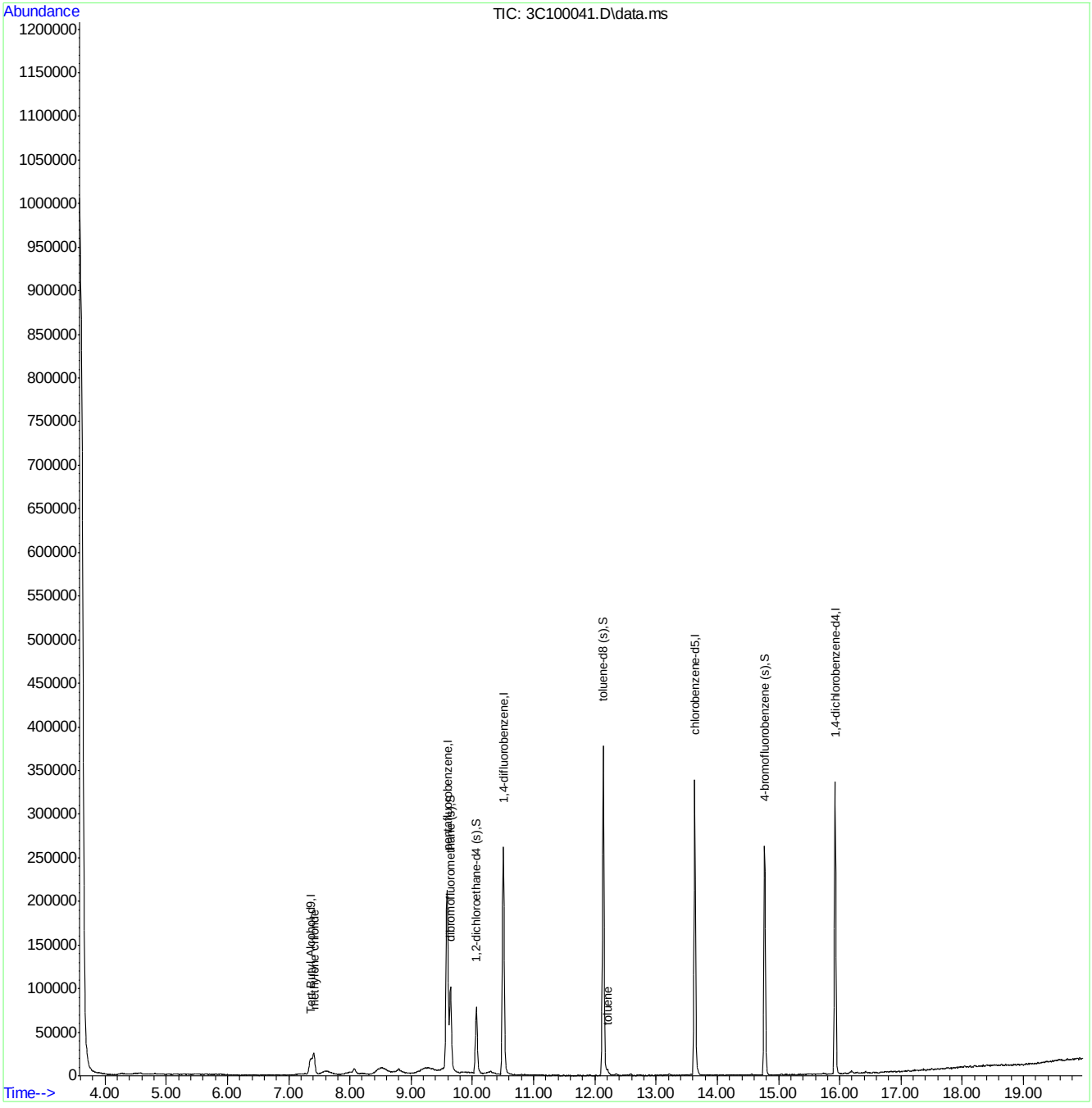
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.367	65	43659	500.00	ug/L	0.00
5) pentafluorobenzene	9.589	168	178497	50.00	ug/L	-0.01
53) 1,4-difluorobenzene	10.505	114	249936	50.00	ug/L	-0.01
82) chlorobenzene-d5	13.632	117	200301	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	15.923	152	88125	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.642	113	66880	42.87	ug/L	-0.02
Spiked Amount 50.000	Range 65 - 131		Recovery = 85.74%			
45) 1,2-dichloroethane-d4 (s)	10.065	65	64854	41.25	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 82.50%			
74) toluene-d8 (s)	12.136	98	277931	44.52	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 128		Recovery = 89.04%			
99) 4-bromofluorobenzene (s)	14.773	95	87714	44.38	ug/L	-0.01
Spiked Amount 50.000	Range 67 - 131		Recovery = 88.76%			
Target Compounds						Qvalue
24) methylene chloride	7.414	84	13129	7.30	ug/L	86
76) toluene	12.210	92	1664	0.39	ug/L	86

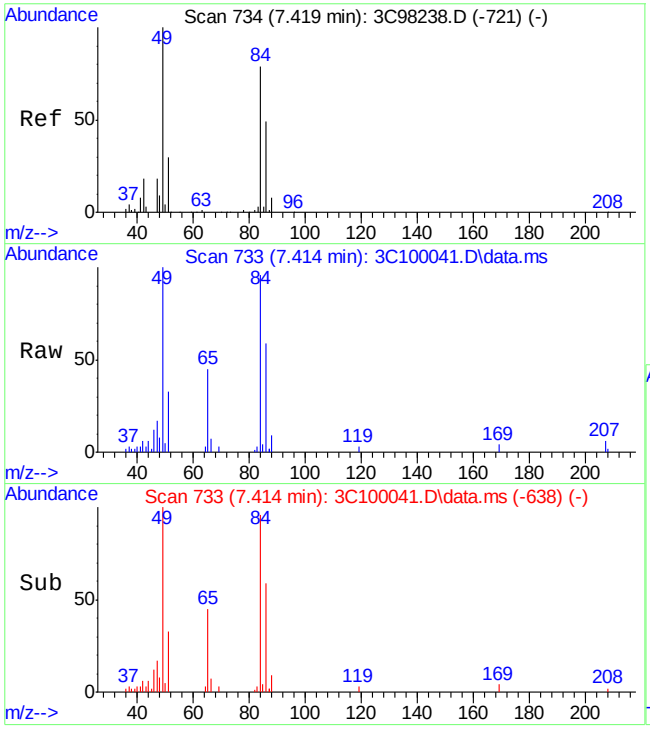
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100041.D
Acq On : 22 Jun 2013 7:12 am
Operator : prashans
Sample : JB40127-5
Misc : MS50297,V3C4446,5.4,,,,1
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Jun 26 14:38:43 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

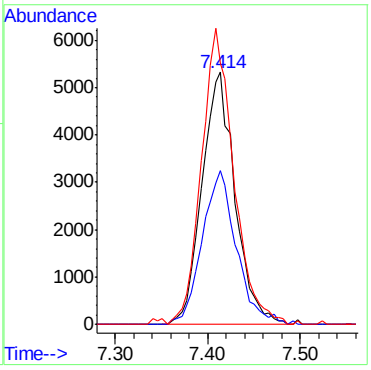


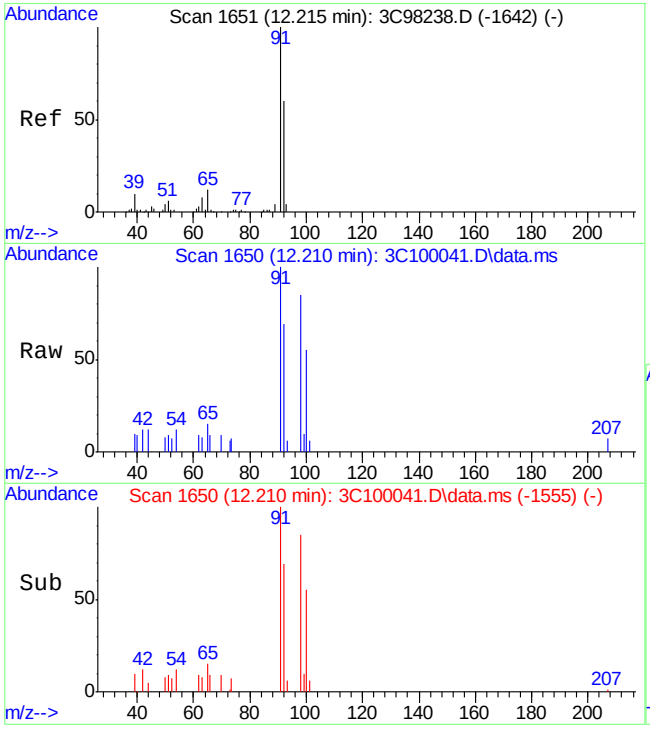


#24
methylene chloride
Concen: 7.30 ug/L
RT: 7.414 min Scan# 733
Delta R.T. -0.005 min
Lab File: 3C100041.D
Acq: 22 Jun 2013 7:12 am

Tgt Ion: 84 Resp: 13129

Ion	Ratio	Lower	Upper
84	100		
86	60.8	43.6	81.0
49	103.7	89.0	165.2

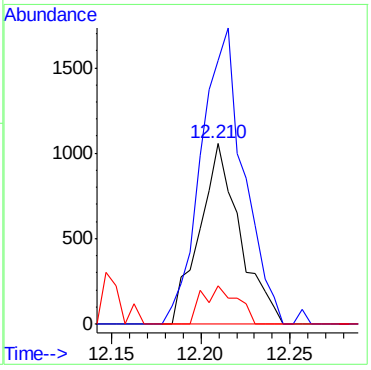




#76
toluene
Concen: 0.39 ug/L
RT: 12.210 min Scan# 1650
Delta R.T. -0.005 min
Lab File: 3C100041.D
Acq: 22 Jun 2013 7:12 am

Tgt Ion: 92 Resp: 1664

Ion	Ratio	Lower	Upper
92	100		
91	145.6	136.1	196.1
65	21.4	0.0	49.4



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100041.D
Acq On : 22 Jun 2013 7:12 am
Operator : prashans
Sample : JB40127-5
Misc : MS50297,V3C4446,5.4,,,,1
ALS Vial : 44 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: 3C100041.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.255	116	129	131	rBV6	1390	3778	0.54%	0.096%
2	4.380	150	153	155	rBV2	661	663	0.09%	0.017%
3	4.464	167	169	171	rBV3	711	576	0.08%	0.015%
4	4.558	185	187	197	rVB4	1756	3236	0.46%	0.082%
5	4.809	232	235	238	rBV4	1002	989	0.14%	0.025%
6	5.023	273	276	281	rBV6	918	1726	0.25%	0.044%
7	5.248	315	319	320	rBV3	659	611	0.09%	0.016%
8	5.630	389	392	393	rBV2	665	461	0.07%	0.012%
9	5.698	403	405	406	rBV	754	571	0.08%	0.015%
10	5.761	415	417	421	rVB3	483	403	0.06%	0.010%
11	5.996	459	462	465	rBV	688	424	0.06%	0.011%
12	6.106	480	483	487	rVB3	637	647	0.09%	0.016%
13	6.221	503	505	508	rVB	353	426	0.06%	0.011%
14	6.263	508	513	514	rBV3	709	776	0.11%	0.020%
15	6.279	514	516	523	rVB2	519	766	0.11%	0.019%
16	6.341	523	528	529	rBV2	547	571	0.08%	0.015%
17	6.357	529	531	534	rBV	761	524	0.07%	0.013%
18	6.388	534	537	539	rVV2	545	426	0.06%	0.011%
19	6.504	556	559	562	rVB	521	546	0.08%	0.014%
20	6.551	566	568	570	rVB2	652	389	0.06%	0.010%
21	6.624	581	582	587	rBV3	492	696	0.10%	0.018%
22	6.671	587	591	596	rBV2	676	1138	0.16%	0.029%
23	6.843	619	624	627	rVB3	498	786	0.11%	0.020%
24	6.911	629	637	638	rBV2	472	891	0.13%	0.023%
25	6.969	646	648	650	rBV2	972	576	0.08%	0.015%
26	7.037	660	661	666	rBV2	664	821	0.12%	0.021%
27	7.110	671	675	677	rVV2	805	654	0.09%	0.017%
28	7.152	681	683	685	rBV2	855	706	0.10%	0.018%
29	7.183	687	689	692	rVV2	676	647	0.09%	0.016%
30	7.267	703	705	709	rBV2	1062	596	0.08%	0.015%
31	7.367	709	724	725	rBV3	18415	46221	6.59%	1.174%
32	7.408	728	732	747	rVB3	24038	58814	8.38%	1.494%
33	7.581	748	765	766	rBV6	3083	8752	1.25%	0.222%
34	7.827	810	812	814	rBV2	601	602	0.09%	0.015%

M3C4359.M Wed Jun 26 14:44:01 2013 ACCNJ Page: 1

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100041.D
Acq On : 22 Jun 2013 7:12 am
Operator : prashans
Sample : JB40127-5
Misc : MS50297,V3C4446,5.4,,,,1
ALS Vial : 44 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

35	7.968	824	839	841	rBV4	2449	6528	0.93%	0.166%
36	8.073	852	859	875	rVB6	6123	17740	2.53%	0.451%
37	8.318	904	906	909	rBV2	1068	1034	0.15%	0.026%
38	8.470	909	935	936	rBV4	6677	27828	3.97%	0.707%
39	8.794	990	997	1008	rVB4	3590	10944	1.56%	0.278%
40	9.004	1034	1037	1039	rBV2	730	972	0.14%	0.025%
41	9.584	1138	1148	1155	rBV	205215	481052	68.56%	12.219%
42	9.642	1155	1159	1182	rVB	98775	226891	32.34%	5.763%
43	10.065	1231	1240	1262	rVB	76916	172744	24.62%	4.388%
44	10.207	1263	1267	1268	rBV3	886	827	0.12%	0.021%
45	10.505	1314	1324	1354	rVB	260970	554363	79.01%	14.081%
46	10.672	1354	1356	1358	rVB2	468	432	0.06%	0.011%
47	10.730	1361	1367	1371	rBV5	558	814	0.12%	0.021%
48	10.855	1388	1391	1394	rBV4	633	543	0.08%	0.014%
49	11.043	1421	1427	1428	rBV4	580	892	0.13%	0.023%
50	11.383	1490	1492	1493	rBV2	712	507	0.07%	0.013%
51	11.399	1493	1495	1501	rVV3	656	1188	0.17%	0.030%
52	11.436	1501	1502	1506	rVV2	428	534	0.08%	0.014%
53	11.488	1510	1512	1516	rVV2	549	621	0.09%	0.016%
54	11.572	1525	1528	1531	rBV2	563	407	0.06%	0.010%
55	11.723	1553	1557	1561	rVB3	443	654	0.09%	0.017%
56	11.755	1561	1563	1566	rBV2	462	437	0.06%	0.011%
57	11.880	1586	1587	1589	rBV	535	389	0.06%	0.010%
58	11.933	1596	1597	1603	rBV2	363	408	0.06%	0.010%
59	12.136	1626	1636	1647	rBV	377895	701601	100.00%	17.821%
60	12.351	1668	1677	1683	rVB2	1761	4444	0.63%	0.113%
61	12.492	1701	1704	1706	rBV3	434	556	0.08%	0.014%
62	12.513	1706	1708	1710	rVV3	483	444	0.06%	0.011%
63	12.581	1714	1721	1729	rBV5	1777	3463	0.49%	0.088%
64	12.728	1745	1749	1752	rBV4	736	818	0.12%	0.021%
65	12.790	1758	1761	1764	rBV3	535	507	0.07%	0.013%
66	12.827	1766	1768	1771	rBV3	503	413	0.06%	0.010%
67	12.884	1771	1779	1783	rBV4	431	840	0.12%	0.021%
68	13.151	1826	1830	1832	rVV3	359	478	0.07%	0.012%
69	13.209	1833	1841	1848	rVB5	2030	3219	0.46%	0.082%
70	13.366	1866	1871	1876	rBV4	659	1001	0.14%	0.025%
71	13.533	1899	1903	1905	rVB3	477	382	0.05%	0.010%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100041.D
Acq On : 22 Jun 2013 7:12 am
Operator : prashans
Sample : JB40127-5
Misc : MS50297,V3C4446,5.4,,,,1
ALS Vial : 44 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

72	13.575	1905	1911	1914	rBV5	1713	2722	0.39%	0.069%
73	13.632	1914	1922	1946	rVV	339174	587013	83.67%	14.910%
74	13.821	1950	1958	1964	rBV5	996	1602	0.23%	0.041%
75	13.951	1979	1983	1987	rBV2	440	791	0.11%	0.020%
76	14.155	2019	2022	2026	rBV3	576	778	0.11%	0.020%
77	14.223	2031	2035	2037	rVV2	460	609	0.09%	0.015%
78	14.250	2037	2040	2042	rVB3	940	839	0.12%	0.021%
79	14.270	2042	2044	2046	rBV2	547	394	0.06%	0.010%
80	14.291	2047	2048	2053	rVB2	440	391	0.06%	0.010%
81	14.385	2065	2066	2072	rVB3	531	638	0.09%	0.016%
82	14.569	2094	2101	2107	rBV6	1313	2811	0.40%	0.071%
83	14.637	2111	2114	2117	rBV3	588	787	0.11%	0.020%
84	14.710	2124	2128	2130	rVB3	673	511	0.07%	0.013%
85	14.773	2130	2140	2156	rBV	263123	421509	60.08%	10.706%
86	15.050	2189	2193	2198	rVB5	992	1605	0.23%	0.041%
87	15.180	2217	2218	2221	rBV2	581	476	0.07%	0.012%
88	15.259	2231	2233	2237	rVB3	924	895	0.13%	0.023%
89	15.296	2237	2240	2241	rBV2	614	597	0.09%	0.015%
90	15.411	2260	2262	2263	rBV	867	539	0.08%	0.014%
91	15.447	2267	2269	2271	rBV2	651	432	0.06%	0.011%
92	15.473	2271	2274	2276	rBV3	780	877	0.12%	0.022%
93	15.735	2320	2324	2328	rBV4	1378	1977	0.28%	0.050%
94	15.803	2334	2337	2339	rBV2	1046	1160	0.17%	0.029%
95	15.845	2344	2345	2347	rBV	917	677	0.10%	0.017%
96	15.923	2353	2360	2377	rVB	335214	523786	74.66%	13.304%
97	16.028	2378	2380	2383	rBV4	418	419	0.06%	0.011%
98	16.190	2402	2411	2418	rBV6	3276	7519	1.07%	0.191%
99	16.420	2448	2455	2462	rBV7	2832	6013	0.86%	0.153%
100	16.661	2499	2501	2505	rBV5	858	1287	0.18%	0.033%

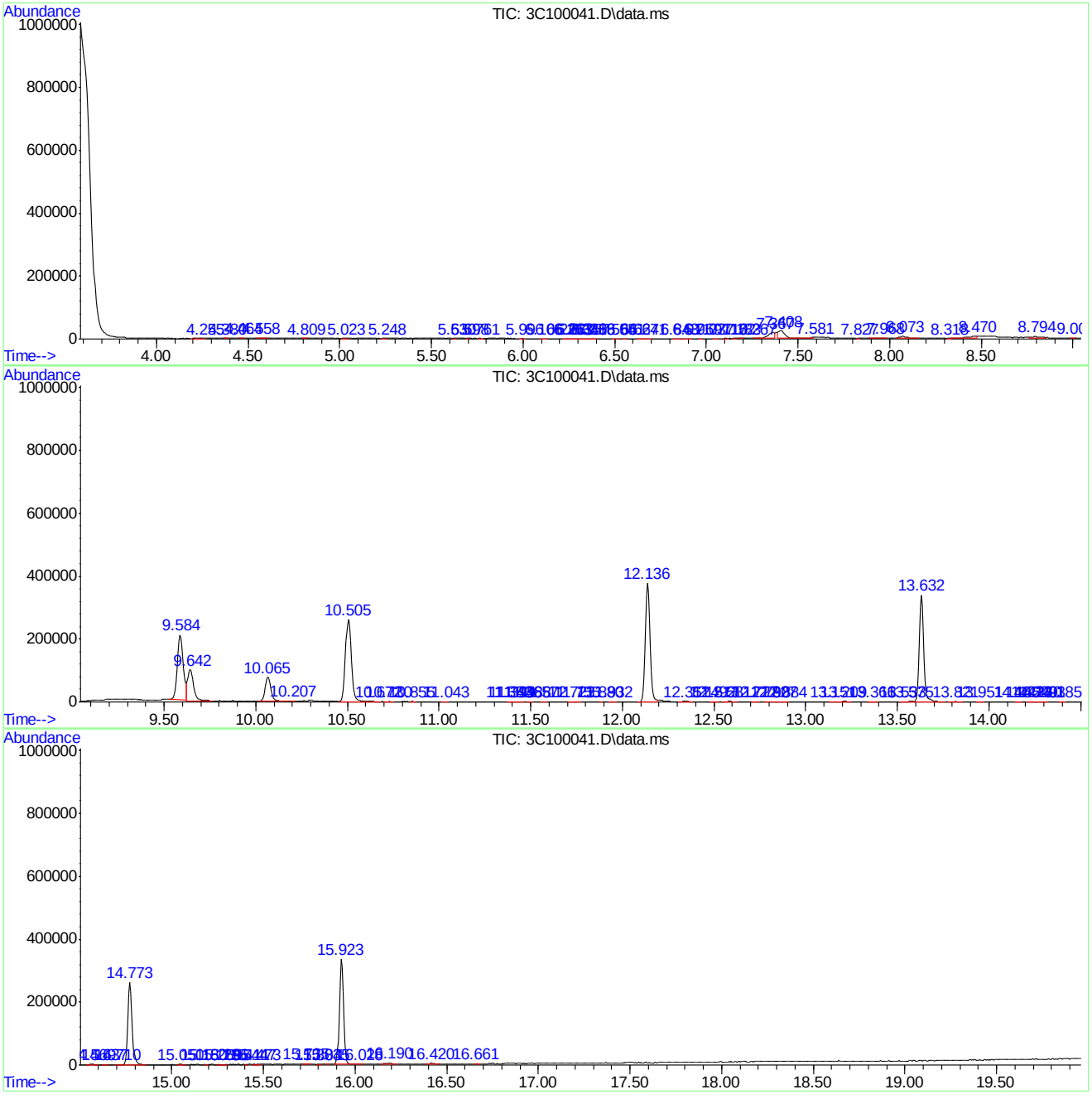
Sum of corrected areas: 3936978

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100041.D
Acq On : 22 Jun 2013 7:12 am
Operator : prashans
Sample : JB40127-5
Misc : MS50297,V3C4446,5.4,,,,1
ALS Vial : 44 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100041.D
Acq On    : 22 Jun 2013   7:12 am
Operator  : prashans
Sample    : JB40127-5
Misc      : MS50297,V3C4446,5.4,,,,1
ALS Vial  : 44   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library    : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p
```

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
  Data File : 3C100041.D
  Acq On    : 22 Jun 2013   7:12 am
  Operator  : prashans
  Sample    : JB40127-5
  Misc      : MS50297,V3C4446,5.4,,,,1
  ALS Vial  : 44   Sample Multiplier: 1

  Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
  Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

  TIC Library   : C:\DATABASE\NIST08.L
  TIC Integration Parameters: lscint.p

                                                     |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100042.D
Acq On : 22 Jun 2013 7:41 am
Operator : prashans
Sample : JB40127-6
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 45 Sample Multiplier: 1

Quant Time: Jun 26 14:40:26 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

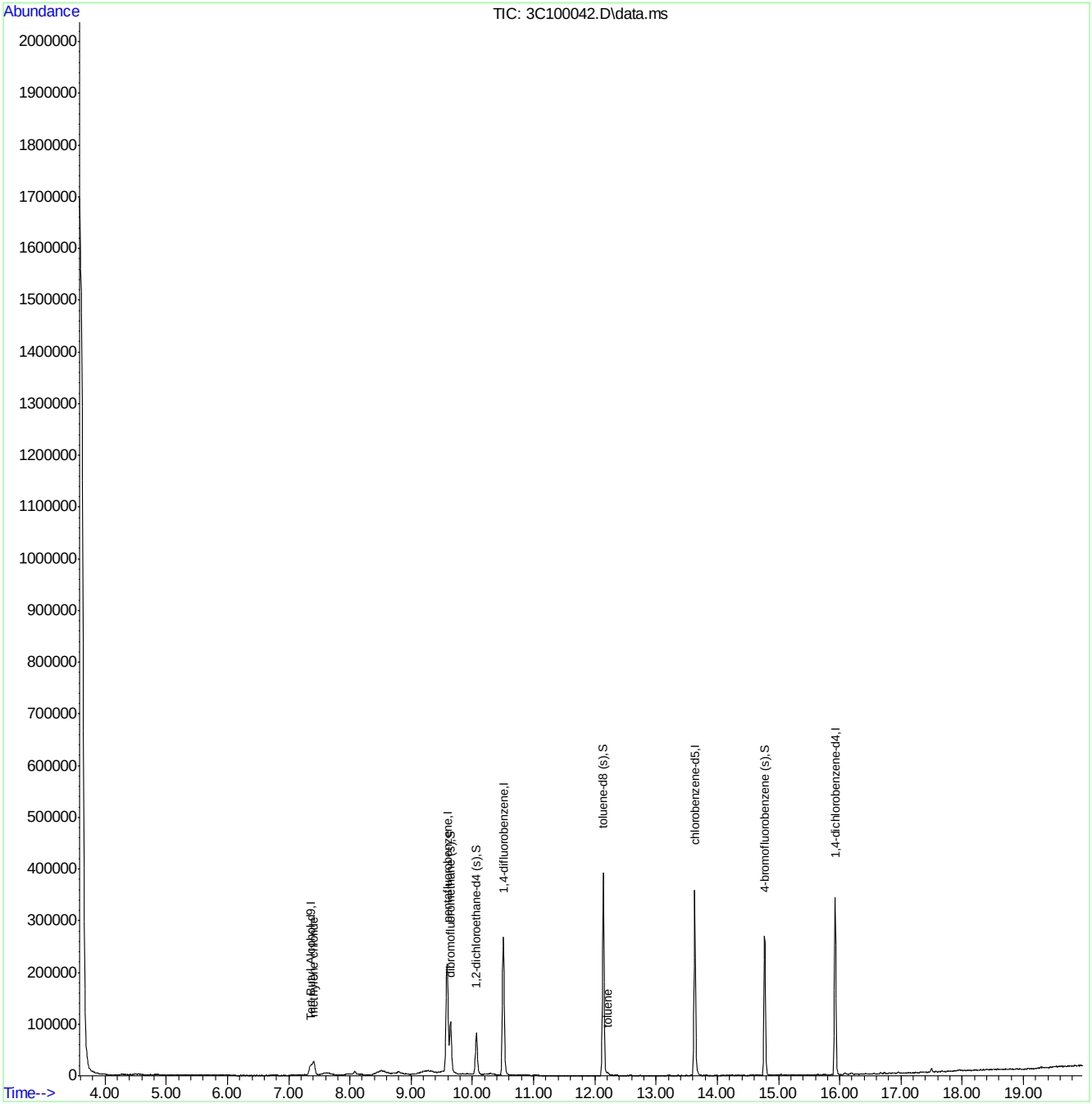
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.366	65	49046	500.00	ug/L	0.00
5) pentafluorobenzene	9.589	168	181284	50.00	ug/L	-0.01
53) 1,4-difluorobenzene	10.505	114	256030	50.00	ug/L	-0.01
82) chlorobenzene-d5	13.632	117	207398	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	15.928	152	90334	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.647	113	67541	42.63	ug/L	-0.01
Spiked Amount 50.000	Range 65 - 131		Recovery = 85.26%			
45) 1,2-dichloroethane-d4 (s)	10.065	65	68247	42.74	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 85.48%			
74) toluene-d8 (s)	12.136	98	284643	44.51	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 128		Recovery = 89.02%			
99) 4-bromofluorobenzene (s)	14.772	95	92148	45.48	ug/L	-0.01
Spiked Amount 50.000	Range 67 - 131		Recovery = 90.96%			
Target Compounds						Qvalue
24) methylene chloride	7.408	84	13683	7.49	ug/L	96
76) toluene	12.210	92	1319	0.30	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

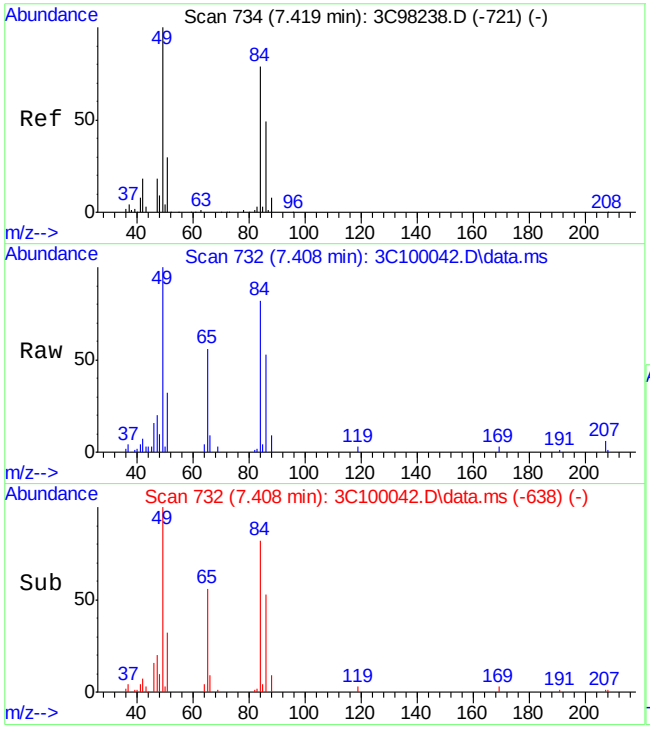
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100042.D
Acq On : 22 Jun 2013 7:41 am
Operator : prashans
Sample : JB40127-6
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 45 Sample Multiplier: 1

Quant Time: Jun 26 14:40:26 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration



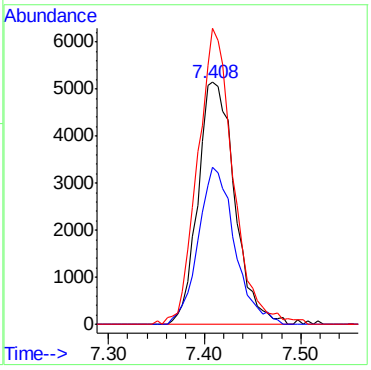
M3C4359.M Wed Jun 26 14:45:48 2013 ACCNJ Page: 2

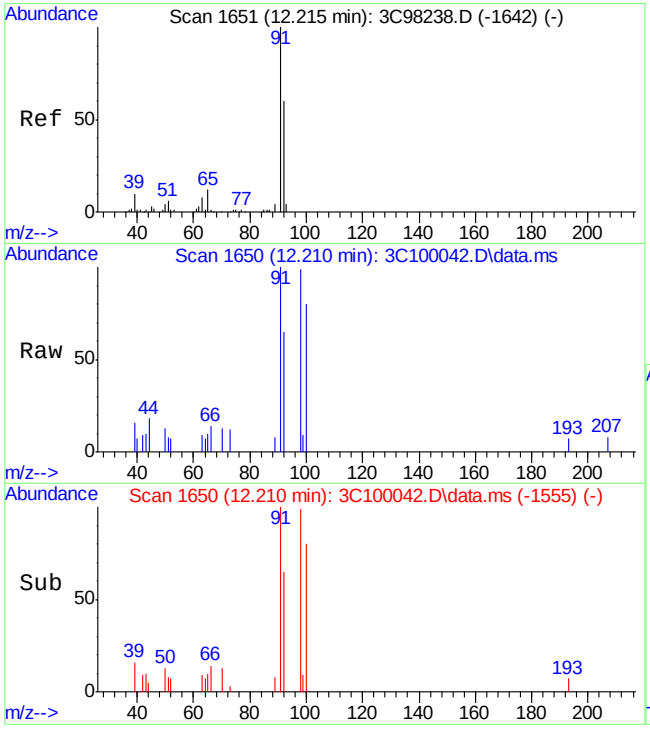


#24
methylene chloride
Concen: 7.49 ug/L
RT: 7.408 min Scan# 732
Delta R.T. -0.011 min
Lab File: 3C100042.D
Acq: 22 Jun 2013 7:41 am

Tgt Ion: 84 Resp: 13683

Ion	Ratio	Lower	Upper
84	100		
86	65.1	43.6	81.0
49	122.4	89.0	165.2

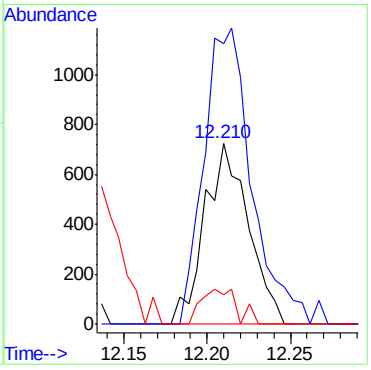




#76
toluene
Concen: 0.30 ug/L
RT: 12.210 min Scan# 1650
Delta R.T. -0.005 min
Lab File: 3C100042.D
Acq: 22 Jun 2013 7:41 am

Tgt Ion: 92 Resp: 1319

Ion	Ratio	Lower	Upper
92	100		
91	154.7	136.1	196.1
65	16.1	0.0	49.4



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\3Colddata\v3c4445-4446\
Data File : 3C100042.D
Acq On : 22 Jun 2013 7:41 am
Operator : prashans
Sample : JB40127-6
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 45 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: 3C100042.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.030	85	86	91	rVB2	862	820	0.11%	0.020%
2	4.186	111	116	119	rBV3	429	752	0.10%	0.019%
3	4.479	169	172	174	rBV3	896	959	0.13%	0.024%
4	4.500	174	176	178	rVV3	868	695	0.10%	0.017%
5	5.081	284	287	290	rBV3	500	651	0.09%	0.016%
6	5.133	296	297	300	rBV2	971	1010	0.14%	0.025%
7	5.212	309	312	314	rBV3	703	791	0.11%	0.019%
8	5.232	314	316	319	rVB4	689	791	0.11%	0.019%
9	5.253	319	320	322	rBV2	1218	687	0.10%	0.017%
10	5.316	329	332	338	rBV3	534	1061	0.15%	0.026%
11	5.368	338	342	345	rVV4	678	871	0.12%	0.021%
12	5.515	368	370	372	rBV2	962	562	0.08%	0.014%
13	5.572	379	381	384	rBV3	623	532	0.07%	0.013%
14	5.630	389	392	395	rVB4	940	989	0.14%	0.024%
15	5.672	396	400	404	rVV2	861	1138	0.16%	0.028%
16	5.708	405	407	411	rVB3	902	737	0.10%	0.018%
17	5.850	431	434	436	rBV3	881	667	0.09%	0.016%
18	5.918	446	447	452	rBV5	814	822	0.11%	0.020%
19	6.048	470	472	477	rBV3	475	551	0.08%	0.014%
20	6.111	480	484	490	rBV3	551	991	0.14%	0.024%
21	6.263	511	513	519	rVV4	473	695	0.10%	0.017%
22	6.326	520	525	527	rVV4	470	610	0.08%	0.015%
23	6.404	539	540	543	rBV2	510	506	0.07%	0.012%
24	6.744	599	605	607	rBV2	1497	2117	0.29%	0.052%
25	6.948	641	644	649	rVB3	531	785	0.11%	0.019%
26	7.000	649	654	657	rBB3	535	772	0.11%	0.019%
27	7.032	657	660	661	rBV2	982	790	0.11%	0.019%
28	7.105	669	674	675	rBV4	518	497	0.07%	0.012%
29	7.189	689	690	694	rBV3	614	717	0.10%	0.018%
30	7.220	694	696	698	rVV2	673	554	0.08%	0.014%
31	7.361	710	723	726	rBV2	20421	57228	7.95%	1.410%
32	7.570	752	763	766	rBV6	2655	7230	1.00%	0.178%
33	7.895	822	825	829	rBV5	926	1092	0.15%	0.027%
34	7.963	829	838	839	rBV3	2044	3826	0.53%	0.094%

M3C4359.M Fri Jul 05 18:12:41 2013 ACCNJ

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\3Colddata\v3c4445-4446\
Data File : 3C100042.D
Acq On : 22 Jun 2013 7:41 am
Operator : prashans
Sample : JB40127-6
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 45 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

35	8.072	851	859	871	rVB5	5848	16386	2.28%	0.404%
36	8.308	902	904	906	rVB3	1013	734	0.10%	0.018%
37	8.329	906	908	911	rBV4	999	1052	0.15%	0.026%
38	8.501	912	941	943	rBV4	8109	40121	5.58%	0.988%
39	8.915	1018	1020	1031	rVB5	2032	3281	0.46%	0.081%
40	9.129	1043	1061	1062	rBV6	2721	9179	1.28%	0.226%
41	9.584	1138	1148	1155	rBV	207823	490685	68.19%	12.086%
42	9.647	1155	1160	1183	rVB2	100881	239239	33.24%	5.893%
43	10.065	1231	1240	1258	rVB	81593	182626	25.38%	4.498%
44	10.222	1262	1270	1271	rBV5	1032	1865	0.26%	0.046%
45	10.505	1315	1324	1347	rBV	267353	559970	77.81%	13.793%
46	10.792	1377	1379	1383	rBV4	736	785	0.11%	0.019%
47	11.033	1420	1425	1427	rVB2	508	621	0.09%	0.015%
48	11.049	1427	1428	1431	rBV2	672	504	0.07%	0.012%
49	11.143	1443	1446	1448	rVB2	488	537	0.07%	0.013%
50	11.263	1464	1469	1471	rBV3	615	630	0.09%	0.016%
51	11.451	1503	1505	1512	rVB	644	985	0.14%	0.024%
52	11.598	1532	1533	1541	rVB2	519	879	0.12%	0.022%
53	11.781	1564	1568	1573	rBV2	413	671	0.09%	0.017%
54	11.943	1597	1599	1602	rBV	402	488	0.07%	0.012%
55	12.136	1623	1636	1647	rBV	392730	719628	100.00%	17.726%
56	12.346	1670	1676	1688	rVB4	1767	5164	0.72%	0.127%
57	12.461	1694	1698	1703	rVB4	550	578	0.08%	0.014%
58	12.534	1707	1712	1716	rBV3	1064	1494	0.21%	0.037%
59	12.581	1716	1721	1731	rVB6	1971	3366	0.47%	0.083%
60	12.890	1776	1780	1783	rBV2	597	697	0.10%	0.017%
61	12.984	1792	1798	1800	rBV2	503	820	0.11%	0.020%
62	13.041	1804	1809	1814	rBV3	409	779	0.11%	0.019%
63	13.214	1835	1842	1851	rBV3	2034	3491	0.49%	0.086%
64	13.355	1866	1869	1872	rBV3	863	767	0.11%	0.019%
65	13.501	1893	1897	1899	rVV3	622	655	0.09%	0.016%
66	13.569	1904	1910	1914	rVV6	1397	2681	0.37%	0.066%
67	13.632	1914	1922	1944	rVV	359184	609833	84.74%	15.021%
68	13.773	1947	1949	1952	rVV3	446	498	0.07%	0.012%
69	13.826	1952	1959	1966	rVB6	879	2163	0.30%	0.053%
70	13.967	1983	1986	1988	rBV2	499	511	0.07%	0.013%
71	13.993	1990	1991	1994	rBV2	508	528	0.07%	0.013%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\3Colddata\v3c4445-4446\
Data File : 3C100042.D
Acq On : 22 Jun 2013 7:41 am
Operator : prashans
Sample : JB40127-6
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 45 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

72	14.234	2035	2037	2044	rVB4	570	957	0.13%	0.024%
73	14.422	2071	2073	2075	rVB3	646	539	0.07%	0.013%
74	14.527	2090	2093	2096	rBV2	586	817	0.11%	0.020%
75	14.563	2097	2100	2105	rVV4	1387	2248	0.31%	0.055%
76	14.616	2108	2110	2113	rVV3	847	759	0.11%	0.019%
77	14.657	2114	2118	2120	rVB3	606	574	0.08%	0.014%
78	14.772	2131	2140	2154	rBV2	268883	440619	61.23%	10.853%
79	14.929	2165	2170	2175	rVB4	771	1372	0.19%	0.034%
80	14.992	2175	2182	2185	rBV3	925	1413	0.20%	0.035%
81	15.044	2186	2192	2203	rVB5	2404	4646	0.65%	0.114%
82	15.149	2205	2212	2215	rBV6	644	1266	0.18%	0.031%
83	15.238	2225	2229	2231	rVV4	1311	1291	0.18%	0.032%
84	15.275	2235	2236	2243	rBV3	777	933	0.13%	0.023%
85	15.332	2246	2247	2254	rBV4	991	1590	0.22%	0.039%
86	15.473	2273	2274	2278	rVB3	749	695	0.10%	0.017%
87	15.510	2278	2281	2284	rBV4	925	1167	0.16%	0.029%
88	15.630	2302	2304	2312	rVB6	1149	1901	0.26%	0.047%
89	15.688	2312	2315	2318	rBV3	729	791	0.11%	0.019%
90	15.745	2319	2326	2329	rBV7	1005	1781	0.25%	0.044%
91	15.871	2348	2350	2351	rBV	1038	644	0.09%	0.016%
92	15.923	2353	2360	2375	rBV	342605	547611	76.10%	13.489%
93	16.085	2383	2391	2401	rVB8	3898	7490	1.04%	0.184%
94	16.195	2401	2412	2419	rBV8	4146	12389	1.72%	0.305%
95	16.415	2451	2454	2455	rBV3	935	655	0.09%	0.016%
96	16.551	2478	2480	2487	rVB7	1546	1931	0.27%	0.048%
97	16.661	2496	2501	2507	rBV9	2908	4951	0.69%	0.122%
98	16.739	2511	2516	2519	rVV4	2435	3965	0.55%	0.098%
99	16.959	2553	2558	2563	rBV7	2622	5088	0.71%	0.125%
100	17.497	2656	2661	2667	rBV2	7209	11308	1.57%	0.279%

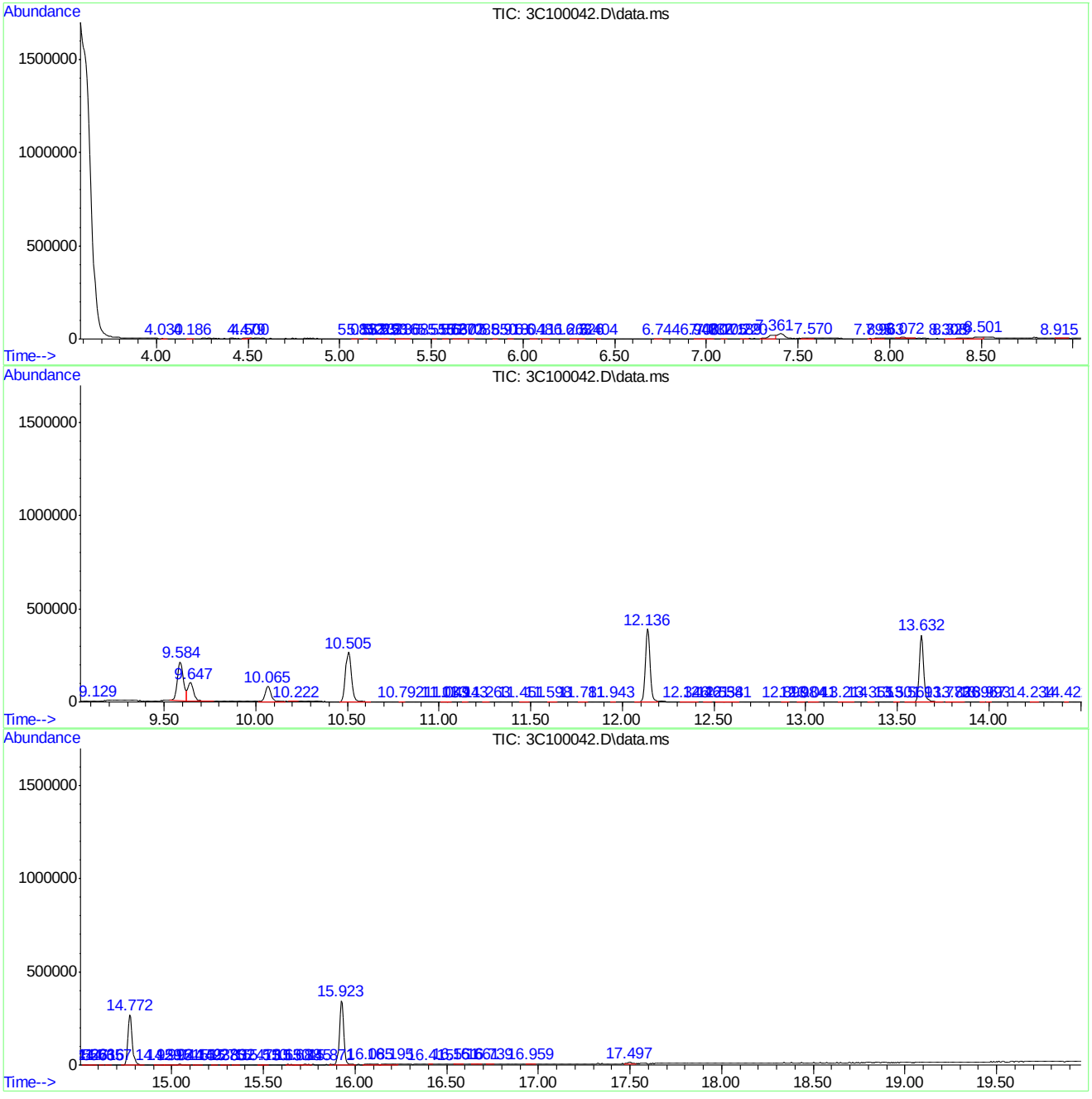
Sum of corrected areas: 4059778

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\3C\3Colddata\v3c4445-4446\
Data File : 3C100042.D
Acq On : 22 Jun 2013 7:41 am
Operator : prashans
Sample : JB40127-6
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 45 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3C\3Colddata\v3c4445-4446\
Data File : 3C100042.D
Acq On : 22 Jun 2013 7:41 am
Operator : prashans
Sample : JB40127-6
Misc : MS50297,V3C4446,5.8,,,,1
ALS Vial : 45 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\1\DATA\3C\3Colddata\v3c4445-4446\
  Data File : 3C100042.D
  Acq On    : 22 Jun 2013   7:41 am
  Operator  : prashans
  Sample    : JB40127-6
  Misc      : MS50297,V3C4446,5.8,,,,1
  ALS Vial  : 45   Sample Multiplier: 1

  Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
  Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

  TIC Library   : C:\DATABASE\NIST08.L
  TIC Integration Parameters: lscint.p

                                                    |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

7.1.12

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100127.D
Acq On : 25 Jun 2013 1:58 pm
Operator : prashans
Sample : JB40127-7
Misc : MS50525,V3C4450,6.2,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 27 15:36:39 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

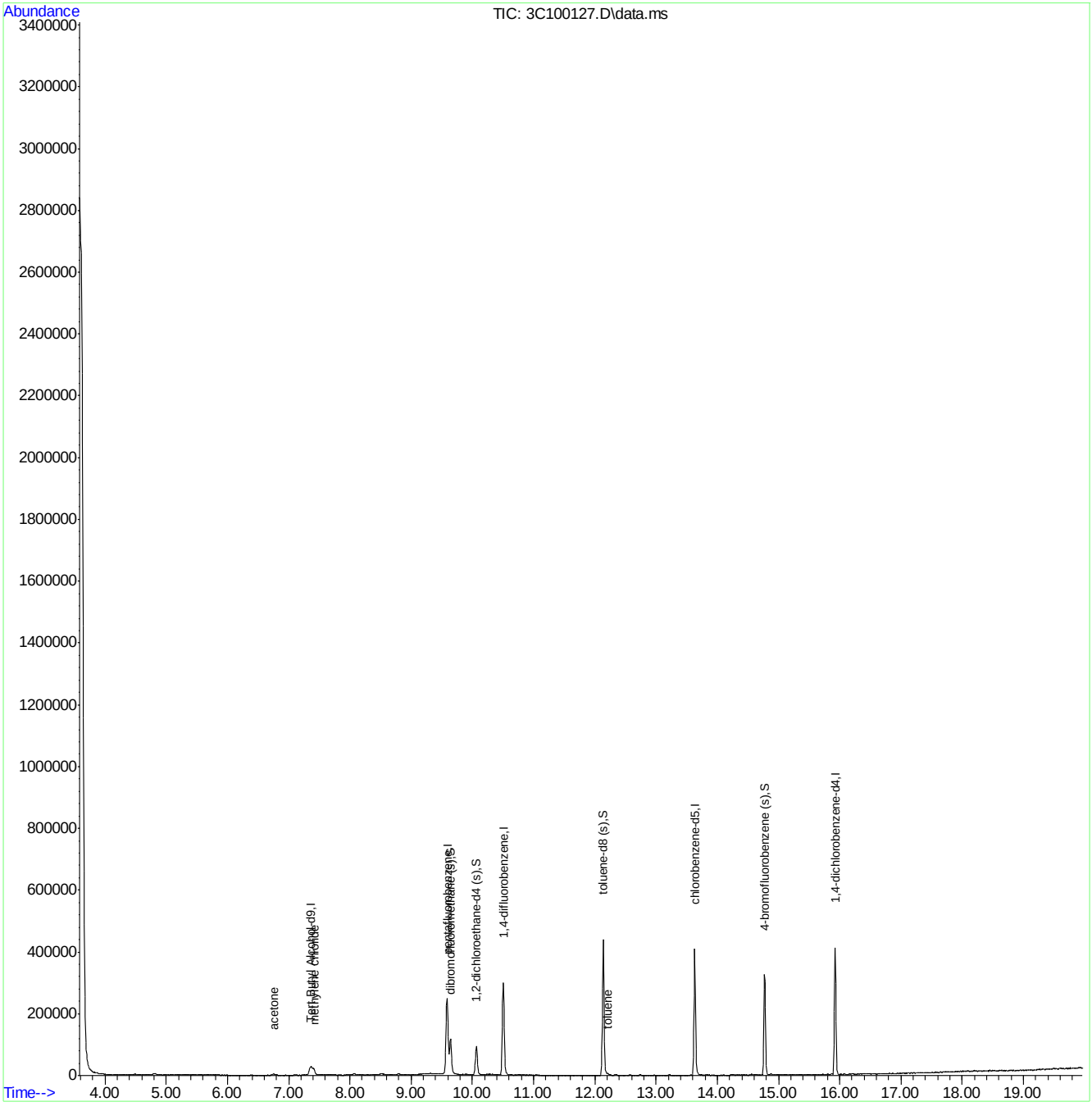
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.356	65	63152	500.00	ug/L	-0.02
5) pentafluorobenzene	9.589	168	199335	50.00	ug/L	-0.01
53) 1,4-difluorobenzene	10.505	114	274910	50.00	ug/L	-0.01
82) chlorobenzene-d5	13.632	117	227414	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	15.923	152	102985	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.647	113	76206	43.74	ug/L	-0.01
Spiked Amount 50.000	Range 65 - 131		Recovery = 87.48%			
45) 1,2-dichloroethane-d4 (s)	10.060	65	87994	50.11	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 121		Recovery = 100.22%			
74) toluene-d8 (s)	12.137	98	310895	45.28	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 128		Recovery = 90.56%			
99) 4-bromofluorobenzene (s)	14.773	95	107058	46.35	ug/L	-0.01
Spiked Amount 50.000	Range 67 - 131		Recovery = 92.70%			
Target Compounds						Qvalue
18) acetone	6.755	58	1894	16.73	ug/L	96
24) methylene chloride	7.414	84	7735	3.85	ug/L	80
76) toluene	12.210	92	1664	0.35	ug/L	92

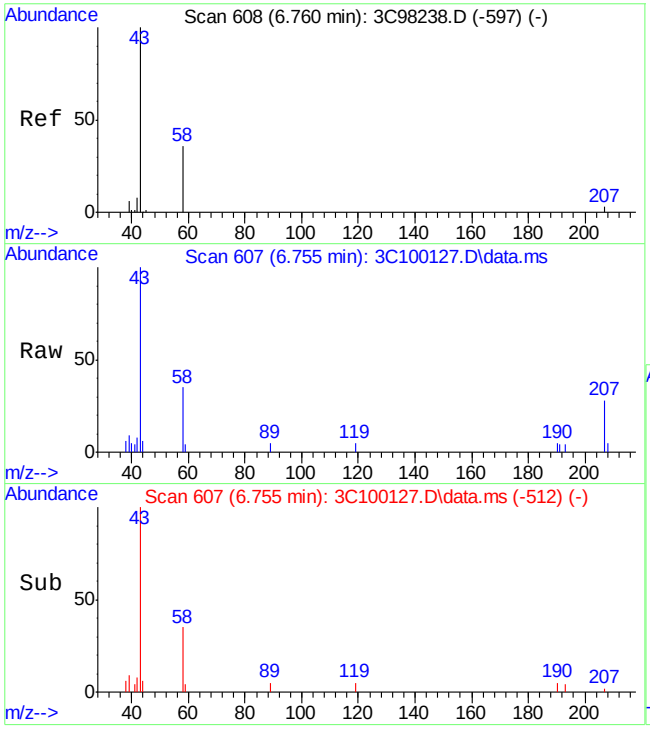
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100127.D
Acq On : 25 Jun 2013 1:58 pm
Operator : prashans
Sample : JB40127-7
Misc : MS50525,V3C4450,6.2,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 27 15:36:39 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

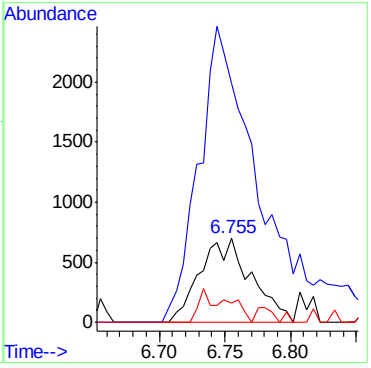


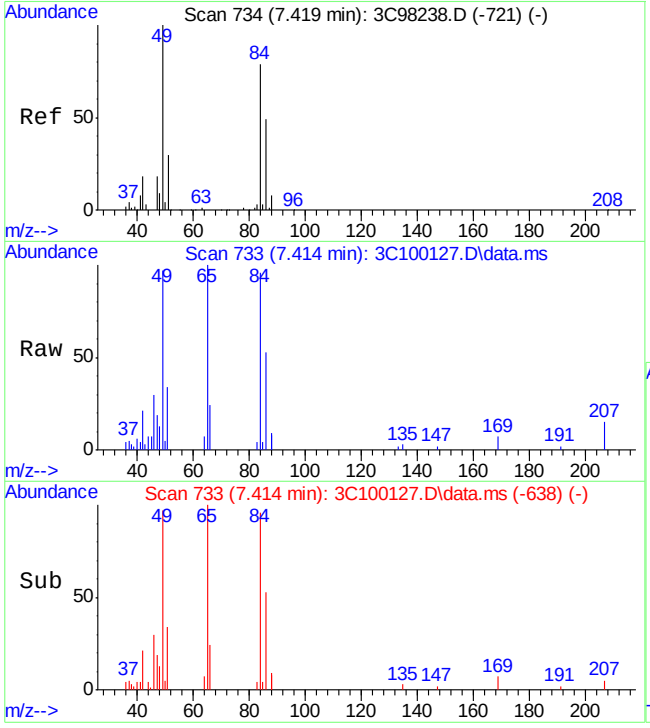


#18
acetone
Concen: 16.73 ug/L
RT: 6.755 min Scan# 607
Delta R.T. -0.005 min
Lab File: 3C100127.D
Acq: 25 Jun 2013 1:58 pm

Tgt Ion: 58 Resp: 1894

Ion	Ratio	Lower	Upper
58	100		
43	282.4	259.1	319.1
42	22.8	0.0	57.9

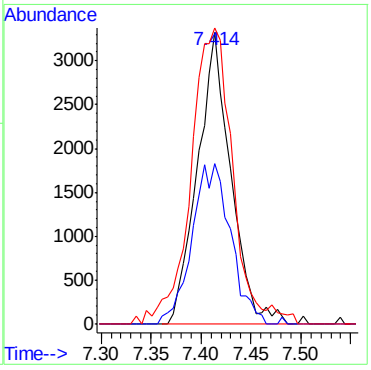


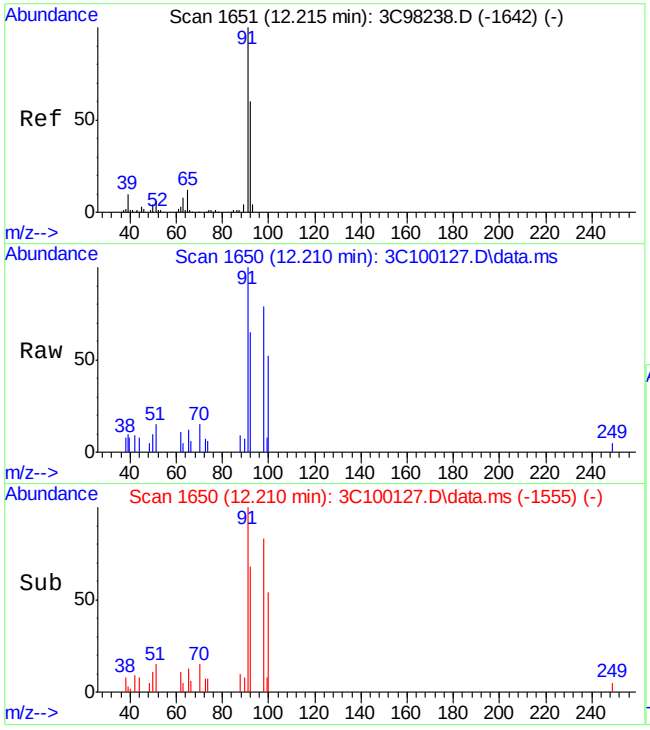


#24
methylene chloride
Concen: 3.85 ug/L
RT: 7.414 min Scan# 733
Delta R.T. -0.005 min
Lab File: 3C100127.D
Acq: 25 Jun 2013 1:58 pm

Tgt Ion: 84 Resp: 7735

Ion	Ratio	Lower	Upper
84	100		
86	55.0	43.6	81.0
49	98.4	89.0	165.2

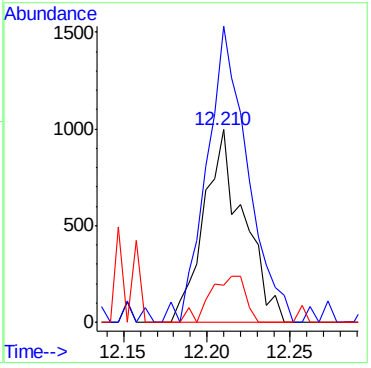




#76
toluene
Concen: 0.35 ug/L
RT: 12.210 min Scan# 1650
Delta R.T. -0.005 min
Lab File: 3C100127.D
Acq: 25 Jun 2013 1:58 pm

Tgt Ion: 92 Resp: 1664

Ion	Ratio	Lower	Upper
92	100		
91	153.9	136.1	196.1
65	19.1	0.0	49.4



7.1.13

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100127.D
Acq On : 25 Jun 2013 1:58 pm
Operator : prashans
Sample : JB40127-7
Misc : MS50525,V3C4450,6.2,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: 3C100127.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.281	131	134	135	rBV2	1317	1187	0.15%	0.025%
2	4.344	144	146	154	rVB3	1430	1906	0.24%	0.040%
3	4.412	157	159	164	rBV2	956	1582	0.20%	0.033%
4	4.799	220	233	236	rBV5	3225	9656	1.19%	0.203%
5	4.945	259	261	264	rBV3	1483	1320	0.16%	0.028%
6	5.055	280	282	284	rBV2	957	889	0.11%	0.019%
7	5.227	311	315	317	rBV2	1118	1508	0.19%	0.032%
8	5.269	317	323	327	rVB6	1216	2636	0.33%	0.056%
9	5.348	337	338	340	rBV2	1855	945	0.12%	0.020%
10	5.604	386	387	392	rBV4	1134	1461	0.18%	0.031%
11	5.641	392	394	397	rVV3	1496	1129	0.14%	0.024%
12	5.682	400	402	408	rVV5	1137	1665	0.21%	0.035%
13	5.730	409	411	414	rVB	940	836	0.10%	0.018%
14	5.813	424	427	429	rBV3	1070	1210	0.15%	0.025%
15	5.907	441	445	446	rBV	759	776	0.10%	0.016%
16	5.949	449	453	456	rVV3	1116	1182	0.15%	0.025%
17	6.054	471	473	478	rBV2	709	871	0.11%	0.018%
18	6.284	514	517	523	rBV4	714	1230	0.15%	0.026%
19	6.404	538	540	545	rVB2	1028	1287	0.16%	0.027%
20	6.446	545	548	556	rVB2	720	1453	0.18%	0.031%
21	6.509	556	560	563	rBV2	837	914	0.11%	0.019%
22	6.608	573	579	580	rBV	625	955	0.12%	0.020%
23	6.749	591	606	611	rBV2	4058	11363	1.40%	0.239%
24	6.859	626	627	632	rVB4	948	1032	0.13%	0.022%
25	6.901	632	635	640	rBV4	918	1573	0.19%	0.033%
26	6.974	646	649	653	rBV3	749	961	0.12%	0.020%
27	7.110	667	675	677	rVV5	1374	1883	0.23%	0.040%
28	7.178	686	688	691	rBV2	668	779	0.10%	0.016%
29	7.361	706	723	747	rBV4	27588	144494	17.83%	3.045%
30	7.591	764	767	768	rBV	1674	1201	0.15%	0.025%
31	7.686	784	785	788	rBV2	1576	1339	0.17%	0.028%
32	7.843	812	815	817	rBV4	966	1028	0.13%	0.022%
33	7.958	832	837	840	rBV4	1099	2037	0.25%	0.043%
34	8.010	840	847	849	rVV5	1166	1939	0.24%	0.041%

M3C4359.M Thu Jun 27 15:45:44 2013 ACCNJ

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100127.D
Acq On : 25 Jun 2013 1:58 pm
Operator : prashans
Sample : JB40127-7
Misc : MS50525,V3C4450,6.2,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

35	8.062	854	857	869	rVB8	3796	10399	1.28%	0.219%
36	8.439	923	929	932	rBV6	1555	2476	0.31%	0.052%
37	8.470	932	935	936	rBV2	957	1023	0.13%	0.022%
38	8.590	957	958	961	rBV3	915	833	0.10%	0.018%
39	8.794	988	997	1004	rBV7	3364	9753	1.20%	0.206%
40	8.915	1017	1020	1023	rBV4	1703	1322	0.16%	0.028%
41	9.004	1034	1037	1038	rBV2	1186	977	0.12%	0.021%
42	9.072	1045	1050	1053	rBV6	1409	2523	0.31%	0.053%
43	9.124	1059	1060	1062	rBV2	1059	830	0.10%	0.017%
44	9.501	1130	1132	1134	rBV2	1552	1274	0.16%	0.027%
45	9.584	1137	1148	1155	rVV	245638	582371	71.85%	12.272%
46	9.642	1155	1159	1180	rVB2	114981	265117	32.71%	5.587%
47	10.065	1230	1240	1258	rVB2	93075	214327	26.44%	4.516%
48	10.238	1270	1273	1276	rBV3	1627	1474	0.18%	0.031%
49	10.505	1314	1324	1349	rBV	299917	637417	78.64%	13.432%
50	10.756	1368	1372	1375	rVV3	814	1015	0.13%	0.021%
51	11.002	1416	1419	1423	rVB4	666	792	0.10%	0.017%
52	11.153	1445	1448	1452	rVB2	1028	1009	0.12%	0.021%
53	11.430	1496	1501	1503	rVB2	824	866	0.11%	0.018%
54	11.807	1568	1573	1579	rBV4	771	1146	0.14%	0.024%
55	11.969	1601	1604	1606	rBV2	1109	817	0.10%	0.017%
56	12.137	1622	1636	1647	rBV	441092	810521	100.00%	17.080%
57	12.341	1669	1675	1686	rVB3	2423	6186	0.76%	0.130%
58	12.419	1686	1690	1692	rBV2	680	872	0.11%	0.018%
59	12.586	1716	1722	1724	rVV6	1540	2332	0.29%	0.049%
60	12.675	1734	1739	1741	rBV3	711	1094	0.13%	0.023%
61	12.733	1745	1750	1755	rBV2	1097	1451	0.18%	0.031%
62	12.837	1767	1770	1775	rVB4	820	862	0.11%	0.018%
63	12.968	1792	1795	1797	rVB2	1094	919	0.11%	0.019%
64	13.151	1828	1830	1834	rVB4	953	1050	0.13%	0.022%
65	13.214	1838	1842	1849	rVB5	2463	4101	0.51%	0.086%
66	13.261	1849	1851	1856	rBV4	742	1039	0.13%	0.022%
67	13.319	1856	1862	1864	rBV4	696	1196	0.15%	0.025%
68	13.360	1864	1870	1872	rBV4	742	1544	0.19%	0.033%
69	13.544	1900	1905	1906	rVB3	728	925	0.11%	0.019%
70	13.575	1906	1911	1914	rBV3	1122	2130	0.26%	0.045%
71	13.632	1914	1922	1941	rVV	409274	707901	87.34%	14.917%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100127.D
Acq On : 25 Jun 2013 1:58 pm
Operator : prashans
Sample : JB40127-7
Misc : MS50525,V3C4450,6.2,,,,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

72	13.821	1953	1958	1965	rVB5	2167	4329	0.53%	0.091%
73	13.868	1965	1967	1971	rBV4	1051	1079	0.13%	0.023%
74	13.915	1972	1976	1980	rBV4	840	835	0.10%	0.018%
75	13.988	1986	1990	1997	rBV3	716	1739	0.21%	0.037%
76	14.239	2032	2038	2040	rBV4	1520	2846	0.35%	0.060%
77	14.328	2051	2055	2056	rVB3	710	809	0.10%	0.017%
78	14.344	2056	2058	2062	rBV3	858	1067	0.13%	0.022%
79	14.516	2088	2091	2093	rBV2	1132	795	0.10%	0.017%
80	14.563	2093	2100	2106	rBV4	3503	6279	0.77%	0.132%
81	14.621	2106	2111	2115	rVV6	1423	1605	0.20%	0.034%
82	14.773	2129	2140	2154	rBV	325387	533077	65.77%	11.233%
83	14.872	2154	2159	2164	rVV6	3065	4733	0.58%	0.100%
84	14.971	2175	2178	2183	rVB4	1878	2669	0.33%	0.056%
85	15.008	2183	2185	2188	rBV2	1292	1276	0.16%	0.027%
86	15.191	2216	2220	2222	rBV4	900	1344	0.17%	0.028%
87	15.222	2224	2226	2228	rVV3	1503	1445	0.18%	0.030%
88	15.259	2231	2233	2238	rVB6	1952	2096	0.26%	0.044%
89	15.515	2276	2282	2284	rBV4	1277	2609	0.32%	0.055%
90	15.630	2301	2304	2306	rBV3	1049	992	0.12%	0.021%
91	15.698	2316	2317	2319	rBV2	2079	1279	0.16%	0.027%
92	15.725	2319	2322	2323	rBV2	2249	1695	0.21%	0.036%
93	15.798	2333	2336	2340	rVB4	1803	2520	0.31%	0.053%
94	15.871	2346	2350	2353	rVV5	1877	2527	0.31%	0.053%
95	15.923	2353	2360	2374	rVB	411729	665479	82.11%	14.023%
96	16.164	2402	2406	2409	rBV6	2109	3195	0.39%	0.067%
97	16.211	2410	2415	2422	rVV10	2394	4439	0.55%	0.094%
98	16.284	2427	2429	2431	rBV3	2112	1310	0.16%	0.028%
99	16.603	2489	2490	2492	rBV2	1714	1029	0.13%	0.022%
100	17.508	2661	2663	2666	rBV4	2286	2366	0.29%	0.050%

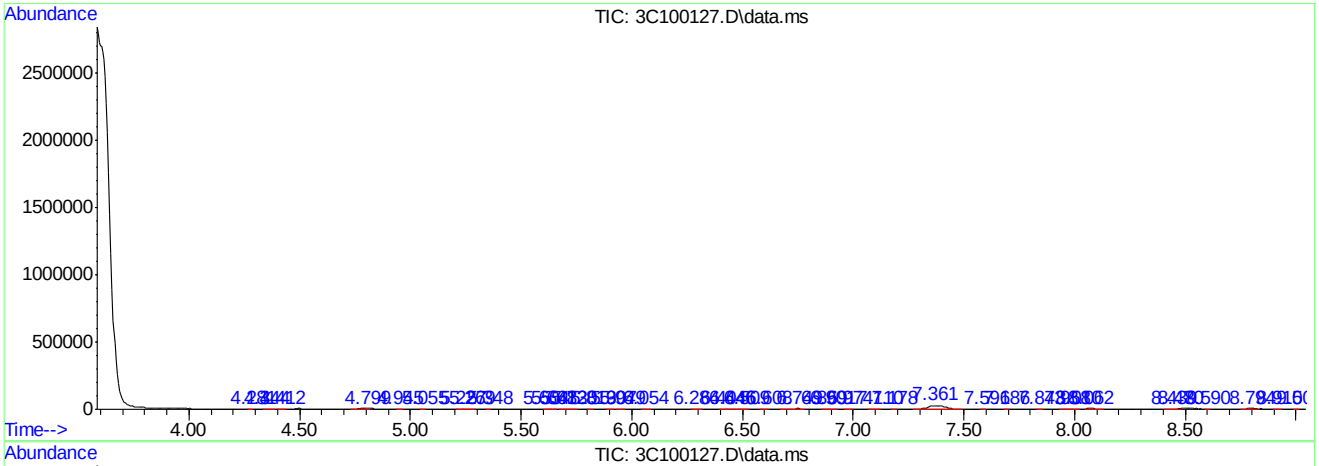
Sum of corrected areas: 4745574

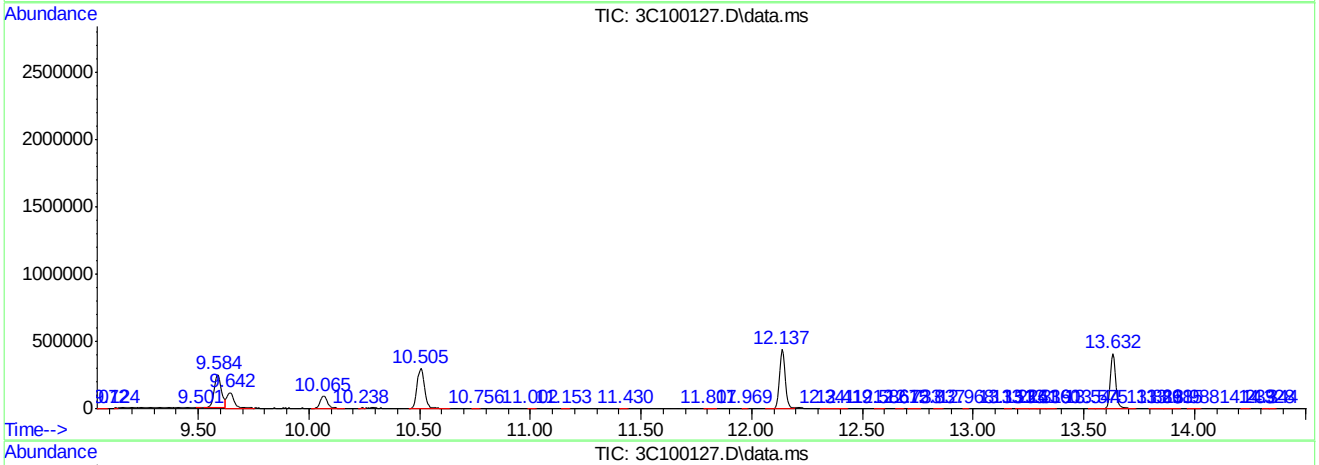
LSC Report - Integrated Chromatogram

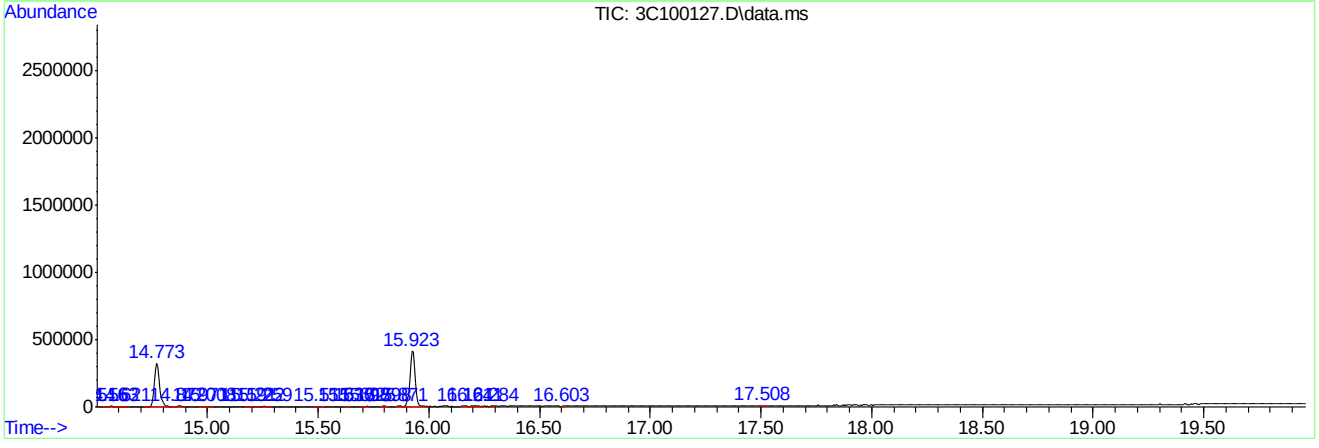
Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100127.D
Acq On : 25 Jun 2013 1:58 pm
Operator : prashans
Sample : JB40127-7
Misc : MS50525,V3C4450,6.2,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p







M3C4359.M Thu Jun 27 15:45:45 2013 ACCNJ

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100127.D
Acq On : 25 Jun 2013 1:58 pm
Operator : prashans
Sample : JB40127-7
Misc : MS50525,V3C4450,6.2,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\1\DATA\3C\v3c4450\
  Data File : 3C100127.D
  Acq On    : 25 Jun 2013   1:58 pm
  Operator  : prashans
  Sample    : JB40127-7
  Misc      : MS50525,V3C4450,6.2,,,,1
  ALS Vial  : 11   Sample Multiplier: 1

  Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
  Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

  TIC Library   : C:\DATABASE\NIST08.L
  TIC Integration Parameters: lscint.p

                                                    |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100024.D
Acq On : 21 Jun 2013 10:53 pm
Operator : prashans
Sample : MB
Misc : MS50308,V3C4446,5.0,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jun 26 14:28:49 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

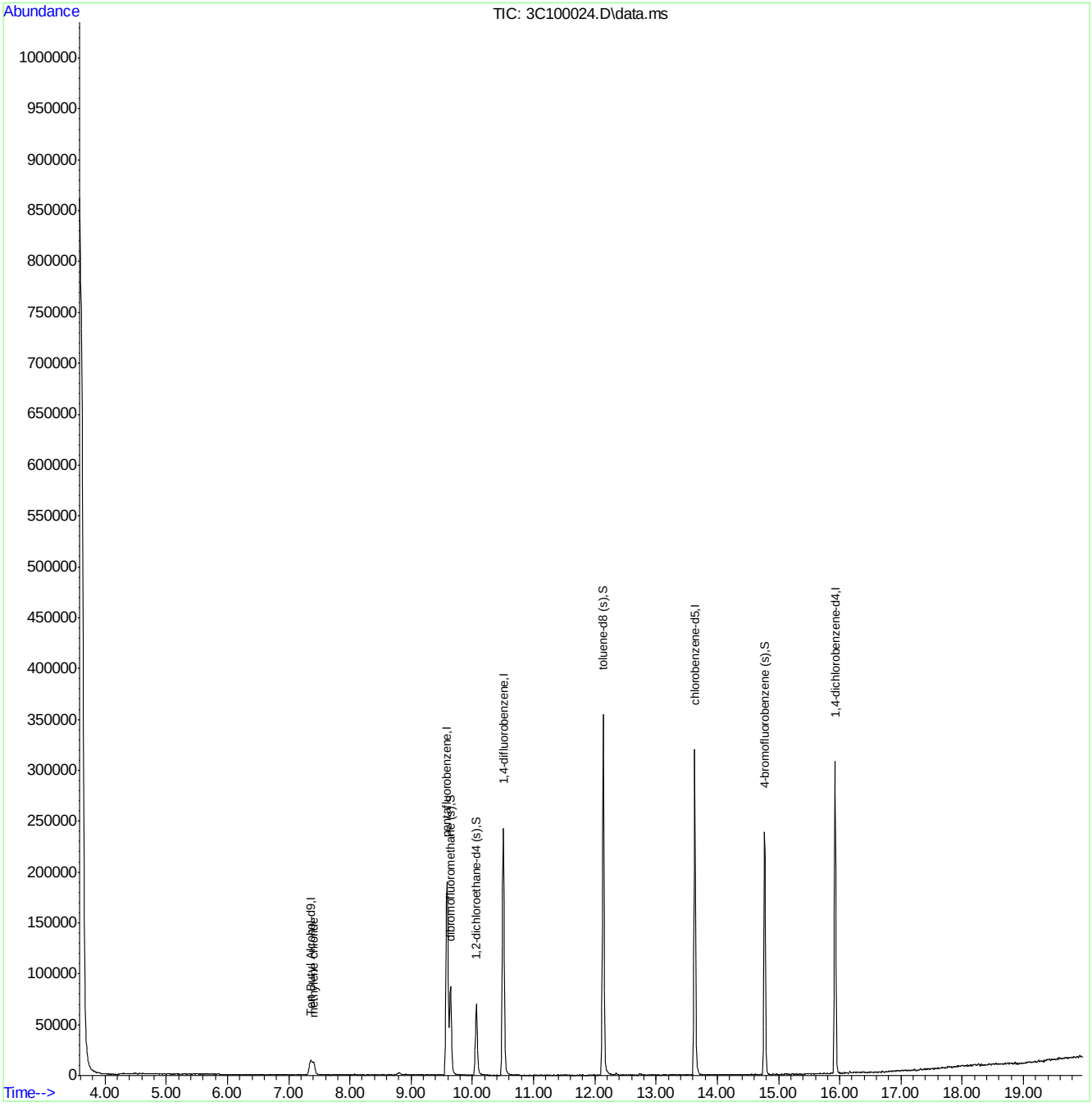
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.366	65	37345	500.00	ug/L	0.00
5) pentafluorobenzene	9.584	168	169250	50.00	ug/L	-0.02
53) 1,4-difluorobenzene	10.505	114	232167	50.00	ug/L	-0.01
82) chlorobenzene-d5	13.632	117	185320	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	15.923	152	79143	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.642	113	61204	41.38	ug/L	-0.02
Spiked Amount 50.000	Range 65 - 131		Recovery = 82.76%			
45) 1,2-dichloroethane-d4 (s)	10.065	65	59191	39.70	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 79.40%			
74) toluene-d8 (s)	12.136	98	257439	44.40	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 128		Recovery = 88.80%			
99) 4-bromofluorobenzene (s)	14.773	95	80361	45.27	ug/L	-0.01
Spiked Amount 50.000	Range 67 - 131		Recovery = 90.54%			
Target Compounds						Qvalue
24) methylene chloride	7.408	84	5606	3.29	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

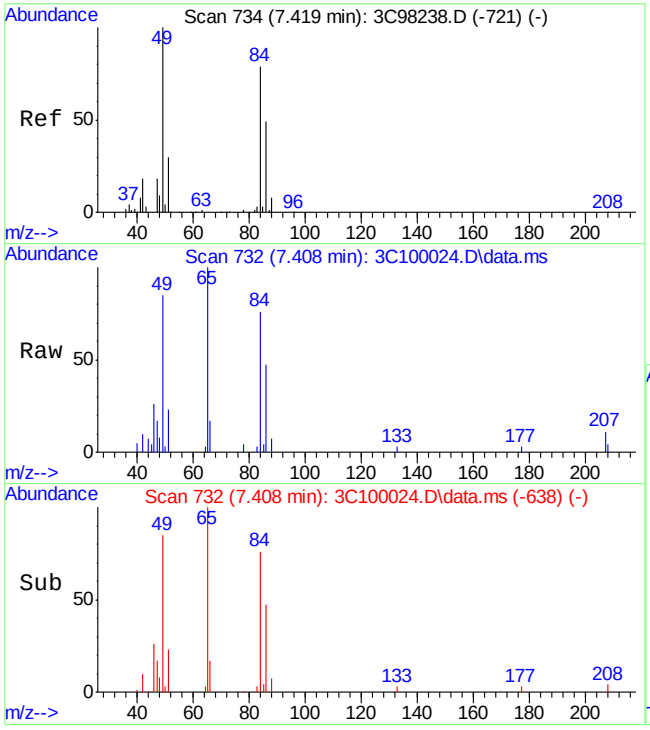
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100024.D
Acq On : 21 Jun 2013 10:53 pm
Operator : prashans
Sample : MB
Misc : MS50308,V3C4446,5.0,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jun 26 14:28:49 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration



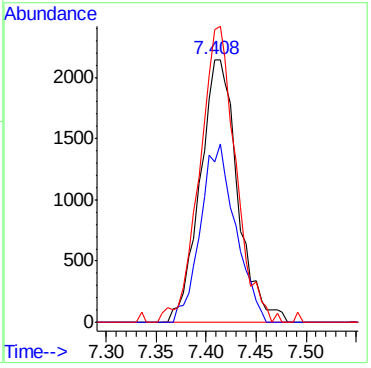
M3C4359.M Wed Jun 26 14:57:45 2013 ACCNJ Page: 2



#24
methylene chloride
Concen: 3.29 ug/L
RT: 7.408 min Scan# 732
Delta R.T. -0.011 min
Lab File: 3C100024.D
Acq: 21 Jun 2013 10:53 pm

Tgt Ion: 84 Resp: 5606

Ion	Ratio	Lower	Upper
84	100		
86	61.0	43.6	81.0
49	111.5	89.0	165.2



7.2.1

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100024.D
Acq On : 21 Jun 2013 10:53 pm
Operator : prashans
Sample : MB
Misc : MS50308,V3C4446,5.0,,,,1
ALS Vial : 27 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: 3C100024.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.244	124	127	130	rBV2	911	802	0.12%	0.023%
2	4.542	182	184	186	rBV	707	635	0.10%	0.018%
3	4.621	197	199	202	rVB4	780	533	0.08%	0.015%
4	4.720	215	218	221	rBV2	582	649	0.10%	0.018%
5	5.107	289	292	293	rBV2	811	582	0.09%	0.017%
6	5.253	317	320	322	rVB3	906	648	0.10%	0.018%
7	5.306	329	330	333	rVV3	709	494	0.08%	0.014%
8	5.374	337	343	346	rBV3	780	1299	0.20%	0.037%
9	5.395	346	347	350	rBV2	1066	647	0.10%	0.018%
10	5.484	362	364	367	rBV2	455	521	0.08%	0.015%
11	5.557	375	378	379	rBV3	742	652	0.10%	0.019%
12	5.646	394	395	400	rVB2	580	534	0.08%	0.015%
13	5.714	405	408	410	rBV2	665	586	0.09%	0.017%
14	5.844	429	433	437	rVB4	1185	1610	0.24%	0.046%
15	5.960	453	455	457	rBV	604	549	0.08%	0.016%
16	6.096	476	481	483	rBV2	598	851	0.13%	0.024%
17	6.164	491	494	496	rBV2	585	573	0.09%	0.016%
18	6.232	504	507	510	rBV2	429	456	0.07%	0.013%
19	6.273	511	515	521	rVB5	500	879	0.13%	0.025%
20	6.320	523	524	527	rBV	527	570	0.09%	0.016%
21	6.906	632	636	641	rVV3	475	807	0.12%	0.023%
22	7.215	690	695	698	rBV2	376	444	0.07%	0.013%
23	7.366	709	724	728	rBV3	14564	48518	7.38%	1.381%
24	7.534	754	756	759	rVB2	548	504	0.08%	0.014%
25	7.696	785	787	790	rVB	528	504	0.08%	0.014%
26	7.733	790	794	796	rBV	614	779	0.12%	0.022%
27	7.754	796	798	802	rVV2	533	723	0.11%	0.021%
28	7.790	802	805	808	rVV2	494	592	0.09%	0.017%
29	7.869	818	820	827	rVB3	492	825	0.13%	0.023%
30	7.931	827	832	835	rBV2	289	545	0.08%	0.016%
31	8.057	852	856	857	rVV	737	678	0.10%	0.019%
32	8.078	857	860	866	rVB4	1217	1727	0.26%	0.049%
33	8.125	866	869	872	rVB	529	464	0.07%	0.013%
34	8.266	894	896	902	rBV3	405	637	0.10%	0.018%

M3C4359.M Wed Jun 26 14:49:34 2013 ACCNJ Page: 1

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100024.D
Acq On : 21 Jun 2013 10:53 pm
Operator : prashans
Sample : MB
Misc : MS50308,V3C4446,5.0,,,,1
ALS Vial : 27 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

35	8.418	920	925	928	rVB3	662	584	0.09%	0.017%
36	8.481	934	937	941	rVB	577	719	0.11%	0.020%
37	8.721	981	983	985	rBV	619	453	0.07%	0.013%
38	8.810	985	1000	1008	rVV3	2472	8969	1.36%	0.255%
39	8.920	1015	1021	1027	rBV4	835	1209	0.18%	0.034%
40	9.150	1062	1065	1068	rBV	358	514	0.08%	0.015%
41	9.192	1071	1073	1078	rVB3	666	565	0.09%	0.016%
42	9.239	1078	1082	1083	rBV2	401	465	0.07%	0.013%
43	9.438	1116	1120	1123	rBV4	598	1087	0.17%	0.031%
44	9.584	1138	1148	1155	rBV	190391	448422	68.24%	12.761%
45	9.642	1155	1159	1182	rVB2	87310	195563	29.76%	5.565%
46	9.908	1206	1210	1215	rVB3	576	668	0.10%	0.019%
47	9.976	1220	1223	1227	rVB	670	752	0.11%	0.021%
48	10.065	1227	1240	1274	rBV	70401	163930	24.95%	4.665%
49	10.254	1274	1276	1282	rBV3	351	468	0.07%	0.013%
50	10.505	1312	1324	1345	rBV	242975	508965	77.45%	14.484%
51	10.630	1345	1348	1353	rVV3	1176	2084	0.32%	0.059%
52	10.667	1353	1355	1357	rVV2	672	654	0.10%	0.019%
53	10.719	1360	1365	1366	rVV2	616	801	0.12%	0.023%
54	10.740	1366	1369	1371	rVV	493	508	0.08%	0.014%
55	10.939	1403	1407	1413	rBV2	464	799	0.12%	0.023%
56	11.111	1433	1440	1441	rBV2	427	518	0.08%	0.015%
57	11.326	1478	1481	1487	rBV3	530	613	0.09%	0.017%
58	11.383	1487	1492	1496	rBV3	416	546	0.08%	0.016%
59	11.598	1532	1533	1538	rBV	397	530	0.08%	0.015%
60	11.875	1582	1586	1590	rVB3	326	522	0.08%	0.015%
61	12.000	1606	1610	1612	rVB2	415	477	0.07%	0.014%
62	12.136	1627	1636	1664	rBV	354702	657152	100.00%	18.701%
63	12.346	1669	1676	1687	rVB3	2056	4392	0.67%	0.125%
64	12.581	1717	1721	1723	rBV3	424	562	0.09%	0.016%
65	12.727	1742	1749	1761	rVB3	1821	4797	0.73%	0.137%
66	12.801	1761	1763	1767	rVB3	572	597	0.09%	0.017%
67	12.984	1795	1798	1803	rVB3	416	603	0.09%	0.017%
68	13.026	1803	1806	1810	rBV3	389	504	0.08%	0.014%
69	13.454	1883	1888	1891	rBV3	338	572	0.09%	0.016%
70	13.486	1891	1894	1898	rBV2	487	830	0.13%	0.024%
71	13.632	1913	1922	1939	rVV	320201	541696	82.43%	15.416%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100024.D
Acq On : 21 Jun 2013 10:53 pm
Operator : prashans
Sample : MB
Misc : MS50308,V3C4446,5.0,,,,1
ALS Vial : 27 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

72	13.821	1948	1958	1963	rBV6	797	1558	0.24%	0.044%
73	14.260	2033	2042	2045	rVV4	799	1666	0.25%	0.047%
74	14.359	2056	2061	2063	rBV4	657	806	0.12%	0.023%
75	14.485	2081	2085	2089	rVB3	643	977	0.15%	0.028%
76	14.521	2089	2092	2093	rBV2	665	495	0.08%	0.014%
77	14.558	2098	2099	2104	rVV3	851	786	0.12%	0.022%
78	14.621	2107	2111	2116	rBV4	656	917	0.14%	0.026%
79	14.773	2131	2140	2156	rVB	238530	386619	58.83%	11.002%
80	14.872	2156	2159	2161	rVB3	513	585	0.09%	0.017%
81	14.908	2161	2166	2170	rBV4	1066	1425	0.22%	0.041%
82	14.961	2172	2176	2178	rBV3	950	876	0.13%	0.025%
83	15.118	2203	2206	2210	rBV4	741	1076	0.16%	0.031%
84	15.201	2219	2222	2223	rBV3	506	450	0.07%	0.013%
85	15.228	2223	2227	2232	rVV5	910	1634	0.25%	0.047%
86	15.337	2247	2248	2251	rBV	499	499	0.08%	0.014%
87	15.384	2256	2257	2261	rVB3	875	535	0.08%	0.015%
88	15.421	2261	2264	2266	rVB3	625	645	0.10%	0.018%
89	15.442	2266	2268	2269	rBV	842	554	0.08%	0.016%
90	15.510	2278	2281	2285	rVB5	878	1230	0.19%	0.035%
91	15.594	2295	2297	2300	rBV3	826	725	0.11%	0.021%
92	15.625	2301	2303	2308	rVB4	736	961	0.15%	0.027%
93	15.683	2311	2314	2317	rVV4	722	664	0.10%	0.019%
94	15.745	2321	2326	2330	rVV4	1064	1646	0.25%	0.047%
95	15.923	2352	2360	2372	rBV	306958	475194	72.31%	13.523%
96	16.075	2386	2389	2391	rVB4	1192	831	0.13%	0.024%
97	16.169	2403	2407	2411	rBV5	2445	2760	0.42%	0.079%
98	16.216	2413	2416	2418	rVV3	806	634	0.10%	0.018%
99	16.462	2460	2463	2465	rBV4	1057	699	0.11%	0.020%
100	16.687	2504	2506	2509	rBV3	1464	1577	0.24%	0.045%

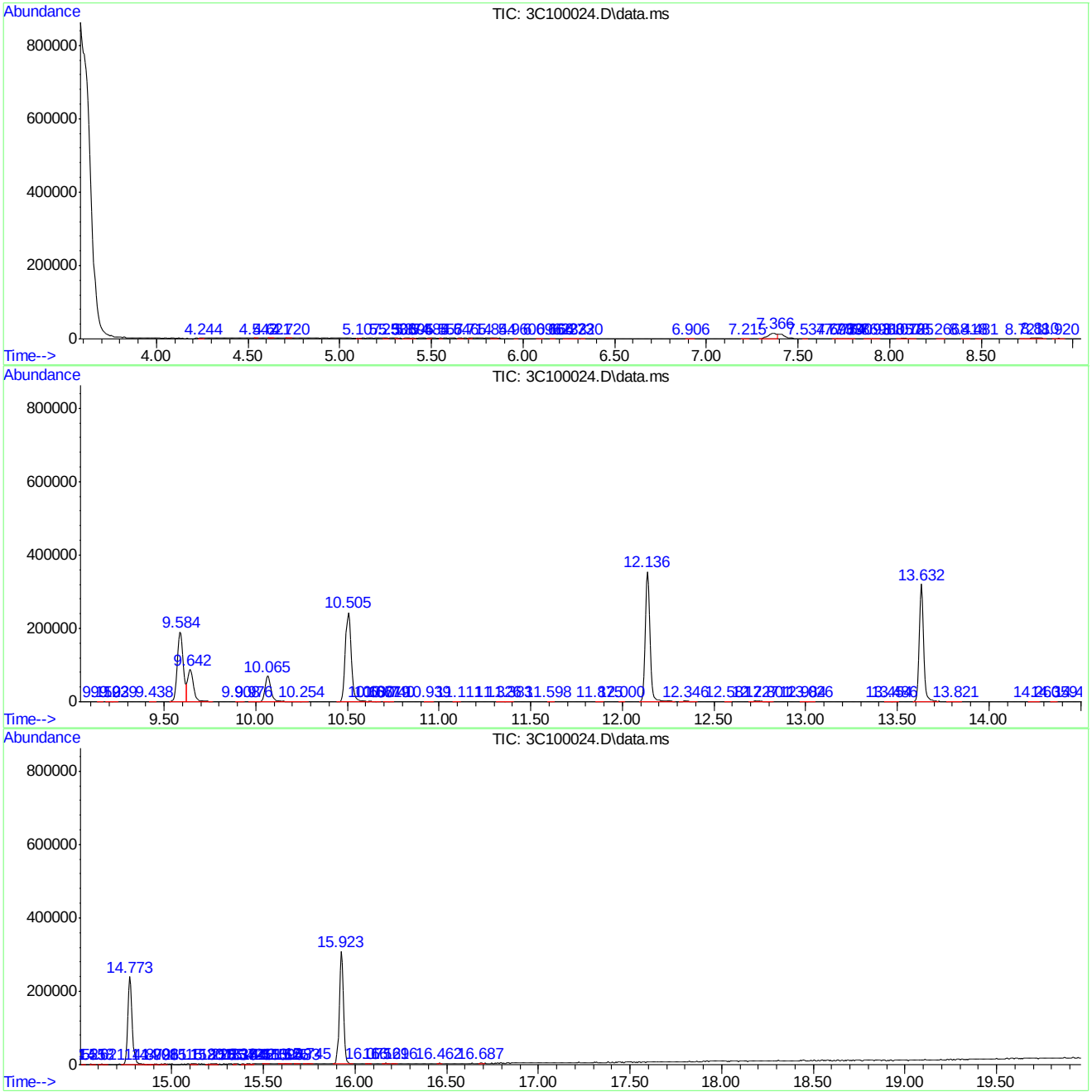
Sum of corrected areas: 3513931

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100024.D
Acq On    : 21 Jun 2013  10:53 pm
Operator  : prashans
Sample    : MB
Misc      : MS50308,V3C4446,5.0,,,,1
ALS Vial  : 27   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library    : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p
```



M3C4359.M Wed Jun 26 14:49:35 2013 ACCNJ

Page: 4

Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100024.D
Acq On    : 21 Jun 2013  10:53 pm
Operator  : prashans
Sample    : MB
Misc      : MS50308,V3C4446,5.0,,,,1
ALS Vial  : 27   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library    : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p
```

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

```
Data Path : C:\msdchem\1\DATA\3C\v3c4445-4446\
Data File : 3C100024.D
Acq On    : 21 Jun 2013  10:53 pm
Operator  : prashans
Sample    : MB
Misc      : MS50308,V3C4446,5.0,,,,1
ALS Vial  : 27   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library   : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

                                                    |--Internal Standard---|
TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100120.D
Acq On : 25 Jun 2013 10:23 am
Operator : prashans
Sample : MB
Misc : MS50525,V3C4450,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 27 15:33:51 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.367	65	46905	500.00	ug/L	0.00
5) pentafluorobenzene	9.584	168	187014	50.00	ug/L	-0.02
53) 1,4-difluorobenzene	10.505	114	253586	50.00	ug/L	-0.01
82) chlorobenzene-d5	13.632	117	202578	50.00	ug/L	-0.01
97) 1,4-dichlorobenzene-d4	15.923	152	92801	50.00	ug/L	-0.01
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.642	113	68450	41.88	ug/L	-0.02
Spiked Amount 50.000	Range 65 - 131		Recovery = 83.76%			
45) 1,2-dichloroethane-d4 (s)	10.065	65	75703	45.95	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 91.90%			
74) toluene-d8 (s)	12.136	98	284919	44.99	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 128		Recovery = 89.98%			
99) 4-bromofluorobenzene (s)	14.773	95	96909	46.56	ug/L	-0.01
Spiked Amount 50.000	Range 67 - 131		Recovery = 93.12%			

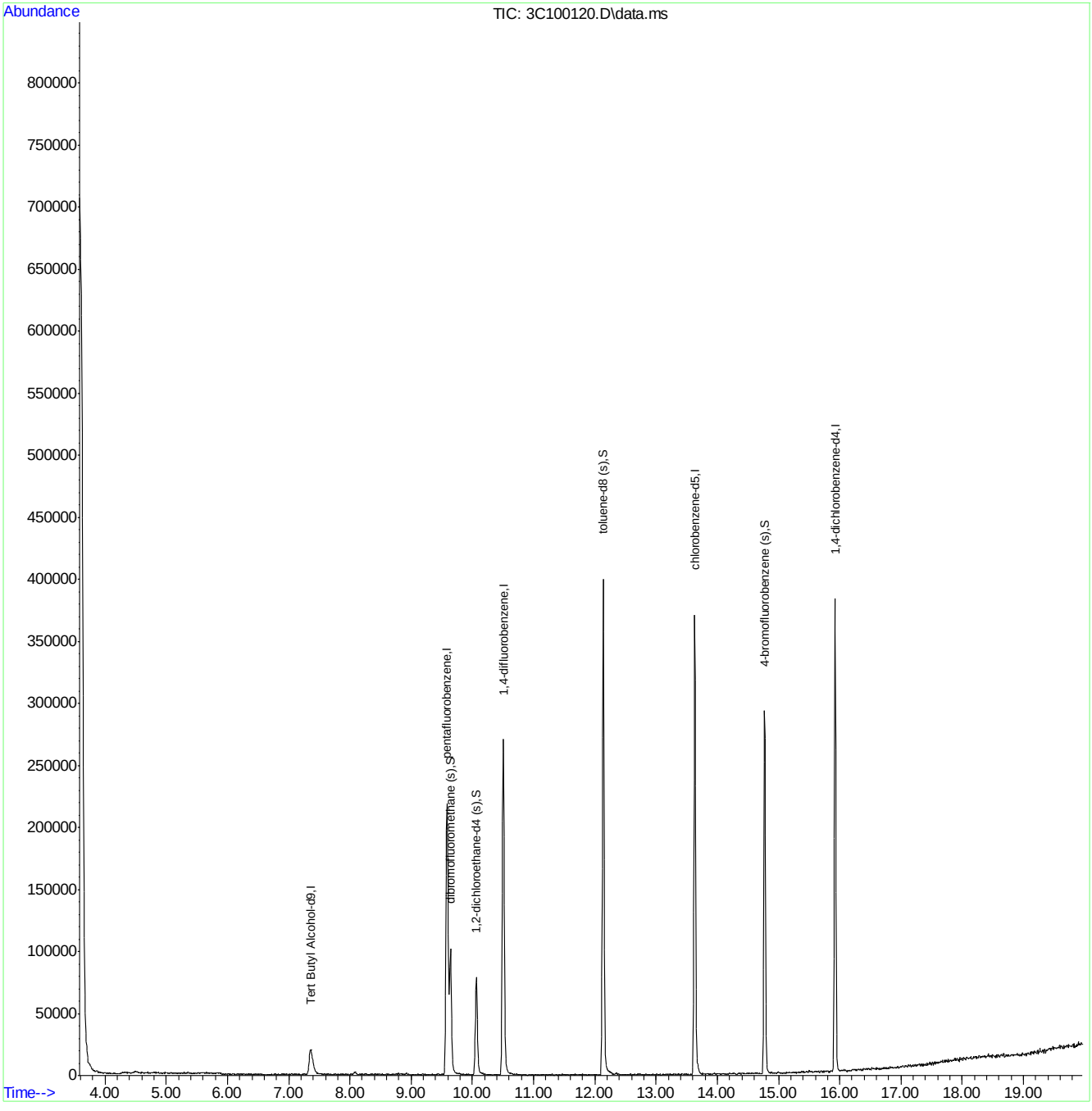
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100120.D
Acq On : 25 Jun 2013 10:23 am
Operator : prashans
Sample : MB
Misc : MS50525,V3C4450,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 27 15:33:51 2013
Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue May 28 09:01:21 2013
Response via : Initial Calibration



M3C4359.M Thu Jun 27 15:49:43 2013 ACCNJ Page: 2

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100120.D
Acq On : 25 Jun 2013 10:23 am
Operator : prashans
Sample : MB
Misc : MS50429,V3C4450,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: 3C100120.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.977	75	76	84	rVB	942	1101	0.15%	0.026%
2	4.275	127	133	134	rBV4	1196	1751	0.23%	0.042%
3	4.370	149	151	153	rBV3	1259	986	0.13%	0.024%
4	4.699	212	214	216	rVB	1275	1030	0.14%	0.025%
5	4.746	221	223	226	rBV2	709	883	0.12%	0.021%
6	4.950	259	262	266	rBV3	716	765	0.10%	0.018%
7	5.070	282	285	290	rVB6	1039	1445	0.19%	0.034%
8	5.149	297	300	301	rBV	889	777	0.10%	0.019%
9	5.238	314	317	322	rVB4	1018	1347	0.18%	0.032%
10	5.290	322	327	332	rBV4	1928	2443	0.32%	0.058%
11	5.363	336	341	343	rBV4	1474	1397	0.19%	0.033%
12	5.389	343	346	349	rBV	635	842	0.11%	0.020%
13	5.515	368	370	375	rBV3	850	1360	0.18%	0.032%
14	5.824	427	429	434	rVB4	1142	1368	0.18%	0.033%
15	5.871	434	438	442	rVB4	1248	1679	0.22%	0.040%
16	5.975	453	458	462	rVB4	1076	1594	0.21%	0.038%
17	6.012	462	465	471	rBV2	811	1222	0.16%	0.029%
18	6.101	477	482	484	rVB2	678	961	0.13%	0.023%
19	6.164	491	494	495	rVB2	1045	823	0.11%	0.020%
20	6.184	495	498	501	rBV2	940	1414	0.19%	0.034%
21	6.273	509	515	518	rBV2	849	1456	0.19%	0.035%
22	6.436	542	546	549	rBV2	1000	1082	0.14%	0.026%
23	6.561	567	570	576	rVB3	956	1492	0.20%	0.036%
24	6.603	576	578	586	rBV3	604	1304	0.17%	0.031%
25	6.723	597	601	605	rBV4	697	1058	0.14%	0.025%
26	6.775	609	611	616	rBV3	684	879	0.12%	0.021%
27	6.880	629	631	635	rBV2	687	755	0.10%	0.018%
28	6.969	645	648	652	rVB2	729	927	0.12%	0.022%
29	7.053	660	664	666	rVB2	774	933	0.12%	0.022%
30	7.089	669	671	675	rBV	764	782	0.10%	0.019%
31	7.163	683	685	694	rVB3	578	773	0.10%	0.018%
32	7.251	699	702	707	rBV3	778	1271	0.17%	0.030%
33	7.367	711	724	742	rBV3	19958	84113	11.14%	2.005%
34	8.073	854	859	869	rBV6	2016	4344	0.58%	0.104%

M3C4359.M Thu Jun 27 15:45:40 2013 ACCNJ Page: 1

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100120.D
Acq On : 25 Jun 2013 10:23 am
Operator : prashans
Sample : MB
Misc : MS50429,V3C4450,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

35	8.156	873	875	878	rVB	1109	866	0.11%	0.021%
36	8.245	887	892	896	rBV3	994	1341	0.18%	0.032%
37	8.355	909	913	914	rBV	838	857	0.11%	0.020%
38	8.407	919	923	924	rBV	754	859	0.11%	0.020%
39	8.528	941	946	949	rVB2	740	881	0.12%	0.021%
40	8.747	984	988	991	rBV	614	789	0.10%	0.019%
41	8.800	994	998	1001	rBV2	1125	1113	0.15%	0.027%
42	8.930	1015	1023	1036	rVB3	1509	4884	0.65%	0.116%
43	9.004	1036	1037	1041	rBV	725	794	0.11%	0.019%
44	9.176	1069	1070	1076	rBV2	884	1073	0.14%	0.026%
45	9.223	1076	1079	1082	rVB	831	825	0.11%	0.020%
46	9.260	1082	1086	1089	rBV2	738	1123	0.15%	0.027%
47	9.344	1099	1102	1105	rVB	815	862	0.11%	0.021%
48	9.448	1120	1122	1126	rVB3	1052	997	0.13%	0.024%
49	9.584	1137	1148	1155	rBV	218821	528191	69.98%	12.593%
50	9.642	1155	1159	1178	rVB2	100820	228801	30.31%	5.455%
51	9.908	1203	1210	1211	rVB2	819	984	0.13%	0.023%
52	10.065	1227	1240	1254	rBV2	78596	186495	24.71%	4.446%
53	10.505	1312	1324	1346	rBV	270863	582832	77.22%	13.896%
54	10.724	1363	1366	1368	rVB2	865	798	0.11%	0.019%
55	10.845	1383	1389	1395	rBV2	650	1767	0.23%	0.042%
56	11.017	1420	1422	1427	rVV	685	1044	0.14%	0.025%
57	11.153	1443	1448	1451	rVV	674	861	0.11%	0.021%
58	11.174	1451	1452	1458	rVV3	505	758	0.10%	0.018%
59	11.305	1473	1477	1480	rVB2	921	942	0.12%	0.022%
60	11.472	1504	1509	1512	rBV	1100	980	0.13%	0.023%
61	11.566	1520	1527	1528	rVB2	540	920	0.12%	0.022%
62	11.681	1547	1549	1552	rBV2	972	776	0.10%	0.019%
63	12.136	1624	1636	1667	rVB	399972	754815	100.00%	17.997%
64	12.351	1671	1677	1683	rVB4	1238	2461	0.33%	0.059%
65	12.649	1729	1734	1739	rVB2	939	1290	0.17%	0.031%
66	12.790	1760	1761	1766	rVB2	791	964	0.13%	0.023%
67	12.947	1785	1791	1795	rVB4	932	1036	0.14%	0.025%
68	13.115	1820	1823	1827	rVV2	712	863	0.11%	0.021%
69	13.198	1835	1839	1842	rBV5	974	1099	0.15%	0.026%
70	13.355	1865	1869	1878	rBV3	937	1994	0.26%	0.048%
71	13.423	1878	1882	1886	rBV3	762	1349	0.18%	0.032%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100120.D
Acq On : 25 Jun 2013 10:23 am
Operator : prashans
Sample : MB
Misc : MS50429,V3C4450,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

72	13.460	1888	1889	1894	rBV3	750	795	0.11%	0.019%
73	13.632	1912	1922	1940	rVV	370894	638932	84.65%	15.234%
74	13.831	1958	1960	1969	rVB3	782	1275	0.17%	0.030%
75	13.941	1976	1981	1982	rBV2	912	1214	0.16%	0.029%
76	13.957	1983	1984	1990	rVB4	856	878	0.12%	0.021%
77	14.025	1996	1997	2002	rVB2	612	810	0.11%	0.019%
78	14.093	2006	2010	2016	rVB4	844	1283	0.17%	0.031%
79	14.349	2052	2059	2061	rBV4	936	1287	0.17%	0.031%
80	14.433	2072	2075	2078	rBV3	1000	798	0.11%	0.019%
81	14.511	2088	2090	2096	rBV4	567	900	0.12%	0.021%
82	14.616	2106	2110	2112	rVV4	766	958	0.13%	0.023%
83	14.773	2132	2140	2154	rBV	292779	481282	63.76%	11.475%
84	14.888	2159	2162	2166	rBV4	1317	1486	0.20%	0.035%
85	14.992	2177	2182	2186	rBV3	1632	2865	0.38%	0.068%
86	15.128	2207	2208	2212	rBV3	1586	1022	0.14%	0.024%
87	15.259	2231	2233	2236	rVB2	1426	828	0.11%	0.020%
88	15.296	2239	2240	2244	rBV3	1301	952	0.13%	0.023%
89	15.500	2276	2279	2280	rBV3	1792	1078	0.14%	0.026%
90	15.547	2286	2288	2292	rVB3	883	765	0.10%	0.018%
91	15.646	2306	2307	2312	rVB4	1275	1052	0.14%	0.025%
92	15.693	2312	2316	2319	rBV4	1126	1560	0.21%	0.037%
93	15.724	2321	2322	2325	rVB2	1629	1216	0.16%	0.029%
94	15.745	2325	2326	2329	rBV3	1281	1299	0.17%	0.031%
95	15.845	2344	2345	2349	rBV3	1235	1499	0.20%	0.036%
96	15.923	2352	2360	2375	rVV	381409	594158	78.72%	14.166%
97	16.096	2391	2393	2398	rVB4	1659	1691	0.22%	0.040%
98	16.394	2447	2450	2455	rBV5	2204	3555	0.47%	0.085%
99	16.530	2473	2476	2478	rBV4	2183	1682	0.22%	0.040%
100	17.069	2577	2579	2581	rBV3	1763	1440	0.19%	0.034%

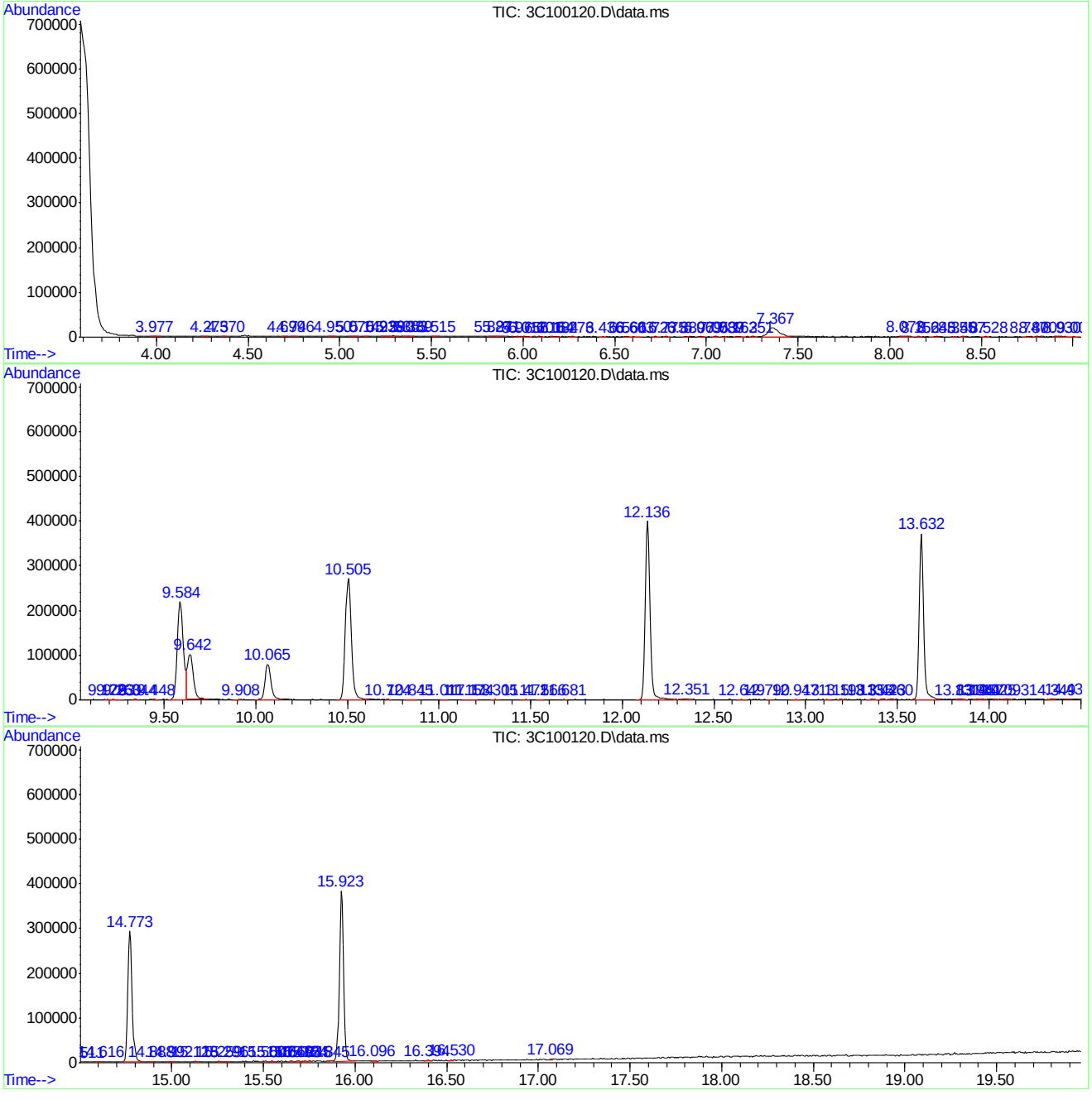
Sum of corrected areas: 4194201

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100120.D
Acq On : 25 Jun 2013 10:23 am
Operator : prashans
Sample : MB
Misc : MS50429,V3C4450,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p



M3C4359.M Thu Jun 27 15:45:40 2013 ACCNJ

Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100120.D
Acq On    : 25 Jun 2013  10:23 am
Operator  : prashans
Sample    : MB
Misc      : MS50429,V3C4450,5.0,,,,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library   : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p
```

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

```
Data Path : C:\msdchem\1\DATA\3C\v3c4450\
Data File : 3C100120.D
Acq On    : 25 Jun 2013  10:23 am
Operator  : prashans
Sample    : MB
Misc      : MS50429,V3C4450,5.0,,,,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M3C4359.M
Quant Title  : Method SW846 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library   : C:\DATABASE\NIST08.L
TIC Integration Parameters: lscint.p

                                                   |--Internal Standard---|
TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

New Jersey
ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66993-MB1	5P1139.D	1	06/26/13	EA	06/25/13	OP66993	E5P55

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	29	8.3	ug/kg	
208-96-8	Acenaphthylene	ND	29	9.1	ug/kg	
98-86-2	Acetophenone	ND	140	5.0	ug/kg	
120-12-7	Anthracene	ND	29	10	ug/kg	
1912-24-9	Atrazine	ND	140	5.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	29	9.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	29	8.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	29	9.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	29	11	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	29	11	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	57	10	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	57	17	ug/kg	
92-52-4	1,1'-Biphenyl	ND	57	3.3	ug/kg	
100-52-7	Benzaldehyde	ND	140	6.6	ug/kg	
91-58-7	2-Chloronaphthalene	ND	57	8.9	ug/kg	
106-47-8	4-Chloroaniline	ND	140	9.1	ug/kg	
86-74-8	Carbazole	ND	57	13	ug/kg	
105-60-2	Caprolactam	ND	57	9.0	ug/kg	
218-01-9	Chrysene	ND	29	9.7	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	57	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	57	8.6	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	57	8.5	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	57	8.6	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	57	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	57	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	140	7.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	29	9.7	ug/kg	
132-64-9	Dibenzofuran	ND	57	8.5	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	57	6.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	57	14	ug/kg	
84-66-2	Diethyl phthalate	ND	57	9.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	57	10	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	57	25	ug/kg	
206-44-0	Fluoranthene	ND	29	13	ug/kg	
86-73-7	Fluorene	ND	29	9.4	ug/kg	
118-74-1	Hexachlorobenzene	ND	57	9.3	ug/kg	

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66993-MB1	5P1139.D	1	06/26/13	EA	06/25/13	OP66993	E5P55

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-7

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	29	7.9	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	290	29	ug/kg	
67-72-1	Hexachloroethane	ND	140	7.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	29	9.9	ug/kg	
78-59-1	Isophorone	ND	57	7.7	ug/kg	
91-57-6	2-Methylnaphthalene	ND	57	16	ug/kg	
88-74-4	2-Nitroaniline	ND	140	13	ug/kg	
99-09-2	3-Nitroaniline	ND	140	11	ug/kg	
100-01-6	4-Nitroaniline	ND	140	11	ug/kg	
91-20-3	Naphthalene	ND	29	7.8	ug/kg	
98-95-3	Nitrobenzene	ND	57	8.3	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	57	7.0	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	140	17	ug/kg	
85-01-8	Phenanthrene	ND	29	13	ug/kg	
129-00-0	Pyrene	ND	29	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	140	8.8	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	61%	12-109%
4165-62-2	Phenol-d5	68%	14-108%
118-79-6	2,4,6-Tribromophenol	79%	20-138%
4165-60-0	Nitrobenzene-d5	55%	11-119%
321-60-8	2-Fluorobiphenyl	59%	17-115%
1718-51-0	Terphenyl-d14	109%	30-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	2.20	220	ug/kg	J
	system artifact	2.27	140	ug/kg	J
	system artifact	2.64	360	ug/kg	J
	system artifact	3.47	230	ug/kg	J
	system artifact	3.66	180	ug/kg	J
	system artifact/aldol-condensation	3.83	4400	ug/kg	J

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66993-MB1	5P1139.D	1	06/26/13	EA	06/25/13	OP66993	E5P55

The QC reported here applies to the following samples: **Method:**

JB40127-7

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/kg	

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66993-MB1	2M53990.D	1	06/28/13	OYA	06/25/13	OP66993	E2M2296

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	29	8.3	ug/kg	
208-96-8	Acenaphthylene	ND	29	9.1	ug/kg	
98-86-2	Acetophenone	ND	140	5.0	ug/kg	
120-12-7	Anthracene	ND	29	10	ug/kg	
1912-24-9	Atrazine	ND	140	5.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	29	9.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	29	8.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	29	9.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	29	11	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	29	11	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	57	10	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	57	17	ug/kg	
92-52-4	1,1'-Biphenyl	ND	57	3.3	ug/kg	
100-52-7	Benzaldehyde	ND	140	6.6	ug/kg	
91-58-7	2-Chloronaphthalene	ND	57	8.9	ug/kg	
106-47-8	4-Chloroaniline	ND	140	9.1	ug/kg	
86-74-8	Carbazole	ND	57	13	ug/kg	
105-60-2	Caprolactam	ND	57	9.0	ug/kg	
218-01-9	Chrysene	ND	29	9.7	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	57	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	57	8.6	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	57	8.5	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	57	8.6	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	57	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	57	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	140	7.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	29	9.7	ug/kg	
132-64-9	Dibenzofuran	ND	57	8.5	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	57	6.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	57	14	ug/kg	
84-66-2	Diethyl phthalate	ND	57	9.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	57	10	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	57	25	ug/kg	
206-44-0	Fluoranthene	ND	29	13	ug/kg	
86-73-7	Fluorene	ND	29	9.4	ug/kg	
118-74-1	Hexachlorobenzene	ND	57	9.3	ug/kg	

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66993-MB1	2M53990.D	1	06/28/13	OYA	06/25/13	OP66993	E2M2296

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-7

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	29	7.9	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	290	29	ug/kg	
67-72-1	Hexachloroethane	ND	140	7.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	29	9.9	ug/kg	
78-59-1	Isophorone	ND	57	7.7	ug/kg	
91-57-6	2-Methylnaphthalene	ND	57	16	ug/kg	
88-74-4	2-Nitroaniline	ND	140	13	ug/kg	
99-09-2	3-Nitroaniline	ND	140	11	ug/kg	
100-01-6	4-Nitroaniline	ND	140	11	ug/kg	
91-20-3	Naphthalene	ND	29	7.8	ug/kg	
98-95-3	Nitrobenzene	ND	57	8.3	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	57	7.0	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	140	17	ug/kg	
85-01-8	Phenanthrene	ND	29	13	ug/kg	
129-00-0	Pyrene	ND	29	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	140	8.8	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	60%	12-109%
4165-62-2	Phenol-d5	66%	14-108%
118-79-6	2,4,6-Tribromophenol	59%	20-138%
4165-60-0	Nitrobenzene-d5	54%	11-119%
321-60-8	2-Fluorobiphenyl	60%	17-115%
1718-51-0	Terphenyl-d14	90%	30-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	2.36	300	ug/kg	J
	system artifact	3.22	220	ug/kg	J
	system artifact	3.40	130	ug/kg	J
	system artifact/aldol-condensation	3.58	3800	ug/kg	J
	Total TIC, Semi-Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66993-BS1	5P1140.D	1	06/26/13	EA	06/25/13	OP66993	E5P55

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1430	1320	92	52-113
208-96-8	Acenaphthylene	1430	1260	88	49-105
98-86-2	Acetophenone	1430	1260	88	49-122
120-12-7	Anthracene	1430	1400	98	59-121
1912-24-9	Atrazine	1430	1740	122	62-162
56-55-3	Benzo(a)anthracene	1430	1400	98	57-120
50-32-8	Benzo(a)pyrene	1430	1550	109	59-124
205-99-2	Benzo(b)fluoranthene	1430	1720	120	53-135
191-24-2	Benzo(g,h,i)perylene	1430	1480	104	56-128
207-08-9	Benzo(k)fluoranthene	1430	1670	117	50-133
101-55-3	4-Bromophenyl phenyl ether	1430	1370	96	57-126
85-68-7	Butyl benzyl phthalate	1430	1500	105	56-131
92-52-4	1,1'-Biphenyl	1430	1400	98	54-125
100-52-7	Benzaldehyde	1430	1440	101	36-134
91-58-7	2-Chloronaphthalene	1430	1230	86	49-113
106-47-8	4-Chloroaniline	1430	1110	78	41-99
86-74-8	Carbazole	1430	1390	97	56-119
105-60-2	Caprolactam	1430	1440	101	47-148
218-01-9	Chrysene	1430	1380	97	57-121
111-91-1	bis(2-Chloroethoxy)methane	1430	1070	75	49-120
111-44-4	bis(2-Chloroethyl)ether	1430	1100	77	40-112
108-60-1	bis(2-Chloroisopropyl)ether	1430	1290	90	37-113
7005-72-3	4-Chlorophenyl phenyl ether	1430	1330	93	53-120
121-14-2	2,4-Dinitrotoluene	1430	1540	108	58-129
606-20-2	2,6-Dinitrotoluene	1430	1550	109	56-131
91-94-1	3,3'-Dichlorobenzidine	1430	1630	114	47-122
53-70-3	Dibenzo(a,h)anthracene	1430	1450	102	57-131
132-64-9	Dibenzofuran	1430	1290	90	53-110
84-74-2	Di-n-butyl phthalate	1430	1410	99	58-131
117-84-0	Di-n-octyl phthalate	1430	1900	133	56-143
84-66-2	Diethyl phthalate	1430	1350	95	53-124
131-11-3	Dimethyl phthalate	1430	1330	93	56-117
117-81-7	bis(2-Ethylhexyl)phthalate	1430	1540	108	57-134
206-44-0	Fluoranthene	1430	1440	101	56-125
86-73-7	Fluorene	1430	1380	97	56-119
118-74-1	Hexachlorobenzene	1430	1340	94	54-125

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66993-BS1	5P1140.D	1	06/26/13	EA	06/25/13	OP66993	E5P55

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	1430	1050	74	38-127
77-47-4	Hexachlorocyclopentadiene	2860	2510	88	28-141
67-72-1	Hexachloroethane	1430	1090	76	36-114
193-39-5	Indeno(1,2,3-cd)pyrene	1430	1500	105	58-131
78-59-1	Isophorone	1430	1010	71	49-118
91-57-6	2-Methylnaphthalene	1430	1050	74	46-109
88-74-4	2-Nitroaniline	1430	1280	90	44-138
99-09-2	3-Nitroaniline	1430	1420	99	45-112
100-01-6	4-Nitroaniline	1430	1450	102	51-124
91-20-3	Naphthalene	1430	1040	73	46-110
98-95-3	Nitrobenzene	1430	964	67	42-121
621-64-7	N-Nitroso-di-n-propylamine	1430	1040	73	39-118
86-30-6	N-Nitrosodiphenylamine	1430	1300	91	55-119
85-01-8	Phenanthrene	1430	1360	95	57-117
129-00-0	Pyrene	1430	1410	99	57-121
95-94-3	1,2,4,5-Tetrachlorobenzene	1430	1300	91	33-136

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	94%	12-109%
4165-62-2	Phenol-d5	91%	14-108%
118-79-6	2,4,6-Tribromophenol	114%	20-138%
4165-60-0	Nitrobenzene-d5	77%	11-119%
321-60-8	2-Fluorobiphenyl	100%	17-115%
1718-51-0	Terphenyl-d14	112%	30-141%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66993-MS	5P1108.D	1	06/25/13	AD	06/25/13	OP66993	E5P54
OP66993-MSD	5P1109.D	1	06/25/13	AD	06/25/13	OP66993	E5P54
JB39700-1	5P1113.D	1	06/26/13	AD	06/25/13	OP66993	E5P54

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-7

CAS No.	Compound	JB39700-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	47.1	J	3190	1630	50	1650	52	1	22-120/35
208-96-8	Acenaphthylene	59.1	J	3190	1500	45	1560	48	4	20-112/34
98-86-2	Acetophenone	ND		3190	1280	40	1240	40	3	19-128/38
120-12-7	Anthracene	75.6		3190	2300	70	2330	73	1	25-134/36
1912-24-9	Atrazine	ND		3190	2850	89	2810	91	1	38-158/35
56-55-3	Benzo(a)anthracene	126		3190	2620	78	2680	82	2	20-135/39
50-32-8	Benzo(a)pyrene	172		3190	2620	77	2870	87	9	20-137/39
205-99-2	Benzo(b)fluoranthene	105		3190	2940	89	3060	95	4	17-149/43
191-24-2	Benzo(g,h,i)perylene	128		3190	2610	78	2690	83	3	20-138/39
207-08-9	Benzo(k)fluoranthene	107		3190	2850	86	2920	91	2	17-134/45
101-55-3	4-Bromophenyl phenyl ether	ND		3190	2170	68	1960	63	10	27-132/36
85-68-7	Butyl benzyl phthalate	ND		3190	2680	84	2670	86	0	27-139/38
92-52-4	1,1'-Biphenyl	ND		3190	1650	52	1610	52	2	25-127/34
100-52-7	Benzaldehyde	ND		3190	1250	39	1290	42	3	10-140/38
91-58-7	2-Chloronaphthalene	ND		3190	1380	43	1370	44	1	22-116/35
106-47-8	4-Chloroaniline	ND		3190	1270	40	1220	39	4	15-105/36
86-74-8	Carbazole	ND		3190	2360	74	2370	77	0	28-128/34
105-60-2	Caprolactam	ND		3190	1770	56	1670	54	6	12-154/40
218-01-9	Chrysene	164		3190	2510	74	2670	81	6	21-134/39
111-91-1	bis(2-Chloroethoxy)methane	ND		3190	1320	41	1270	41	4	20-125/36
111-44-4	bis(2-Chloroethyl)ether	ND		3190	1050	33	1110	36	6	13-114/40
108-60-1	bis(2-Chloroisopropyl)ether	ND		3190	1100	35	1160	37	5	13-112/36
7005-72-3	4-Chlorophenyl phenyl ether	ND		3190	1800	56	1790	58	1	25-125/34
121-14-2	2,4-Dinitrotoluene	ND		3190	2130	67	2270	73	6	21-133/35
606-20-2	2,6-Dinitrotoluene	ND		3190	2180	68	1960	63	11	23-134/34
91-94-1	3,3'-Dichlorobenzidine	ND		3190	2180	68	2160	70	1	12-130/39
53-70-3	Dibenzo(a,h)anthracene	29.0	J	3190	2530	78	2490	79	2	23-141/39
132-64-9	Dibenzofuran	ND		3190	1630	51	1670	54	2	21-120/35
84-74-2	Di-n-butyl phthalate	ND		3190	2390	75	2450	79	2	30-134/34
117-84-0	Di-n-octyl phthalate	ND		3190	3200	100	3110	100	3	21-150/39
84-66-2	Diethyl phthalate	ND		3190	1990	62	1950	63	2	30-125/33
131-11-3	Dimethyl phthalate	ND		3190	1750	55	1760	57	1	30-124/32
117-81-7	bis(2-Ethylhexyl)phthalate	ND		3190	2690	84	2660	86	1	25-146/39
206-44-0	Fluoranthene	134		3190	2450	73	2610	80	6	17-139/43
86-73-7	Fluorene	29.0	J	3190	1970	61	1900	60	4	24-127/36
118-74-1	Hexachlorobenzene	ND		3190	2140	67	2020	65	6	24-129/36

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66993-MS	5P1108.D	1	06/25/13	AD	06/25/13	OP66993	E5P54
OP66993-MSD	5P1109.D	1	06/25/13	AD	06/25/13	OP66993	E5P54
JB39700-1	5P1113.D	1	06/26/13	AD	06/25/13	OP66993	E5P54

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-7

CAS No.	Compound	JB39700-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		3190	1100	35	958	31	14	10-125/40
77-47-4	Hexachlorocyclopentadiene	ND		6370	1520	24	1140	18	29	10-115/51
67-72-1	Hexachloroethane	ND		3190	790	25	755	24	5	10-106/40
193-39-5	Indeno(1,2,3-cd)pyrene	98.3		3190	2770	84	2750	86	1	21-141/39
78-59-1	Isophorone	ND		3190	1180	37	1140	37	3	22-121/35
91-57-6	2-Methylnaphthalene	ND		3190	1150	36	1200	39	4	14-119/39
88-74-4	2-Nitroaniline	ND		3190	1730	54	1830	59	6	19-141/34
99-09-2	3-Nitroaniline	ND		3190	2070	65	2110	68	2	20-119/35
100-01-6	4-Nitroaniline	ND		3190	2170	68	2200	71	1	23-123/36
91-20-3	Naphthalene	ND		3190	1150	36	1130	36	2	14-115/38
98-95-3	Nitrobenzene	ND		3190	1040	33	1060	34	2	13-125/36
621-64-7	N-Nitroso-di-n-propylamine	ND		3190	1060	33	1050	34	1	12-125/38
86-30-6	N-Nitrosodiphenylamine	ND		3190	2160	68	2120	68	2	21-139/35
85-01-8	Phenanthrene	126		3190	2310	69	2390	73	3	16-139/41
129-00-0	Pyrene	252		3190	2640	75	2800	82	6	15-143/41
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		3190	1370	43	1280	41	7	13-128/37

CAS No.	Surrogate Recoveries	MS	MSD	JB39700-1	Limits
367-12-4	2-Fluorophenol	40%	42%	43%	12-109%
4165-62-2	Phenol-d5	42%	43%	44%	14-108%
118-79-6	2,4,6-Tribromophenol	89%	90%	80%	20-138%
4165-60-0	Nitrobenzene-d5	37%	38%	44%	11-119%
321-60-8	2-Fluorobiphenyl	49%	51%	56%	17-115%
1718-51-0	Terphenyl-d14	88%	86%	77%	30-141%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2287-DFTPP
Lab File ID: 2M53827.D
Instrument ID: GCMS2M
Injection Date: 06/22/13
Injection Time: 09:20

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	104885	44.2		Pass
68	Less than 2.0% of mass 69	1452	0.61	(1.49) [a]	Pass
69	Mass 69 relative abundance	97200	40.9		Pass
70	Less than 2.0% of mass 69	333	0.14	(0.34) [a]	Pass
127	40.0 - 60.0% of mass 198	135948	57.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	237525	100.0		Pass
199	5.0 - 9.0% of mass 198	15606	6.57		Pass
275	10.0 - 30.0% of mass 198	56074	23.6		Pass
365	1.0 - 100.0% of mass 198	7394	3.11		Pass
441	Present, but less than mass 443	30237	12.7	(73.3) [b]	Pass
442	40.0 - 100.0% of mass 198	206285	86.8		Pass
443	17.0 - 23.0% of mass 442	41230	17.4	(20.0) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M2287-IC2287	2M53828.D	06/22/13	09:38	00:18	Initial cal 100
E2M2287-IC2287	2M53829.D	06/22/13	10:06	00:46	Initial cal 1
E2M2287-ICC2287	2M53830.D	06/22/13	10:48	01:28	Initial cal 50
E2M2287-IC2287	2M53831.D	06/22/13	11:16	01:56	Initial cal 25
E2M2287-IC2287	2M53832.D	06/22/13	11:44	02:24	Initial cal 80
E2M2287-IC2287	2M53833.D	06/22/13	12:12	02:52	Initial cal 2
E2M2287-IC2287	2M53834.D	06/22/13	12:40	03:20	Initial cal 5
E2M2287-IC2287	2M53835.D	06/22/13	13:08	03:48	Initial cal 10

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2288-DFTPP
Lab File ID: 2M53836.D
Instrument ID: GCMS2M
Injection Date: 06/22/13
Injection Time: 13:40

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	91399	41.8		Pass
68	Less than 2.0% of mass 69	1048	0.48	(1.22) [a]	Pass
69	Mass 69 relative abundance	85939	39.3		Pass
70	Less than 2.0% of mass 69	258	0.12	(0.30) [a]	Pass
127	40.0 - 60.0% of mass 198	120909	55.3		Pass
197	Less than 1.0% of mass 198	694	0.32		Pass
198	Base peak, 100% relative abundance	218608	100.0		Pass
199	5.0 - 9.0% of mass 198	14313	6.55		Pass
275	10.0 - 30.0% of mass 198	51506	23.6		Pass
365	1.0 - 100.0% of mass 198	6398	2.93		Pass
441	Present, but less than mass 443	30325	13.9	(73.0) [b]	Pass
442	40.0 - 100.0% of mass 198	214298	98.0		Pass
443	17.0 - 23.0% of mass 442	41568	19.0	(19.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M2288-IC2288	2M53837.D	06/22/13	13:53	00:13	Initial cal 100
E2M2288-IC2288	2M53838.D	06/22/13	14:22	00:42	Initial cal 80
E2M2288-ICC2288	2M53839.D	06/22/13	14:50	01:10	Initial cal 50
E2M2288-IC2288	2M53840.D	06/22/13	15:18	01:38	Initial cal 25
E2M2288-IC2288	2M53841.D	06/22/13	15:46	02:06	Initial cal 10
E2M2288-IC2288	2M53842.D	06/22/13	16:15	02:35	Initial cal 5
E2M2288-IC2288	2M53843.D	06/22/13	16:43	03:03	Initial cal 2
E2M2288-IC2288	2M53844.D	06/22/13	17:12	03:32	Initial cal 1
E2M2288-ICV2287	2M53845.D	06/22/13	17:40	04:00	Initial cal verification 50
E2M2288-ICV2288	2M53846A.D	06/22/13	18:08	04:28	Initial cal verification 50
E2M2288-ICV2287	2M53846.D	06/22/13	18:08	04:28	Initial cal verification 50
E2M2288-ICV2288	2M53847A.D	06/22/13	18:37	04:57	Initial cal verification 50
E2M2288-ICV2287	2M53847.D	06/22/13	18:37	04:57	Initial cal verification 50
E2M2288-ICV2287	2M53848.D	06/22/13	19:05	05:25	Initial cal verification 50
E2M2288-ICV2287	2M53849.D	06/22/13	19:33	05:53	Initial cal verification 50
E2M2288-ICV2288	2M53850.D	06/22/13	20:02	06:22	Initial cal verification 50
E2M2288-ICV2288	2M53851.D	06/22/13	20:30	06:50	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2296-DFTPP
Lab File ID: 2M53980.D
Instrument ID: GCMS2M
Injection Date: 06/28/13
Injection Time: 09:59

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	152727	42.4		Pass
68	Less than 2.0% of mass 69	2140	0.59	(1.50) [a]	Pass
69	Mass 69 relative abundance	142529	39.6		Pass
70	Less than 2.0% of mass 69	649	0.18	(0.46) [a]	Pass
127	40.0 - 60.0% of mass 198	208282	57.9		Pass
197	Less than 1.0% of mass 198	556	0.15		Pass
198	Base peak, 100% relative abundance	359914	100.0		Pass
199	5.0 - 9.0% of mass 198	24032	6.68		Pass
275	10.0 - 30.0% of mass 198	78333	21.8		Pass
365	1.0 - 100.0% of mass 198	9387	2.61		Pass
441	Present, but less than mass 443	41754	11.6	(71.6) [b]	Pass
442	40.0 - 100.0% of mass 198	296237	82.3		Pass
443	17.0 - 23.0% of mass 442	58330	16.2	(19.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M2296-CC2287	2M53981.D	06/28/13	10:11	00:12	Continuing cal 25
E2M2296-CC2288	2M53982.D	06/28/13	10:40	00:41	Continuing cal 25
OP67055-MB1	2M53988.D	06/28/13	13:33	03:34	Method Blank
OP67055-BS1	2M53989.D	06/28/13	14:02	04:03	Blank Spike
OP66993-MB1	2M53990.D	06/28/13	14:31	04:32	Method Blank
ZZZZZZ	2M53991.D	06/28/13	14:59	05:00	(unrelated sample)
ZZZZZZ	2M53992.D	06/28/13	15:28	05:29	(unrelated sample)
ZZZZZZ	2M53993.D	06/28/13	15:57	05:58	(unrelated sample)
ZZZZZZ	2M53994.D	06/28/13	16:26	06:27	(unrelated sample)
ZZZZZZ	2M53995.D	06/28/13	16:55	06:56	(unrelated sample)
JB40473-17	2M53996.D	06/28/13	17:24	07:25	(used for QC only; not part of job JB40127)
OP67055-MS	2M53997.D	06/28/13	17:53	07:54	Matrix Spike
OP67055-MSD	2M53998.D	06/28/13	18:22	08:23	Matrix Spike Duplicate
ZZZZZZ	2M53999.D	06/28/13	18:50	08:51	(unrelated sample)
ZZZZZZ	2M54000.D	06/28/13	19:19	09:20	(unrelated sample)
ZZZZZZ	2M54001.D	06/28/13	19:48	09:49	(unrelated sample)
ZZZZZZ	2M54002.D	06/28/13	20:17	10:18	(unrelated sample)
ZZZZZZ	2M54003.D	06/28/13	20:46	10:47	(unrelated sample)
ZZZZZZ	2M54004.D	06/28/13	21:14	11:15	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample:	E2M2296-DFTPP	**Injection Date:**	06/28/13
Lab File ID:	2M53980.D	**Injection Time:**	09:59
Instrument ID:	GCMS2M		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	2M54005.D	06/28/13	21:43	11:44	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P31-DFTPP
Lab File ID: 5P603.D
Instrument ID: GCMS5P
Injection Date: 06/11/13
Injection Time: 14:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	29333	41.5		Pass
68	Less than 2.0% of mass 69	248	0.35	(0.87) [a]	Pass
69	Mass 69 relative abundance	28346	40.1		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	33229	47.0		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	70680	100.0		Pass
199	5.0 - 9.0% of mass 198	5159	7.30		Pass
275	10.0 - 30.0% of mass 198	16476	23.3		Pass
365	1.0 - 100.0% of mass 198	2231	3.16		Pass
441	Present, but less than mass 443	8663	12.3	(70.6) [b]	Pass
442	40.0 - 100.0% of mass 198	59919	84.8		Pass
443	17.0 - 23.0% of mass 442	12267	17.4	(20.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P31-ICC31	5P604.D	06/11/13	14:57	00:38	Initial cal 50
E5P31-IC31	5P605.D	06/11/13	15:27	01:08	Initial cal 25
E5P31-IC31	5P606.D	06/11/13	15:56	01:37	Initial cal 100
E5P31-IC31	5P607.D	06/11/13	16:26	02:07	Initial cal 80
E5P31-IC31	5P608.D	06/11/13	16:56	02:37	Initial cal 1
E5P31-IC31	5P609.D	06/11/13	17:25	03:06	Initial cal 2
E5P31-IC31	5P610.D	06/11/13	17:54	03:35	Initial cal 5
E5P31-IC31	5P611.D	06/11/13	18:24	04:05	Initial cal 10

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P32-DFTPP
Lab File ID: 5P612.D
Instrument ID: GCMS5P
Injection Date: 06/11/13
Injection Time: 18:48

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	28535	40.4		Pass
68	Less than 2.0% of mass 69	188	0.27	(0.70) [a]	Pass
69	Mass 69 relative abundance	27000	38.2		Pass
70	Less than 2.0% of mass 69	340	0.48	(1.26) [a]	Pass
127	40.0 - 60.0% of mass 198	31770	45.0		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	70589	100.0		Pass
199	5.0 - 9.0% of mass 198	4498	6.37		Pass
275	10.0 - 30.0% of mass 198	16670	23.6		Pass
365	1.0 - 100.0% of mass 198	2523	3.57		Pass
441	Present, but less than mass 443	10841	15.4	(83.5) [b]	Pass
442	40.0 - 100.0% of mass 198	69568	98.6		Pass
443	17.0 - 23.0% of mass 442	12984	18.4	(18.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P32-IC32	5P613.D	06/11/13	19:02	00:14	Initial cal 100
E5P32-IC32	5P614.D	06/11/13	19:31	00:43	Initial cal 80
E5P32-ICC32	5P615.D	06/11/13	20:00	01:12	Initial cal 50
E5P32-IC32	5P616.D	06/11/13	20:30	01:42	Initial cal 25
E5P32-IC32	5P617.D	06/11/13	20:59	02:11	Initial cal 10
E5P32-IC32	5P618.D	06/11/13	21:28	02:40	Initial cal 5
E5P32-IC32	5P619.D	06/11/13	21:58	03:10	Initial cal 2
E5P32-IC32	5P620.D	06/11/13	22:27	03:39	Initial cal 1
E5P32-ICV31	5P621.D	06/11/13	22:56	04:08	Initial cal verification 50
E5P32-ICV32	5P622A.D	06/11/13	23:26	04:38	Initial cal verification 50
E5P32-ICV31	5P622.D	06/11/13	23:26	04:38	Initial cal verification 50
E5P32-ICV32	5P623A.D	06/11/13	23:55	05:07	Initial cal verification 50
E5P32-ICV31	5P623.D	06/11/13	23:55	05:07	Initial cal verification 50
E5P32-ICV31	5P624.D	06/12/13	00:24	05:36	Initial cal verification 50
E5P32-ICV31	5P626.D	06/12/13	01:23	06:35	Initial cal verification 50
E5P32-ICV32	5P626A.D	06/12/13	01:23	06:35	Initial cal verification 50
E5P32-ICV32	5P627.D	06/12/13	01:52	07:04	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P54-DFTPP
Lab File ID: 5P1101.D
Instrument ID: GCMS5P
Injection Date: 06/25/13
Injection Time: 20:10

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	14948	40.5		Pass
68	Less than 2.0% of mass 69	70	0.19	(0.52) [a]	Pass
69	Mass 69 relative abundance	13363	36.2		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	16855	45.6		Pass
197	Less than 1.0% of mass 198	86	0.23		Pass
198	Base peak, 100% relative abundance	36930	100.0		Pass
199	5.0 - 9.0% of mass 198	2262	6.13		Pass
275	10.0 - 30.0% of mass 198	8077	21.9		Pass
365	1.0 - 100.0% of mass 198	1261	3.41		Pass
441	Present, but less than mass 443	4308	11.7	(72.5) [b]	Pass
442	40.0 - 100.0% of mass 198	30989	83.9		Pass
443	17.0 - 23.0% of mass 442	5940	16.1	(19.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P54-CC31	5P1102.D	06/25/13	20:23	00:13	Continuing cal 25
E5P54-CC32	5P1105.D	06/25/13	21:51	01:41	Continuing cal 25
OP66993-MS	5P1108.D	06/25/13	23:17	03:07	Matrix Spike
OP66993-MSD	5P1109.D	06/25/13	23:46	03:36	Matrix Spike Duplicate
ZZZZZZ	5P1110A.D	06/26/13	01:15	05:05	(unrelated sample)
ZZZZZZ	5P1111.D	06/26/13	01:43	05:33	(unrelated sample)
ZZZZZZ	5P1112.D	06/26/13	02:12	06:02	(unrelated sample)
JB39700-1	5P1113.D	06/26/13	02:41	06:31	(used for QC only; not part of job JB40127)
ZZZZZZ	5P1114.D	06/26/13	03:09	06:59	(unrelated sample)
ZZZZZZ	5P1115.D	06/26/13	03:38	07:28	(unrelated sample)
ZZZZZZ	5P1116.D	06/26/13	04:06	07:56	(unrelated sample)
ZZZZZZ	5P1119.D	06/26/13	05:32	09:22	(unrelated sample)
ZZZZZZ	5P1120.D	06/26/13	06:00	09:50	(unrelated sample)
JB40127-7	5P1122.D	06/26/13	06:57	10:47	P-1
ZZZZZZ	5P1124.D	06/26/13	07:53	11:43	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P55-DFTPP
Lab File ID: 5P1135.D
Instrument ID: GCMS5P
Injection Date: 06/26/13
Injection Time: 09:59

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	15444	41.8		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	14305	38.8		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	17089	46.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	36914	100.0		Pass
199	5.0 - 9.0% of mass 198	2819	7.64		Pass
275	10.0 - 30.0% of mass 198	7481	20.3		Pass
365	1.0 - 100.0% of mass 198	1235	3.35		Pass
441	Present, but less than mass 443	4545	12.3	(77.0) [b]	Pass
442	40.0 - 100.0% of mass 198	27507	74.5		Pass
443	17.0 - 23.0% of mass 442	5903	16.0	(21.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P55-CC31	5P1136.D	06/26/13	10:13	00:14	Continuing cal 50
E5P55-CC32	5P1138.D	06/26/13	12:02	02:03	Continuing cal 50
OP66993-MB1	5P1139.D	06/26/13	12:46	02:47	Method Blank
OP66993-BS1	5P1140.D	06/26/13	13:15	03:16	Blank Spike
ZZZZZZ	5P1141.D	06/26/13	13:44	03:45	(unrelated sample)
ZZZZZZ	5P1142.D	06/26/13	14:12	04:13	(unrelated sample)
ZZZZZZ	5P1143.D	06/26/13	14:41	04:42	(unrelated sample)
ZZZZZZ	5P1144.D	06/26/13	15:10	05:11	(unrelated sample)
ZZZZZZ	5P1145.D	06/26/13	15:39	05:40	(unrelated sample)
JB39098-1	5P1146.D	06/26/13	16:19	06:20	(used for QC only; not part of job JB40127)

Semivolatile Internal Standard Area Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	E2M2296-CC2287	**Injection Date:**	06/28/13
Lab File ID:	2M53981.D	**Injection Time:**	10:11
Instrument ID:	GCMS2M	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	525873	4.80	2149201	5.96	1199827	8.32	1748018	10.94	1497216	16.11	1432798	18.72
Upper Limit [a]	1051746	5.30	4298402	6.46	2399654	8.82	3496036	11.44	2994432	16.61	2865596	19.22
Lower Limit [b]	262937	4.30	1074601	5.46	599914	7.82	874009	10.44	748608	15.61	716399	18.22

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP67055-MB1	540023	4.80	2199771	5.96	1201580	8.32	1834809	10.94	1611901	16.10	1435088	18.72
OP67055-BS1	560072	4.80	2300249	5.96	1245635	8.32	1706431	10.95	1466560	16.11	1507583	18.72
OP66993-MB1	491980	4.80	2018709	5.96	1113645	8.32	1703494	10.94	1512622	16.10	1373987	18.72
ZZZZZZ	618097	4.80	2559002	5.96	1397824	8.32	2086748	10.95	1786435	16.12	1634598	18.74
ZZZZZZ	611395	4.80	2444241	5.96	1361116	8.32	2066966	10.95	1824762	16.11	1602681	18.72
ZZZZZZ	559501	4.80	2257490	5.96	1251775	8.32	1919411	10.94	1731061	16.11	1529959	18.72
ZZZZZZ	538968	4.80	2156073	5.96	1196402	8.32	1839624	10.94	1653540	16.11	1472924	18.72
ZZZZZZ	535909	4.80	2161822	5.96	1193036	8.32	1840311	10.94	1640721	16.11	1480046	18.72
JB40473-17	531068	4.80	2114682	5.96	1167883	8.32	1795545	10.94	1606653	16.11	1451027	18.72
OP67055-MS	547248	4.80	2268443	5.96	1236795	8.33	1757649	10.95	1466852	16.11	1495224	18.72
OP67055-MSD	544588	4.80	2251373	5.96	1220349	8.33	1725661	10.95	1432663	16.11	1478654	18.72
ZZZZZZ	505417	4.80	2013380	5.96	1124694	8.32	1727438	10.94	1522919	16.10	1385125	18.72
ZZZZZZ	544719	4.80	2094495	5.96	1249052	8.33	1938028	10.95	1731668	16.11	1567669	18.72
ZZZZZZ	555410	4.80	2071058	5.96	1247704	8.33	1947593	10.95	1753284	16.11	1594381	18.72
ZZZZZZ	517063	4.80	1883604	5.96	996266	8.33	1621581	10.95	1602783	16.11	1512668	18.72
ZZZZZZ	620071	4.80	2495756	5.96	1373961	8.32	2106681	10.94	1865667	16.10	1686825	18.72
ZZZZZZ	538641	4.80	2192099	5.96	1226880	8.32	1887144	10.94	1721027	16.10	1574015	18.72
ZZZZZZ	570432	4.80	2327911	5.96	1279708	8.32	1969400	10.94	1773097	16.11	1598815	18.72

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	E5P54-CC31	**Injection Date:**	06/25/13
Lab File ID:	5P1102.D	**Injection Time:**	20:23
Instrument ID:	GCMS5P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	70461	5.04	233218	6.11	136067	8.40	221779	10.99	250051	16.18	186717	18.76
Upper Limit [a]	140922	5.54	466436	6.61	272134	8.90	443558	11.49	500102	16.68	373434	19.26
Lower Limit [b]	35231	4.54	116609	5.61	68034	7.90	110890	10.49	125026	15.68	93359	18.26

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP66993-MS	52908	5.04	194461	6.10	102947	8.40	155097	10.98	152294	16.17	117822	18.76
OP66993-MSD	48743	5.04	182796	6.10	96248	8.40	147502	10.98	150333	16.17	116420	18.76
ZZZZZZ	37312	5.04	143774	6.10	90047	8.40	150358	10.98	146220	16.17	104608	18.76
ZZZZZZ	45547	5.04	164650	6.10	95787	8.40	151772	10.98	151049	16.17	112490	18.75
ZZZZZZ	41873	5.04	159386	6.10	92552	8.40	146152	10.98	141423	16.17	103538	18.76
JB39700-1	51930	5.04	184284	6.10	103448	8.40	153603	10.98	153415	16.16	117683	18.76
ZZZZZZ	55054	5.04	194878	6.10	105388	8.40	165424	10.98	168427	16.17	126585	18.76
ZZZZZZ	57523	5.04	204243	6.10	113919	8.40	171855	10.98	184483	16.17	138924	18.76
ZZZZZZ	59208	5.04	212830	6.10	115005	8.40	178105	10.98	183040	16.17	132965	18.76
ZZZZZZ	48673	5.04	179560	6.10	100005	8.40	156311	10.98	162755	16.18	129462	18.77
ZZZZZZ	40964	5.04	145177	6.10	78340	8.40	122227	10.98	125873	16.17	98432	18.76
JB40127-7	37382	5.04	168217	6.10	115962	8.40	199012	10.98	168530	16.17	126693	18.76
ZZZZZZ	56981	5.04	211611	6.10	118662	8.40	181855	10.99	196160	16.18	155440	18.77

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	E5P55-CC31	**Injection Date:**	06/26/13
Lab File ID:	5P1136.D	**Injection Time:**	10:13
Instrument ID:	GCMS5P	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	53244	5.04	203844	6.10	117052	8.40	188686	10.98	204071	16.17	151100	18.75
Upper Limit [a]	106488	5.54	407688	6.60	234104	8.90	377372	11.48	408142	16.67	302200	19.25
Lower Limit [b]	26622	4.54	101922	5.60	58526	7.90	94343	10.48	102036	15.67	75550	18.25

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP66993-MB1	35716	5.03	137368	6.10	80350	8.39	128672	10.97	128235	16.16	93297	18.75
OP66993-BS1	36944	5.03	157866	6.10	79941	8.39	130867	10.97	135987	16.16	96093	18.75
ZZZZZZ	35616	5.03	142139	6.10	92671	8.39	164586	10.97	175401	16.16	127458	18.75
ZZZZZZ	43245	5.03	159575	6.10	92985	8.39	148840	10.97	150464	16.16	95205	18.75
ZZZZZZ	43064	5.03	163438	6.10	93161	8.39	151893	10.97	150689	16.16	109632	18.76
ZZZZZZ	43622	5.03	167025	6.10	94634	8.39	150260	10.98	154100	16.17	113523	18.76
ZZZZZZ	40137	5.04	157475	6.20	88544	8.39	141887	10.98	145492	16.16	108204	18.76
JB39098-1	36295	5.03	131548	6.10	77814	8.39	129739	10.98	133138	16.16	96189	18.76

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JB40127-7	5P1122.D	42.0	44.0	68.0
OP66993-BS1	5P1140.D	77.0	100.0	112.0
OP66993-MB1	5P1139.D	55.0	59.0	109.0
OP66993-MB1	2M53990.D	54.0	60.0	90.0
OP66993-MS	5P1108.D	37.0	49.0	88.0
OP66993-MSD	5P1109.D	38.0	51.0	86.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	11-119%
S2 = 2-Fluorobiphenyl	17-115%
S3 = Terphenyl-d14	30-141%

Initial Calibration Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2287-ICC2287
Lab FileID: 2M53830.D

Response Factor Report MS2M

Method : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umSat Jun 22 13:37:29 2013
Last Update : Sat Jun 22 13:37:29 2013
Response via : Initial Calibration

Calibration Files
2 =2m53833.D 5 =2m53834.D 25 =2m53831.D 80 =2m53832.D
100 =2m53828.D 50 =2m53830.D 1 =2m53829.D 10 =2m53835.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane	0.671	0.764	0.704	0.710	0.690	0.757	0.772	0.718	0.723	5.12
3) Pyridine	1.863	1.955	1.806	1.805	1.781	1.942	2.135	1.825	1.889	6.27
4) N-Nitrosodim	1.124	1.247	1.145	1.174	1.149	1.254	1.266	1.163	1.190	4.73
5) 2-Fluorophen	1.471	1.558	1.515	1.492	1.439	1.555	1.639	1.500	1.521	4.09
6) Indene	2.890	3.020	2.688	2.148	1.869	2.549	3.085	2.849	2.637	16.32
7) Cumene	3.954	4.174	3.727	3.398	3.146	3.701	4.364	3.888	3.794	10.42
8) Phenol-d5	1.886	2.004	1.861	1.762	1.621	1.898	2.017	1.885	1.867	6.84
9) Phenol	2.370	2.509	2.306	2.120	1.861	2.360	2.607	2.389	2.315	10.04
10) Aniline	2.783	2.826	2.770	2.137	1.946	2.796	3.074	2.621	2.619	14.55
11) bis(2-Chloro	1.689	1.723	1.607	1.524	1.428	1.645	1.782	1.659	1.632	6.90
12) 2-Chlorophen	1.678	1.807	1.675	1.543	1.431	1.683	1.802	1.706	1.666	7.55
13) Decane	1.422	1.540	1.387	1.263	1.173	1.475	1.642	1.419	1.415	10.47
14) 1,3-Dichloro	1.914	2.020	1.797	1.629	1.493	1.797	2.120	1.906	1.834	11.08
15) 1,4-Dichloro	1.876	2.021	1.785	1.598	1.456	1.781	2.118	1.879	1.814	11.78
16) Benzyl alcoh	1.138	1.185	1.159	1.102	1.011	1.204	1.248	1.163	1.151	6.21
17) 1,2-Dichloro	1.821	1.932	1.673	1.466	1.325	1.636	1.989	1.782	1.703	13.30
18) Acetophenone	2.304	2.381	2.037	1.634	1.479	1.889	2.568	2.188	2.060	18.21
19) 2-Methylphen	1.596	1.670	1.595	1.363	1.216	1.591	1.693	1.604	1.541	10.67
20) 2,2'-oxybis(	1.978	2.090	1.909	1.747	1.579	2.037	2.330	1.980	1.956	11.49
21) 3&4-Methylph	1.618	1.731	1.587	1.251	1.130	1.463	1.702	1.633	1.514	14.39
22) n-Nitroso-di	1.187	1.208	1.028	0.866	0.803	0.970	1.269	1.105	1.055	15.88
23) Hexachloroet	0.561	0.572	0.527	0.481	0.439	0.527	0.546	0.554	0.526	8.51
24) I Naphthalene-d8	----------ISTD----------									
25) Nitrobenzene	0.352	0.380	0.350	0.328	0.316	0.357	0.407	0.364	0.357	7.99
26) Nitrobenzene	0.405	0.448	0.412	0.372	0.346	0.414	0.462	0.431	0.411	9.26
27) Quinoline	0.784	0.817	0.764	0.734	0.717	0.780	0.843	0.783	0.778	5.26
28) Isophorone	0.705	0.756	0.726	0.660	0.633	0.724	0.721	0.737	0.708	5.83
29) 2-Nitropheno	0.195	0.216	0.218	0.203	0.187	0.218	0.198	0.214	0.206	5.91
30) 2,4-Dimethyl	0.351	0.312	0.387	0.334	0.315	0.386	0.387	0.325	0.350	9.43
31) Benzoic acid		0.207	0.279	0.330	0.334	0.312		0.236	0.283	18.54
32) bis(2-Chloro	0.448	0.472	0.440	0.407	0.376	0.436	0.476	0.458	0.439	7.62
33) 2,4-Dichloro	0.296	0.321	0.304	0.275	0.259	0.301	0.303	0.313	0.296	6.82
34) 2,6-Dichloro	0.310	0.317	0.301	0.253	0.235	0.286	0.316	0.313	0.291	10.70
35) 1,3,5-Trichl	0.351	0.362	0.321	0.272	0.238	0.305	0.393	0.345	0.323	15.58
36) 1,2,4-Trichl	0.337	0.355	0.315	0.278	0.255	0.305	0.377	0.335	0.320	12.55
37) 1,2,3-Trichl	0.315	0.341	0.300	0.258	0.239	0.288	0.361	0.316	0.302	13.41
38) Naphthalene	1.242	1.310	1.160	0.992	0.914	1.118	1.346	1.227	1.163	12.94
39) 4-Chloroanil	0.529	0.543	0.520	0.425	0.385	0.505	0.540	0.519	0.496	11.78
40) 2,3-Dichloro	0.354	0.376	0.341	0.297	0.278	0.332	0.396	0.360	0.342	11.47
41) Caprolactam	0.135	0.152	0.160	0.163	0.173	0.173	0.142	0.154	0.157	8.70
42) Hexachlorobu	0.170	0.174	0.157	0.132	0.121	0.148	0.191	0.166	0.157	14.50
43) 4-Chloro-3-m	0.311	0.336	0.340	0.312	0.295	0.340	0.333	0.336	0.325	5.22
44) 2-Methylnaph	0.637	0.706	0.633	0.549	0.510	0.616	0.726	0.665	0.630	11.63
45) 1-Methylnaph	0.744	0.793	0.723	0.637	0.592	0.706	0.834	0.756	0.723	10.90

Initial Calibration Summary

Job Number: JB40127 **Sample:** E2M2287-ICC2287
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 2M53830.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

46)	Dimethylnaph	0.653	0.698	0.649	0.573	0.532	0.645	0.686	0.679	0.640	9.03
47)	I Acenaphthene-d10	----------ISTD----------									
48)	Hexachlorocy	0.282	0.317	0.299	0.265	0.230	0.290	0.300	0.307	0.286	9.61
49)	2,4,6-Trichl	0.339	0.376	0.338	0.302	0.269	0.331	0.346	0.364	0.333	10.16
50)	2,4,5-Trichl	0.367	0.397	0.381	0.362	0.335	0.390	0.366	0.384	0.373	5.27
51)	2-Fluorobiph	1.259	1.384	1.178	1.071	0.977	1.180	1.375	1.276	1.212	11.65
52)	2-Chloronaph	1.274	1.397	1.203	1.065	0.952	1.197	1.401	1.308	1.225	12.75
53)	Biphenyl	1.663	1.769	1.522	1.348	1.204	1.506	1.775	1.660	1.556	13.00
54)	2-Nitroanili	0.333	0.403	0.391	0.387	0.378	0.420	0.362	0.392	0.383	6.88
55)	Dimethylphth	1.368	1.487	1.344	1.251	1.177	1.362	1.456	1.416	1.358	7.57
56)	Acenaphthyle	1.928	2.134	1.962	1.769	1.648	1.952	1.922	2.047	1.920	7.91
57)	2,6-Dinitrot	0.252	0.302	0.304	0.305	0.289	0.322	0.250	0.309	0.292	9.07
58)	3-Nitroanili	0.335	0.398	0.408	0.407	0.386	0.425	0.333	0.404	0.387	8.93
59)	Acenaphthene	1.246	1.355	1.176	1.029	0.949	1.149	1.348	1.269	1.190	12.20
60)	2,4-Dinitrop			0.145	0.179	0.172	0.170		0.118	0.157	16.00
61)	4-Nitropheno	0.136	0.172	0.180	0.189	0.191	0.200	0.140	0.175	0.173	13.59
62)	Dibenzofuran	1.826	1.964	1.665	1.387	1.247	1.578	2.006	1.808	1.685	15.99
63)	2,4-Dinitrot	0.339	0.415	0.398	0.350	0.317	0.396	0.310	0.417	0.368	11.91
64)	2,3,4,6-Tetr	0.255	0.285	0.294	0.290	0.271	0.303	0.252	0.301	0.281	7.06
65)	Diethylphtha	1.290	1.452	1.346	1.263	1.173	1.375	1.403	1.416	1.340	6.89
66)	Fluorene	1.308	1.471	1.318	1.197	1.097	1.315	1.455	1.401	1.320	9.60
67)	4-Chlorophen	0.639	0.688	0.600	0.541	0.490	0.590	0.700	0.652	0.612	11.77
68)	4-Nitroanili	0.330	0.402	0.397	0.413	0.394	0.419	0.321	0.395	0.384	9.73
69)	I Phenanthrene-d10	----------ISTD----------									
70)	4,6-Dinitro-			0.153	0.202	0.202	0.179		0.128	0.173	18.59
71)	n-Nitrosodip	0.685	0.709	0.679	0.727	0.721	0.721	0.677	0.688	0.701	2.96
72)	1,2-Diphenyl	0.963	1.014	1.000	1.042	1.028	1.061	0.900	0.992	1.000	5.05
73)	2,4,6-Tribro	0.078	0.087	0.096	0.116	0.116	0.107	0.073	0.095	0.096	16.74
74)	4-Bromopheny	0.194	0.220	0.220	0.238	0.232	0.228	0.218	0.216	0.221	5.95
75)	Hexachlorobe	0.255	0.261	0.240	0.260	0.257	0.252	0.274	0.246	0.255	3.97
76)	Pentachlorop	0.109	0.129	0.148	0.161	0.161	0.160		0.142	0.144	13.66
77)	Phenanthrene	1.342	1.410	1.295	1.298	1.264	1.329	1.465	1.329	1.341	4.90
78)	Anthracene	1.209	1.340	1.298	1.316	1.279	1.355	1.253	1.294	1.293	3.62
79)	Carbazole	1.203	1.298	1.258	1.333	1.313	1.335	1.262	1.282	1.285	3.45
80)	Di-n-butylph	1.243	1.440	1.558	1.693	1.634	1.689	1.194	1.490	1.493	12.84
81)	Fluoranthene	1.178	1.239	1.237	1.320	1.280	1.308	1.287	1.226	1.259	3.79
82)	Octadecane	0.475	0.551	0.565	0.603	0.578	0.623	0.519	0.546	0.558	8.38
83)	I Chrysene-d12	----------ISTD----------									
84)	Pyrene	1.357	1.543	1.465	1.489	1.496	1.540	1.547	1.489	1.491	4.16
85)	Terphenyl-d1	0.841	0.924	0.888	0.902	0.901	0.930	0.958	0.876	0.902	3.95
86)	Butylbenzylp	0.602	0.705	0.767	0.814	0.820	0.836	0.636	0.716	0.737	11.84
87)	Butyl steara	0.263	0.340	0.403	0.449	0.468	0.465		0.370	0.394	19.23
88)	Benzo[a]anth	1.192	1.263	1.234	1.299	1.291	1.319	1.418	1.223	1.280	5.47
89)	3,3'-Dichlor	0.353	0.398	0.427	0.458	0.445	0.464	0.388	0.409	0.418	9.11
90)	Chrysene	1.273	1.333	1.251	1.263	1.267	1.294	1.420	1.254	1.294	4.41
91)	bis(2-Ethylh	0.747	0.920	1.042	1.104	1.098	1.135	0.808	0.959	0.976	14.74
92)	I Perylene-d12	----------ISTD----------									
93)	Di-n-octylph	1.071	1.452	1.806	1.807	1.680	1.908		1.635	1.623	17.53
94)	Benzo[b]fluo	1.250	1.398	1.321	1.249	1.189	1.326	1.403	1.329	1.308	5.72
95)	Benzo[k]fluo	1.281	1.454	1.334	1.216	1.116	1.321	1.412	1.405	1.317	8.50
96)	Benzo[a]pyre	1.066	1.220	1.242	1.172	1.118	1.267	1.168	1.210	1.183	5.61
97)	Indeno[1,2,3	0.944	1.012	1.070	1.087	1.064	1.118	1.095	1.013	1.050	5.40
98)	Dibenz(a,h)a	0.783	0.932	0.983	0.955	0.944	1.020	0.844	0.944	0.926	8.24
99)	Dibenz[a,h]a	1.016	1.097	1.114	1.092	1.059	1.185	1.118	1.081	1.095	4.47
100)	7,12-Dimethy	0.542	0.512	0.638	0.570	0.523	0.620	0.567	0.525	0.562	8.23
101)	Benzo[g,h,i]	1.070	1.167	1.170	1.139	1.105	1.208	1.183	1.163	1.151	3.86

Initial Calibration Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2287-ICC2287
Lab FileID: 2M53830.D

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---------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M2M2287.M         Sat Jun 22 13:38:25 2013   MS2M
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Initial Calibration Summary

Job Number: JB40127 **Sample:** E2M2288-ICC2288
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 2M53839.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

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                          Response Factor Report  MS2M

  Method       : C:\MSDCHEM\1\METHODS\M2M2288.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umSat Jun 22 17:49:18 2013
  Last Update  : Sat Jun 22 17:49:18 2013
  Response via : Initial Calibration

  Calibration Files
  2   =2m53843.D   5   =2m53842.D   25  =2m53840.D   80  =2m53838.D
  100 =2m53837.D   50  =2m53839.D   1   =2m53844.D   10  =2m53841.D

   Compound         2     5     25    80    100   50    1     10    Avg %RSD
  ---------------------------------------------------------------------------

102)     1,4-Dichlorobenzene-d ----------------ISTD---------------------
103) Benzaldehyde 1.240 1.367 1.157 0.751       1.064 1.164 1.414 1.165  18.87

104)     Acenaphthene-d10a     ----------------ISTD---------------------
105) 1,2,4,5-Tetr 0.506 0.534 0.503 0.467 0.453 0.498 0.481 0.553 0.500   6.60
106) 2-bromonapht 0.628 0.683 0.668 0.639 0.622 0.680 0.603 0.719 0.655   5.90

107)     Chrysene-d12a         ----------------ISTD---------------------
108) Benzidine    0.468 0.707 0.760 0.638 0.626 0.753       0.866 0.688  18.42
109) 1-chloroocta 0.283 0.386 0.458 0.444 0.434 0.485       0.482 0.425  16.65

110)     Phenanthrene-d10a     ----------------ISTD---------------------
111) Atrazine     0.086 0.103 0.114 0.111 0.109 0.120 0.073 0.124 0.105  16.52
112) o-terphenyl  0.576 0.633 0.604 0.511 0.491 0.586 0.522 0.681 0.575  11.28

113) I   Naphthalene-d8a       ----------------ISTD---------------------
114) hydroquinone       0.258 0.390 0.428 0.423 0.434       0.386 0.386  17.07
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M2M2287.M         Sat Jun 22 17:49:40 2013   MS2M
```

8.7.2

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2288-ICV2287
Lab FileID: 2M53845.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2288\2m53845.D          Vial: 10
Acq On    : 22 Jun 2013   5:40 pm                    Operator: olgaa
Sample    : icv2287-50                               Inst    : MS2M
Misc      : op66858,e2m2288,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Jun 24 07:47:40 2013
Last Update  : Mon Jun 24 07:47:40 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	135	0.00	4.83
9	t	Phenol	2.315	1.999	13.7	114	0.00	4.55
12	t	2-Chlorophenol	1.666	1.600	4.0	128	0.00	4.66
19	t	2-Methylphenol	1.541	1.431	7.1	121	0.00	5.02
21	t	3&4-Methylphenol	1.514	1.523	-0.6	141	0.00	5.15
24	I	Naphthalene-d8	1.000	1.000	0.0	127	0.00	5.99
29	t	2-Nitrophenol	0.206	0.202	1.9	118	0.00	5.60
30	t	2,4-Dimethylphenol	0.350	0.365	-4.3	120	0.00	5.63
31	t	Benzoic acid	0.283	0.262	7.4	107	0.00	5.75
33	t	2,4-Dichlorophenol	0.296	0.284	4.1	120	0.00	5.84
34	t	2,6-Dichlorophenol	0.291	0.283	2.7	126	0.00	6.08
43	t	4-Chloro-3-methylphenol	0.325	0.311	4.3	116	0.00	6.63
47	I	Acenaphthene-d10	1.000	1.000	0.0	120	0.00	8.36
49	t	2,4,6-Trichlorophenol	0.333	0.346	-3.9	125	0.00	7.21
50	t	2,4,5-Trichlorophenol	0.373	0.368	1.3	113	0.00	7.26
60	t	2,4-Dinitrophenol	0.157	0.124	21.0	88	0.00	8.46
61	t	4-Nitrophenol	0.173	0.176	-1.7	105	0.00	8.60
64		2,3,4,6-Tetrachlorophenol	0.281	0.278	1.1	110	0.00	8.92
69	I	Phenanthrene-d10	1.000	1.000	0.0	128	0.00	10.98
70	t	4,6-Dinitro-2-methylpheno	0.173	0.136	21.4	97	0.00	9.39
76	t	Pentachlorophenol	0.144	0.148	-2.8	118	0.00	10.66

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 2m53845.D  M2M2287.M        Mon Jun 24 07:49:10 2013   MS2M
```

8.7.3

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2288-ICV2287
Lab FileID: 2M53846.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E2M2288\2m53846.D Vial: 11
Acq On : 22 Jun 2013 6:08 pm Operator: olgaa
Sample : icv2287-50 Inst : MS2M
Misc : op66858,e2m2288, Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Jun 24 07:53:12 2013
Last Update : Mon Jun 24 07:53:12 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	157	0.00	4.83
3	t	Pyridine	1.889	1.503	20.4	122	0.00	2.72
4	t	N-Nitrosodimethylamine	1.190	0.971	18.4	122	0.00	2.68
11	t	bis(2-Chloroethyl)ether	1.632	1.439	11.8	137	0.00	4.61
14	t	1,3-Dichlorobenzene	1.834	1.510	17.7	132	0.00	4.78
15	t	1,4-Dichlorobenzene	1.814	1.481	18.4	131	0.00	4.84
16	t	Benzyl alcohol	1.151	0.980	14.9	128	0.00	4.93
17	t	1,2-Dichlorobenzene	1.703	1.437	15.6	138	0.00	4.96
20	t	2,2'-oxybis(1-Chloropropa	1.956	1.754	10.3	135	0.00	5.04
22	t	n-Nitroso-di-n-propylamin	1.055	0.959	9.1	155	0.00	5.15
23	t	Hexachloroethane	0.526	0.451	14.3	134	0.00	5.25
24	I	Naphthalene-d8	1.000	1.000	0.0	150	0.00	5.99
26	t	Nitrobenzene	0.411	0.345	16.1	125	0.00	5.30
28	t	Isophorone	0.708	0.607	14.3	126	0.00	5.52
32	t	bis(2-Chloroethoxy)methan	0.439	0.396	9.8	137	0.00	5.72
36	t	1,2,4-Trichlorobenzene	0.320	0.270	15.6	133	0.00	5.93
38	t	Naphthalene	1.163	0.978	15.9	132	0.00	6.01
42	t	Hexachlorobutadiene	0.157	0.136	13.4	138	0.00	6.16
44	t	2-Methylnaphthalene	0.630	0.494	21.6	121	0.00	6.83
47	I	Acenaphthene-d10	1.000	1.000	0.0	143	0.00	8.36
48	t	Hexachlorocyclopentadiene	0.286	0.236	17.5	116	0.00	7.06
52	t	2-Chloronaphthalene	1.225	1.048	14.4	125	0.00	7.50
54	t	2-Nitroaniline	0.383	0.333	13.1	113	0.00	7.65
55	t	Dimethylphthalate	1.358	1.156	14.9	121	0.00	7.96
56	t	Acenaphthylene	1.920	1.641	14.5	120	0.00	8.13
57	t	2,6-Dinitrotoluene	0.292	0.261	10.6	116	0.00	8.04
58	t	3-Nitroaniline	0.387	0.315	18.6	106	0.00	8.30
59	t	Acenaphthene	1.190	0.993	16.6	123	0.00	8.41
62	t	Dibenzofuran	1.685	1.389	17.6	126	0.00	8.70
63	t	2,4-Dinitrotoluene	0.368	0.307	16.6	110	0.00	8.69
65	t	Diethylphthalate	1.340	1.147	14.4	119	0.00	9.16
66	t	Fluorene	1.320	1.158	12.3	126	0.00	9.29
67	t	4-Chlorophenyl-phenylethe	0.612	0.511	16.5	124	0.00	9.32
68	t	4-Nitroaniline	0.384	0.328	14.6	112	0.00	9.34
69	I	Phenanthrene-d10	1.000	1.000	0.0	153	0.00	10.98
71	t	n-Nitrosodiphenylamine	0.701	0.568	19.0	121	0.00	9.53
72	t	1,2-Diphenylhydrazine	1.000	0.838	16.2	121	0.00	9.60
74	t	4-Bromophenyl-phenylether	0.221	0.187	15.4	126	0.00	10.20
75	t	Hexachlorobenzene	0.255	0.205	19.6	125	0.00	10.29

Initial Calibration Verification

Job Number: JB40127 **Sample:** E2M2288-ICV2287
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 2M53846.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

77	t	Phenanthrene	1.341	1.075	19.8	124	0.00	11.03
78	t	Anthracene	1.293	1.077	16.7	122	0.00	11.12
79	t	Carbazole	1.285	1.046	18.6	120	0.00	11.46
80	t	Di-n-butylphthalate	1.493	1.283	14.1	117	0.00	12.27
81	t	Fluoranthene	1.259	1.032	18.0	121	0.00	13.32
83	I	Chrysene-d12	1.000	1.000	0.0	134	0.00	16.15
84	t	Pyrene	1.491	1.356	9.1	118	0.00	13.74
86	t	Butylbenzylphthalate	0.737	0.680	7.7	109	0.00	15.20
88	t	Benzo[a]anthracene	1.280	1.144	10.6	117	0.00	16.13
89	t	3,3'-Dichlorobenzidine	0.418	0.340	18.7	98	0.00	16.15
90	t	Chrysene	1.294	1.115	13.8	116	0.00	16.20
91	t	bis(2-Ethylhexyl)phthalat	0.976	0.898	8.0	106	0.00	16.42
92	I	Perylene-d12	1.000	1.000	0.0	133	0.00	18.75
93	t	Di-n-octylphthalate	1.623	1.549	4.6	108	0.00	17.64
94	t	Benzo[b]fluoranthene	1.308	1.168	10.7	117	0.00	18.12
95	t	Benzo[k]fluoranthene	1.317	1.175	10.8	118	0.00	18.16
96	t	Benzo[a]pyrene	1.183	1.110	6.2	117	0.00	18.66
97	t	Indeno[1,2,3-cd]pyrene	1.050	1.012	3.6	121	0.00	20.50
99	t	Dibenz[a,h]anthracene	1.095	1.072	2.1	120	0.00	20.55
101	t	Benzo[g,h,i]perylene	1.151	1.103	4.2	122	0.00	20.98

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m53830.D M2M2287.M Mon Jun 24 07:55:04 2013 MS2M

8.7.4

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2288-ICV2288
Lab FileID: 2M53846A.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2288\2m53846a.D         Vial: 11
Acq On    : 22 Jun 2013   6:08 pm                    Operator: olgaa
Sample    : icv2288-50                               Inst    : MS2M
Misc      : op66858,e2m2288,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Jun 24 07:53:12 2013
Last Update  : Mon Jun 24 07:53:12 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
104	Acenaphthene-d10a	1.000	1.000	0.0	131	0.00	8.36
105	1,2,4,5-Tetrachlorobenzen	0.500	0.369	26.2	97	0.00	7.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m53830.D M2M2287.M Mon Jun 24 08:08:11 2013 MS2M

8.7.5
8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2288-ICV2287
Lab FileID: 2M53847.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2288\2m53847.D          Vial: 12
Acq On    : 22 Jun 2013   6:37 pm                    Operator: olgaa
Sample    : icv2287-50                               Inst    : MS2M
Misc      : op66858,e2m2288,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Jun 24 07:53:12 2013
Last Update  : Mon Jun 24 07:53:12 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	134	0.00	4.83
2	t	1,4-Dioxane	0.723	0.606	16.2	107	0.01	2.41
6	t	Indene	2.637	2.402	8.9	126	0.00	5.03
7	t	Cumene	3.794	3.140	17.2	114	0.00	4.23
13	t	Decane	1.415	1.198	15.3	109	0.00	4.70
18	t	Acetophenone	2.060	1.884	8.5	134	0.00	5.15
24	I	Naphthalene-d8	1.000	1.000	0.0	130	0.00	5.99
27	t	Quinoline	0.778	0.640	17.7	107	-0.01	6.38
40	t	2,3-Dichloroaniline	0.342	0.267	21.9	105	0.00	7.21
41	t	Caprolactam	0.157	0.128	18.5	96	-0.04	6.44
45	t	1-Methylnaphthalene	0.723	0.597	17.4	110	0.00	6.96
46	t	Dimethylnaphthalene	0.640	0.537	16.1	108	0.00	7.71
47	I	Acenaphthene-d10	1.000	1.000	0.0	119	0.00	8.36
53	t	Biphenyl	1.556	1.388	10.8	110	0.00	7.48
69	I	Phenanthrene-d10	1.000	1.000	0.0	117	0.00	10.98
82	t	Octadecane	0.558	0.534	4.3	101	0.00	10.98
92	I	Perylene-d12	1.000	1.000	0.0	100	0.00	18.75
100	t	7,12-Dimethylbenz(a)anthr	0.562	0.488	13.2	79	-0.01	18.12

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 2m53830.D  M2M2287.M        Mon Jun 24 07:58:45 2013   MS2M
```

Initial Calibration Verification

Job Number: JB40127 **Sample:** E2M2288-ICV2288
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 2M53847A.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2288\2m53847a.D         Vial: 12
Acq On    : 22 Jun 2013   6:37 pm                    Operator: olgaa
Sample    : icv2288-50                               Inst    : MS2M
Misc      : op66858,e2m2288,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Jun 24 07:53:12 2013
Last Update  : Mon Jun 24 07:53:12 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	108	0.00	4.83
103	Benzaldehyde	1.165	1.136	2.5	115	0.00	4.49
110	Phenanthrene-d10a	1.000	1.000	0.0	91	0.00	10.98
111	Atrazine	0.105	0.115	-9.5	88	0.00	10.56

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m53830.D M2M2287.M Mon Jun 24 08:09:35 2013 MS2M

8.7.7

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2288-ICV2287
Lab FileID: 2M53848.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2288\2m53848.D          Vial: 13
Acq On    : 22 Jun 2013   7:05 pm                    Operator: olgaa
Sample    : icv2287-50                               Inst    : MS2M
Misc      : op66858,e2m2288,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Jun 24 07:53:12 2013
Last Update  : Mon Jun 24 07:53:12 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	135	0.00	4.83
5	S	2-Fluorophenol	1.521	1.617	-6.3	140	0.00	3.83
8	S	Phenol-d5	1.867	1.897	-1.6	134	0.00	4.54
24	I	Naphthalene-d8	1.000	1.000	0.0	126	0.00	5.99
25	S	Nitrobenzene-d5	0.357	0.386	-8.1	137	0.00	5.29
47	I	Acenaphthene-d10	1.000	1.000	0.0	116	0.00	8.36
51	S	2-Fluorobiphenyl	1.212	1.352	-11.6	133	0.00	7.34
69	I	Phenanthrene-d10	1.000	1.000	0.0	122	0.00	10.98
73	S	2,4,6-Tribromophenol	0.096	0.105	-9.4	120	0.00	9.71
83	I	Chrysene-d12	1.000	1.000	0.0	115	-0.01	16.14
85	S	Terphenyl-d14	0.902	0.962	-6.7	119	0.00	14.15

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m53830.D M2M2287.M Mon Jun 24 08:00:36 2013 MS2M

8.7.8

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2288-ICV2287
Lab FileID: 2M53849.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2288\2m53849.D          Vial: 14
Acq On    : 22 Jun 2013   7:33 pm                    Operator: olgaa
Sample    : icv2287-50                               Inst    : MS2M
Misc      : op66858,e2m2288,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Jun 24 07:53:12 2013
Last Update  : Mon Jun 24 07:53:12 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	115	0.00	4.83
10		Aniline	2.619	2.214	15.5	91	0.00	4.57
24	I	Naphthalene-d8	1.000	1.000	0.0	111	0.00	5.99
39	t	4-Chloroaniline	0.496	0.426	14.1	94	0.00	6.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m53830.D M2M2287.M Mon Jun 24 08:02:28 2013 MS2M

8.7.9

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2288-ICV2288
Lab FileID: 2M53850.D

```
                    Evaluate Continuing Calibration Report

  Data File : C:\msdchem\1\DATA\E2M2288\2m53850.D          Vial: 15
  Acq On    : 22 Jun 2013   8:02 pm                    Operator: olgaa
  Sample    : icv2288-50                               Inst    : MS2M
  Misc      : op66858,e2m2288,                         Multiplr: 1.00
  MS Integration Params: lscint.p

  Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Jun 24 07:53:12 2013
  Last Update  : Mon Jun 24 07:53:12 2013
  Response via : Multiple Level Calibration

  Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
  Max. RRF Dev :  30%     Max. Rel. Area : 200%

         Compound                   AvgRF   CCRF      %Dev Area%  Dev(min)R.T.
  ---------------------------------------------------------------------------

107     Chrysene-d12a               1.000   1.000      0.0   72  -0.02   16.13
108     Benzidine                   0.688   0.694     -0.9   67   0.00   13.65

 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range               SPCC's out = 0  CCC's out = 0
     2m53830.D  M2M2287.M        Mon Jun 24 08:03:16 2013   MS2M
```

8.7.10

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E2M2288-ICV2288
Lab FileID: 2M53851.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2288\2m53851.D          Vial: 16
Acq On    : 22 Jun 2013   8:30 pm                    Operator: olgaa
Sample    : icv2288-50                               Inst    : MS2M
Misc      : op66858,e2m2288,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Jun 24 07:53:12 2013
Last Update  : Mon Jun 24 07:53:12 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
113 I	Naphthalene-d8a	1.000	1.000	0.0	148	0.00	5.99
114	hydroquinone	0.386	0.339	12.2	116	0.00	6.44

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m53830.D M2M2287.M Mon Jun 24 08:05:41 2013 MS2M

8.7.11

8

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E2M2296-CC2287
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 2M53981.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2296\2m53981.D          Vial: 2
Acq On    : 28 Jun 2013  10:11 am                    Operator: olgaa
Sample    : cc2287-25                                Inst    : MS2M
Misc      : op67037,e2m2296,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013
Last Update  : Wed Jun 26 13:04:02 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	130	-0.02	4.80
2	t	1,4-Dioxane	0.723	0.655	9.4	121	-0.01	2.38
3	t	Pyridine	1.889	1.610	14.8	116	-0.01	2.70
4	t	N-Nitrosodimethylamine	1.190	1.062	10.8	120	-0.01	2.66
5	S	2-Fluorophenol	1.521	1.455	4.3	125	-0.01	3.81
6	t	Indene	2.637	2.608	1.1	126	-0.02	5.01
7	t	Cumene	3.794	3.657	3.6	127	-0.01	4.20
8	S	Phenol-d5	1.867	1.795	3.9	125	-0.02	4.52
9	t	Phenol	2.315	2.191	5.4	123	-0.02	4.53
10		Aniline	2.619	2.488	5.0	117	-0.01	4.55
11	t	bis(2-Chloroethyl)ether	1.632	1.521	6.8	123	-0.01	4.60
12	t	2-Chlorophenol	1.666	1.628	2.3	126	-0.02	4.64
13	t	Decane	1.415	1.294	8.6	121	-0.01	4.68
14	t	1,3-Dichlorobenzene	1.834	1.816	1.0	131	-0.02	4.76
15	t	1,4-Dichlorobenzene	1.814	1.788	1.4	130	-0.01	4.82
16	t	Benzyl alcohol	1.151	1.121	2.6	126	-0.02	4.91
17	t	1,2-Dichlorobenzene	1.703	1.700	0.2	132	-0.02	4.94
18	t	Acetophenone	2.060	1.946	5.5	124	-0.02	5.13
19	t	2-Methylphenol	1.541	1.495	3.0	122	-0.02	5.00
20	t	2,2'-oxybis(1-Chloropropa	1.956	1.760	10.0	120	-0.01	5.02
21	t	3&4-Methylphenol	1.514	1.486	1.8	122	-0.02	5.12
22	t	n-Nitroso-di-n-propylamin	1.055	1.007	4.5	127	-0.02	5.13
23	t	Hexachloroethane	0.526	0.530	-0.8	131	-0.02	5.23
24	I	Naphthalene-d8	1.000	1.000	0.0	129	-0.02	5.96
25	S	Nitrobenzene-d5	0.357	0.335	6.2	123	-0.02	5.26
26	t	Nitrobenzene	0.411	0.387	5.8	121	-0.02	5.28
27	t	Quinoline	0.778	0.759	2.4	128	-0.02	6.36
28	t	Isophorone	0.708	0.681	3.8	121	-0.02	5.49
29	t	2-Nitrophenol	0.206	0.218	-5.8	129	-0.02	5.57
30	t	2,4-Dimethylphenol	0.350	0.357	-2.0	119	-0.02	5.61
31	t	Benzoic acid	0.283	0.263	7.1	122	-0.04	5.69
32	t	bis(2-Chloroethoxy)methan	0.439	0.417	5.0	122	-0.02	5.70
33	t	2,4-Dichlorophenol	0.296	0.312	-5.4	132	-0.02	5.81
34	t	2,6-Dichlorophenol	0.291	0.302	-3.8	129	-0.02	6.05
35		1,3,5-Trichlorobenzene	0.323	0.326	-0.9	131	-0.02	5.59
36	t	1,2,4-Trichlorobenzene	0.320	0.316	1.3	129	-0.02	5.90
37		1,2,3-Trichlorobenzene	0.302	0.303	-0.3	130	-0.02	6.15
38	t	Naphthalene	1.163	1.144	1.6	127	-0.02	5.99
39	t	4-Chloroaniline	0.496	0.488	1.6	121	-0.02	6.03
40	t	2,3-Dichloroaniline	0.342	0.352	-2.9	133	-0.02	7.18
41	t	Caprolactam	0.157	0.150	4.5	121	-0.04	6.42

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E2M2296-CC2287
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 2M53981.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

42	t	Hexachlorobutadiene	0.157	0.155	1.3	127	-0.02	6.13
43	t	4-Chloro-3-methylphenol	0.325	0.329	-1.2	125	-0.02	6.61
44	t	2-Methylnaphthalene	0.630	0.650	-3.2	132	-0.02	6.80
45	t	1-Methylnaphthalene	0.723	0.729	-0.8	130	-0.03	6.93
46	t	Dimethylnaphthalene	0.640	0.646	-0.9	128	-0.03	7.68
47	I	Acenaphthene-d10	1.000	1.000	0.0	129	-0.03	8.32
48	t	Hexachlorocyclopentadiene	0.286	0.281	1.7	121	-0.02	7.02
49	t	2,4,6-Trichlorophenol	0.333	0.355	-6.6	135	-0.03	7.18
50	t	2,4,5-Trichlorophenol	0.373	0.396	-6.2	134	-0.03	7.23
51	S	2-Fluorobiphenyl	1.212	1.221	-0.7	134	-0.03	7.30
52	t	2-Chloronaphthalene	1.225	1.211	1.1	130	-0.02	7.47
53	t	Biphenyl	1.556	1.576	-1.3	133	-0.02	7.45
54	t	2-Nitroaniline	0.383	0.370	3.4	122	-0.03	7.62
55	t	Dimethylphthalate	1.358	1.354	0.3	130	-0.03	7.92
56	t	Acenaphthylene	1.920	2.002	-4.3	132	-0.02	8.09
57	t	2,6-Dinitrotoluene	0.292	0.302	-3.4	128	-0.03	8.00
58	t	3-Nitroaniline	0.387	0.394	-1.8	125	-0.03	8.26
59	t	Acenaphthene	1.190	1.186	0.3	130	-0.03	8.38
60	t	2,4-Dinitrophenol	0.157	0.140	10.8	124	-0.03	8.44
61	t	4-Nitrophenol	0.173	0.163	5.8	117	-0.03	8.57
62	t	Dibenzofuran	1.685	1.692	-0.4	131	-0.02	8.67
63	t	2,4-Dinitrotoluene	0.368	0.405	-10.1	131	-0.03	8.65
64		2,3,4,6-Tetrachlorophenol	0.281	0.294	-4.6	129	-0.03	8.88
65	t	Diethylphthalate	1.340	1.339	0.1	128	-0.03	9.12
66	t	Fluorene	1.320	1.345	-1.9	131	-0.03	9.25
67	t	4-Chlorophenyl-phenylethe	0.612	0.604	1.3	130	-0.02	9.28
68	t	4-Nitroaniline	0.384	0.385	-0.3	125	-0.03	9.30
69	I	Phenanthrene-d10	1.000	1.000	0.0	131	-0.02	10.94
70	t	4,6-Dinitro-2-methylpheno	0.173	0.150	13.3	129	-0.03	9.36
71	t	n-Nitrosodiphenylamine	0.701	0.671	4.3	130	-0.03	9.49
72	t	1,2-Diphenylhydrazine	1.000	0.903	9.7	118	-0.02	9.56
73	S	2,4,6-Tribromophenol	0.096	0.088	8.3	120	-0.02	9.68
74	t	4-Bromophenyl-phenylether	0.221	0.210	5.0	125	-0.02	10.16
75	t	Hexachlorobenzene	0.255	0.227	11.0	124	-0.02	10.25
76	t	Pentachlorophenol	0.144	0.143	0.7	127	-0.02	10.62
77	t	Phenanthrene	1.341	1.277	4.8	129	-0.03	10.99
78	t	Anthracene	1.293	1.288	0.4	130	-0.02	11.08
79	t	Carbazole	1.285	1.245	3.1	130	-0.02	11.42
80	t	Di-n-butylphthalate	1.493	1.542	-3.3	130	-0.02	12.23
81	t	Fluoranthene	1.259	1.241	1.4	132	-0.02	13.28
82	t	Octadecane	0.558	0.545	2.3	127	-0.02	10.94
83	I	Chrysene-d12	1.000	1.000	0.0	125	-0.02	16.11
84	t	Pyrene	1.491	1.540	-3.3	131	-0.03	13.70
85	S	Terphenyl-d14	0.902	0.896	0.7	126	-0.02	14.11
86	t	Butylbenzylphthalate	0.737	0.763	-3.5	124	-0.02	15.16
87		Butyl stearate	0.394	0.392	0.5	121	-0.02	15.40
88	t	Benzo[a]anthracene	1.280	1.256	1.9	127	-0.02	16.08
89	t	3,3'-Dichlorobenzidine	0.418	0.420	-0.5	123	-0.02	16.11
90	t	Chrysene	1.294	1.246	3.7	124	-0.03	16.15
91	t	bis(2-Ethylhexyl)phthalat	0.976	1.049	-7.5	126	-0.02	16.38
92	I	Perylene-d12	1.000	1.000	0.0	123	-0.02	18.72
93	t	Di-n-octylphthalate	1.623	1.844	-13.6	126	-0.02	17.60
94	t	Benzo[b]fluoranthene	1.308	1.318	-0.8	123	-0.03	18.07
95	t	Benzo[k]fluoranthene	1.317	1.341	-1.8	124	-0.03	18.12
96	t	Benzo[a]pyrene	1.183	1.229	-3.9	122	-0.03	18.61
97	t	Indeno[1,2,3-cd]pyrene	1.050	1.046	0.4	121	-0.03	20.44

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E2M2296-CC2287
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 2M53981.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

98	t	Dibenz(a,h)acridine	0.926	0.953	-2.9	120	-0.03	20.07
99	t	Dibenz[a,h]anthracene	1.095	1.064	2.8	118	-0.03	20.50
100	t	7,12-Dimethylbenz(a)anthr	0.562	0.608	-8.2	118	-0.03	18.08
101	t	Benzo[g,h,i]perylene	1.151	1.126	2.2	119	-0.04	20.91

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m53840.D M2M2287.M Sun Jun 30 19:27:31 2013 MS2M

8.7.12

8

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E2M2296-CC2288
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 2M53982.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2296\2m53982.D          Vial: 3
Acq On    : 28 Jun 2013  10:40 am                    Operator: olgaa
Sample    : cc2288-25                                Inst    : MS2M
Misc      : op67037,e2m2296,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2287.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013
Last Update  : Wed Jun 26 13:04:02 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	99	-0.02	4.80
103	Benzaldehyde	1.165	1.301	-11.7	112	-0.02	4.47
104	Acenaphthene-d10a	1.000	1.000	0.0	102	-0.03	8.32
105	1,2,4,5-Tetrachlorobenzen	0.500	0.514	-2.8	104	-0.03	7.02
106	Chrysene-d12a	1.000	1.000	0.0	97	-0.03	16.10
107	Benzidine	0.688	0.937	-36.2#	119	-0.04	13.61
108	Phenanthrene-d10a	1.000	1.000	0.0	102	-0.02	10.94
109	Atrazine	0.105	0.120	-14.3	107	-0.05	10.52

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m53840.D M2M2287.M Sun Jun 30 19:27:33 2013 MS2M

8.7.13

8

Initial Calibration Summary

Job Number: JB40127 **Sample:** E5P31-ICC31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P604.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Response Factor Report MS5P

Method : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update : Tue Jun 11 23:45:41 2013
Response via : Initial Calibration

Calibration Files
2 =5p609.D 5 =5p610.D 25 =5p605.D 80 =5p607.D
100 =5p606.D 50 =5p604.D 1 =5p608.D 10 =5p611.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
1) I 1,4-Dichlorobenzene-d					ISTD					
2) 1,4-Dioxane	0.678	0.652	0.602	0.631	0.610	0.589	0.707	0.598	0.633	6.69
3) Pyridine	1.215	1.430	1.412	1.626	1.570	1.546	0.844	1.286	1.366	18.53
4) N-Nitrosodim	1.052	0.948	0.965	1.028	1.004	0.994	1.269	0.941	1.025	10.31
5) 2-Fluorophen	1.183	1.295	1.290	1.408	1.391	1.366	1.742	1.283	1.370	12.18
6) Indene	2.446	2.688	2.330	2.544	2.489	2.509	2.930	2.463	2.550	7.19
7) Cumene	3.421	3.605	3.395	3.556	3.493	3.430	4.165	3.408	3.559	7.20
8) Phenol-d5	1.811	1.627	1.610	1.798	1.759	1.748	1.902	1.728	1.748	5.48
9) Phenol	1.715	1.950	1.805	2.113	2.044	2.003	2.443	1.913	1.998	11.03
10) Aniline	2.586	2.379	2.203	2.193	2.133	2.257	2.740	2.151	2.330	9.55
11) bis(2-Chloro	1.529	1.499	1.492	1.543	1.523	1.501	1.717	1.426	1.529	5.49
12) 2-Chlorophen	1.405	1.607	1.472	1.639	1.610	1.573	1.902	1.483	1.586	9.53
13) Decane	1.801	1.692	1.572	1.694	1.650	1.624	1.993	1.649	1.709	7.75
14) 1,3-Dichloro	1.666	1.753	1.696	1.776	1.755	1.762	2.066	1.790	1.783	6.81
15) 1,4-Dichloro	1.761	1.810	1.668	1.806	1.765	1.788	2.468	1.720	1.848	13.79
16) Benzyl alcoh	1.050	0.997	0.898	1.038	1.032	0.998	1.186	0.943	1.018	8.35
17) 1,2-Dichloro	1.484	1.607	1.555	1.672	1.578	1.589	1.847	1.656	1.624	6.63
18) Acetophenone	2.224	2.013	1.907	2.088	2.040	2.049	2.262	1.938	2.065	6.05
19) 2-Methylphen	1.258	1.323	1.319	1.453	1.390	1.401	1.566	1.401	1.389	6.78
20) 2,2'-oxybis(	2.523	2.434	2.172	2.391	2.330	2.327	2.379	2.176	2.342	5.15
21) 3&4-Methylph	1.268	1.411	1.336	1.510	1.519	1.487	1.697	1.369	1.450	9.22
22) n-Nitroso-di	0.956	1.087	1.007	1.096	1.091	1.080	1.297	1.092	1.088	9.05
23) Hexachloroet	0.539	0.573	0.525	0.598	0.575	0.574	0.647	0.577	0.576	6.39
24) I Naphthalene-d8					ISTD					
25) Nitrobenzene	0.314	0.377	0.321	0.365	0.351	0.338	0.447	0.333	0.356	11.95
26) Nitrobenzene	0.406	0.420	0.382	0.423	0.407	0.400	0.435	0.407	0.410	3.95
27) Quinoline	0.673	0.752	0.660	0.732	0.724	0.692	0.780	0.674	0.711	6.04
28) Isophorone	0.688	0.748	0.650	0.710	0.693	0.692	0.764	0.691	0.704	5.12
29) 2-Nitropheno	0.177	0.182	0.182	0.220	0.212	0.201	0.183	0.185	0.193	8.37
30) 2,4-Dimethyl	0.347	0.338	0.320	0.365	0.360	0.352	0.376	0.325	0.348	5.56
31) Benzoic acid			0.219	0.288	0.283	0.260		0.183	0.247	18.11
32) bis(2-Chloro	0.411	0.459	0.395	0.441	0.428	0.407	0.443	0.425	0.426	5.00
33) 2,4-Dichloro	0.298	0.291	0.286	0.319	0.307	0.293	0.333	0.269	0.300	6.59
34) 2,6-Dichloro	0.323	0.314	0.282	0.311	0.303	0.301	0.328	0.281	0.305	5.65
35) 1,3,5-Trichl	0.371	0.394	0.327	0.366	0.370	0.347	0.409	0.332	0.364	7.79
36) 1,2,4-Trichl	0.359	0.344	0.312	0.355	0.342	0.334	0.410	0.337	0.349	8.16
37) 1,2,3-Trichl	0.309	0.349	0.295	0.345	0.336	0.322	0.327	0.329	0.327	5.51
38) Naphthalene	1.145	1.185	1.026	1.104	1.074	1.058	1.182	1.112	1.111	5.17
39) 4-Chloroanil	0.427	0.455	0.449	0.471	0.464	0.453	0.463	0.456	0.455	2.90
40) 2,3-Dichloro	0.322	0.365	0.341	0.364	0.362	0.349	0.429	0.373	0.363	8.62
41) Caprolactam	0.186	0.153	0.164	0.184	0.182	0.175		0.175	0.174	6.81
42) Hexachlorobu	0.197	0.192	0.175	0.196	0.193	0.186	0.202	0.191	0.192	4.22
43) 4-Chloro-3-m	0.292	0.297	0.293	0.316	0.314	0.293	0.335	0.294	0.304	5.21
44) 2-Methylnaph	0.626	0.623	0.604	0.637	0.632	0.610	0.600	0.614	0.618	2.14
45) 1-Methylnaph	0.664	0.728	0.643	0.698	0.680	0.670	0.754	0.665	0.688	5.38

Initial Calibration Summary

Job Number: JB40127 **Sample:** E5P31-ICC31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P604.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
46) Dimethylnaph 0.610 0.657 0.583 0.652 0.627 0.614 0.717 0.611 0.634   6.47

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.313 0.372 0.366 0.409 0.404 0.383 0.368 0.354 0.371   8.14
49) 2,4,6-Trichl 0.306 0.345 0.349 0.382 0.380 0.365 0.408 0.347 0.360   8.58
50) 2,4,5-Trichl 0.327 0.391 0.368 0.413 0.405 0.395 0.420 0.373 0.386   7.75
51) 2-Fluorobiph 1.076 1.242 1.085 1.189 1.163 1.110 1.360 1.182 1.176   7.96
52) 2-Chloronaph 1.135 1.285 1.124 1.228 1.221 1.171 1.430 1.190 1.223   8.07
53) Biphenyl     1.465 1.627 1.425 1.528 1.498 1.459 1.768 1.460 1.529   7.51
54) 2-Nitroanili 0.286 0.364 0.353 0.406 0.391 0.373 0.499 0.341 0.376  16.27
55) Dimethylphth 1.356 1.359 1.254 1.355 1.311 1.282 1.496 1.299 1.339   5.54
56) Acenaphthyle 1.690 1.888 1.752 1.883 1.835 1.809 1.933 1.819 1.826   4.29
57) 2,6-Dinitrot 0.285 0.240 0.258 0.311 0.312 0.291 0.255 0.243 0.274  10.54
58) 3-Nitroanili 0.272 0.317 0.337 0.371 0.362 0.351 0.327 0.299 0.330  10.06
59) Acenaphthene 1.236 1.157 1.122 1.185 1.176 1.156 1.173 1.140 1.168   2.93
60) 2,4-Dinitrop             0.123 0.169 0.169 0.150       0.081 0.138  26.92
            ----- Linear regression -----  Coefficient =  0.9984
              Response Ratio = -0.06417 + 0.18188 *A

61) 4-Nitropheno 0.142 0.154 0.170 0.191 0.183 0.182 0.140 0.146 0.163  12.58
62) Dibenzofuran 1.605 1.741 1.556 1.681 1.637 1.620 1.942 1.605 1.673   7.29
63) 2,4-Dinitrot 0.291 0.335 0.366 0.421 0.416 0.390 0.368 0.354 0.368  11.59
64) 2,3,4,6-Tetr 0.251 0.312 0.301 0.340 0.342 0.326 0.342 0.312 0.316   9.66
65) Diethylphtha 1.379 1.361 1.227 1.325 1.321 1.264 1.389 1.263 1.316   4.53
66) Fluorene     1.311 1.310 1.207 1.304 1.287 1.265 1.282 1.251 1.277   2.77
67) 4-Chlorophen 0.589 0.664 0.601 0.649 0.641 0.610 0.686 0.624 0.633   5.23
68) 4-Nitroanili 0.250 0.339 0.346 0.370 0.367 0.355 0.293 0.313 0.329  12.49

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro-       0.083 0.118 0.163 0.159 0.145       0.098 0.128  25.86
         ----- Quadratic regression -----                Coefficient =  0.9977
              Response Ratio = -0.01317 + 0.14713 *A + 0.00807 *A^2

71) n-Nitrosodip 0.591 0.585 0.542 0.590 0.578 0.557 0.607 0.572 0.578   3.58
72) 1,2-Diphenyl 0.925 0.922 0.821 0.900 0.888 0.875 0.937 0.893 0.895   4.08
73) 2,4,6-Tribro 0.087 0.108 0.111 0.124 0.124 0.120 0.107 0.108 0.111  10.97
74) 4-Bromopheny 0.221 0.224 0.214 0.235 0.233 0.223 0.240 0.238 0.229   4.04
75) Hexachlorobe 0.252 0.270 0.252 0.277 0.278 0.264 0.270 0.261 0.266   3.79
76) Pentachlorop 0.115 0.142 0.146 0.175 0.176 0.167 0.140 0.144 0.151  13.84
77) Phenanthrene 1.131 1.206 1.117 1.190 1.171 1.138 1.284 1.163 1.175   4.55
78) Anthracene   1.120 1.256 1.106 1.187 1.175 1.145 1.206 1.171 1.171   4.11
79) Carbazole    1.080 1.054 1.019 1.106 1.105 1.048 1.154 1.072 1.080   3.87
80) Di-n-butylph 1.347 1.400 1.322 1.464 1.442 1.406 1.358 1.359 1.387   3.55
81) Fluoranthene 1.090 1.268 1.135 1.257 1.242 1.179 1.255 1.181 1.201   5.41
82) Octadecane   0.543 0.586 0.542 0.605 0.607 0.588 0.681 0.569 0.590   7.52

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.256 1.383 1.112 1.249 1.202 1.128 1.312 1.258 1.237   7.28
85) Terphenyl-d1 0.735 0.820 0.686 0.787 0.756 0.703 0.734 0.765 0.748   5.83
86) Butylbenzylp 0.485 0.580 0.511 0.619 0.596 0.550 0.579 0.559 0.560   7.87
87) Butyl steara 0.346 0.362 0.327 0.392 0.377 0.343 0.316 0.343 0.350   7.17
88) Benzo[a]anth 1.095 1.142 0.962 1.120 1.095 1.013 1.363 1.089 1.110  10.63
89) 3,3'-Dichlor 0.339 0.341 0.337 0.424 0.412 0.375 0.413 0.373 0.377   9.61
90) Chrysene     0.980 1.064 0.941 1.083 1.038 0.967 1.301 1.069 1.055  10.65
91) bis(2-Ethylh 0.717 0.826 0.743 0.870 0.848 0.790 0.751 0.771 0.789   6.83

92) I   Perylene-d12          ----------------ISTD---------------------
93) Di-n-octylph 1.220 1.454 1.380 1.850 1.802 1.545 1.458 1.524 1.529  13.68
94) Benzo[b]fluo 1.116 1.337 1.049 1.349 1.312 1.182 1.372 1.277 1.249   9.56
95) Benzo[k]fluo 1.349 1.417 1.170 1.505 1.503 1.224 1.393 1.329 1.361   8.85
```

Initial Calibration Summary

Job Number: JB40127 **Sample:** E5P31-ICC31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P604.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

96)	Benzo[a]pyre	1.051	1.090	0.961	1.170	1.159	1.012	1.106	1.126	1.084	6.66
97)	Indeno[1,2,3	0.910	1.028	0.901	1.194	1.162	0.973	1.074	1.032	1.034	10.36
98)	Dibenz(a,h)a	0.778	0.869	0.763	1.013	1.008	0.865	0.898	0.895	0.886	10.34
99)	Dibenz[a,h]a	0.885	1.041	0.934	1.185	1.136	0.985	1.403	1.043	1.076	15.30
100)	7,12-Dimethy	0.628	0.564	0.528	0.725	0.712	0.588	0.683	0.547	0.622	12.40
101)	Benzo[g,h,i]	0.961	1.107	0.948	1.173	1.141	0.981	1.187	1.085	1.073	9.01

(#) = Out of Range ### Number of calibration levels exceeded format ###

M5P31.M Tue Jun 11 23:47:40 2013

8.7.14

8

Initial Calibration Summary

Job Number: JB40127 **Sample:** E5P32-ICC32
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P615.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
                    Response Factor Report  MS5P

  Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
  Last Update  : Wed Jun 12 00:01:38 2013
  Response via : Initial Calibration

  Calibration Files
  2   =5p619.D     5   =5p618.D     25  =5p616.D     80  =5p614.D
  100 =5p613.D     50  =5p615.D     1   =5p620.D     10  =5p617.D

   Compound         2     5     25    80    100   50    1     10    Avg %RSD
  -------------------------------------------------------------------------------
102)     1,4-Dichlorobenzene-d ----------------ISTD---------------------
103) Benzaldehyde 1.176 1.222 1.132 0.903 0.853 1.016 1.109 1.244 1.082  13.40

104)     Acenaphthene-d10a     ----------------ISTD---------------------
105) 1,2,4,5-Tetr 0.481 0.508 0.542 0.518 0.537 0.537 0.444 0.523 0.511   6.55
106) 2-bromonapht 0.547 0.631 0.663 0.605 0.633 0.632 0.538 0.622 0.609   7.22

107)     Chrysene-d12a         ----------------ISTD---------------------
108) Benzidine          0.301 0.484 0.388 0.401 0.381       0.435 0.398  15.34
109) 1-chloroocta 0.305 0.340 0.437 0.417 0.418 0.408 0.321 0.391 0.380  13.23

110)     Phenanthrene-d10a     ----------------ISTD---------------------
111) Atrazine     0.097 0.104 0.110 0.113 0.114 0.112       0.114 0.109   5.76
112) o-terphenyl  0.543 0.616 0.646 0.642 0.651 0.654 0.577 0.640 0.621   6.50

113) I   Naphthalene-d8a       ----------------ISTD---------------------
114) hydroquinone       0.249 0.339 0.386 0.384 0.369       0.307 0.339  15.72
 -------------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M5P31.M           Wed Jun 12 00:05:38 2013
```

8.7.15

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P32-ICV31
Lab FileID: 5P621.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p31\5p621.D              Vial: 18
Acq On    : 11 Jun 2013  10:56 pm                     Operator: elwiraa
Sample    : icv31-50                                  Inst    : MS5P
Misc      : op66547,e5p32,                           Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Wed Jun 12 00:01:38 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	96	0.00	5.19
9	t	Phenol	1.998	2.001	-0.2	96	0.00	4.91
12	t	2-Chlorophenol	1.586	1.594	-0.5	97	0.00	5.04
19	t	2-Methylphenol	1.389	1.324	4.7	91	0.00	5.39
21	t	3&4-Methylphenol	1.450	1.328	8.4	86	0.00	5.50
24	I	Naphthalene-d8	1.000	1.000	0.0	91	0.00	6.26
29	t	2-Nitrophenol	0.193	0.182	5.7	83	0.00	5.92
30	t	2,4-Dimethylphenol	0.348	0.333	4.3	87	0.00	5.93
31	t	Benzoic acid	0.247	0.211	14.6	74	0.04	6.01
33	t	2,4-Dichlorophenol	0.300	0.295	1.7	92	0.00	6.13
34	t	2,6-Dichlorophenol	0.305	0.286	6.2	87	0.00	6.36
43	t	4-Chloro-3-methylphenol	0.304	0.293	3.6	91	0.00	6.87
47	I	Acenaphthene-d10	1.000	1.000	0.0	87	0.00	8.60
49	t	2,4,6-Trichlorophenol	0.360	0.361	-0.3	86	0.00	7.47
50	t	2,4,5-Trichlorophenol	0.386	0.388	-0.5	86	0.00	7.52
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	100.000	82.024	18.0	58	0.00	8.73
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.163	0.168	-3.1	81	-0.01	8.85
64		2,3,4,6-Tetrachlorophenol	0.316	0.304	3.8	82	0.00	9.20
69	I	Phenanthrene-d10	1.000	1.000	0.0	84	0.00	11.20
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	50.000	40.645	18.7	68	0.00	9.69
		----------	AvgRF	CCRF	% Dev	----------		
76	t	Pentachlorophenol	0.151	0.160	-6.0	81	0.00	10.98

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p615.D M5P31.M Wed Jun 12 00:10:14 2013

8.7.16

8

Initial Calibration Verification

Job Number: JB40127 **Sample:** E5P32-ICV32
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P622A.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p31\5p622a.D            Vial: 19
Acq On    : 11 Jun 2013  11:26 pm                   Operator: elwiraa
Sample    : icv32-50                                Inst    : MS5P
Misc      : op66547,e5p32,                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Wed Jun 12 00:01:38 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
104	Acenaphthene-d10a	1.000	1.000	0.0	94	0.00	8.60
105	1,2,4,5-Tetrachlorobenzen	0.511	0.548	-7.2	96	0.00	7.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p615.D M5P31.M Wed Jun 12 00:54:41 2013

8.7.17

8

Initial Calibration Verification

Job Number: JB40127 **Sample:** E5P32-ICV31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P622.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\e5p31\5p622.D Vial: 19
Acq On : 11 Jun 2013 11:26 pm Operator: elwiraa
Sample : icv31-50 Inst : MS5P
Misc : op66547,e5p32, Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update : Wed Jun 12 00:01:38 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	92	0.00	5.19
3	t	Pyridine	1.366	1.851	-35.5#	110	-0.05	3.14
4	t	N-Nitrosodimethylamine	1.025	1.032	-0.7	95	-0.01	3.12
11	t	bis(2-Chloroethyl)ether	1.529	1.561	-2.1	96	0.00	4.98
14	t	1,3-Dichlorobenzene	1.783	1.779	0.2	93	0.00	5.16
15	t	1,4-Dichlorobenzene	1.848	1.747	5.5	90	0.00	5.20
16	t	Benzyl alcohol	1.018	0.981	3.6	90	0.00	5.30
17	t	1,2-Dichlorobenzene	1.624	1.572	3.2	91	0.00	5.35
20	t	2,2'-oxybis(1-Chloropropa	2.342	2.258	3.6	89	0.00	5.42
22	t	n-Nitroso-di-n-propylamin	1.088	1.050	3.5	89	0.00	5.52
23	t	Hexachloroethane	0.576	0.558	3.1	89	0.00	5.59
24	I	Naphthalene-d8	1.000	1.000	0.0	83	0.00	6.26
26	t	Nitrobenzene	0.410	0.408	0.5	85	0.00	5.65
28	t	Isophorone	0.704	0.717	-1.8	86	0.00	5.83
32	t	bis(2-Chloroethoxy)methan	0.426	0.466	-9.4	95	0.00	6.02
36	t	1,2,4-Trichlorobenzene	0.349	0.359	-2.9	89	0.00	6.22
38	t	Naphthalene	1.111	1.151	-3.6	90	0.00	6.29
42	t	Hexachlorobutadiene	0.192	0.202	-5.2	90	0.00	6.47
44	t	2-Methylnaphthalene	0.618	0.602	2.6	82	0.00	7.07
47	I	Acenaphthene-d10	1.000	1.000	0.0	78	0.00	8.60
48	t	Hexachlorocyclopentadiene	0.371	0.382	-3.0	78	0.00	7.37
52	t	2-Chloronaphthalene	1.223	1.221	0.2	82	0.00	7.72
54	t	2-Nitroaniline	0.376	0.347	7.7	73	0.00	7.92
55	t	Dimethylphthalate	1.339	1.305	2.5	80	0.00	8.26
56	t	Acenaphthylene	1.826	1.818	0.4	79	0.00	8.36
57	t	2,6-Dinitrotoluene	0.274	0.277	-1.1	75	0.00	8.35
58	t	3-Nitroaniline	0.330	0.292	11.5	65	0.00	8.57
59	t	Acenaphthene	1.168	1.247	-6.8	85	0.00	8.65
62	t	Dibenzofuran	1.673	1.682	-0.5	81	0.00	8.92
63	t	2,4-Dinitrotoluene	0.368	0.330	10.3	66	0.00	8.99
65	t	Diethylphthalate	1.316	1.304	0.9	81	0.00	9.46
66	t	Fluorene	1.277	1.330	-4.2	82	0.00	9.51
67	t	4-Chlorophenyl-phenylethe	0.633	0.628	0.8	81	0.00	9.53
68	t	4-Nitroaniline	0.329	0.325	1.2	72	0.00	9.62
69	I	Phenanthrene-d10	1.000	1.000	0.0	75	0.00	11.20
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.578	0.543	6.1	73	0.00	9.75
72	t	1,2-Diphenylhydrazine	0.895	0.954	-6.6	82	0.00	9.81

Initial Calibration Verification

Job Number: JB40127 **Sample:** E5P32-ICV31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P622.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

74	t	4-Bromophenyl-phenylether	0.229	0.236	-3.1	79	0.00	10.40
75	t	Hexachlorobenzene	0.266	0.275	-3.4	78	0.00	10.65
77	t	Phenanthrene	1.175	1.216	-3.5	80	0.00	11.24
78	t	Anthracene	1.171	1.249	-6.7	82	0.00	11.32
79	t	Carbazole	1.080	1.097	-1.6	78	0.00	11.67
80	t	Di-n-butylphthalate	1.387	1.391	-0.3	74	0.00	12.56
81	t	Fluoranthene	1.201	1.222	-1.7	78	0.00	13.54
83	I	Chrysene-d12	1.000	1.000	0.0	64	0.00	16.39
84	t	Pyrene	1.237	1.338	-8.2	76	0.00	13.97
86	t	Butylbenzylphthalate	0.560	0.599	-7.0	69	0.00	15.50
88	t	Benzo[a]anthracene	1.110	1.161	-4.6	73	0.00	16.36
90	t	Chrysene	1.055	1.094	-3.7	72	0.00	16.44
91	t	bis(2-Ethylhexyl)phthalat	0.789	0.847	-7.4	68	0.00	16.74
92	I	Perylene-d12	1.000	1.000	0.0	61	0.00	18.93
93	t	Di-n-octylphthalate	1.529	1.704	-11.4	67	0.00	17.90
94	t	Benzo[b]fluoranthene	1.249	1.332	-6.6	69	0.00	18.38
95	t	Benzo[k]fluoranthene	1.361	1.351	0.7	67	0.00	18.42
96	t	Benzo[a]pyrene	1.084	1.195	-10.2	72	0.00	18.85
97	t	Indeno[1,2,3-cd]pyrene	1.034	1.109	-7.3	69	0.01	20.44
99	t	Dibenz[a,h]anthracene	1.076	1.111	-3.3	69	0.00	20.48
101	t	Benzo[g,h,i]perylene	1.073	1.164	-8.5	72	0.02	20.86

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p615.D M5P31.M Wed Jun 12 00:51:39 2013

8.7.18

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P32-ICV32
Lab FileID: 5P623A.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p31\5p623a.D            Vial: 20
Acq On    : 11 Jun 2013  11:55 pm                   Operator: elwiraa
Sample    : icv31-50                                Inst    : MS5P
Misc      : op65688a,e5p32,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Wed Jun 12 00:01:38 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	130	0.00	5.19
103	Benzaldehyde	1.082	1.334	-23.3	171	0.00	4.84
110	Phenanthrene-d10a	1.000	1.000	0.0	109	0.00	11.20
111	Atrazine	0.109	0.121	-11.0	118	0.01	10.83

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5p615.D    M5P31.M          Wed Jun 12 00:57:04 2013
```

8.7.19

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P32-ICV31
Lab FileID: 5P623.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p31\5p623.D              Vial: 20
Acq On    : 11 Jun 2013  11:55 pm                     Operator: elwiraa
Sample    : icv31-50                                  Inst    : MS5P
Misc      : op66547,e5p32,                            Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Wed Jun 12 00:01:38 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	114	0.00	5.19
2	t	1,4-Dioxane	0.633	0.613	3.2	118	-0.01	2.81
6	t	Indene	2.550	2.604	-2.1	118	0.00	5.41
7	t	Cumene	3.559	3.710	-4.2	123	0.00	4.58
13	t	Decane	1.709	1.694	0.9	118	0.00	5.05
18	t	Acetophenone	2.065	1.967	4.7	109	0.00	5.51
24	I	Naphthalene-d8	1.000	1.000	0.0	119	0.00	6.27
27	t	Quinoline	0.711	0.642	9.7	110	0.00	6.64
40	t	2,3-Dichloroaniline	0.363	0.277	23.7	94	0.00	7.48
41	t	Caprolactam	0.174	0.147	15.5	100	0.00	6.68
45	t	1-Methylnaphthalene	0.688	0.616	10.5	109	0.00	7.21
46	t	Dimethylnaphthalene	0.634	0.542	14.5	105	0.00	7.94
47	I	Acenaphthene-d10	1.000	1.000	0.0	95	0.00	8.60
53	t	Biphenyl	1.529	1.645	-7.6	107	0.00	7.71
69	I	Phenanthrene-d10	1.000	1.000	0.0	90	0.00	11.20
82	t	Octadecane	0.590	0.662	-12.2	102	0.00	11.14
92	I	Perylene-d12	1.000	1.000	0.0	65	0.00	18.93
100	t	7,12-Dimethylbenz(a)anthr	0.622	0.645	-3.7	72	0.00	18.42

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5p615.D    M5P31.M          Wed Jun 12 00:55:30 2013
```

8.7.20

8

Initial Calibration Verification

Job Number: JB40127 **Sample:** E5P32-ICV31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P624.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p31\5p624.D              Vial: 21
Acq On    : 12 Jun 2013  12:24 am                     Operator: elwiraa
Sample    : icv31-50                                  Inst    : MS5P
Misc      : op66547,e5p32,                            Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Wed Jun 12 00:01:38 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  230%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	5.19
5	S	2-Fluorophenol	1.370	1.312	4.2	99	0.00	4.21
8	S	Phenol-d5	1.748	1.574	10.0	93	0.00	4.90
24	I	Naphthalene-d8	1.000	1.000	0.0	96	0.00	6.27
25	S	Nitrobenzene-d5	0.356	0.345	3.1	98	0.00	5.63
47	I	Acenaphthene-d10	1.000	1.000	0.0	87	0.00	8.60
51	S	2-Fluorobiphenyl	1.176	1.223	-4.0	96	0.00	7.58
69	I	Phenanthrene-d10	1.000	1.000	0.0	82	0.00	11.20
73	S	2,4,6-Tribromophenol	0.111	0.110	0.9	76	0.00	9.97
83	I	Chrysene-d12	1.000	1.000	0.0	65	0.00	16.38
85	S	Terphenyl-d14	0.748	0.832	-11.2	77	0.00	14.39

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5p615.D    M5P31.M          Wed Jun 12 00:57:40 2013
```

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P32-ICV32
Lab FileID: 5P626A.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p31\5p626a.D            Vial: 23
Acq On    : 12 Jun 2013   1:23 am                   Operator: elwiraa
Sample    : icv32-50                                Inst    : MS5P
Misc      : op66547,e5p32,                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Wed Jun 12 00:01:38 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
106	Chrysene-d12a	1.000	1.000	0.0	90	0.00	16.38
107	Benzidine	0.398	0.609	-53.0#	144	0.00	13.88

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p615.D M5P31.M Wed Jun 12 14:27:16 2013

8.7.22

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P32-ICV31
Lab FileID: 5P626.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p31\5p626.D              Vial: 23
Acq On    : 12 Jun 2013   1:23 am                    Operator: elwiraa
Sample    : icv31-50                                 Inst    : MS5P
Misc      : op66547,e5p32,                           Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Wed Jun 12 00:01:38 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83 I	Chrysene-d12	1.000	1.000	0.0	69	0.00	16.38
89 t	3,3'-Dichlorobenzidine	0.377	0.392	-4.0	72	0.00	16.40

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p615.D M5P31.M Wed Jun 12 14:25:44 2013

8.7.23

8

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: E5P32-ICV32
Lab FileID: 5P627.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p31\5p627.D              Vial: 24
Acq On    : 12 Jun 2013   1:52 am                     Operator: elwiraa
Sample    : icv32-50                                  Inst    : MS5P
Misc      : op66547,e5p32,                            Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Wed Jun 12 00:01:38 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
110 I	Naphthalene-d8a	1.000	1.000	0.0	172	0.00	6.27
111	hydroquinone	0.339	0.310	8.6	144	-0.02	6.68

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p615.D M5P31.M Wed Jun 12 14:20:47 2013

8.7.24

8

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E5P54-CC31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P1102.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p54\5p1102.D            Vial: 2
Acq On    : 25 Jun 2013   8:23 pm                   Operator: ashleyd
Sample    : cc31-25                                 Inst    : MS5P
Misc      : op66681,e5p54,                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Fri Jun 21 21:44:59 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	110	-0.05	5.04
2	t	1,4-Dioxane	0.633	0.484	23.5#	88	-0.04	2.66
3	t	Pyridine	1.366	1.196	12.4	93	-0.04	3.00
4	t	N-Nitrosodimethylamine	1.025	0.794	22.5#	90	-0.04	2.98
5	S	2-Fluorophenol	1.370	1.137	17.0	97	-0.05	4.10
6	t	Indene	2.550	2.191	14.1	103	-0.04	5.28
7	t	Cumene	3.559	3.039	14.6	98	-0.05	4.44
8	S	Phenol-d5	1.748	1.441	17.6	98	-0.05	4.80
9	t	Phenol	1.998	1.857	7.1	113	-0.05	4.81
10		Aniline	2.330	1.701	27.0#	85	-0.05	4.81
11	t	bis(2-Chloroethyl)ether	1.529	1.233	19.4	91	-0.05	4.84
12	t	2-Chlorophenol	1.586	1.397	11.9	104	-0.05	4.90
13	t	Decane	1.709	1.669	2.3	117	-0.05	4.90
14	t	1,3-Dichlorobenzene	1.783	1.562	12.4	101	-0.05	5.01
15	t	1,4-Dichlorobenzene	1.848	1.603	13.3	106	-0.05	5.05
16	t	Benzyl alcohol	1.018	0.894	12.2	109	-0.05	5.17
17	t	1,2-Dichlorobenzene	1.624	1.484	8.6	105	-0.05	5.21
18	t	Acetophenone	2.065	1.631	21.0#	94	-0.04	5.38
19	t	2-Methylphenol	1.389	1.151	17.1	96	-0.05	5.28
20	t	2,2'-oxybis(1-Chloropropa	2.342	2.131	9.0	108	-0.04	5.29
21	t	3&4-Methylphenol	1.450	1.247	14.0	103	-0.04	5.39
22	t	n-Nitroso-di-n-propylamin	1.088	0.774	28.9#	84	-0.05	5.39
23	t	Hexachloroethane	0.576	0.515	10.6	108	-0.04	5.45
24	I	Naphthalene-d8	1.000	1.000	0.0	93	-0.05	6.11
25	S	Nitrobenzene-d5	0.356	0.320	10.1	92	-0.05	5.50
26	t	Nitrobenzene	0.410	0.356	13.2	87	-0.05	5.52
27	t	Quinoline	0.711	0.662	6.9	93	-0.06	6.48
28	t	Isophorone	0.704	0.595	15.5	85	-0.05	5.70
29	t	2-Nitrophenol	0.193	0.206	-6.7	105	-0.05	5.78
30	t	2,4-Dimethylphenol	0.348	0.295	15.2	85	-0.05	5.81
31	t	Benzoic acid	0.247	0.235	4.9	100	-0.05	5.90
32	t	bis(2-Chloroethoxy)methan	0.426	0.362	15.0	85	-0.05	5.88
33	t	2,4-Dichlorophenol	0.300	0.305	-1.7	99	-0.05	5.99
34	t	2,6-Dichlorophenol	0.305	0.302	1.0	100	-0.05	6.21
35		1,3,5-Trichlorobenzene	0.364	0.348	4.4	99	-0.05	5.78
36	t	1,2,4-Trichlorobenzene	0.349	0.331	5.2	98	-0.05	6.07
37		1,2,3-Trichlorobenzene	0.327	0.327	0.0	103	-0.05	6.31
38	t	Naphthalene	1.111	1.021	8.1	92	-0.05	6.13
39	t	4-Chloroaniline	0.455	0.425	6.6	88	-0.05	6.20
40	t	2,3-Dichloroaniline	0.363	0.348	4.1	95	-0.07	7.30
41	t	Caprolactam	0.174	0.169	2.9	96	-0.07	6.54

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E5P54-CC31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P1102.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

42	t	Hexachlorobutadiene	0.192	0.201	-4.7	107	-0.06	6.30
43	t	4-Chloro-3-methylphenol	0.304	0.282	7.2	89	-0.06	6.74
44	t	2-Methylnaphthalene	0.618	0.604	2.3	93	-0.06	6.89
45	t	1-Methylnaphthalene	0.688	0.642	6.7	93	-0.06	7.02
46	t	Dimethylnaphthalene	0.634	0.594	6.3	95	-0.07	7.74
47	I	Acenaphthene-d10	1.000	1.000	0.0	97	-0.07	8.40
48	t	Hexachlorocyclopentadiene	0.371	0.347	6.5	92	-0.06	7.17
49	t	2,4,6-Trichlorophenol	0.360	0.365	-1.4	102	-0.06	7.30
50	t	2,4,5-Trichlorophenol	0.386	0.391	-1.3	103	-0.07	7.37
51	S	2-Fluorobiphenyl	1.176	1.131	3.8	101	-0.07	7.39
52	t	2-Chloronaphthalene	1.223	1.126	7.9	97	-0.07	7.53
53	t	Biphenyl	1.529	1.432	6.3	98	-0.07	7.52
54	t	2-Nitroaniline	0.376	0.343	8.8	94	-0.06	7.73
55	t	Dimethylphthalate	1.339	1.290	3.7	100	-0.07	8.06
56	t	Acenaphthylene	1.826	1.767	3.2	98	-0.07	8.16
57	t	2,6-Dinitrotoluene	0.274	0.308	-12.4	116	-0.07	8.16
58	t	3-Nitroaniline	0.330	0.326	1.2	94	-0.07	8.38
59	t	Acenaphthene	1.168	1.143	2.1	99	-0.07	8.45
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	55.258	-10.5	118	-0.07	8.56
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.163	0.161	1.2	92	-0.09	8.74
62	t	Dibenzofuran	1.673	1.582	5.4	99	-0.07	8.71
63	t	2,4-Dinitrotoluene	0.368	0.409	-11.1	108	-0.07	8.80
64		2,3,4,6-Tetrachlorophenol	0.316	0.306	3.2	99	-0.07	9.02
65	t	Diethylphthalate	1.316	1.276	3.0	101	-0.08	9.25
66	t	Fluorene	1.277	1.206	5.6	97	-0.07	9.30
67	t	4-Chlorophenyl-phenylethe	0.633	0.595	6.0	96	-0.07	9.32
68	t	4-Nitroaniline	0.329	0.327	0.6	92	-0.08	9.43
69	I	Phenanthrene-d10	1.000	1.000	0.0	97	-0.08	10.99
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	25.000	27.648	-10.6	122	-0.07	9.51
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.578	0.534	7.6	96	-0.07	9.55
72	t	1,2-Diphenylhydrazine	0.895	0.746	16.6	88	-0.07	9.60
73	S	2,4,6-Tribromophenol	0.111	0.118	-6.3	103	-0.08	9.76
74	t	4-Bromophenyl-phenylether	0.229	0.222	3.1	101	-0.08	10.19
75	t	Hexachlorobenzene	0.266	0.261	1.9	100	-0.08	10.44
76	t	Pentachlorophenol	0.151	0.124	17.9	83	-0.08	10.80
77	t	Phenanthrene	1.175	1.094	6.9	95	-0.09	11.03
78	t	Anthracene	1.171	1.110	5.2	98	-0.08	11.11
79	t	Carbazole	1.080	1.021	5.5	98	-0.08	11.46
80	t	Di-n-butylphthalate	1.387	1.387	0.0	102	-0.09	12.34
81	t	Fluoranthene	1.201	1.204	-0.2	103	-0.09	13.33
82	t	Octadecane	0.590	0.512	13.2	92	-0.08	10.93
83	I	Chrysene-d12	1.000	1.000	0.0	100	-0.09	16.18
84	t	Pyrene	1.237	1.110	10.3	100	-0.09	13.75
85	S	Terphenyl-d14	0.748	0.685	8.4	100	-0.09	14.17
86	t	Butylbenzylphthalate	0.560	0.561	-0.2	110	-0.09	15.28
87		Butyl stearate	0.350	0.324	7.4	99	-0.09	15.42
88	t	Benzo[a]anthracene	1.110	1.002	9.7	104	-0.09	16.15
89	t	3,3'-Dichlorobenzidine	0.377	0.365	3.2	108	-0.09	16.19
90	t	Chrysene	1.055	0.944	10.5	100	-0.09	16.23

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E5P54-CC31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P1102.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

91	t	bis(2-Ethylhexyl)phthalat	0.789	0.798	-1.1	107	-0.09	16.53
92	I	Perylene-d12	1.000	1.000	0.0	86	-0.07	18.76
93	t	Di-n-octylphthalate	1.529	1.844	-20.6#	115	-0.09	17.69
94	t	Benzo[b]fluoranthene	1.249	1.388	-11.1	114	-0.09	18.17
95	t	Benzo[k]fluoranthene	1.361	1.323	2.8	97	-0.09	18.22
96	t	Benzo[a]pyrene	1.084	0.985	9.1	88	-0.07	18.68
97	t	Indeno[1,2,3-cd]pyrene	1.034	0.949	8.2	90	-0.10	20.23
98	t	Dibenz(a,h)acridine	0.886	0.822	7.2	93	-0.09	19.91
99	t	Dibenz[a,h]anthracene	1.076	0.905	15.9	83	-0.09	20.27
100	t	7,12-Dimethylbenz(a)anthr	0.622	0.563	9.5	92	-0.09	18.22
101	t	Benzo[g,h,i]perylene	1.073	0.940	12.4	85	-0.10	20.63

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p616.D M5P31.M Thu Jun 27 16:43:35 2013 RPT1

8.7.25

8

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E5P54-CC32
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P1105.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p54\5p1105.D            Vial: 5
Acq On    : 25 Jun 2013   9:51 pm                   Operator: ashleyd
Sample    : cc32-25                                 Inst    : MS5P
Misc      : op66681,e5p54,                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Fri Jun 21 21:44:59 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	66	-0.05	5.04
103	Benzaldehyde	1.082	1.068	1.3	63	-0.14	4.70
104	Acenaphthene-d10a	1.000	1.000	0.0	70	-0.07	8.40
105	1,2,4,5-Tetrachlorobenzen	0.511	0.575	-12.5	74	-0.18	7.15
106	Chrysene-d12a	1.000	1.000	0.0	73	-0.10	16.17
107	Benzidine	0.398	0.625	-57.0#	94	-0.21	13.66
108	Phenanthrene-d10a	1.000	1.000	0.0	67	-0.09	10.98
109	Atrazine	0.109	0.116	-6.4	71	-0.20	10.62

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p616.D M5P31.M Thu Jun 27 16:45:23 2013 RPT1

8.7.26

8

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E5P55-CC31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P1136.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p55\5p1136.D            Vial: 2
Acq On    : 26 Jun 2013  10:13 am                   Operator: elwiraa
Sample    : cc31-50                                 Inst    : MS5P
Misc      : op66993,e5p55,                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Thu Jun 27 15:53:10 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	70	0.00	5.04
2	t	1,4-Dioxane	0.633	0.530	16.3	63	0.00	2.65
3	t	Pyridine	1.366	1.324	3.1	60	0.00	3.00
4	t	N-Nitrosodimethylamine	1.025	0.871	15.0	62	0.00	2.97
5	S	2-Fluorophenol	1.370	1.297	5.3	67	0.00	4.10
6	t	Indene	2.550	2.391	6.2	67	0.00	5.27
7	t	Cumene	3.559	3.278	7.9	67	0.00	4.44
8	S	Phenol-d5	1.748	1.620	7.3	65	0.00	4.79
9	t	Phenol	1.998	2.002	-0.2	70	0.00	4.80
10		Aniline	2.330	1.806	22.5#	56	0.00	4.80
11	t	bis(2-Chloroethyl)ether	1.529	1.338	12.5	63	0.00	4.84
12	t	2-Chlorophenol	1.586	1.526	3.8	68	0.00	4.90
13	t	Decane	1.709	1.914	-12.0	83	0.00	4.90
14	t	1,3-Dichlorobenzene	1.783	1.682	5.7	67	0.00	5.00
15	t	1,4-Dichlorobenzene	1.848	1.685	8.8	66	0.00	5.05
16	t	Benzyl alcohol	1.018	1.017	0.1	72	0.00	5.17
17	t	1,2-Dichlorobenzene	1.624	1.640	-1.0	73	0.00	5.21
18	t	Acetophenone	2.065	1.885	8.7	65	0.00	5.38
19	t	2-Methylphenol	1.389	1.338	3.7	67	0.00	5.28
20	t	2,2'-oxybis(1-Chloropropa	2.342	2.543	-8.6	77	0.00	5.28
21	t	3&4-Methylphenol	1.450	1.415	2.4	67	0.00	5.38
22	t	n-Nitroso-di-n-propylamin	1.088	0.945	13.1	61	0.00	5.39
23	t	Hexachloroethane	0.576	0.607	-5.4	74	0.00	5.45
24	I	Naphthalene-d8	1.000	1.000	0.0	68	0.00	6.10
25	S	Nitrobenzene-d5	0.356	0.320	10.1	64	0.00	5.50
26	t	Nitrobenzene	0.410	0.373	9.0	63	0.00	5.52
27	t	Quinoline	0.711	0.689	3.1	67	0.00	6.48
28	t	Isophorone	0.704	0.617	12.4	60	0.00	5.69
29	t	2-Nitrophenol	0.193	0.215	-11.4	72	0.00	5.77
30	t	2,4-Dimethylphenol	0.348	0.313	10.1	60	0.00	5.80
31	t	Benzoic acid	0.247	0.247	0.0	64	0.00	5.91
32	t	bis(2-Chloroethoxy)methan	0.426	0.390	8.5	65	0.00	5.87
33	t	2,4-Dichlorophenol	0.300	0.309	-3.0	71	0.00	5.99
34	t	2,6-Dichlorophenol	0.305	0.304	0.3	68	0.00	6.21
35		1,3,5-Trichlorobenzene	0.364	0.358	1.6	70	0.00	5.78
36	t	1,2,4-Trichlorobenzene	0.349	0.345	1.1	70	0.00	6.06
37		1,2,3-Trichlorobenzene	0.327	0.341	-4.3	72	0.00	6.31
38	t	Naphthalene	1.111	1.050	5.5	67	0.00	6.12
39	t	4-Chloroaniline	0.455	0.427	6.2	64	0.00	6.19
40	t	2,3-Dichloroaniline	0.363	0.362	0.3	70	0.00	7.30
41	t	Caprolactam	0.174	0.176	-1.1	68	0.00	6.55

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E5P55-CC31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P1136.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

42	t	Hexachlorobutadiene	0.192	0.192	0.0	70	0.00	6.30
43	t	4-Chloro-3-methylphenol	0.304	0.286	5.9	66	0.00	6.74
44	t	2-Methylnaphthalene	0.618	0.608	1.6	67	0.00	6.88
45	t	1-Methylnaphthalene	0.688	0.658	4.4	66	0.00	7.02
46	t	Dimethylnaphthalene	0.634	0.602	5.0	66	0.00	7.73
47	I	Acenaphthene-d10	1.000	1.000	0.0	68	0.00	8.40
48	t	Hexachlorocyclopentadiene	0.371	0.349	5.9	62	0.00	7.17
49	t	2,4,6-Trichlorophenol	0.360	0.389	-8.1	73	0.00	7.30
50	t	2,4,5-Trichlorophenol	0.386	0.390	-1.0	67	0.00	7.37
51	S	2-Fluorobiphenyl	1.176	1.139	3.1	70	0.00	7.39
52	t	2-Chloronaphthalene	1.223	1.167	4.6	68	0.00	7.53
53	t	Biphenyl	1.529	1.448	5.3	68	0.00	7.51
54	t	2-Nitroaniline	0.376	0.374	0.5	68	0.00	7.73
55	t	Dimethylphthalate	1.339	1.310	2.2	70	0.00	8.05
56	t	Acenaphthylene	1.826	1.832	-0.3	69	0.00	8.15
57	t	2,6-Dinitrotoluene	0.274	0.312	-13.9	73	0.00	8.16
58	t	3-Nitroaniline	0.330	0.360	-9.1	70	0.00	8.38
59	t	Acenaphthene	1.168	1.163	0.4	69	0.00	8.44
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	100.000	110.055	-10.1	80	0.00	8.56
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.163	0.168	-3.1	63	0.00	8.74
62	t	Dibenzofuran	1.673	1.619	3.2	68	0.00	8.71
63	t	2,4-Dinitrotoluene	0.368	0.412	-12.0	72	0.00	8.80
64		2,3,4,6-Tetrachlorophenol	0.316	0.321	-1.6	67	0.00	9.01
65	t	Diethylphthalate	1.316	1.319	-0.2	71	0.00	9.25
66	t	Fluorene	1.277	1.280	-0.2	69	0.00	9.29
67	t	4-Chlorophenyl-phenylethe	0.633	0.604	4.6	68	0.00	9.32
68	t	4-Nitroaniline	0.329	0.345	-4.9	66	0.00	9.43
69	I	Phenanthrene-d10	1.000	1.000	0.0	70	0.00	10.98
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	50.000	55.111	-10.2	79	0.00	9.51
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.578	0.563	2.6	71	0.00	9.54
72	t	1,2-Diphenylhydrazine	0.895	0.771	13.9	62	0.00	9.59
73	S	2,4,6-Tribromophenol	0.111	0.128	-15.3	75	0.00	9.76
74	t	4-Bromophenyl-phenylether	0.229	0.230	-0.4	72	0.00	10.18
75	t	Hexachlorobenzene	0.266	0.262	1.5	69	0.00	10.43
76	t	Pentachlorophenol	0.151	0.137	9.3	57	0.00	10.80
77	t	Phenanthrene	1.175	1.108	5.7	68	0.00	11.02
78	t	Anthracene	1.171	1.117	4.6	68	0.00	11.11
79	t	Carbazole	1.080	1.040	3.7	69	0.00	11.46
80	t	Di-n-butylphthalate	1.387	1.399	-0.9	70	0.00	12.34
81	t	Fluoranthene	1.201	1.220	-1.6	72	0.00	13.32
82	t	Octadecane	0.590	0.541	8.3	64	0.00	10.93
83	I	Chrysene-d12	1.000	1.000	0.0	67	0.00	16.17
84	t	Pyrene	1.237	1.192	3.6	71	0.00	13.74
85	S	Terphenyl-d14	0.748	0.715	4.4	69	0.00	14.16
86	t	Butylbenzylphthalate	0.560	0.571	-2.0	70	0.00	15.27
87		Butyl stearate	0.350	0.349	0.3	69	0.00	15.41
88	t	Benzo[a]anthracene	1.110	1.035	6.8	69	0.00	16.14
89	t	3,3'-Dichlorobenzidine	0.377	0.381	-1.1	69	0.00	16.19
90	t	Chrysene	1.055	0.972	7.9	68	0.00	16.22

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E5P55-CC31
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P1136.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

91	t	bis(2-Ethylhexyl)phthalat	0.789	0.826	-4.7	71	0.00	16.52
92	I	Perylene-d12	1.000	1.000	0.0	58	0.00	18.75
93	t	Di-n-octylphthalate	1.529	1.967	-28.6#	74	0.00	17.68
94	t	Benzo[b]fluoranthene	1.249	1.446	-15.8	71	0.00	18.17
95	t	Benzo[k]fluoranthene	1.361	1.419	-4.3	67	0.00	18.22
96	t	Benzo[a]pyrene	1.084	1.034	4.6	59	0.00	18.68
97	t	Indeno[1,2,3-cd]pyrene	1.034	1.070	-3.5	64	0.00	20.23
98	t	Dibenz(a,h)acridine	0.886	0.879	0.8	59	0.00	19.91
99	t	Dibenz[a,h]anthracene	1.076	0.986	8.4	58	0.00	20.27
100	t	7,12-Dimethylbenz(a)anthr	0.622	0.666	-7.1	66	0.00	18.22
101	t	Benzo[g,h,i]perylene	1.073	1.036	3.4	61	0.00	20.64

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p1136.D M5P31.M Thu Jun 27 15:54:03 2013 RPT1

Continuing Calibration Summary

Job Number: JB40127 **Sample:** E5P55-CC32
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5P1138.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e5p55\5p1138.D            Vial: 3
Acq On    : 26 Jun 2013  12:02 pm                    Operator: elwiraa
Sample    : cc32-50                                  Inst    : MS5P
Misc      : op66993,e5p55,                           Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M5P31.M (RTE Integrator)
Title        : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
Last Update  : Thu Jun 27 15:53:10 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	58	0.00	5.03
103	Benzaldehyde	1.082	1.112	-2.8	64	-0.15	4.69
104	Acenaphthene-d10a	1.000	1.000	0.0	55	-0.01	8.39
105	1,2,4,5-Tetrachlorobenzen	0.511	0.555	-8.6	57	-0.19	7.15
106	Chrysene-d12a	1.000	1.000	0.0	58	-0.01	16.16
107	Benzidine	0.398	0.757	-90.2#	116	-0.22	13.65
108	Phenanthrene-d10a	1.000	1.000	0.0	58	-0.01	10.97
109	Atrazine	0.109	0.114	-4.6	59	-0.20	10.62
110 I	Naphthalene-d8a	1.000	1.000	0.0	56	0.00	6.10
111	hydroquinone	0.339	0.350	-3.2	53	-0.16	6.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5p1136.D M5P31.M Thu Jun 27 15:55:00 2013 RPT1

8.7.28

8

New Jersey

ACCUTEST LABORATORIES

GC/MS Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On : 26 Jun 2013 6:57 am
Operator : ashleyd
Sample : jb40127-7
Misc : op66993,e5p54,34.4
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jun 27 17:32:34 2013
Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Fri Jun 21 21:44:59 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.036	152	37382	40.00 ppb	-0.05
24) Naphthalene-d8	6.105	136	168217	40.00 ppb	-0.05
47) Acenaphthene-d10	8.396	164	115962	40.00 ppb	-0.07
69) Phenanthrene-d10	10.982	188	199012	40.00 ppb	-0.09
83) Chrysene-d12	16.175	240	168530	40.00 ppb	-0.09
92) Perylene-d12	18.760	264	126693	40.00 ppb	-0.07
102) 1,4-Dichlorobenzene-d4a	5.036	152	37382	40.00 ppb	-0.05
104) Acenaphthene-d10a	8.396	164	115962	40.00 ppb	-0.07
106) Chrysene-d12a	16.175	240	168530	40.00 ppb	-0.09
108) Phenanthrene-d10a	10.982	188	199012	40.00 ppb	-0.09
110) Naphthalene-d8a	6.105	136	168217	40.00 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol	4.107	112	36113	28.21 ppb	-0.04
Spiked Amount 50.000			Recovery	= 56.42%	
8) Phenol-d5	4.812	99	49601	30.37 ppb	-0.03
Spiked Amount 50.000			Recovery	= 60.74%	
25) Nitrobenzene-d5	5.501	82	31093	20.77 ppb	-0.05
Spiked Amount 50.000			Recovery	= 41.54%	
51) 2-Fluorobiphenyl	7.392	172	74761	21.93 ppb	-0.07
Spiked Amount 50.000			Recovery	= 43.86%	
73) 2,4,6-Tribromophenol	9.764	330	15654	28.34 ppb	-0.08
Spiked Amount 50.000			Recovery	= 56.68%	
85) Terphenyl-d14	14.166	244	106682	33.83 ppb	-0.09
Spiked Amount 50.000			Recovery	= 67.66%	

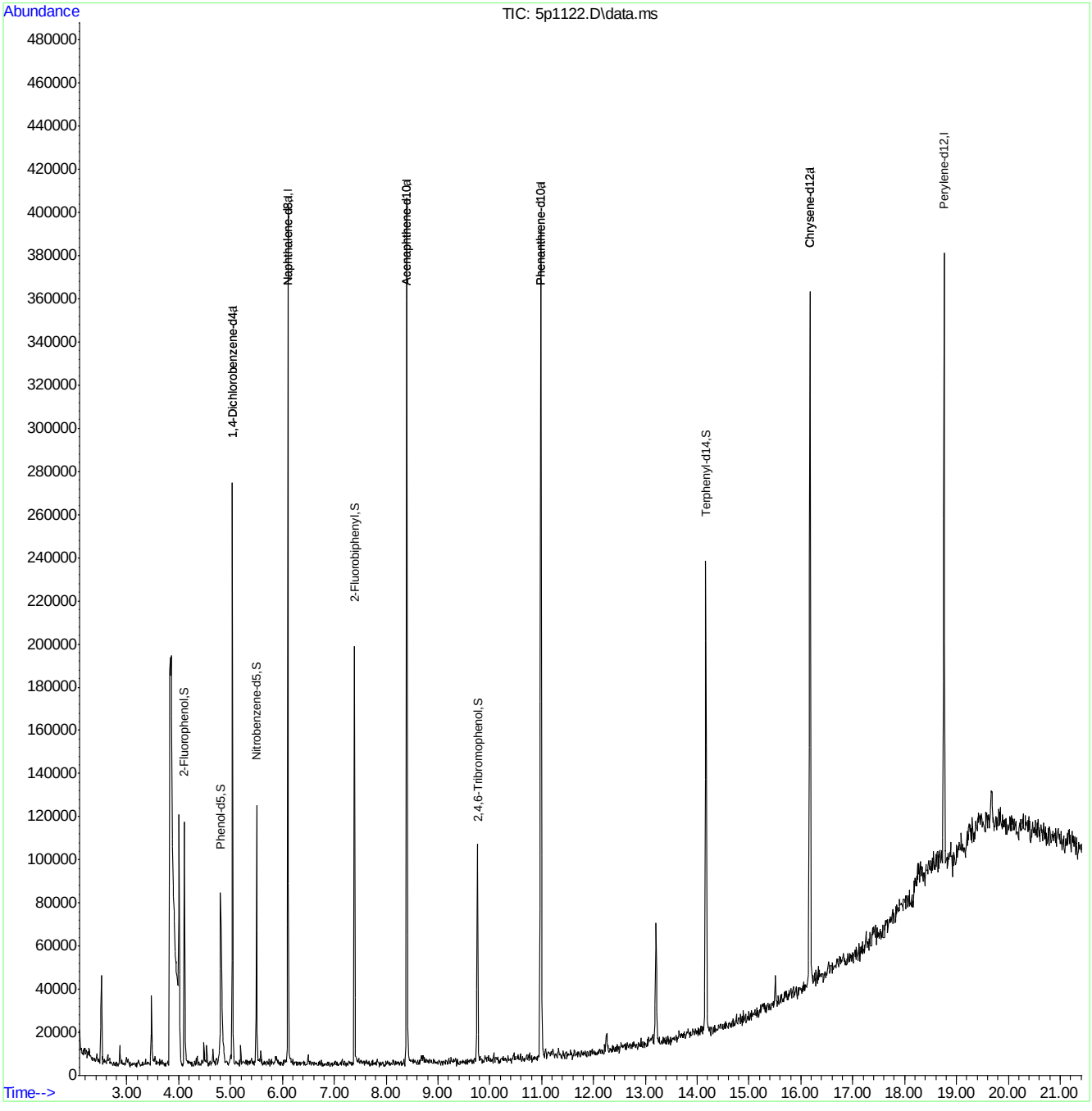
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On : 26 Jun 2013 6:57 am
Operator : ashleyd
Sample : jb40127-7
Misc : op66993,e5p54,34.4
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jun 27 17:32:34 2013
Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Fri Jun 21 21:44:59 2013
Response via : Initial Calibration



M5P31.M Thu Jun 27 17:32:38 2013 RPT1 Page: 2

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On : 26 Jun 2013 6:57 am
Operator : ashleyd
Sample : jb40127-7
Misc : op66993,e5p54,34.4
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 7

Method : C:\MSDCHEM\1\METHODS\M5P31.M
Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

Signal : TIC: 5p1122.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.216	22	25	28	rVB5	3620	4208	0.44%	0.079%
2	2.269	33	35	46	rVB10	5799	11291	1.17%	0.213%
3	2.419	58	63	68	rBV3	4059	5249	0.54%	0.099%
4	2.509	74	80	86	rBV2	40650	55164	5.71%	1.040%
5	2.632	98	103	107	rBV7	4454	7696	0.80%	0.145%
6	2.862	140	146	150	rBV	9660	9775	1.01%	0.184%
7	2.995	164	171	173	rBV5	4038	4658	0.48%	0.088%
8	3.022	173	176	182	rVB7	3627	6203	0.64%	0.117%
9	3.225	210	214	220	rVB8	2847	4441	0.46%	0.084%
10	3.471	255	260	271	rBV	32214	43666	4.52%	0.823%
11	3.546	271	274	278	rVB2	3759	4924	0.51%	0.093%
12	3.674	294	298	308	rVB10	3108	7192	0.74%	0.136%
13	3.856	321	332	357	rBV3	189360	966808	100.00%	18.227%
14	4.005	357	360	370	rVB	116426	126594	13.09%	2.387%
15	4.107	373	379	392	rBV2	113217	129875	13.43%	2.449%
16	4.358	423	426	429	rVB3	4267	3878	0.40%	0.073%
17	4.486	444	450	455	rBV2	10071	12218	1.26%	0.230%
18	4.539	455	460	465	rVB	9803	12958	1.34%	0.244%
19	4.662	475	483	488	rBV	7843	10976	1.14%	0.207%
20	4.721	491	494	499	rBV5	3359	4464	0.46%	0.084%
21	4.806	499	510	527	rBV2	79358	171619	17.75%	3.236%
22	5.004	538	547	549	rBV10	4917	9174	0.95%	0.173%
23	5.036	549	553	563	rVB	269854	244618	25.30%	4.612%
24	5.196	580	583	587	rBV3	8640	7285	0.75%	0.137%
25	5.501	632	640	645	rBV	120623	104529	10.81%	1.971%
26	5.581	652	655	658	rVB4	6058	6275	0.65%	0.118%
27	5.747	683	686	689	rVB5	3508	4053	0.42%	0.076%
28	5.870	702	709	711	rBV6	3727	5620	0.58%	0.106%
29	6.105	746	753	765	rVB	397500	355085	36.73%	6.694%
30	6.500	817	827	832	rBV10	4972	6884	0.71%	0.130%
31	7.152	946	949	956	rBV8	3014	5542	0.57%	0.104%
32	7.392	985	994	1005	rBV	194184	227982	23.58%	4.298%
33	7.825	1072	1075	1080	rVB6	3339	4463	0.46%	0.084%
34	8.129	1128	1132	1138	rVB7	2596	4488	0.46%	0.085%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On : 26 Jun 2013 6:57 am
Operator : ashleyd
Sample : jb40127-7
Misc : op66993,e5p54,34.4
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 7

Method : C:\MSDCHEM\1\METHODS\M5P31.M
Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

35	8.343	1166	1172	1175	rVB6	3177	4157	0.43%	0.078%
36	8.396	1175	1182	1196	rBV	402396	491998	50.89%	9.276%
37	8.674	1230	1234	1236	rBV4	3888	5284	0.55%	0.100%
38	9.342	1355	1359	1363	rVB5	3603	5862	0.61%	0.111%
39	9.759	1431	1437	1445	rBV2	101117	135665	14.03%	2.558%
40	9.908	1461	1465	1471	rBV6	3466	6085	0.63%	0.115%
41	10.079	1493	1497	1501	rBV5	4873	6864	0.71%	0.129%
42	10.293	1533	1537	1544	rVB9	1989	4122	0.43%	0.078%
43	10.469	1560	1570	1572	rBV9	4820	10632	1.10%	0.200%
44	10.982	1659	1666	1679	rVB2	383353	529775	54.80%	9.988%
45	11.126	1688	1693	1695	rBV6	3194	4975	0.51%	0.094%
46	11.217	1707	1710	1715	rVB7	4147	5084	0.53%	0.096%
47	11.324	1725	1730	1732	rBV6	4405	5317	0.55%	0.100%
48	11.415	1742	1747	1749	rBV6	3886	5183	0.54%	0.098%
49	11.474	1752	1758	1761	rBV7	3706	5953	0.62%	0.112%
50	11.570	1775	1776	1780	rVB4	3619	4122	0.43%	0.078%
51	11.629	1780	1787	1792	rBV9	4549	10090	1.04%	0.190%
52	11.714	1799	1803	1808	rBV7	2878	4427	0.46%	0.083%
53	11.773	1808	1814	1815	rBV4	3288	4501	0.47%	0.085%
54	11.944	1839	1846	1847	rVB6	2694	4325	0.45%	0.082%
55	11.976	1847	1852	1854	rBV6	3344	4930	0.51%	0.093%
56	12.254	1898	1904	1908	rBV8	8387	16027	1.66%	0.302%
57	12.531	1949	1956	1960	rBV10	4956	9956	1.03%	0.188%
58	12.825	2008	2011	2016	rVB7	2549	4215	0.44%	0.079%
59	12.868	2016	2019	2022	rBV5	3070	4073	0.42%	0.077%
60	13.066	2053	2056	2059	rBV5	4130	5373	0.56%	0.101%
61	13.204	2074	2082	2091	rBV	56432	93305	9.65%	1.759%
62	14.065	2240	2243	2245	rBV4	4257	5025	0.52%	0.095%
63	14.166	2255	2262	2273	rVV2	218034	333888	34.54%	6.295%
64	14.278	2279	2283	2288	rBV8	4201	8597	0.89%	0.162%
65	14.626	2343	2348	2351	rBV7	2677	5076	0.53%	0.096%
66	14.759	2368	2373	2376	rBV7	5374	6034	0.62%	0.114%
67	14.807	2378	2382	2386	rVV7	3227	6120	0.63%	0.115%
68	15.443	2497	2501	2502	rBV4	3192	4085	0.42%	0.077%
69	15.507	2508	2513	2517	rVV5	14501	20461	2.12%	0.386%
70	15.625	2533	2535	2540	rBV6	4174	3868	0.40%	0.073%
71	16.175	2627	2638	2648	rBV	322596	512853	53.05%	9.669%

LSC Area Percent Report

```
Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On    : 26 Jun 2013   6:57 am
Operator  : ashleyd
Sample    : jb40127-7
Misc      : op66993,e5p54,34.4
ALS Vial  : 22   Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON                            Filtering: 5
Sampling  : 1                              Min Area: 1000 Area counts
Start Thrs: 0.02                          Max Peaks: 100
Stop Thrs : 0                         Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 7

Method    : C:\MSDCHEM\1\METHODS\M5P31.M
Title     : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
```

72	17.254	2837	2840	2844	rVB6	7532	8415	0.87%	0.159%
73	18.183	3011	3014	3015	rBV3	12134	10517	1.09%	0.198%
74	18.413	3054	3057	3063	rBV8	7120	13442	1.39%	0.253%
75	18.760	3115	3122	3130	rVB	284502	383639	39.68%	7.233%

Sum of corrected areas: 5304175

9.1.2

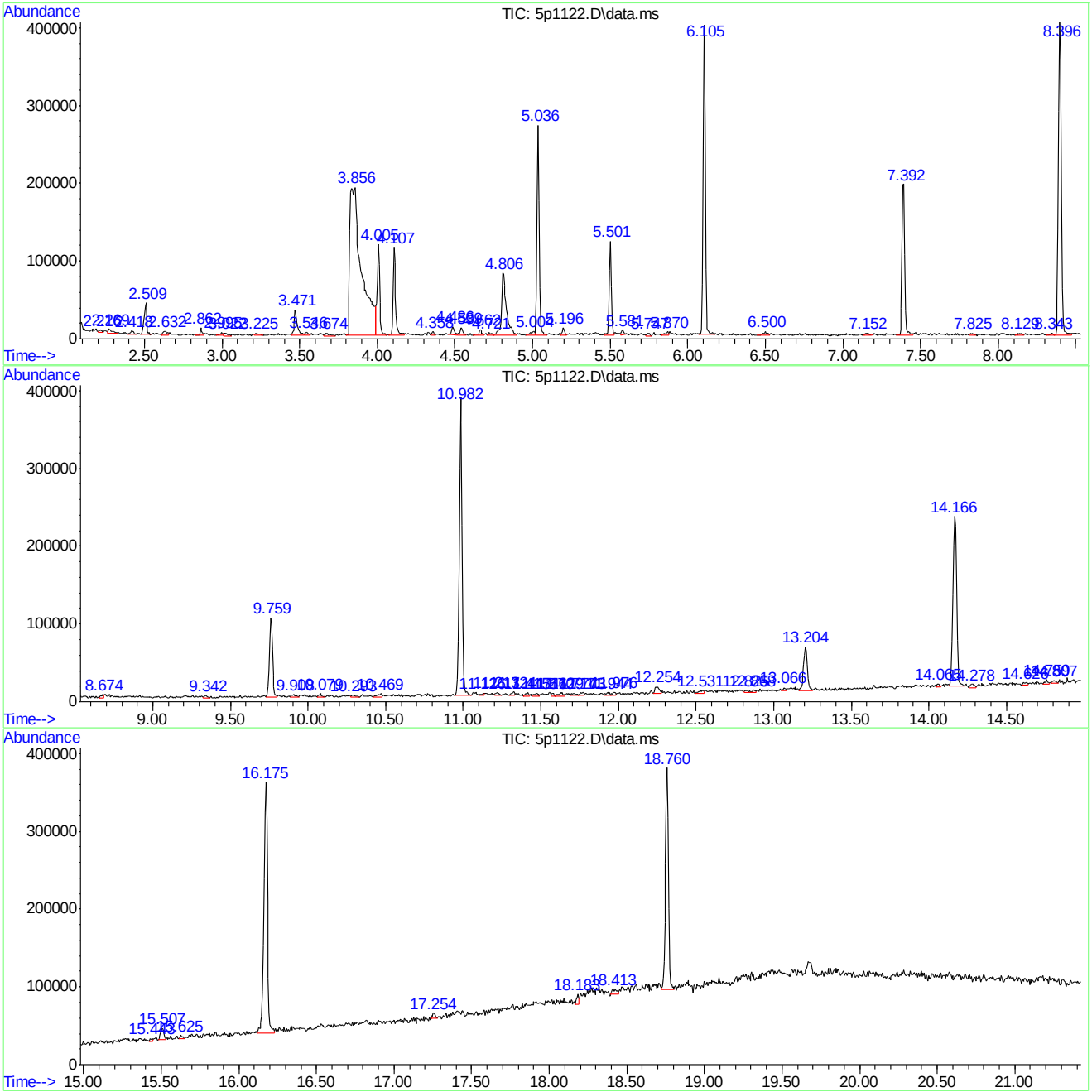
9

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On : 26 Jun 2013 6:57 am
Operator : ashleyd
Sample : jb40127-7
Misc : op66993,e5p54,34.4
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On    : 26 Jun 2013   6:57 am
Operator  : ashleyd
Sample    : jb40127-7
Misc      : op66993,e5p54,34.4
ALS Vial  : 22   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

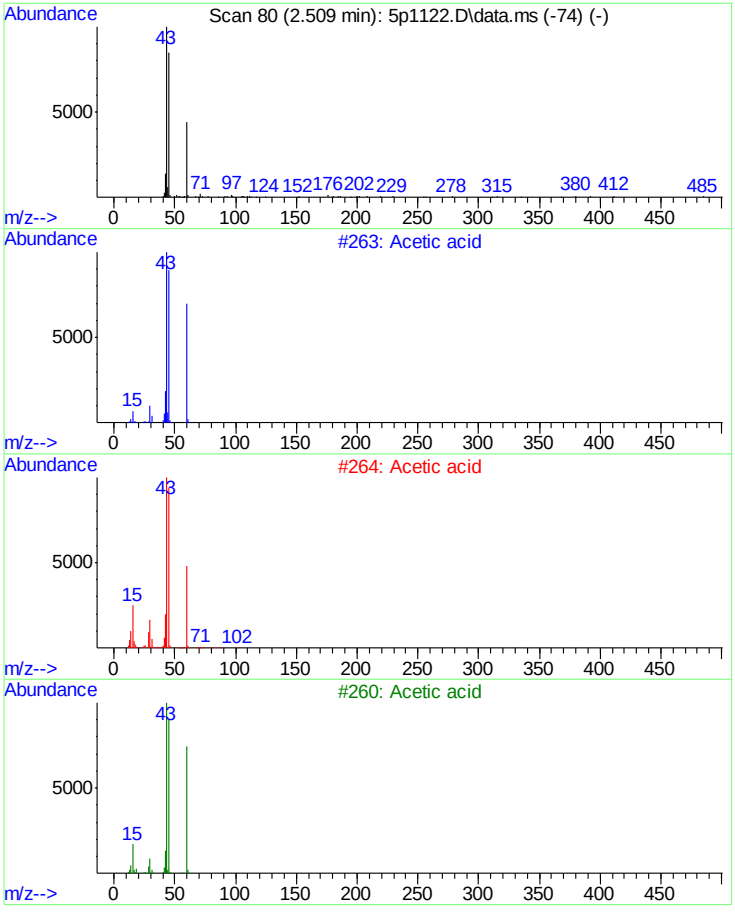
TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
```

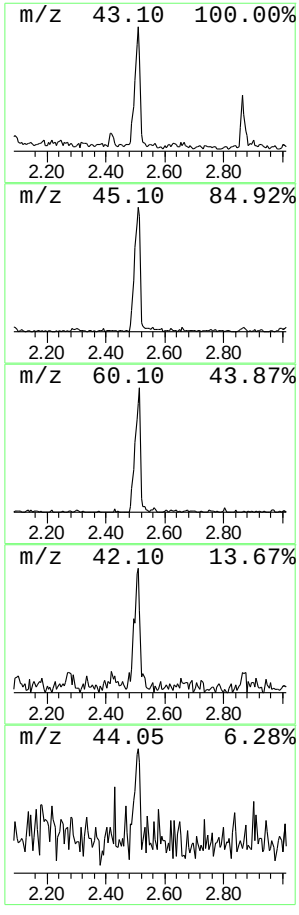
****

Peak Number 1 Acetic acid Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.509	9.02 ppb	55164	1,4-Dichlorobenzene-d4	5.036

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Acetic acid	60	C2H4O2	000064-19-7	86
2	Acetic acid	60	C2H4O2	000064-19-7	86
3	Acetic acid	60	C2H4O2	000064-19-7	86
4	Acetic acid	60	C2H4O2	000064-19-7	80
5	Ammonium acetate	77	C2H7NO2	000631-61-8	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On : 26 Jun 2013 6:57 am
Operator : ashleyd
Sample : jb40127-7
Misc : op66993,e5p54,34.4
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

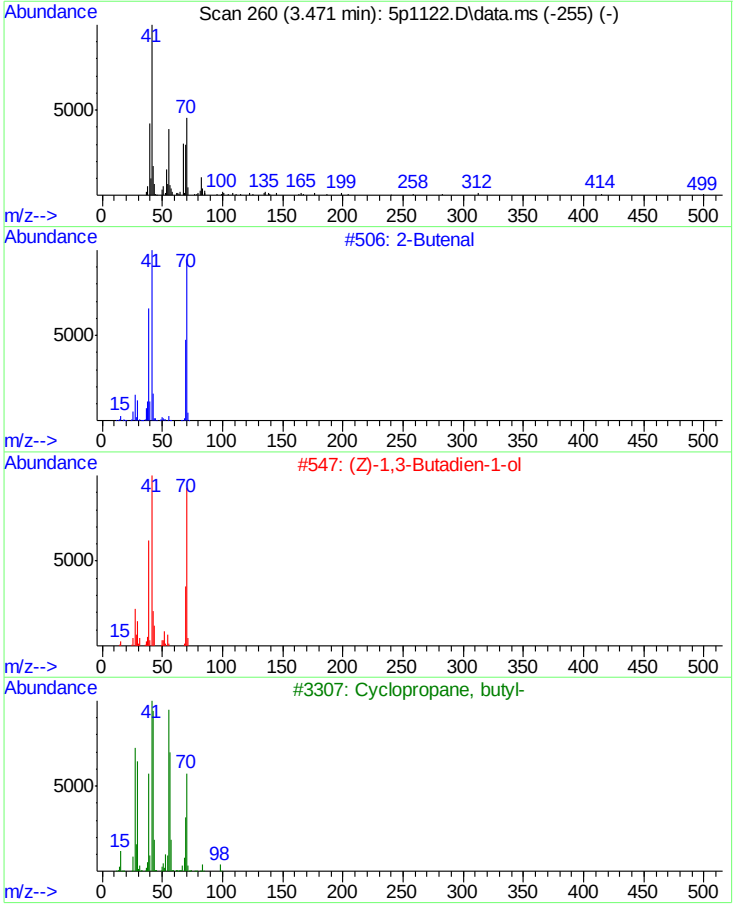
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

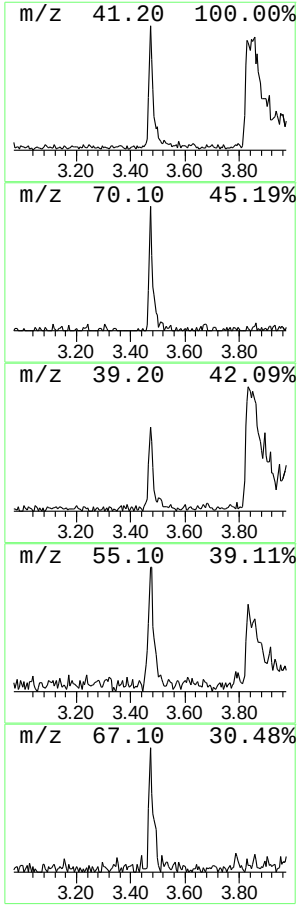
****

Peak Number 2 system artifact Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.471	7.14 ppb	43666	1,4-Dichlorobenzene-d4	5.036

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Butenal	70	C4H6O	004170-30-3	43
2	(Z)-1,3-Butadien-1-ol	70	C4H6O	070415-58-6	43
3	Cyclopropane, butyl-	98	C7H14	000930-57-4	38
4	(E)-1,3-Butadien-1-ol	70	C4H6O	070411-98-2	38
5	Dihydromyrcene	138	C10H18	002436-90-0	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On : 26 Jun 2013 6:57 am
Operator : ashleyd
Sample : jb40127-7
Misc : op66993,e5p54,34.4
ALS Vial : 22 Sample Multiplier: 1

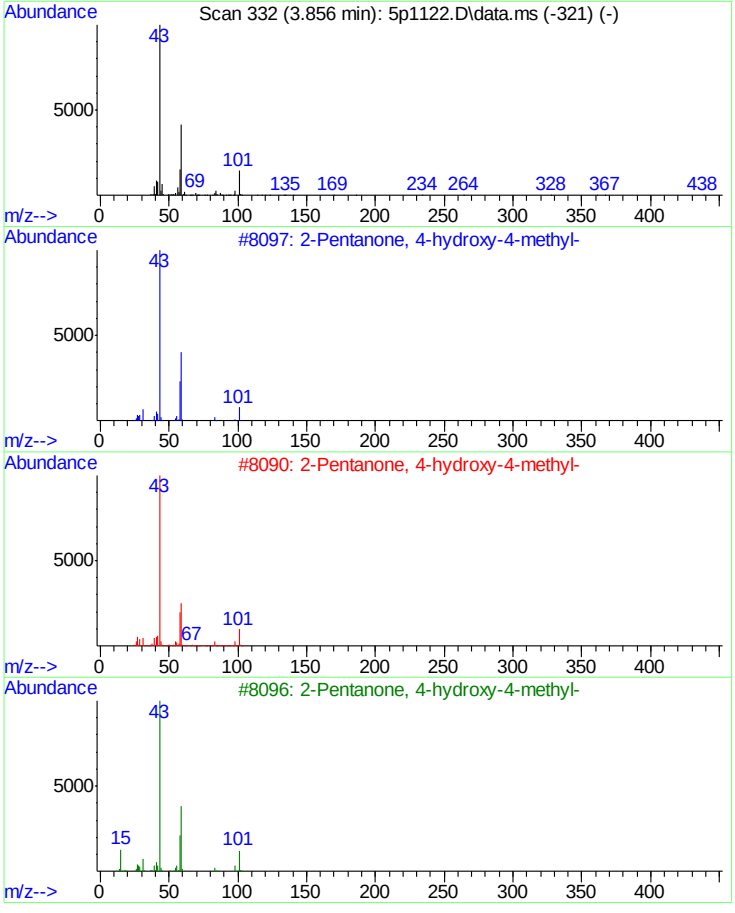
Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

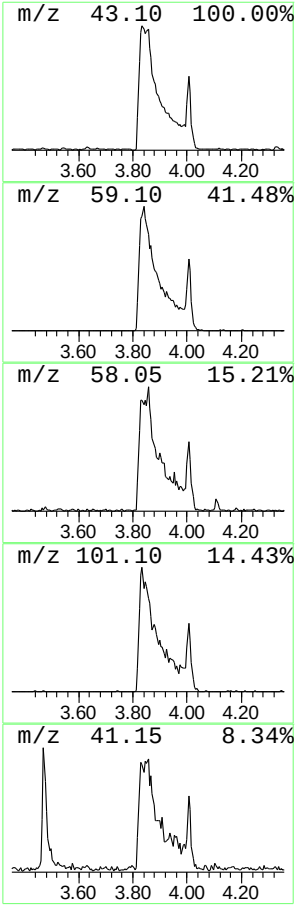
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

****
Peak Number 3 system artifact/aldol-conde... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.856	158.09 ppb	966808	1,4-Dichlorobenzene-d4	5.036

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	64
2	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	45
3	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	42
4	Acetic acid, 1,1-dimethylethyl e...	116	C6H12O2	000540-88-5	38
5	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	25





Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On    : 26 Jun 2013   6:57 am
Operator  : ashleyd
Sample    : jb40127-7
Misc      : op66993,e5p54,34.4
ALS Vial  : 22   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

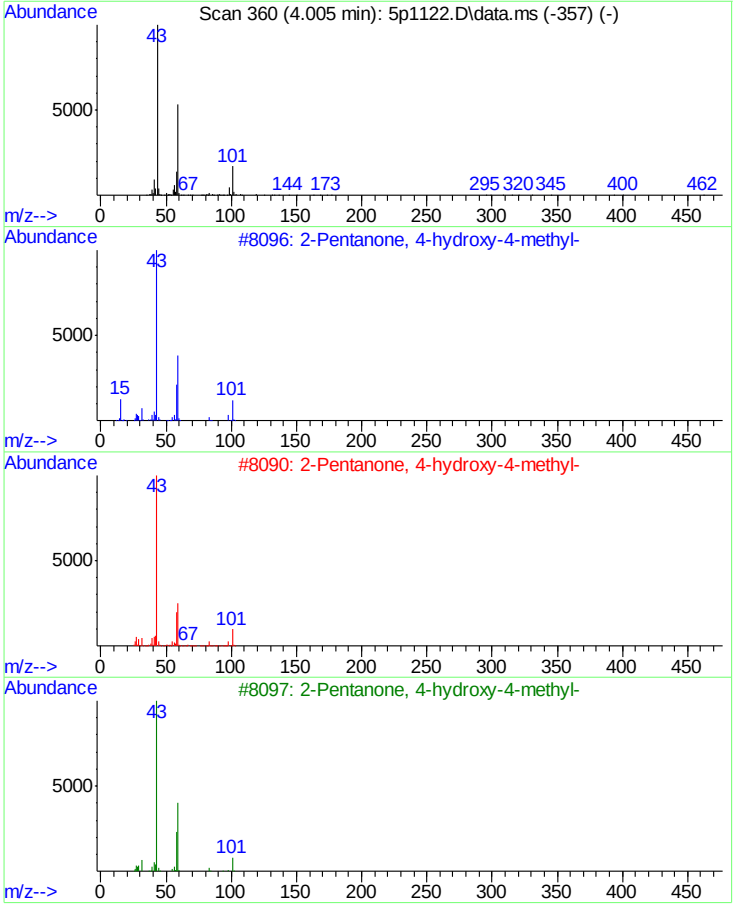
TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
```

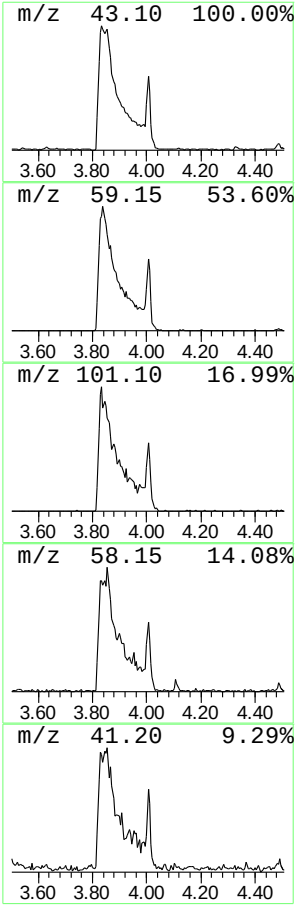
****

Peak Number 4 system artifact/aldol-conde... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.005	20.70 ppb	126594	1,4-Dichlorobenzene-d4	5.036

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	45
2	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	42
3	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	33
4	n-Propyl t-butyl ether	116	C7H16O	1000334-81-9	25
5	4-Ethyl-3-octanol	158	C10H22O	019781-26-1	25





Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On    : 26 Jun 2013   6:57 am
Operator  : ashleyd
Sample    : jb40127-7
Misc      : op66993,e5p54,34.4
ALS Vial  : 22   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

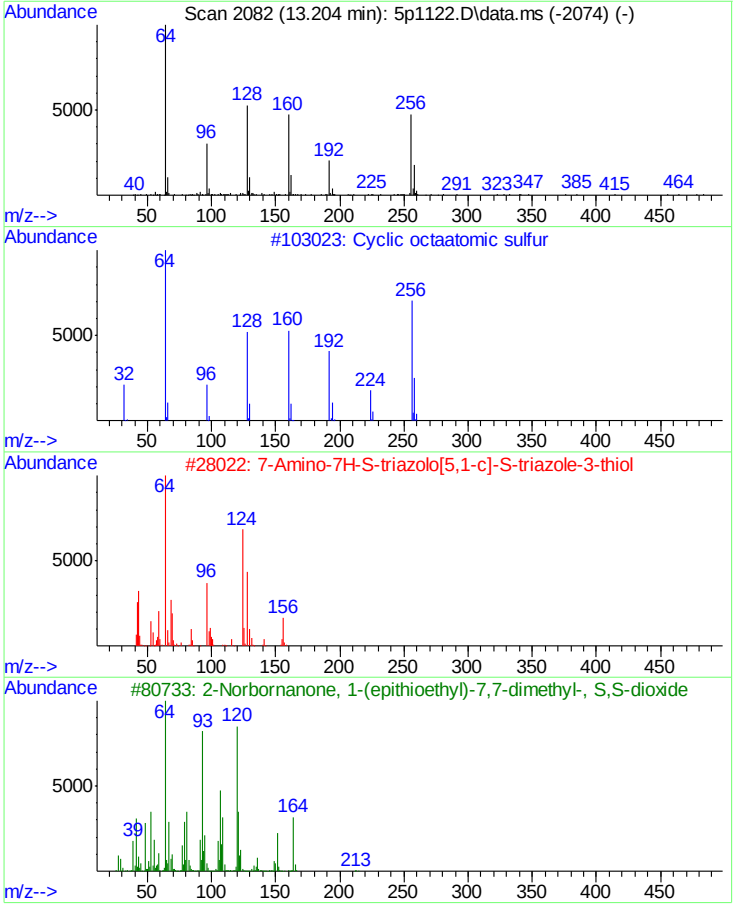
TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
```

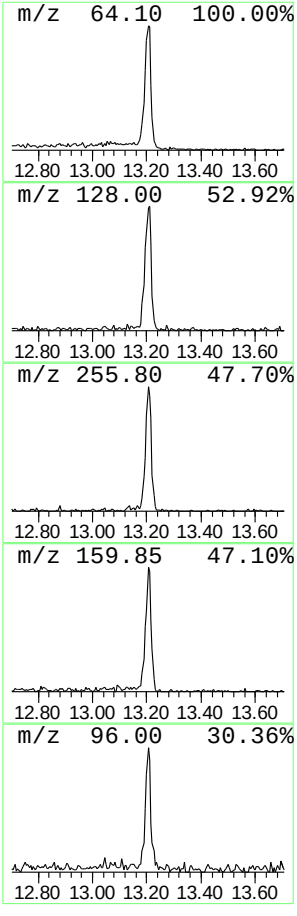
****

Peak Number 5 Cyclic octaatomic sulfur Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.204	7.04 ppb	93305	Phenanthrene-d10a	10.982

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclic octaatomic sulfur	256	S8	010544-50-0	94
2	7-Amino-7H-S-triazolo[5,1-c]-S-t...	156	C3H4N6S	013728-28-4	45
3	2-Norbornanone, 1-(epithioethyl)...	228	C11H16O3S	001782-93-0	9
4	Methanethiol, N-(p-methoxyphenet...	304	C11H16N2O4S2	040283-94-1	9
5	Dihydropyrimidine-2-methyl thios...	208	C5H8N2O3S2	1000256-28-8	9





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\e5p54\
Data File : 5p1122.D
Acq On : 26 Jun 2013 6:57 am
Operator : ashleyd
Sample : jb40127-7
Misc : op66993,e5p54,34.4
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
Acetic acid	2.509	9.0	ppb	55164	1	5.036	244618	40.0
system artifact	3.471	7.1	ppb	43666	1	5.036	244618	40.0
system artifact...	3.856	158.1	ppb	966808	1	5.036	244618	40.0
system artifact...	4.005	20.7	ppb	126594	1	5.036	244618	40.0
Cyclic octaatom...	13.204	7.0	ppb	93305	8	10.982	529775	40.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On : 28 Jun 2013 2:31 pm
Operator : olgaa
Sample : op66993-mb1
Misc : op66993,e2m2296,35.0
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 04 13:00:10 2013
Quant Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Quant Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013
QLast Update : Wed Jun 26 13:04:02 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	4.804	152	491980	40.00	ppb	-0.02
24) Naphthalene-d8	5.959	136	2018709	40.00	ppb	-0.02
47) Acenaphthene-d10	8.323	164	1113645	40.00	ppb	-0.03
69) Phenanthrene-d10	10.944	188	1703494	40.00	ppb	-0.02
83) Chrysene-d12	16.100	240	1512622	40.00	ppb	-0.03
92) Perylene-d12	18.716	264	1373987	40.00	ppb	-0.02
102) 1,4-Dichlorobenzene-d4a	4.804	152	491980	40.00	ppb	-0.02
104) Acenaphthene-d10a	8.323	164	1113645	40.00	ppb	-0.03
106) Chrysene-d12a	16.100	240	1512622	40.00	ppb	-0.03
108) Phenanthrene-d10a	10.944	188	1703494	40.00	ppb	-0.02

System Monitoring Compounds						
5) 2-Fluorophenol	3.825	112	561971	30.04	ppb	0.00
Spiked Amount 50.000			Recovery	=	60.08%	
8) Phenol-d5	4.526	99	755570	32.90	ppb	-0.01
Spiked Amount 50.000			Recovery	=	65.80%	
25) Nitrobenzene-d5	5.258	82	490015	27.22	ppb	-0.02
Spiked Amount 50.000			Recovery	=	54.44%	
51) 2-Fluorobiphenyl	7.302	172	1004272	29.75	ppb	-0.03
Spiked Amount 50.000			Recovery	=	59.50%	
73) 2,4,6-Tribromophenol	9.671	330	120944	29.57	ppb	-0.03
Spiked Amount 50.000			Recovery	=	59.14%	
85) Terphenyl-d14	14.116	244	1530306	44.84	ppb	-0.02
Spiked Amount 50.000			Recovery	=	89.68%	

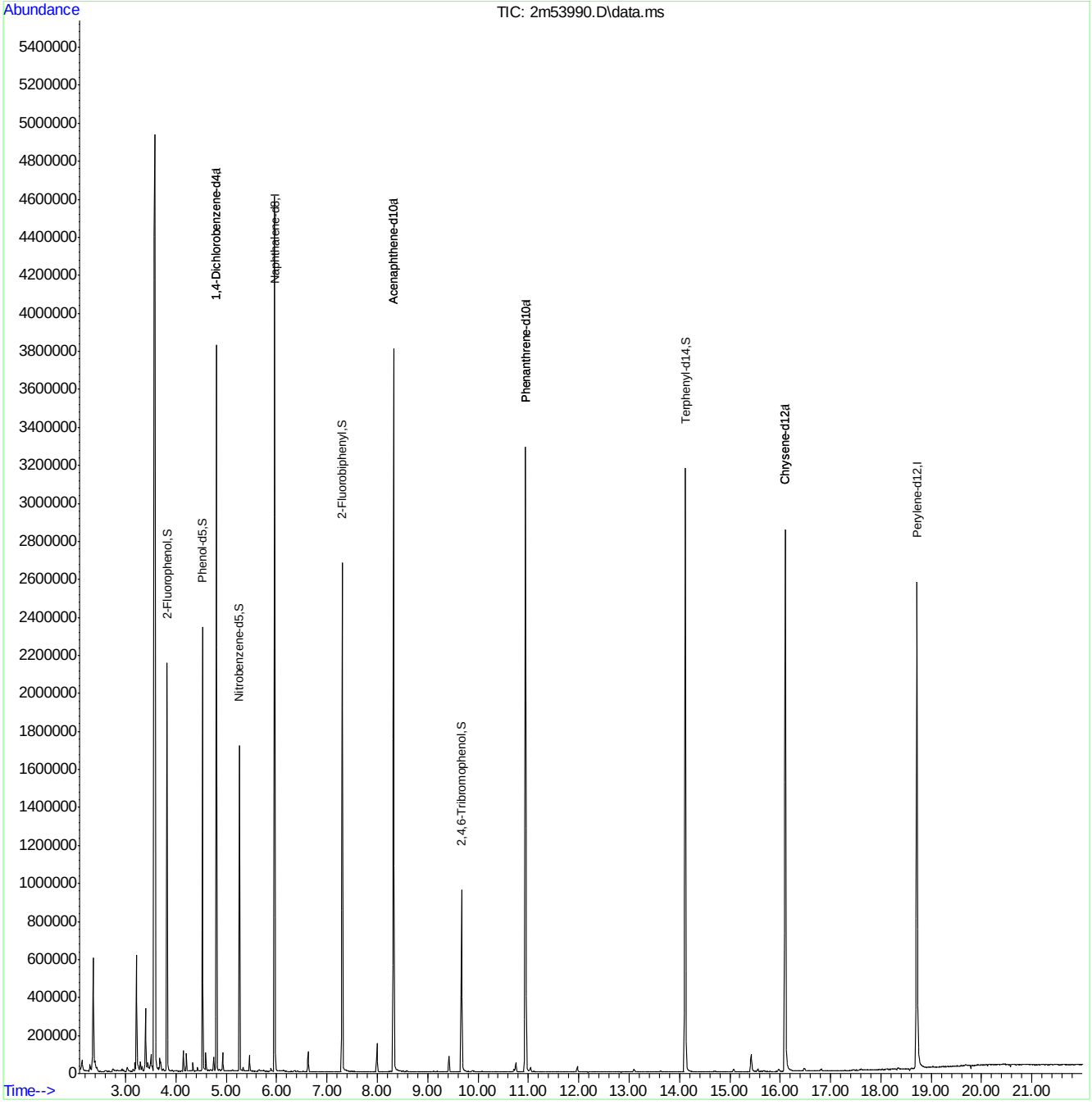
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On : 28 Jun 2013 2:31 pm
Operator : olgaa
Sample : op66993-mb1
Misc : op66993,e2m2296,35.0
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 04 13:00:10 2013
Quant Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Quant Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013
QLast Update : Wed Jun 26 13:04:02 2013
Response via : Initial Calibration



M2M2287.M Thu Jul 04 13:00:15 2013 MS2M

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On : 28 Jun 2013 2:31 pm
Operator : olgaa
Sample : op66993-mb1
Misc : op66993,e2m2296,35.0
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 7

Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013

Signal : TIC: 2m5399

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.135	4	10	17	rVB2	57436	88264	0.94%	0.170%
2	2.188	19	20	27	rVB4	5494	6219	0.07%	0.012%
3	2.290	36	39	44	rBV	37892	38971	0.41%	0.075%
4	2.359	44	52	57	rVV	591004	756856	8.03%	1.462%
5	2.397	57	59	62	rVV	52939	54601	0.58%	0.105%
6	2.429	62	65	72	rVB	25944	36148	0.38%	0.070%
7	2.595	90	96	106	rBV7	5382	12928	0.14%	0.025%
8	2.739	119	123	130	rBV2	16418	25416	0.27%	0.049%
9	2.921	154	157	160	rVV	10842	11584	0.12%	0.022%
10	2.953	160	163	172	rVB6	10019	18148	0.19%	0.035%
11	3.033	172	178	184	rBV2	23690	37167	0.39%	0.072%
12	3.151	197	200	204	rBV2	12350	11022	0.12%	0.021%
13	3.188	204	207	209	rVV	46029	39262	0.42%	0.076%
14	3.215	209	212	222	rVV	610367	557282	5.91%	1.076%
15	3.295	222	227	230	rVV	48106	61805	0.66%	0.119%
16	3.328	230	233	238	rVB2	28377	31647	0.34%	0.061%
17	3.397	238	246	251	rBV	331938	323687	3.43%	0.625%
18	3.445	251	255	262	rVV5	43809	91739	0.97%	0.177%
19	3.504	262	266	273	rVV2	89562	131674	1.40%	0.254%
20	3.579	273	280	291	rVV	4928685	9425479	100.00%	18.203%
21	3.648	291	293	296	rVV	19108	20597	0.22%	0.040%
22	3.681	296	299	307	rVV2	70456	118426	1.26%	0.229%
23	3.745	307	311	315	rVB3	11362	15046	0.16%	0.029%
24	3.825	319	326	341	rVB	2148082	1734777	18.41%	3.350%
25	3.927	341	345	350	rVB5	7679	10883	0.12%	0.021%
26	3.980	350	355	363	rBV5	4253	10264	0.11%	0.020%
27	4.146	380	386	392	rBV	108399	84263	0.89%	0.163%
28	4.205	392	397	404	rBV	96108	89943	0.95%	0.174%
29	4.333	418	421	429	rVB	45486	38628	0.41%	0.075%
30	4.429	434	439	443	rBV	20046	16730	0.18%	0.032%
31	4.526	451	457	467	rVV	2336722	1856376	19.70%	3.585%
32	4.595	467	470	475	rVV	98805	79725	0.85%	0.154%
33	4.638	475	478	482	rVV6	5383	7849	0.08%	0.015%
34	4.675	482	485	492	rVV8	4980	11167	0.12%	0.022%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On : 28 Jun 2013 2:31 pm
Operator : olgaa
Sample : op66993-mb1
Misc : op66993,e2m2296,35.0
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 7

Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013

35	4.750	492	499	503	rVV	74624	72593	0.77%	0.140%
36	4.804	503	509	516	rVV	3821701	2839328	30.12%	5.484%
37	4.863	516	520	524	rVV7	8572	13368	0.14%	0.026%
38	4.932	528	533	538	rVB	96362	82289	0.87%	0.159%
39	5.258	589	594	600	rBV	1713670	1433364	15.21%	2.768%
40	5.301	600	602	605	rVV4	7705	7217	0.08%	0.014%
41	5.333	605	608	613	rVB2	18788	18076	0.19%	0.035%
42	5.462	627	632	642	rVB	83205	71788	0.76%	0.139%
43	5.649	661	667	674	rVV5	9718	18164	0.19%	0.035%
44	5.745	679	685	691	rVB5	9424	10681	0.11%	0.021%
45	5.890	704	712	720	rVB3	19412	26611	0.28%	0.051%
46	5.959	720	725	735	rBV	4605955	4019131	42.64%	7.762%
47	6.136	754	758	765	rVV9	7188	9164	0.10%	0.018%
48	6.622	844	849	855	rBV2	107082	112087	1.19%	0.216%
49	7.302	970	976	986	rBV	2678832	2794713	29.65%	5.397%
50	7.371	986	989	993	rVV4	10895	17043	0.18%	0.033%
51	7.403	993	995	1003	rVV9	5154	10399	0.11%	0.020%
52	7.992	1099	1105	1112	rVB	150931	174640	1.85%	0.337%
53	8.238	1138	1151	1152	rBV	4409	8959	0.10%	0.017%
54	8.254	1152	1154	1159	rVV6	4153	7687	0.08%	0.015%
55	8.323	1159	1167	1188	rVV	3804311	4439833	47.10%	8.575%
56	8.446	1188	1190	1196	rVV7	6408	13339	0.14%	0.026%
57	8.505	1199	1201	1206	rVV6	3687	6948	0.07%	0.013%
58	8.596	1211	1218	1221	rVV9	3488	7504	0.08%	0.014%
59	9.420	1361	1372	1379	rBV	83094	113436	1.20%	0.219%
60	9.671	1412	1419	1433	rBV	959422	1217045	12.91%	2.350%
61	9.880	1453	1458	1464	rBV10	3518	6050	0.06%	0.012%
62	10.618	1590	1596	1603	rVB10	3701	6698	0.07%	0.013%
63	10.714	1606	1614	1616	rVV2	16628	21431	0.23%	0.041%
64	10.751	1616	1621	1632	rVB	48555	68171	0.72%	0.132%
65	10.944	1647	1657	1670	rBV2	3288373	4439042	47.10%	8.573%
66	11.040	1670	1675	1682	rVV	25531	38433	0.41%	0.074%
67	11.110	1682	1688	1694	rVB	5179	9782	0.10%	0.019%
68	11.971	1841	1849	1857	rBV	29206	44495	0.47%	0.086%
69	12.222	1889	1896	1905	rBV	5151	12670	0.13%	0.024%
70	13.099	2053	2060	2067	rVB2	17722	24861	0.26%	0.048%
71	13.618	2151	2157	2168	rBV10	5438	17132	0.18%	0.033%

LSC Area Percent Report

```
Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On    : 28 Jun 2013   2:31 pm
Operator  : olgaa
Sample    : op66993-mb1
Misc      : op66993,e2m2296,35.0
ALS Vial  : 11   Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON                          Filtering: 5
Sampling  : 1                            Min Area: 1000 Area counts
Start Thrs: 0.02                        Max Peaks: 100
Stop Thrs : 0                       Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 7

Method    : C:\MSDCHEM\1\METHODS\M2M2287.M
Title     : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013
```

72	14.116	2238	2250	2270	rBV2	3176116	4566253	48.45%	8.819%
73	14.683	2347	2356	2359	rVB2	3771	8120	0.09%	0.016%
74	15.073	2424	2429	2435	rBV4	13104	20527	0.22%	0.040%
75	15.421	2488	2494	2507	rBV	92516	151243	1.60%	0.292%
76	15.554	2514	2519	2525	rVV2	12701	19252	0.20%	0.037%
77	15.972	2591	2597	2604	rVB3	10151	17987	0.19%	0.035%
78	16.100	2613	2621	2647	rBV	2852812	4306247	45.69%	8.317%
79	16.474	2685	2691	2705	rBV3	16211	33223	0.35%	0.064%
80	16.811	2746	2754	2763	rBV5	10510	22143	0.23%	0.043%
81	17.608	2893	2903	2910	rBV10	8740	18454	0.20%	0.036%
82	18.293	3026	3031	3035	rVB8	5909	9620	0.10%	0.019%
83	18.346	3035	3041	3048	rBV8	11079	30619	0.32%	0.059%
84	18.603	3083	3089	3092	rBV6	11985	27758	0.29%	0.054%
85	18.716	3100	3110	3133	rBV2	2559310	4208409	44.65%	8.128%
86	18.983	3152	3160	3162	rVV9	3431	8128	0.09%	0.016%
87	19.026	3162	3168	3172	rVB9	5284	9487	0.10%	0.018%
88	19.598	3266	3275	3277	rBV9	5450	12477	0.13%	0.024%
89	19.689	3286	3292	3296	rVV8	8969	14947	0.16%	0.029%
90	19.716	3296	3297	3303	rVV6	4968	7307	0.08%	0.014%
91	19.764	3304	3306	3310	rVB4	18563	28233	0.30%	0.055%
92	19.817	3310	3316	3319	rBV3	18135	41693	0.44%	0.081%
93	20.085	3363	3366	3371	rVB6	8380	14983	0.16%	0.029%
94	20.128	3371	3374	3377	rBV5	8163	12935	0.14%	0.025%
95	20.202	3385	3388	3394	rBV8	5317	6482	0.07%	0.013%
96	20.395	3417	3424	3428	rBV10	8200	22834	0.24%	0.044%
97	20.561	3452	3455	3457	rVB3	14715	14806	0.16%	0.029%
98	20.609	3457	3464	3465	rBV5	14113	31254	0.33%	0.060%
99	21.213	3574	3577	3584	rVB9	7227	17193	0.18%	0.033%
100	21.261	3584	3586	3588	rBV2	8325	7101	0.08%	0.014%

Sum of corrected areas: 51778460

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On    : 28 Jun 2013   2:31 pm
Operator  : olgaa
Sample    : op66993-mb1
Misc      : op66993,e2m2296,35.0
ALS Vial  : 11   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Quant Title  : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013

TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
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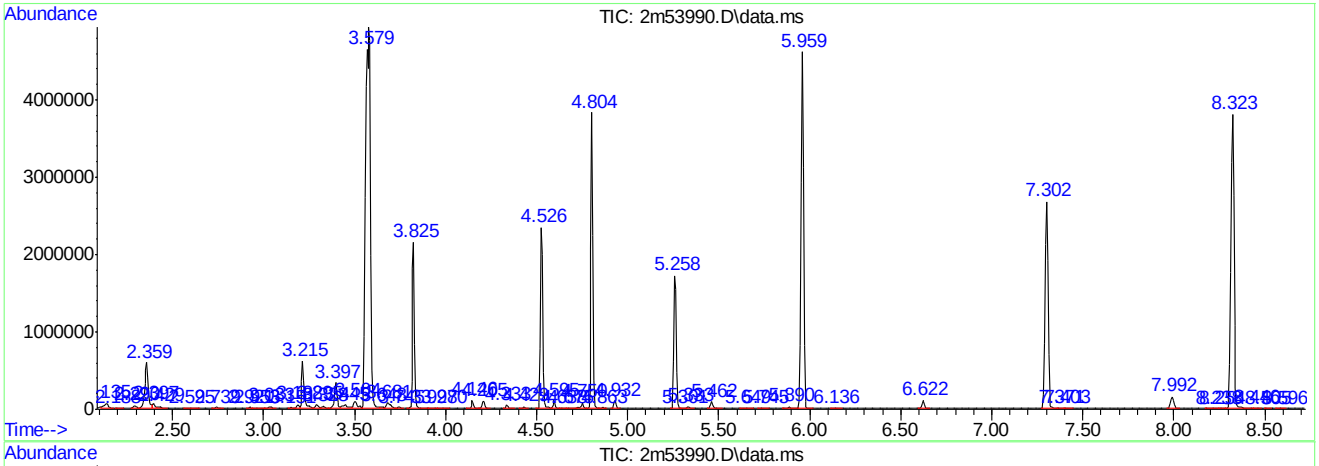
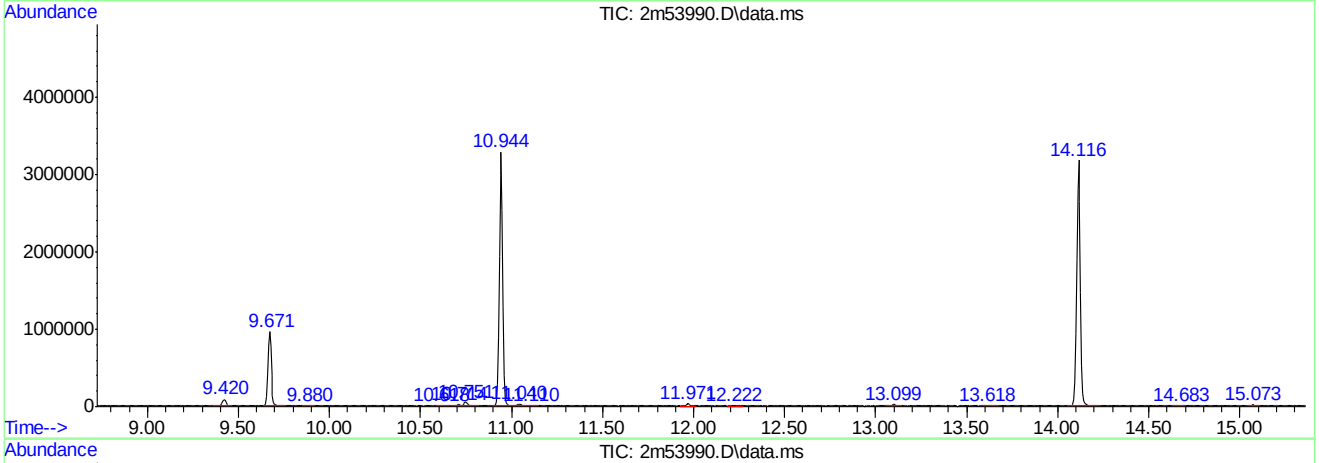
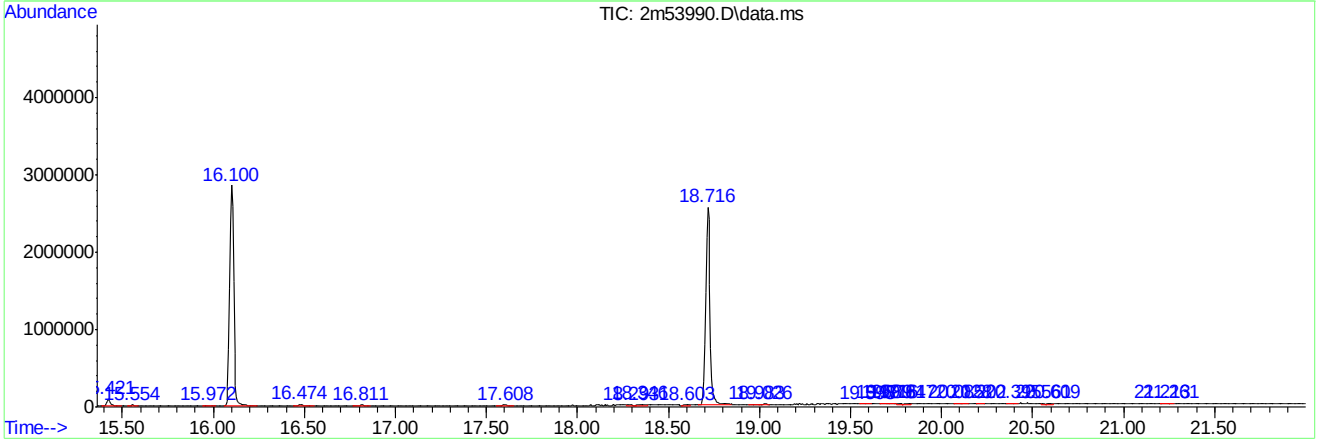






Library Search Compound Report

Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On : 28 Jun 2013 2:31 pm
Operator : olgaa
Sample : op66993-mb1
Misc : op66993,e2m2296,35.0
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Quant Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013

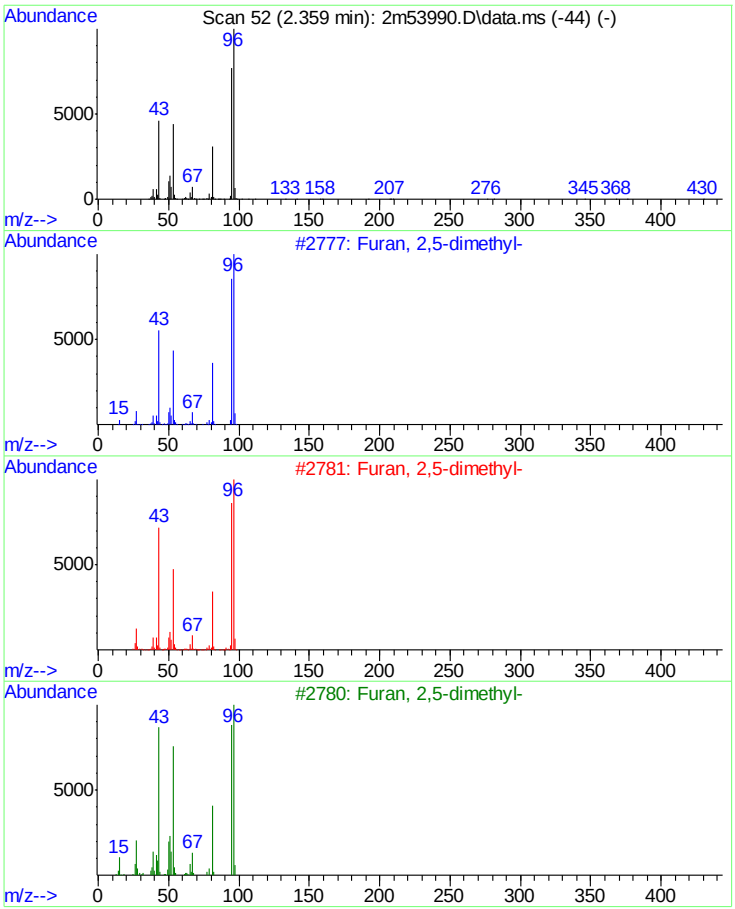
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

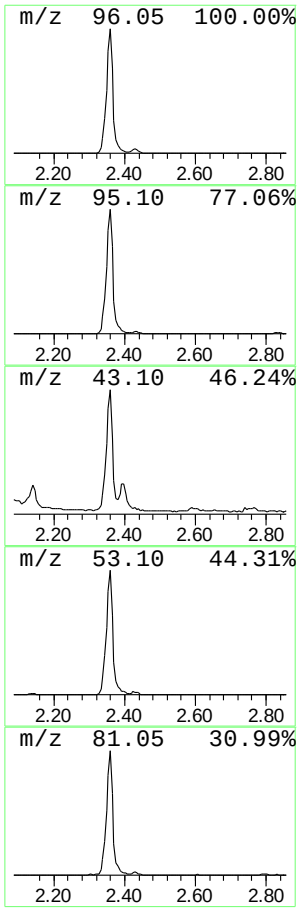
****

Peak Number 1 system artifact Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.359	10.66 ppb	756856	1,4-Dichlorobenzene-d4	4.804

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, 2,5-dimethyl-	96	C6H8O	000625-86-5	97
2	Furan, 2,5-dimethyl-	96	C6H8O	000625-86-5	96
3	Furan, 2,5-dimethyl-	96	C6H8O	000625-86-5	91
4	1H-Pyrazole, 1,5-dimethyl-	96	C5H8N2	000694-31-5	43
5	Furan, 2,5-dimethyl-	96	C6H8O	000625-86-5	43





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On : 28 Jun 2013 2:31 pm
Operator : olgaa
Sample : op66993-mb1
Misc : op66993,e2m2296,35.0
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Quant Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013

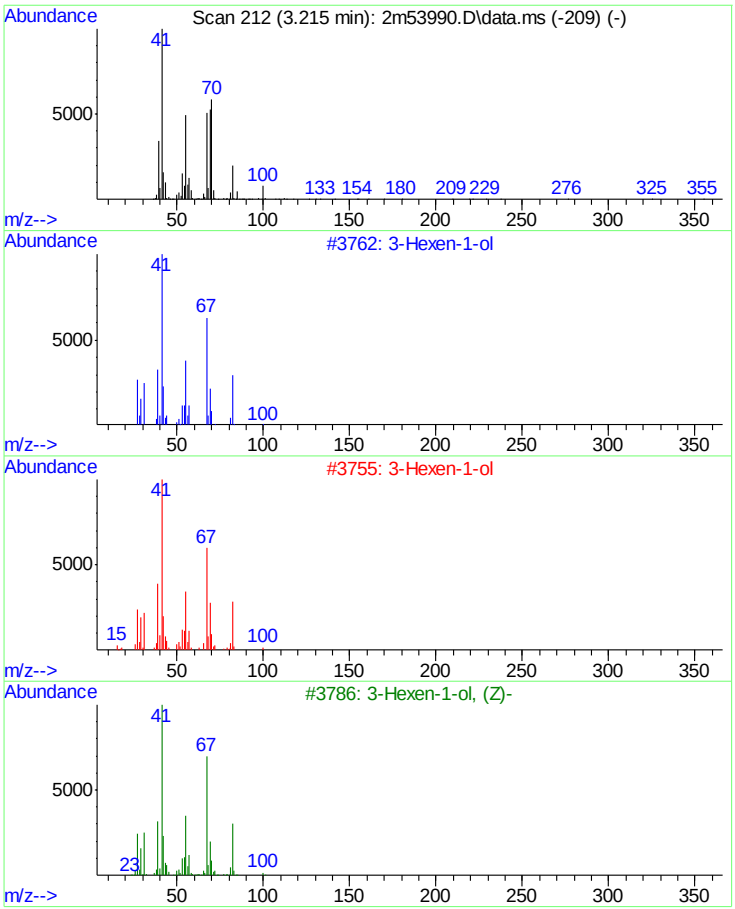
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

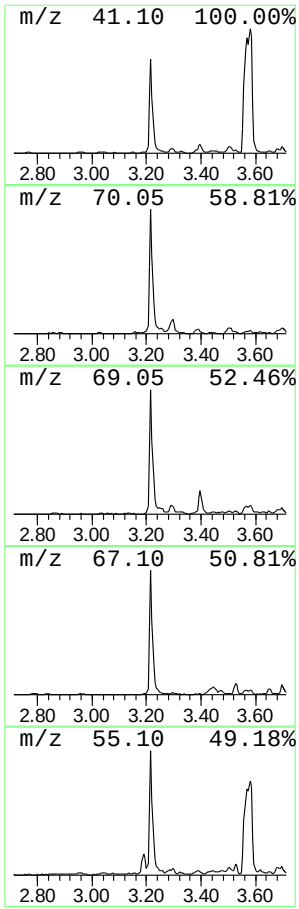
****

Peak Number 2 system artifact Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.215	7.85 ppb	557282	1,4-Dichlorobenzene-d4	4.804

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Hexen-1-ol	100	C6H12O	000544-12-7	50
2	3-Hexen-1-ol	100	C6H12O	000544-12-7	50
3	3-Hexen-1-ol, (Z)-	100	C6H12O	000928-96-1	50
4	3-Hexen-1-ol, (E)-	100	C6H12O	000928-97-2	47
5	2,3-Dimethyl-1-hexene	112	C8H16	016746-86-4	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On : 28 Jun 2013 2:31 pm
Operator : olgaa
Sample : op66993-mb1
Misc : op66993,e2m2296,35.0
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Quant Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013

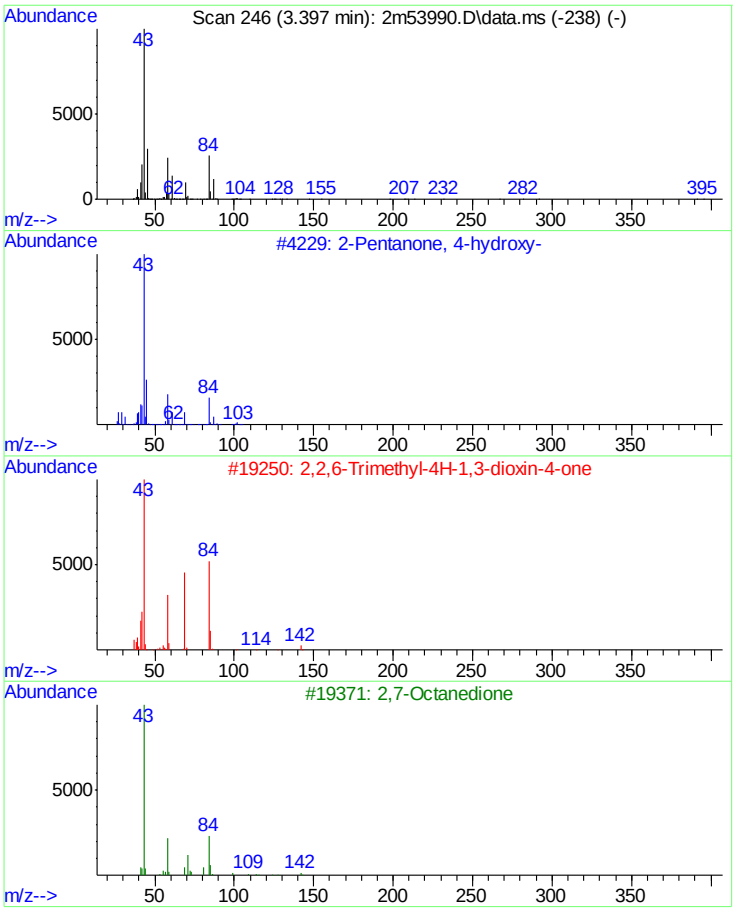
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

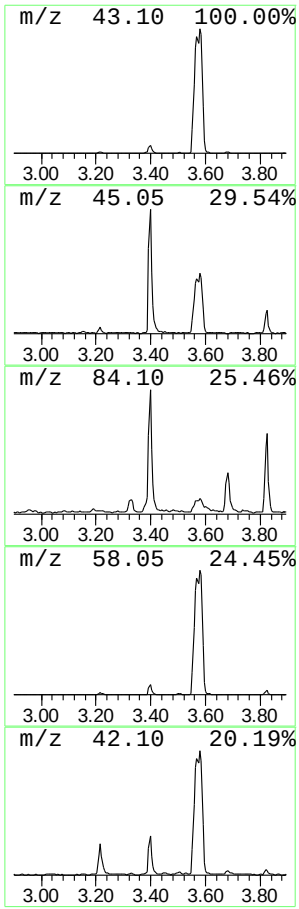
****

Peak Number 3 system artifact Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.397	4.56 ppb	323687	1,4-Dichlorobenzene-d4	4.804

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-	102	C5H10O2	004161-60-8	56
2	2,2,6-Trimethyl-4H-1,3-dioxin-4-one	142	C7H10O3	005394-63-8	38
3	2,7-Octanedione	142	C8H14O2	001626-09-1	25
4	2-Hexanol, acetate	144	C8H16O2	005953-49-1	23
5	Oxirane, trimethyl-	86	C5H10O	005076-19-7	12





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On : 28 Jun 2013 2:31 pm
Operator : olgaa
Sample : op66993-mb1
Misc : op66993,e2m2296,35.0
ALS Vial : 11 Sample Multiplier: 1

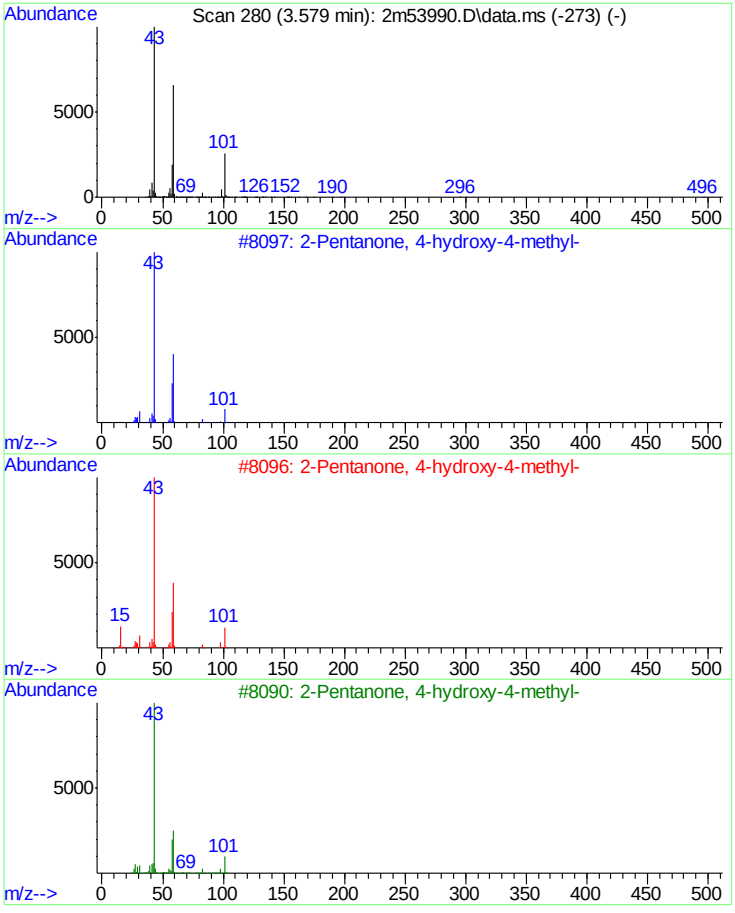
Quant Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Quant Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013

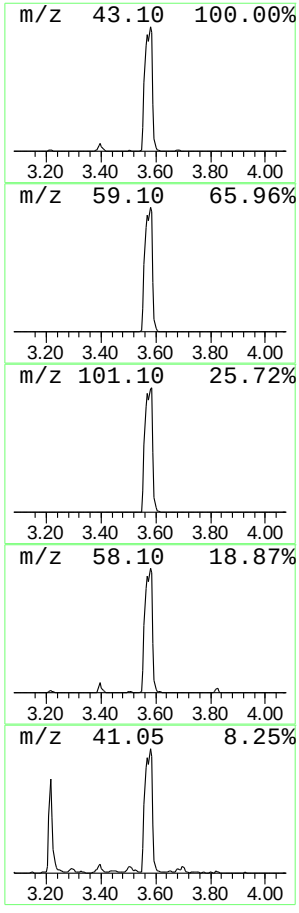
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

****
Peak Number 4 system artifact/aldol-conde... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.579	132.79 ppb	9425480	1,4-Dichlorobenzene-d4	4.804

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	50
3	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	38
4	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
5	Guanidine	59	CH5N3	000113-00-8	9





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\E2M2296\
Data File : 2m53990.D
Acq On : 28 Jun 2013 2:31 pm
Operator : olgaa
Sample : op66993-mb1
Misc : op66993,e2m2296,35.0
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2M2287.M
Quant Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umWed Jun 26 13:04:02 2013

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
system artifact	2.359	10.7	ppb	756856	1	4.804	2839330	40.0
system artifact	3.215	7.8	ppb	557282	1	4.804	2839330	40.0
system artifact	3.397	4.6	ppb	323687	1	4.804	2839330	40.0
system artifact...	3.579	132.8	ppb	9425480	1	4.804	2839330	40.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On : 26 Jun 2013 12:46 pm
Operator : elwiraa
Sample : op66993-mb1
Misc : op66993,e5p55,35.0,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 27 15:55:52 2013
Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Fri Jun 21 21:44:59 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.031	152	35716	40.00 ppb	-0.06
24) Naphthalene-d8	6.099	136	137368	40.00 ppb	-0.06
47) Acenaphthene-d10	8.386	164	80350	40.00 ppb	-0.09
69) Phenanthrene-d10	10.971	188	128672	40.00 ppb	-0.10
83) Chrysene-d12	16.164	240	128235	40.00 ppb	-0.10
92) Perylene-d12	18.750	264	93297	40.00 ppb	-0.08
102) 1,4-Dichlorobenzene-d4a	5.031	152	35716	40.00 ppb	-0.06
104) Acenaphthene-d10a	8.386	164	80350	40.00 ppb	-0.09
106) Chrysene-d12a	16.164	240	128235	40.00 ppb	-0.10
108) Phenanthrene-d10a	10.971	188	128672	40.00 ppb	-0.10
110) Naphthalene-d8a	6.099	136	137368	40.00 ppb	-0.06
System Monitoring Compounds					
5) 2-Fluorophenol	4.096	112	37171	30.40 ppb	-0.05
Spiked Amount 50.000			Recovery	= 60.80%	
8) Phenol-d5	4.796	99	52847	33.87 ppb	-0.05
Spiked Amount 50.000			Recovery	= 67.74%	
25) Nitrobenzene-d5	5.496	82	33377	27.31 ppb	-0.05
Spiked Amount 50.000			Recovery	= 54.62%	
51) 2-Fluorobiphenyl	7.381	172	69149	29.28 ppb	-0.08
Spiked Amount 50.000			Recovery	= 58.56%	
73) 2,4,6-Tribromophenol	9.753	330	14176	39.69 ppb	-0.09
Spiked Amount 50.000			Recovery	= 79.38%	
85) Terphenyl-d14	14.155	244	131106	54.65 ppb	-0.10
Spiked Amount 50.000			Recovery	= 109.30%	

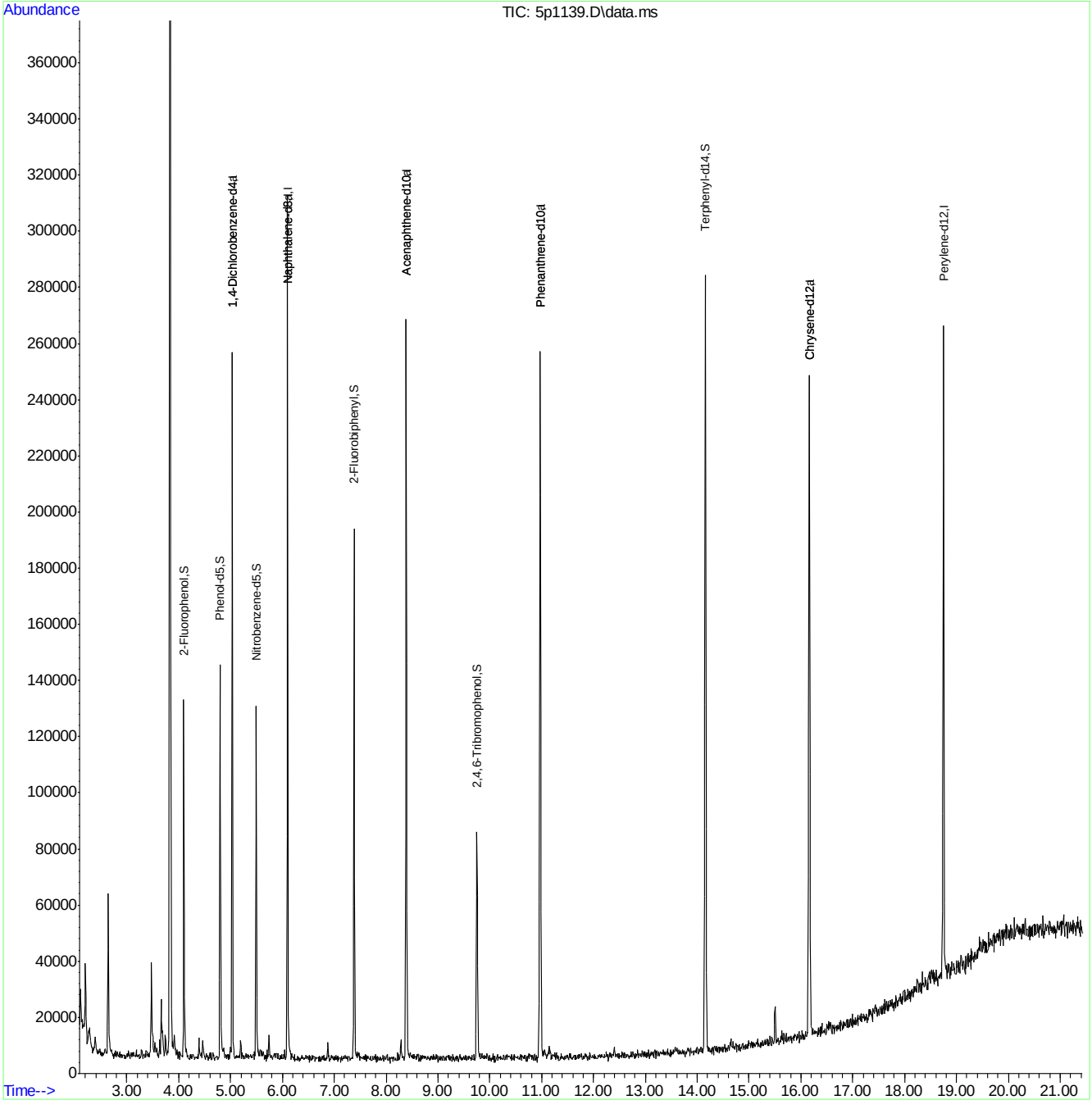
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On : 26 Jun 2013 12:46 pm
Operator : elwiraa
Sample : op66993-mb1
Misc : op66993,e5p55,35.0,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 27 15:55:52 2013
Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Fri Jun 21 21:44:59 2013
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On : 26 Jun 2013 12:46 pm
Operator : elwiraa
Sample : op66993-mb1
Misc : op66993,e5p55,35.0,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 7

Method : C:\MSDCHEM\1\METHODS\M5P31.M
Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

Signal : TIC: 5p1139.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.200	17	22	29	rVB2	29035	45675	5.07%	1.020%
2	2.274	29	36	48	rVB10	8961	28342	3.14%	0.633%
3	2.386	52	57	66	rVB5	6111	11115	1.23%	0.248%
4	2.579	87	93	97	rBV7	2290	4161	0.46%	0.093%
5	2.638	97	104	113	rVV	56870	74046	8.21%	1.653%
6	3.284	218	225	229	rVB8	3400	5806	0.64%	0.130%
7	3.471	252	260	270	rBV2	33458	46820	5.19%	1.045%
8	3.637	286	291	293	rBV2	6340	6493	0.72%	0.145%
9	3.658	293	295	307	rVV2	20742	35731	3.96%	0.798%
10	3.743	307	311	316	rVV2	8341	11023	1.22%	0.246%
11	3.834	321	328	339	rVV	633658	901393	100.00%	20.124%
12	3.914	339	343	350	rVV6	8444	15039	1.67%	0.336%
13	3.968	350	353	357	rVB5	3010	4138	0.46%	0.092%
14	4.096	373	377	385	rBV	127385	127894	14.19%	2.855%
15	4.395	427	433	438	rBV2	7521	10301	1.14%	0.230%
16	4.459	443	445	454	rVB4	7100	10377	1.15%	0.232%
17	4.598	464	471	473	rBV7	2818	4388	0.49%	0.098%
18	4.652	479	481	488	rVB8	2802	4446	0.49%	0.099%
19	4.796	500	508	517	rBV	140765	153207	17.00%	3.420%
20	4.865	517	521	525	rVB5	3811	6414	0.71%	0.143%
21	4.994	540	545	548	rBV5	4558	6475	0.72%	0.145%
22	5.031	548	552	563	rVB	251997	233183	25.87%	5.206%
23	5.197	574	583	586	rVB6	6613	8784	0.97%	0.196%
24	5.496	635	639	647	rBV	124730	106656	11.83%	2.381%
25	5.741	681	685	690	rVB3	8335	7634	0.85%	0.170%
26	6.099	745	752	765	rVB	307507	292956	32.50%	6.540%
27	6.879	891	898	903	rVB7	6822	9672	1.07%	0.216%
28	7.381	983	992	1001	rBV	188966	208964	23.18%	4.665%
29	8.103	1121	1127	1130	rBV5	2186	5171	0.57%	0.115%
30	8.284	1156	1161	1166	rVB5	6775	8431	0.94%	0.188%
31	8.386	1173	1180	1191	rBV	264076	332699	36.91%	7.428%
32	9.753	1428	1436	1445	rBV3	81186	124307	13.79%	2.775%
33	10.747	1618	1622	1625	rBV5	3090	4407	0.49%	0.098%
34	10.971	1656	1664	1673	rBV2	251854	343825	38.14%	7.676%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On : 26 Jun 2013 12:46 pm
Operator : elwiraa
Sample : op66993-mb1
Misc : op66993,e5p55,35.0,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 7

Method : C:\MSDCHEM\1\METHODS\M5P31.M
Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

35	11.062	1678	1681	1687	rVV5	3289	5292	0.59%	0.118%
36	11.137	1691	1695	1701	rVB7	4734	7902	0.88%	0.176%
37	12.243	1898	1902	1910	rVB7	3412	8814	0.98%	0.197%
38	12.403	1928	1932	1936	rVB6	3654	4451	0.49%	0.099%
39	12.729	1985	1993	1995	rBV6	2586	4257	0.47%	0.095%
40	12.756	1995	1998	2004	rVB7	2367	4075	0.45%	0.091%
41	13.183	2074	2078	2083	rVB7	3032	5141	0.57%	0.115%
42	13.819	2192	2197	2203	rBV10	2534	4989	0.55%	0.111%
43	14.155	2253	2260	2270	rBV	277004	404115	44.83%	9.022%
44	14.652	2348	2353	2359	rBV10	3923	6146	0.68%	0.137%
45	14.786	2374	2378	2381	rBV6	2638	3843	0.43%	0.086%
46	15.443	2498	2501	2506	rBV7	3174	4466	0.50%	0.100%
47	15.502	2506	2512	2517	rBV3	13505	24381	2.70%	0.544%
48	15.635	2528	2537	2543	rVB3	4973	9692	1.08%	0.216%
49	15.854	2571	2578	2579	rBV7	2725	4895	0.54%	0.109%
50	16.159	2627	2635	2647	rBV	235656	374701	41.57%	8.365%
51	16.575	2712	2713	2717	rVB4	4278	4197	0.47%	0.094%
52	16.682	2726	2733	2734	rBV7	2815	5234	0.58%	0.117%
53	16.773	2747	2750	2756	rBV8	3741	5611	0.62%	0.125%
54	17.393	2864	2866	2868	rBV2	4888	4186	0.46%	0.093%
55	17.436	2870	2874	2878	rVV7	3756	6764	0.75%	0.151%
56	17.804	2941	2943	2946	rBV4	3232	3889	0.43%	0.087%
57	17.836	2946	2949	2953	rBV6	4617	5039	0.56%	0.112%
58	18.098	2996	2998	3001	rVB4	4081	4359	0.48%	0.097%
59	18.178	3012	3013	3019	rBV6	3719	5601	0.62%	0.125%
60	18.344	3041	3044	3049	rBV7	7819	9589	1.06%	0.214%
61	18.477	3064	3069	3072	rBV7	6507	10840	1.20%	0.242%
62	18.750	3113	3120	3133	rBV2	232842	306612	34.02%	6.845%
63	19.001	3165	3167	3169	rBV3	4835	4246	0.47%	0.095%
64	19.081	3180	3182	3190	rVB9	5209	7528	0.84%	0.168%
65	19.177	3198	3200	3201	rBV2	6679	4316	0.48%	0.096%
66	19.289	3218	3221	3222	rBV3	7363	5376	0.60%	0.120%
67	19.877	3327	3331	3334	rBV6	5487	8691	0.96%	0.194%

Sum of corrected areas: 4479211

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On    : 26 Jun 2013  12:46 pm
Operator  : elwiraa
Sample    : op66993-mb1
Misc      : op66993,e5p55,35.0,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
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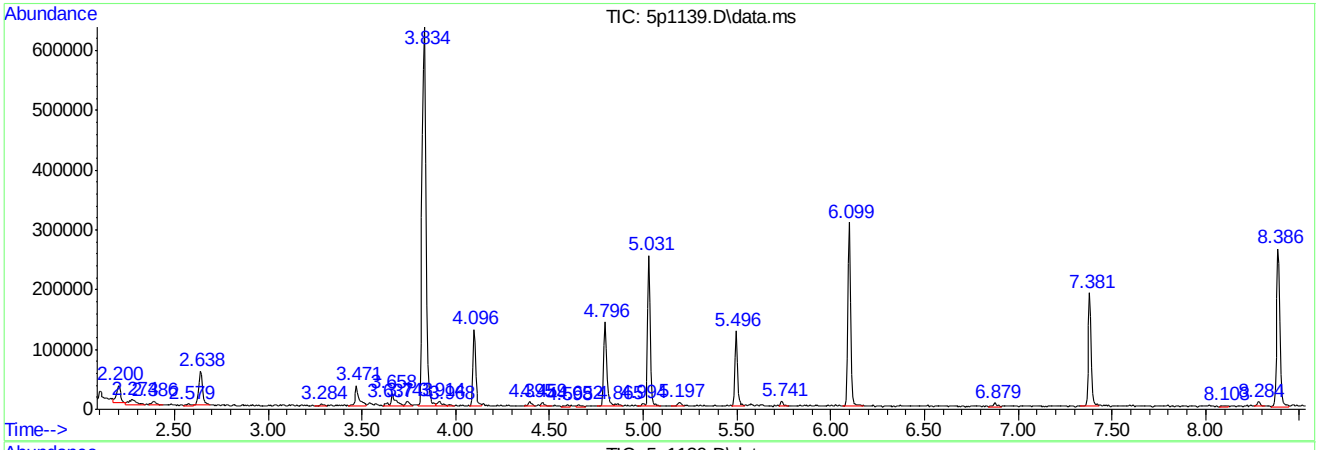
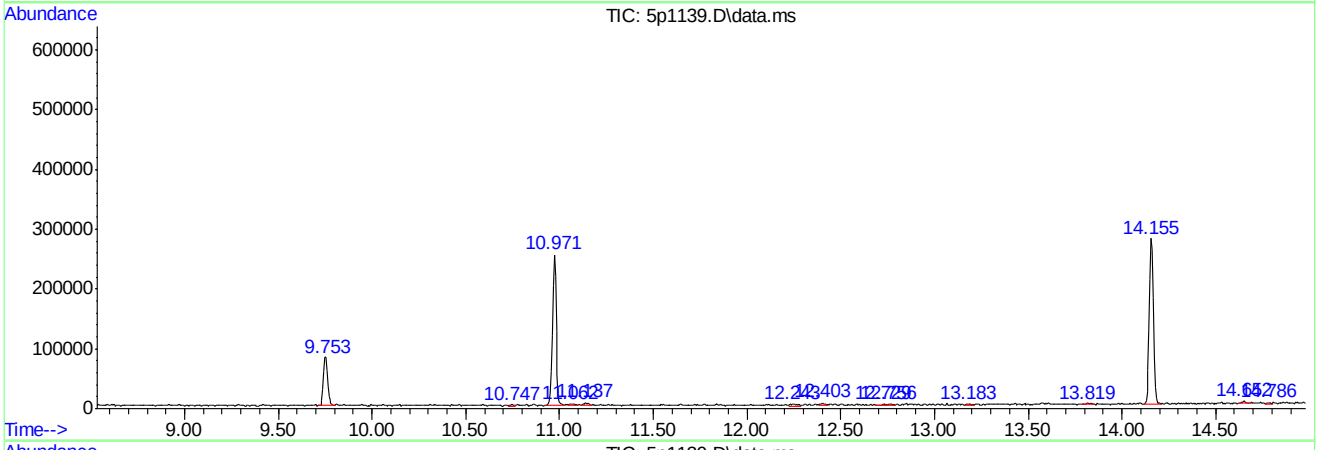
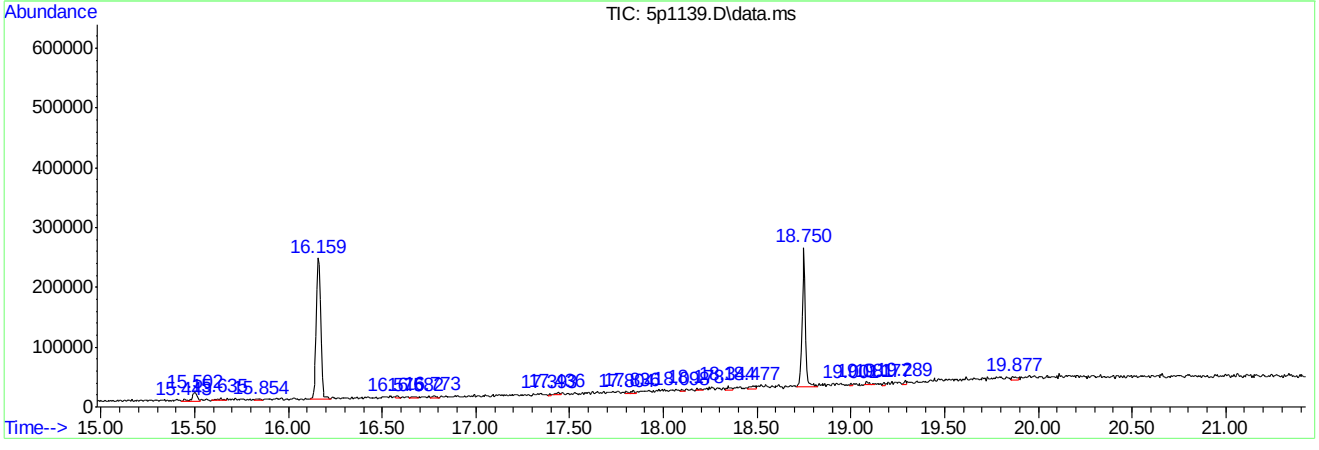






Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On    : 26 Jun 2013  12:46 pm
Operator  : elwiraa
Sample    : op66993-mb1
Misc      : op66993,e5p55,35.0,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

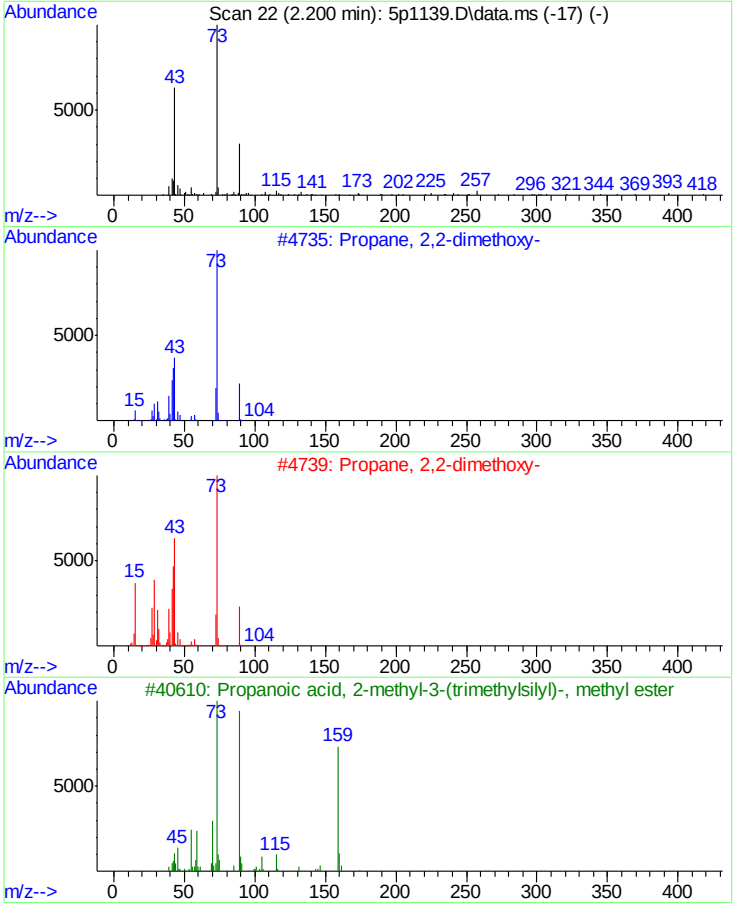
TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
```

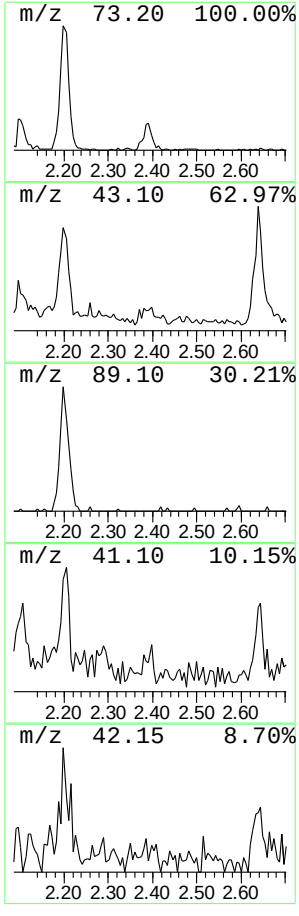
****

Peak Number 1 system artifact Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.200	7.84 ppb	45675	1,4-Dichlorobenzene-d4	5.031

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Propane, 2,2-dimethoxy-	104	C5H12O2	000077-76-9	36
2	Propane, 2,2-dimethoxy-	104	C5H12O2	000077-76-9	36
3	Propanoic acid, 2-methyl-3-(trim...	174	C8H18O2Si	018388-42-6	33
4	1,3-Dioxolane, 2-pentadecyl-	284	C18H36O2	004360-57-0	14
5	Silane, tetramethyl-	88	C4H12Si	000075-76-3	9





Library Search Compound Report

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Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On    : 26 Jun 2013  12:46 pm
Operator  : elwiraa
Sample    : op66993-mb1
Misc      : op66993,e5p55,35.0,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

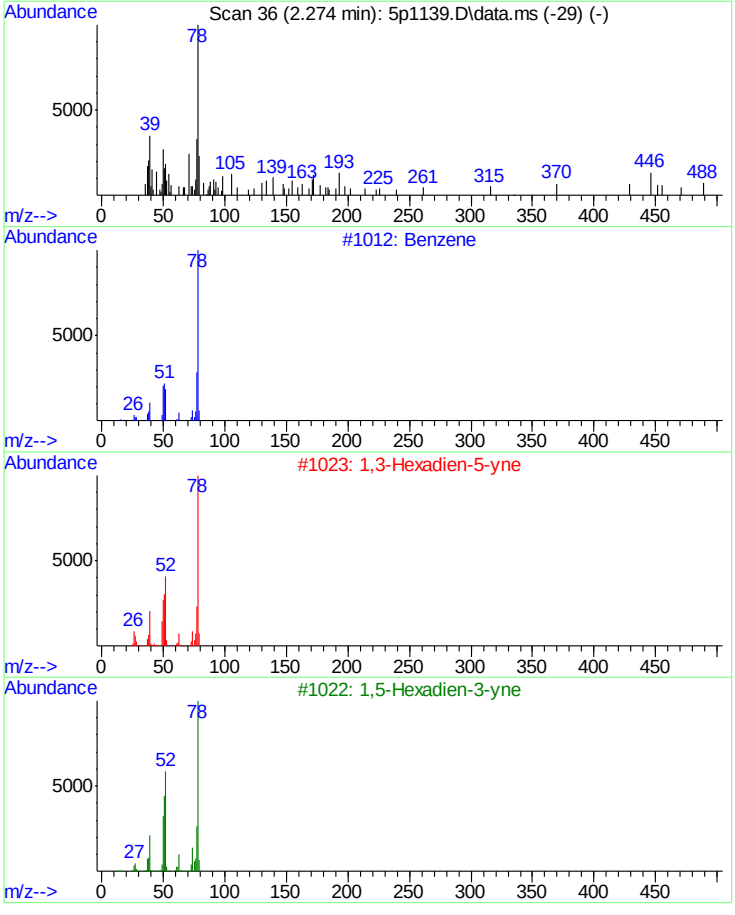
TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
```

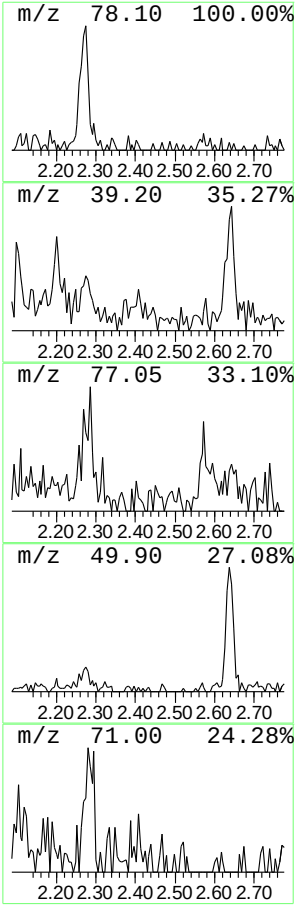
****

Peak Number 2 system artifact Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.274	4.86 ppb	28342	1,4-Dichlorobenzene-d4	5.031

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene	78	C6H6	000071-43-2	90
2	1,3-Hexadien-5-yne	78	C6H6	010420-90-3	86
3	1,5-Hexadien-3-yne	78	C6H6	000821-08-9	78
4	Tricyclo[4.2.2.0(2,5)]dec-9-ene-...	184	C12H12N2	020185-25-5	72
5	2,4-Hexadiyne	78	C6H6	002809-69-0	59





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On : 26 Jun 2013 12:46 pm
Operator : elwiraa
Sample : op66993-mb1
Misc : op66993,e5p55,35.0,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

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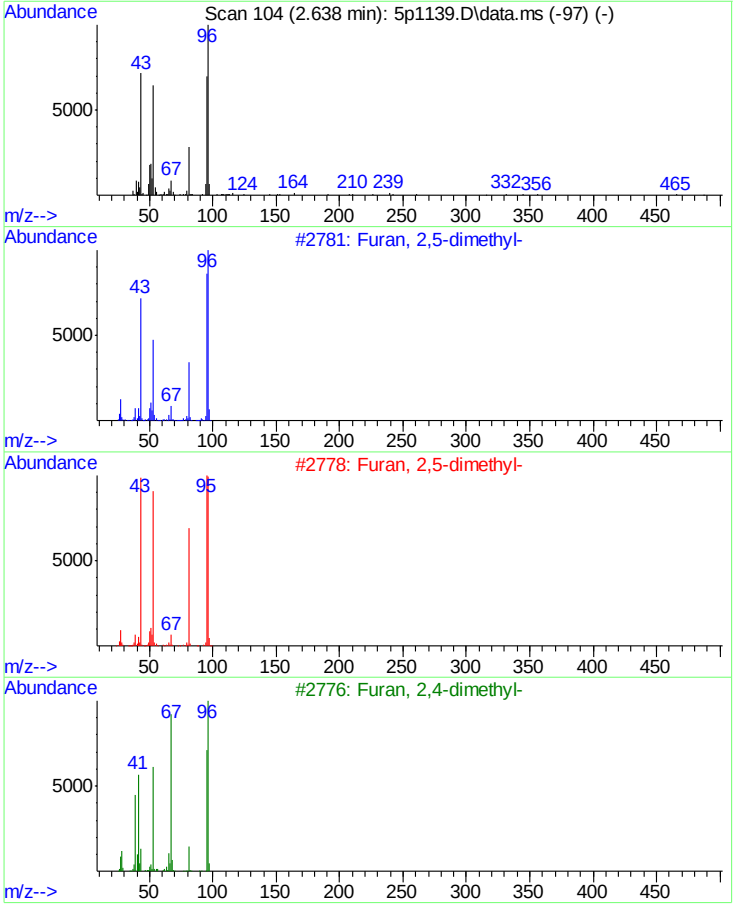
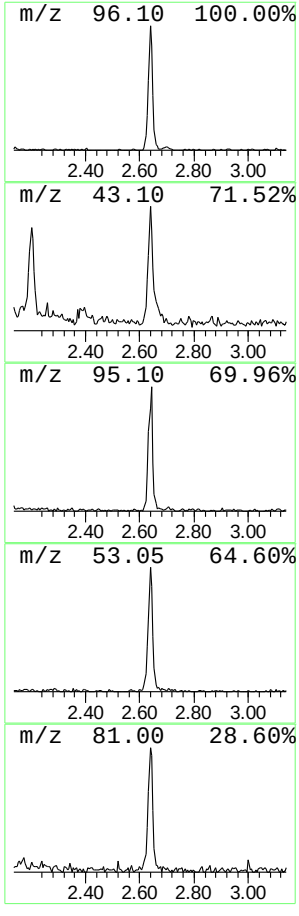
Peak Number 3 system artifact Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.638	12.70 ppb	74046	1,4-Dichlorobenzene-d4	5.031

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, 2,5-dimethyl-	96	C6H8O	000625-86-5	90
2	Furan, 2,5-dimethyl-	96	C6H8O	000625-86-5	90
3	Furan, 2,4-dimethyl-	96	C6H8O	003710-43-8	78
4	Furan, 2,5-dimethyl-	96	C6H8O	000625-86-5	72
5	1,3-Butadiene, 1-bromo-	132	C4H5Br	021890-35-7	43





Library Search Compound Report

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Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On    : 26 Jun 2013  12:46 pm
Operator  : elwiraa
Sample    : op66993-mb1
Misc      : op66993,e5p55,35.0,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

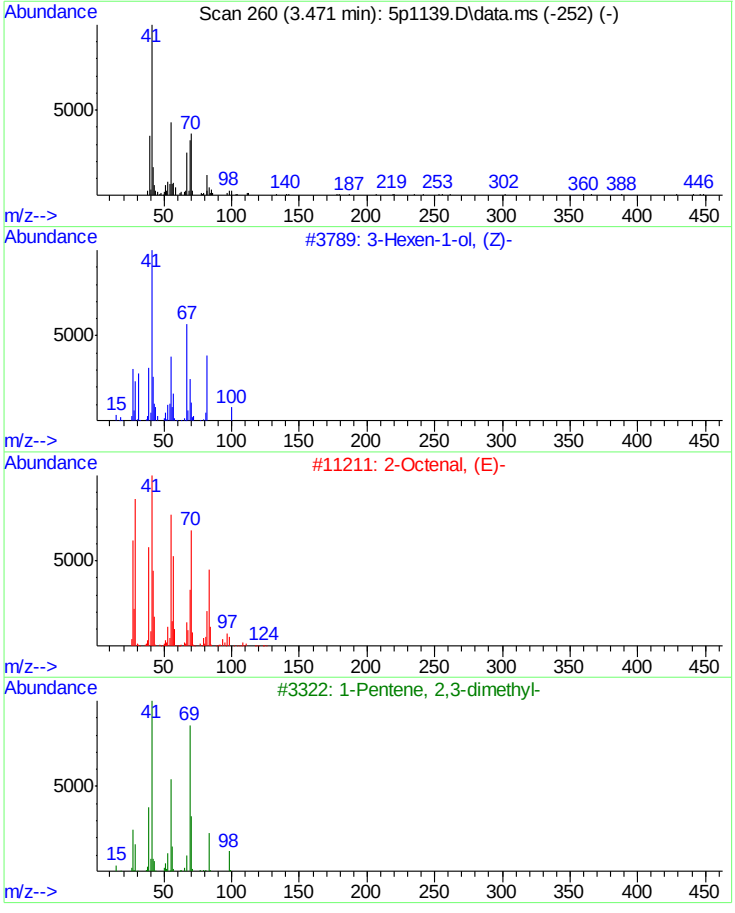
TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
```

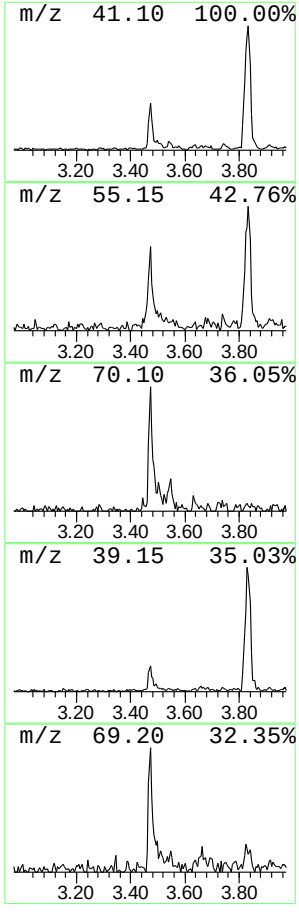
****

Peak Number 4 system artifact Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.471	8.03 ppb	46820	1,4-Dichlorobenzene-d4	5.031

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Hexen-1-ol, (Z)-	100	C6H12O	000928-96-1	35
2	2-Octenal, (E)-	126	C8H14O	002548-87-0	25
3	1-Pentene, 2,3-dimethyl-	98	C7H14	003404-72-6	25
4	3-Hexen-1-ol, (E)-	100	C6H12O	000928-97-2	25
5	1,8-Nonadiene	124	C9H16	004900-30-5	23





Library Search Compound Report

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Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On    : 26 Jun 2013  12:46 pm
Operator  : elwiraa
Sample    : op66993-mb1
Misc      : op66993,e5p55,35.0,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

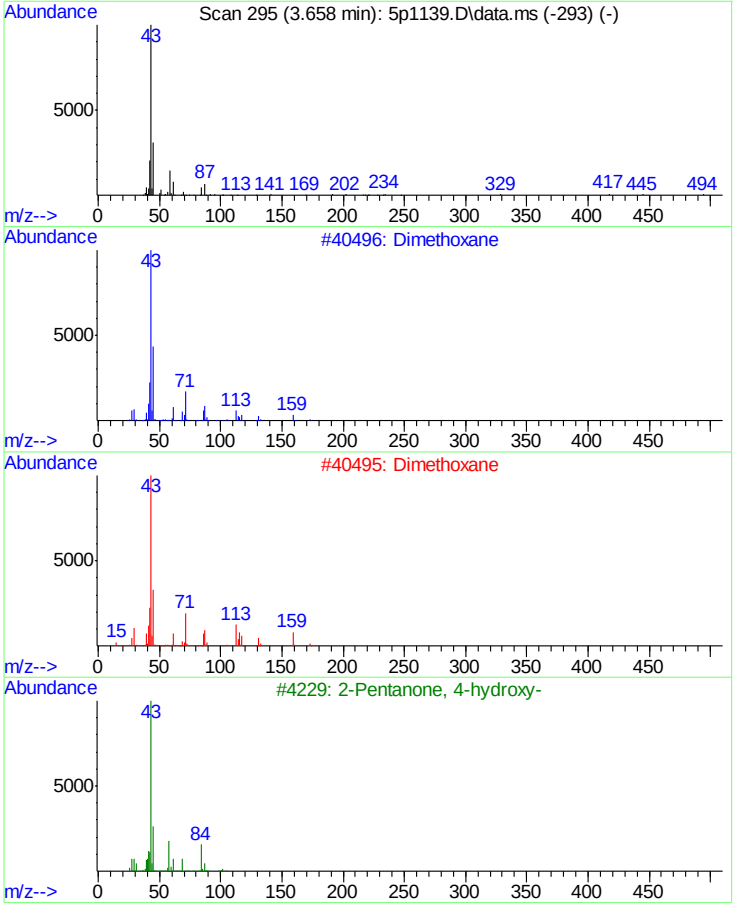
TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
```

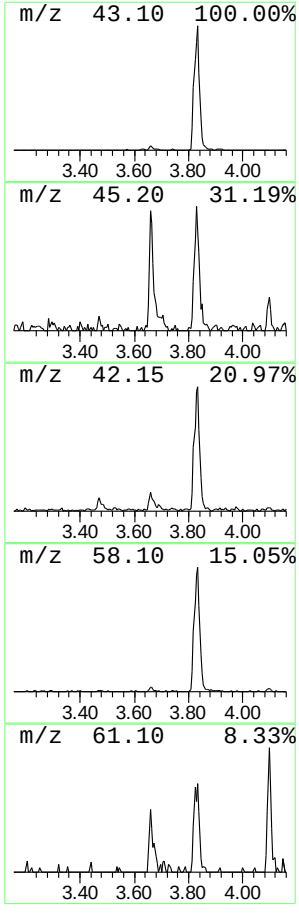
****

Peak Number 5 system artifact Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.658	6.13 ppb	35731	1,4-Dichlorobenzene-d4	5.031

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethoxane	174	C8H14O4	000828-00-2	40
2	Dimethoxane	174	C8H14O4	000828-00-2	33
3	2-Pentanone, 4-hydroxy-	102	C5H10O2	004161-60-8	33
4	2-Butanone, 4-hydroxy-3-methyl-	102	C5H10O2	003393-64-4	9
5	Butane	58	C4H10	000106-97-8	9





Library Search Compound Report

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Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On    : 26 Jun 2013  12:46 pm
Operator  : elwiraa
Sample    : op66993-mb1
Misc      : op66993,e5p55,35.0,,,1,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title  : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

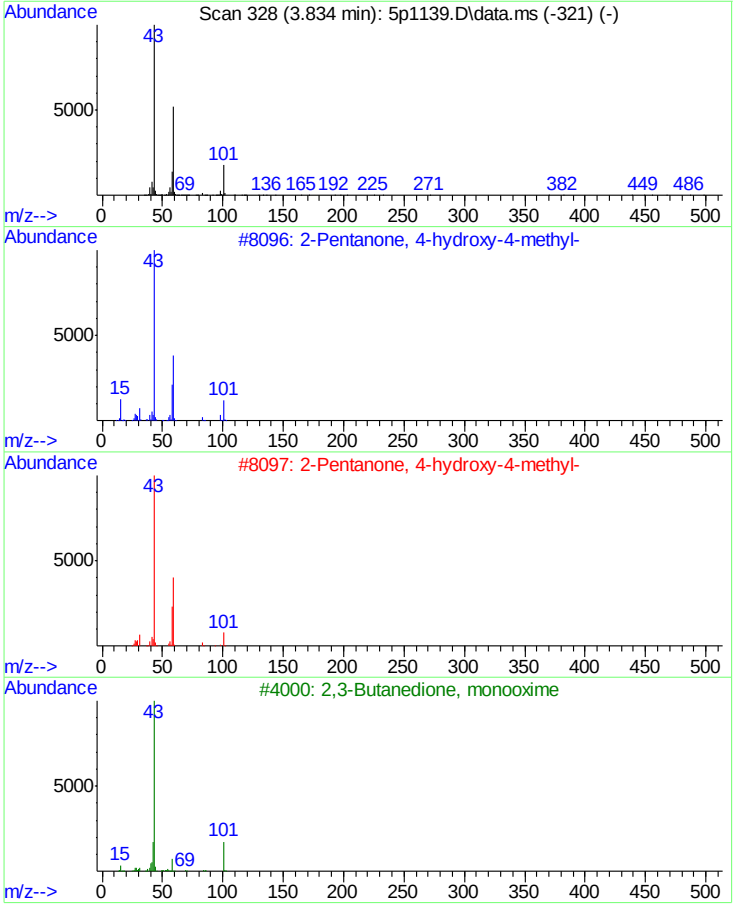
TIC Library    : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p
```

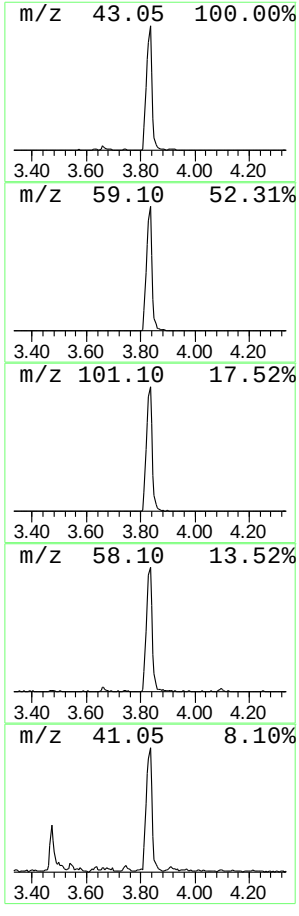
****

Peak Number 6 system artifact/aldol-conde... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.834	154.62 ppb	901393	1,4-Dichlorobenzene-d4	5.031

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	50
2	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	38
3	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	16
4	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9
5	Butane, 1-ethoxy-	102	C6H14O	000628-81-9	9





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\e5p55\
Data File : 5p1139.D
Acq On : 26 Jun 2013 12:46 pm
Operator : elwiraa
Sample : op66993-mb1
Misc : op66993,e5p55,35.0,,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P31.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
system artifact	2.200	7.8	ppb	45675	1	5.031	233183	40.0
system artifact	2.274	4.9	ppb	28342	1	5.031	233183	40.0
system artifact	2.638	12.7	ppb	74046	1	5.031	233183	40.0
system artifact	3.471	8.0	ppb	46820	1	5.031	233183	40.0
system artifact	3.658	6.1	ppb	35731	1	5.031	233183	40.0
system artifact...	3.834	154.6	ppb	901393	1	5.031	233183	40.0

New Jersey

ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66957-MB1	5Y12833.D	1	06/24/13	KD	06/22/13	OP66957	G5Y383

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	5.3	2.4	mg/kg	
	EPH (> C28-C40)	ND	5.3	2.9	mg/kg	
	Total EPH (C9-C40)	ND	5.3	2.4	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	69%	40-140%
3386-33-2	1-Chlorooctadecane	65%	40-140%

Method Blank Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67031-MB1	5Y12937.D	1	06/27/13	KD	06/26/13	OP67031	G5Y386

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40127-7

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	6.7	2.4	mg/kg	
	EPH (> C28-C40)	ND	6.7	2.9	mg/kg	
	Total EPH (C9-C40)	ND	6.7	2.4	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	113%	40-140%
3386-33-2	1-Chlorooctadecane	107%	40-140%

Blank Spike Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66957-BS11	5Y12834.D	1	06/24/13	KD	06/22/13	OP66957	G5Y383

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	EPH (C9-C28)	33.3	21.7	65	40-140
	Total EPH (C9-C40)	33.3	21.7	65	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	67%	40-140%
3386-33-2	1-Chlorooctadecane	66%	40-140%

10.2.1

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* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67031-BS11	5Y12938.D	1	06/27/13	KD	06/26/13	OP67031	G5Y386

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40127-7

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	EPH (C9-C28)	33.3	29.9	90	40-140
	Total EPH (C9-C40)	33.3	29.9	90	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	119%	40-140%
3386-33-2	1-Chlorooctadecane	116%	40-140%

10.2.2

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* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66957-MS	5Y12845.D	1	06/24/13	KD	06/22/13	OP66957	G5Y383
OP66957-MSD	5Y12846.D	1	06/24/13	KD	06/22/13	OP66957	G5Y383
JB40127-3	5Z9187.D	1	06/24/13	KD	06/22/13	OP66957	G5Z309

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	JB40127-3 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	EPH (C9-C28)	ND		182	127	70	144	78	13	40-140/50
	EPH (> C28-C40)	ND		91	54.9	60	62.4	68	13	40-140/50
	Total EPH (C9-C40)	ND		273	182	67	206	75	12	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	JB40127-3	Limits
84-15-1	o-Terphenyl	71%	81%	68%	40-140%
3386-33-2	1-Chlorooctadecane	74%	85%	67%	40-140%

10.3.1

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* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67031-MS	5Y13261.D	1	07/04/13	GAD	06/26/13	OP67031	G5Y392
OP67031-MSD	5Y13262.D	1	07/04/13	GAD	06/26/13	OP67031	G5Y392
JB40175-1	5Y13239.D	1	07/04/13	GAD	06/26/13	OP67031	G5Y392

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40127-7

CAS No.	Compound	JB40175-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	EPH (C9-C28)	28.7		209	191	78	191	85	0	40-140/50
	EPH (> C28-C40)	34.8		105	88.4	51	96.1	64	8	40-140/50
	Total EPH (C9-C40)	63.5		314	279	69	288	78	3	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	JB40175-1	Limits
84-15-1	o-Terphenyl	86%	90%	89%	40-140%
3386-33-2	1-Chlorooctadecane	83%	84%	84%	40-140%

10.3.2

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* = Outside of Control Limits.

Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66957-DUP	5Y12844.D	1	06/24/13	KD	06/22/13	OP66957	G5Y383
JB40171-3	5Z9193.D	1	06/24/13	KD	06/22/13	OP66957	G5Z309

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	JB40171-3 mg/kg	Q	DUP mg/kg	Q	RPD	Limits
	EPH (C9-C28)	ND		ND		nc	25
	EPH (> C28-C40)	ND		ND		nc	25
	Total EPH (C9-C40)	ND		ND		nc	25

CAS No.	Surrogate Recoveries	DUP	JB40171-3	Limits
84-15-1	o-Terphenyl	93%	75%	40-140%
3386-33-2	1-Chlorooctadecane	90%	78%	40-140%

10.4.1

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* = Outside of Control Limits.

Duplicate Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67031-DUP	5Y13260.D	1	07/04/13	GAD	06/26/13	OP67031	G5Y392
JB40175-2	5Y13253.D	1	07/04/13	GAD	06/26/13	OP67031	G5Y392

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40127-7

CAS No.	Compound	JB40175-2 mg/kg	Q	DUP mg/kg	Q	RPD	Limits
	EPH (C9-C28)	320		30.3		165* [a]	25
	EPH (> C28-C40)	130		49.8		89* [a]	25
	Total EPH (C9-C40)	449		80.1		139* [a]	25

CAS No.	Surrogate Recoveries	DUP	JB40175-2	Limits
84-15-1	o-Terphenyl	94%	102%	40-140%
3386-33-2	1-Chlorooctadecane	85%	108%	40-140%

(a) Outside the QC limits.

10.4.2

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* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: NJDEP EPH **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
JB40127-1	5Z9185.D	72.0	72.0
JB40127-2	5Z9186.D	81.0	83.0
JB40127-3	5Z9187.D	68.0	67.0
JB40127-4	5Z9188.D	80.0	79.0
JB40127-5	5Z9189.D	65.0	67.0
JB40127-6	5Z9190.D	67.0	70.0
JB40127-7	5Y12942.D	90.0	85.0
OP66957-BS11	5Y12834.D	67.0	66.0
OP66957-DUP	5Y12844.D	93.0	90.0
OP66957-MB1	5Y12833.D	69.0	65.0
OP66957-MS	5Y12845.D	71.0	74.0
OP66957-MSD	5Y12846.D	81.0	85.0
OP67031-BS11	5Y12938.D	119.0	116.0
OP67031-DUP	5Y13260.D	94.0	85.0
OP67031-MB1	5Y12937.D	113.0	107.0
OP67031-MS	5Y13261.D	86.0	83.0
OP67031-MSD	5Y13262.D	90.0	84.0

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 1-Chlorooctadecane	40-140%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Y383-CC273	**Injection Date:**	06/24/13
Lab File ID:	5Y12831A.D	**Injection Time:**	09:54
Instrument ID:	GC5Y	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.85	8.40

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP66957-MB1	5Y12833.D	06/24/13	10:49	7.85	8.40
OP66957-BS11	5Y12834.D	06/24/13	11:11	7.85	8.40
ZZZZZZ	5Y12835.D	06/24/13	11:33	7.85	8.40
ZZZZZZ	5Y12839.D	06/24/13	13:00	7.85	8.40
ZZZZZZ	5Y12840.D	06/24/13	13:22	7.85	8.40
ZZZZZZ	5Y12841.D	06/24/13	13:43	7.85	8.40
ZZZZZZ	5Y12842.D	06/24/13	14:05	7.85	8.40
ZZZZZZ	5Y12843.D	06/24/13	14:27	7.88	8.30
OP66957-DUP	5Y12844.D	06/24/13	14:49	7.85	8.40
OP66957-MS	5Y12845.D	06/24/13	15:11	7.85	8.40
OP66957-MSD	5Y12846.D	06/24/13	15:33	7.85	8.40

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Y386-CC273	**Injection Date:**	06/27/13
Lab File ID:	5Y12935.D	**Injection Time:**	08:43
Instrument ID:	GC5Y	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.85	8.39

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP67031-MB1	5Y12937.D	06/27/13	10:34	7.85	8.40
OP67031-BS11	5Y12938.D	06/27/13	10:56	7.85	8.40
ZZZZZZ	5Y12939.D	06/27/13	11:18	7.85	8.40
ZZZZZZ	5Y12940.D	06/27/13	11:40	7.85	8.40
JB40127-7	5Y12942.D	06/27/13	12:23	7.85	8.39
OP66923-DUP	5Y12944.D	06/27/13	13:07	7.85	8.40

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Y392-CC273	**Injection Date:**	07/04/13
Lab File ID:	5Y13251.D	**Injection Time:**	19:30
Instrument ID:	GC5Y	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.83	8.38

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
JB40175-2	5Y13253.D	07/04/13	20:14	7.84	8.38
ZZZZZZ	5Y13254.D	07/04/13	20:36	7.83	8.38
JB41182-21	5Y13255.D	07/04/13	20:57	7.83	8.38
ZZZZZZ	5Y13256.D	07/04/13	21:19	7.83	8.38
OP67205-DUP	5Y13257.D	07/04/13	21:41	7.83	8.38
OP67205-MS	5Y13258.D	07/04/13	22:03	7.83	8.38
OP67205-MSD	5Y13259.D	07/04/13	22:24	7.83	8.38
OP67031-DUP	5Y13260.D	07/04/13	22:46	7.83	8.38
OP67031-MS	5Y13261.D	07/04/13	23:08	7.83	8.38
OP67031-MSD	5Y13262.D	07/04/13	23:29	7.83	8.38

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Z309-CC249	**Injection Date:**	06/24/13
Lab File ID:	5Z9182.D	**Injection Time:**	09:03
Instrument ID:	GC5Z	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.78	8.38

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
JB40127-1	5Z9185.D	06/24/13	11:11	7.78	8.38
JB40127-2	5Z9186.D	06/24/13	11:33	7.78	8.38
JB40127-3	5Z9187.D	06/24/13	11:54	7.78	8.38
JB40127-4	5Z9188.D	06/24/13	12:16	7.78	8.38
JB40127-5	5Z9189.D	06/24/13	12:38	7.78	8.38
JB40127-6	5Z9190.D	06/24/13	13:00	7.78	8.38
ZZZZZZ	5Z9191.D	06/24/13	13:22	7.78	8.38
ZZZZZZ	5Z9192.D	06/24/13	13:43	7.78	8.38
JB40171-3	5Z9193.D	06/24/13	14:05	7.78	8.38
ZZZZZZ	5Z9194.D	06/24/13	14:27	7.78	8.38
ZZZZZZ	5Z9195.D	06/24/13	14:49	7.78	8.38
ZZZZZZ	5Z9196.D	06/24/13	15:11	7.78	8.38
OP66967-MB1	5Z9197.D	06/24/13	15:33	7.79	8.38
OP66967-BS11	5Z9198.D	06/24/13	15:54	7.79	8.38
ZZZZZZ	5Z9199.D	06/24/13	16:16	7.79	8.38

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: JB40127 **Sample:** G5Y273-ICC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y8653.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Response Factor Report GC5Y5Z

Method : C:\msdchem\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title : NJDEP Extractable Petroleum Hydrocarbons
Last Update : Thu Jan 31 08:49:13 2013
Response via : Initial Calibration

Calibration Files
5 =5y8650.D 10 =5y8651.D 50 =5y8653.D 100 =5y8654.D
2 =5y8649.D 20 =5y8652.D =

Compound	5	10	50	100	2	20	Avg	%RSD
1)T C9	1.250	1.422	1.395	1.521	1.493	1.397	1.413 E6	6.74
2)T C10	1.314	1.538	1.416	1.532	1.539	1.424	1.461 E6	6.27
3)T C12	1.306	1.480	1.414	1.533	1.477	1.409	1.436 E6	5.50
4)T C14	1.308	1.482	1.426	1.540	1.482	1.420	1.443 E6	5.49
5)T C16	1.318	1.483	1.442	1.555	1.492	1.437	1.454 E6	5.45
6)T C18	1.323	1.496	1.454	1.565	1.495	1.451	1.464 E6	5.50
7)T C20	1.326	1.500	1.461	1.574	1.503	1.456	1.470 E6	5.59
8)T C21	1.450	1.616	1.524	1.637	1.623	1.566	1.569 E6	4.59
9)T C22	1.444	1.633	1.555	1.683	1.651	1.582	1.591 E6	5.40
10)T C24	1.313	1.487	1.426	1.548	1.485	1.441	1.450 E6	5.48
11)T C26	1.321	1.504	1.452	1.565	1.504	1.453	1.466 E6	5.63
12)T C28	1.310	1.494	1.449	1.567	1.495	1.442	1.460 E6	5.87
13)H EPH (C9-C28)	1.332	1.511	1.451	1.568	1.520	1.457	1.473 E6	5.55
14)T C30	1.300	1.492	1.445	1.569	1.487	1.439	1.455 E6	6.14
15)T C32	1.270	1.453	1.414	1.533	1.447	1.400	1.419 E6	6.11
16)T C34	1.308	1.508	1.474	1.599	1.496	1.455	1.473 E6	6.44
17)T C36	1.222	1.415	1.389	1.507	1.397	1.368	1.383 E6	6.68
18)T C38	1.161	1.349	1.333	1.447	1.326	1.307	1.320 E6	7.01
19)T C40	1.195	1.356	1.341	1.459	1.353	1.301	1.334 E6	6.46
20)H EPH (>C28-C40)	1.242	1.429	1.399	1.519	1.418	1.378	1.398 E6	6.44
21)H TOTAL PHC	1.302	1.484	1.434	1.552	1.486	1.430	1.448 E6	5.80
22)S o-Terphenyl (S)	1.459	1.645	1.604	1.732	1.648	1.597	1.614 E6	5.58
23)S 1-chlorooctadecan	1.156	1.316	1.338	1.445	1.313	1.280	1.308 E6	7.15
24)S 2-Fluorobiphenyl							0.000#	-1.00
25)S 2-Bromonaphthalen							0.000#	-1.00

(#) = Out of Range

EPH5Y273.M Thu Jan 31 08:54:17 2013

10.7.1

10

Initial Calibration Verification

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G5Y273-ICV273
Lab FileID: 5Y8655.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y273\5y8655.D            Vial: 8
Acq On    : 29 Jan 2013  12:14 pm                    Operator: gwend
Sample    : icv273-50                                Inst    : GC5Y5Z
Misc      : op63126,g5y273,15.0,,,2,1                Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\msdchem\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Tue Jan 29 12:21:37 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.254 E6	11.3	90	0.00	3.24- 3.30
2	T	C10	1.461	1.456 E6	0.3	103	0.00	4.02- 4.08
3	T	C12	1.436	1.455 E6	-1.3	103	0.00	5.22- 5.28
4	T	C14	1.443	1.432 E6	0.8	100	0.00	6.17- 6.23
5	T	C16	1.454	1.430 E6	1.7	99	0.00	6.98- 7.04
6	T	C18	1.464	1.428 E6	2.5	98	0.00	7.72- 7.78
7	T	C20	1.470	1.447 E6	1.6	99	0.00	8.39- 8.45
8	T	C21	1.569	1.467 E6	6.5	96	0.00	8.70- 8.76
9	T	C22	1.591	1.404 E6	11.8	90	0.00	8.99- 9.05
10	T	C24	1.450	1.418 E6	2.2	99	0.00	9.52- 9.58
11	T	C26	1.466	1.442 E6	1.6	99	0.00	10.01-10.07
12	T	C28	1.460	1.457 E6	0.2	100	0.00	10.47-10.53
13	H	EPH (C9-C28)	1.473	1.424 E6	3.3	99	0.00	3.19-10.57
14	T	C30	1.455	1.469 E6	-1.0	102	0.00	10.92-10.98
15	T	C32	1.419	1.473 E6	-3.8	104	0.00	11.39-11.45
16	T	C34	1.473	1.452 E6	1.4	99	0.00	11.97-12.05
17	T	C36	1.383	1.413 E6	-2.2	102	0.00	12.73-12.79
18	T	C38	1.320	1.342 E6	-1.7	101	0.00	13.76-13.82
19	T	C40	1.334	1.285 E6	3.7	96	0.00	15.17-15.23
20	H	EPH (>C28-C40)	1.398	1.406 E6	-0.6	102	0.00	10.56-15.38
21	H	TOTAL PHC	1.210	1.418 E6	2.3	101	0.00	3.19-15.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y8653.D EPH5Y273.M Tue Jan 29 12:43:12 2013

10.7.2 10

Continuing Calibration Summary

Job Number: JB40127 **Sample:** G5Y383-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y12831A.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y383\5y12831A.D          Vial: 52
Acq On    : 24 Jun 2013   9:54 am                    Operator: khaliahd
Sample    : cc273-20                                 Inst    : GC5Y5Z
Misc      : op66923,g5y383,16.0,,,2,1                Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Tue Jun 25 16:06:58 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.529 E6	-8.2	109	0.00	2.91- 2.97
2	T	C10	1.461	1.492 E6	-2.1	105	0.00	3.72- 3.78
3	T	C12	1.436	1.445 E6	-0.6	103	0.00	4.94- 5.00
4	T	C14	1.443	1.512 E6	-4.8	106	0.00	5.88- 5.94
5	T	C16	1.454	1.559 E6	-7.2	109	0.00	6.70- 6.76
6	T	C18	1.464	1.617 E6	-10.5	111	0.00	7.43- 7.49
7	T	C20	1.470	1.643 E6	-11.8	113	0.00	8.09- 8.15
8	T	C21	1.569	1.715 E6	-9.3	109	0.00	8.40- 8.46
9	T	C22	1.591	1.780 E6	-11.9	113	0.00	8.69- 8.75
10	T	C24	1.450	1.593 E6	-9.9	111	0.01	9.25- 9.31
11	T	C26	1.466	1.624 E6	-10.8	112	0.03	9.76- 9.82
12	T	C28	1.460	1.637 E6	-12.1	114	0.04	10.25-10.31
13	H	EPH (C9-C28)	1.473	1.595 E6	-8.3	113	0.00	3.19-10.57
14	T	C30	1.455	1.661 E6	-14.2	115	0.06	10.72-10.78
15	T	C32	1.419	1.615 E6	-13.8	115	0.08	11.18-11.24
16	T	C34	1.473	1.721 E6	-16.8	118	0.09	11.66-11.74
17	T	C36	1.383	1.617 E6	-16.9	118	0.09	12.28-12.34
18	T	C38	1.320	1.560 E6	-18.2	119	0.10	13.07-13.13
19	T	C40	1.334	1.568 E6	-17.5	120	0.11	14.14-14.20
20	H	EPH (>C28-C40)	1.398	1.624 E6	-16.2	118	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.605 E6	-10.8	116	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.836 E6	-13.8	115	0.00	7.82- 7.88
23	S	1-chlorooctadecane (S)	1.308	1.370 E6	-4.7	107	-0.02	8.37- 8.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y12868.D EPH5Y273.M Tue Jun 25 16:18:56 2013

10.7.3 10

Continuing Calibration Summary

Job Number: JB40127 **Sample:** G5Y383-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y12849.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y383\5y12849.D          Vial: 53
Acq On    : 24 Jun 2013   5:07 pm                   Operator: khaliahd
Sample    : cc273-50                                Inst    : GC5Y5Z
Misc      : op66957,g5y383,15.5,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jun 27 08:54:24 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.428 E6	-1.1	102	0.00	2.91- 2.97
2	T	C10	1.461	1.432 E6	2.0	101	0.00	3.71- 3.77
3	T	C12	1.436	1.409 E6	1.9	100	0.00	4.93- 4.99
4	T	C14	1.443	1.440 E6	0.2	101	0.00	5.88- 5.94
5	T	C16	1.454	1.458 E6	-0.3	101	0.00	6.69- 6.75
6	T	C18	1.464	1.472 E6	-0.5	101	0.00	7.42- 7.48
7	T	C20	1.470	1.504 E6	-2.3	103	0.00	8.09- 8.15
8	T	C21	1.569	1.520 E6	3.1	100	0.00	8.40- 8.46
9	T	C22	1.591	1.608 E6	-1.1	103	0.00	8.69- 8.75
10	T	C24	1.450	1.466 E6	-1.1	103	0.01	9.23- 9.29
11	T	C26	1.466	1.490 E6	-1.6	103	0.02	9.73- 9.79
12	T	C28	1.460	1.691 E6	-15.8	117	0.02	10.20-10.26
13	H	EPH (C9-C28)	1.473	1.493 E6	-1.4	104	0.00	3.19-10.57
14	T	C30	1.455	1.515 E6	-4.1	105	0.03	10.65-10.71
15	T	C32	1.419	1.500 E6	-5.7	105	0.04	11.08-11.14
16	T	C34	1.473	1.533 E6	-4.1	104	0.05	11.55-11.63
17	T	C36	1.383	1.456 E6	-5.3	105	0.06	12.16-12.22
18	T	C38	1.320	1.395 E6	-5.7	105	0.06	12.95-13.01
19	T	C40	1.334	1.389 E6	-4.1	104	0.07	14.02-14.08
20	H	EPH (>C28-C40)	1.398	1.465 E6	-4.8	105	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.484 E6	-2.5	105	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.680 E6	-4.1	105	0.00	7.82- 7.88
23	S	1-chlorooctadecane (S)	1.308	1.327 E6	-1.5	99	0.00	8.37- 8.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y12526.D EPH5Y273.M Thu Jun 27 11:04:21 2013

10.7.4 10

Continuing Calibration Summary

Job Number: JB40127 **Sample:** G5Y386-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y12935.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y386\5y12935.D          Vial: 52
Acq On    : 27 Jun 2013   8:43 am                   Operator: khaliahd
Sample    : cc273-20                                Inst    : GC5Y5Z
Misc      : op66741,g5y386,15.0,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Fri Jun 28 09:28:19 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.614 E6	-14.2	116	0.00	2.91- 2.97
2	T	C10	1.461	1.602 E6	-9.7	112	0.00	3.71- 3.77
3	T	C12	1.436	1.572 E6	-9.5	112	0.00	4.93- 4.99
4	T	C14	1.443	1.621 E6	-12.3	114	0.00	5.87- 5.93
5	T	C16	1.454	1.655 E6	-13.8	115	0.00	6.69- 6.75
6	T	C18	1.464	1.672 E6	-14.2	115	0.00	7.42- 7.48
7	T	C20	1.470	1.672 E6	-13.7	115	0.00	8.08- 8.14
8	T	C21	1.569	1.786 E6	-13.8	114	0.00	8.39- 8.45
9	T	C22	1.591	1.832 E6	-15.1	116	0.00	8.68- 8.74
10	T	C24	1.450	1.670 E6	-15.2	116	0.00	9.23- 9.29
11	T	C26	1.466	1.693 E6	-15.5	117	0.00	9.72- 9.78
12	T	C28	1.460	1.690 E6	-15.8	117	0.00	10.18-10.24
13	H	EPH (C9-C28)	1.473	1.673 E6	-13.6	118	0.00	3.19-10.57
14	T	C30	1.455	1.699 E6	-16.8	118	0.00	10.62-10.68
15	T	C32	1.419	1.679 E6	-18.3	120	0.00	11.05-11.11
16	T	C34	1.473	1.747 E6	-18.6	120	0.00	11.52-11.59
17	T	C36	1.383	1.643 E6	-18.8	120	0.00	12.12-12.18
18	T	C38	1.320	1.608 E6	-21.8	123	0.00	12.90-12.96
19	T	C40	1.334	1.633 E6	-22.4	126	0.00	13.95-14.01
20	H	EPH (>C28-C40)	1.398	1.668 E6	-19.4	124	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.672 E6	-15.4	122	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.886 E6	-16.9	118	0.00	7.82- 7.88
23	S	1-chlorooctadecane (S)	1.308	1.378 E6	-5.4	108	0.00	8.36- 8.42

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y12910.D EPH5Y273.M Fri Jun 28 12:32:29 2013

10.7.5 10

Continuing Calibration Summary

Job Number: JB40127 **Sample:** G5Y386-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y12945.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y386\5y12945.D          Vial: 53
Acq On    : 27 Jun 2013   3:23 pm                   Operator: khaliahd
Sample    : cc273-50                                Inst    : GC5Y5Z
Misc      : op66923,g5y386,16.1,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Fri Jun 28 09:28:19 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.617 E6	-14.4	116	0.00	2.90- 2.96
2	T	C10	1.461	1.614 E6	-10.5	114	0.00	3.71- 3.77
3	T	C12	1.436	1.605 E6	-11.8	114	0.00	4.93- 4.99
4	T	C14	1.443	1.656 E6	-14.8	116	0.00	5.88- 5.94
5	T	C16	1.454	1.681 E6	-15.6	117	0.00	6.69- 6.75
6	T	C18	1.464	1.703 E6	-16.3	117	0.00	7.42- 7.48
7	T	C20	1.470	1.714 E6	-16.6	117	0.00	8.09- 8.14
8	T	C21	1.569	1.735 E6	-10.6	114	0.00	8.40- 8.46
9	T	C22	1.591	1.854 E6	-16.5	119	0.00	8.69- 8.75
10	T	C24	1.450	1.655 E6	-14.1	116	0.02	9.24- 9.30
11	T	C26	1.466	1.692 E6	-15.4	117	0.03	9.75- 9.81
12	T	C28	1.460	1.698 E6	-16.3	117	0.05	10.22-10.28
13	H	EPH (C9-C28)	1.473	1.685 E6	-14.4	117	0.00	3.19-10.57
14	T	C30	1.455	1.708 E6	-17.4	118	0.07	10.68-10.74
15	T	C32	1.419	1.666 E6	-17.4	118	0.09	11.13-11.19
16	T	C34	1.473	1.758 E6	-19.3	119	0.10	11.61-11.69
17	T	C36	1.383	1.661 E6	-20.1	120	0.12	12.22-12.28
18	T	C38	1.320	1.607 E6	-21.7	121	0.12	13.01-13.07
19	T	C40	1.334	1.641 E6	-23.0	122	0.13	14.08-14.14
20	H	EPH (>C28-C40)	1.398	1.673 E6	-19.7	120	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.681 E6	-16.1	119	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.906 E6	-18.1	119	0.00	7.82- 7.88
23	S	1-chlorooctadecane (S)	1.308	1.489 E6	-13.8	111	0.00	8.37- 8.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y12526.D EPH5Y273.M Fri Jun 28 12:42:01 2013

10.7.6 10

Continuing Calibration Summary

Job Number: JB40127 **Sample:** G5Y392-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y13251.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y392\5y13251.D          Vial: 52
Acq On    :  4 Jul 2013   7:30 pm                   Operator: gwend
Sample    : cc273-20                                Inst    : GC5Y5Z
Misc      : op67031,g5y392,15.0,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jul 04 12:40:18 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.434 E6	-1.5	103	0.00	2.89- 2.95
2	T	C10	1.461	1.398 E6	4.3	98	0.00	3.70- 3.76
3	T	C12	1.436	1.353 E6	5.8	96	0.00	4.92- 4.98
4	T	C14	1.443	1.414 E6	2.0	100	0.00	5.86- 5.92
5	T	C16	1.454	1.459 E6	-0.3	102	0.00	6.68- 6.74
6	T	C18	1.464	1.511 E6	-3.2	104	0.00	7.40- 7.46
7	T	C20	1.470	1.544 E6	-5.0	106	0.00	8.06- 8.12
8	T	C21	1.569	1.777 E6	-13.3	113	0.00	8.37- 8.43
9	T	C22	1.591	1.688 E6	-6.1	107	0.00	8.67- 8.73
10	T	C24	1.450	1.544 E6	-6.5	107	0.00	9.21- 9.27
11	T	C26	1.466	1.566 E6	-6.8	108	0.00	9.70- 9.76
12	T	C28	1.460	1.546 E6	-5.9	107	0.00	10.15-10.21
13	H	EPH (C9-C28)	1.473	1.520 E6	-9.0	110	0.00	3.19-10.57
14	T	C30	1.455	1.568 E6	-3.1	107	0.00	10.59-10.65
15	T	C32	1.419	1.528 E6	-7.7	109	0.00	11.01-11.07
16	T	C34	1.473	1.610 E6	-9.3	111	0.00	11.47-11.55
17	T	C36	1.383	1.540 E6	-11.4	113	0.00	12.07-12.13
18	T	C38	1.320	1.475 E6	-11.7	113	-0.02	12.83-12.89
19	T	C40	1.334	1.448 E6	-8.5	111	-0.01	13.88-13.94
20	H	EPH (>C28-C40)	1.398	1.528 E6	-9.3	110	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.522 E6	-5.1	113	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.727 E6	-7.0	108	0.00	7.80- 7.86
23	S	1-chlorooctadecane (S)	1.308	1.157 E6	11.5	90	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y13232.D EPH5Y273.M Fri Jul 05 09:18:07 2013

10.7.7 10

Continuing Calibration Summary

Job Number: JB40127 **Sample:** G5Y392-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y13266.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y392\5y13266.D          Vial: 53
Acq On    :  5 Jul 2013  12:56 am                   Operator: gwend
Sample    : cc273-50                                Inst    : GC5Y5Z
Misc      : op67031,g5y392,15.0,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jul 04 12:40:18 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.367 E6	3.3	98	0.00	2.89- 2.95
2	T	C10	1.461	1.363 E6	6.7	96	0.00	3.70- 3.76
3	T	C12	1.436	1.346 E6	6.3	95	0.00	4.92- 4.98
4	T	C14	1.443	1.383 E6	4.2	97	0.00	5.86- 5.92
5	T	C16	1.454	1.410 E6	3.0	98	0.00	6.68- 6.74
6	T	C18	1.464	1.436 E6	1.9	99	0.00	7.41- 7.47
7	T	C20	1.470	1.424 E6	3.1	98	0.00	8.07- 8.13
8	T	C21	1.569	1.473 E6	6.1	97	0.00	8.38- 8.44
9	T	C22	1.591	1.521 E6	4.4	98	0.00	8.67- 8.73
10	T	C24	1.450	1.386 E6	4.4	97	0.00	9.21- 9.27
11	T	C26	1.466	1.420 E6	3.1	98	0.00	9.70- 9.76
12	T	C28	1.460	1.430 E6	2.1	99	0.00	10.15-10.21
13	H	EPH (C9-C28)	1.473	1.413 E6	4.1	98	0.00	3.19-10.57
14	T	C30	1.455	1.453 E6	0.1	101	0.00	10.59-10.65
15	T	C32	1.419	1.425 E6	-0.4	101	0.00	11.01-11.07
16	T	C34	1.473	1.500 E6	-1.8	102	0.00	11.47-11.55
17	T	C36	1.383	1.430 E6	-3.4	103	-0.01	12.06-12.12
18	T	C38	1.320	1.377 E6	-4.3	103	-0.02	12.83-12.89
19	T	C40	1.334	1.361 E6	-2.0	101	0.00	13.88-13.94
20	H	EPH (>C28-C40)	1.398	1.424 E6	-1.9	101	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.417 E6	2.1	101	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.621 E6	-0.4	101	0.00	7.80- 7.86
23	S	1-chlorooctadecane (S)	1.308	1.265 E6	3.3	95	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y12526.D EPH5Y273.M Fri Jul 05 09:16:56 2013

Initial Calibration Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G5Z249-ICC249
Lab FileID: 5Z6979.D

Response Factor Report GC5Y5Z

Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title : NJDEP Extractable Petroleum Hydrocarbons
Last Update : Sat Apr 06 06:28:34 2013
Response via : Initial Calibration

Calibration Files
5 =5z6976.D 10 =5z6977.D 50 =5z6979.D 100 =5z6980.D
2 =5z6975.D 20 =5z6978.D =

Compound	5	10	50	100	2	20	Avg	%RSD
1)T C9	1.485	1.697	1.662	1.966	1.720	1.731	1.710 E6	9.03
2)T C10	1.467	1.689	1.717	1.957	1.627	1.756	1.702 E6	9.44
3)T C12	1.473	1.712	1.720	1.857	1.594	1.732	1.681 E6	7.85
4)T C14	1.460	1.624	1.747	1.732	1.610	1.778	1.658 E6	7.16
5)T C16	1.383	1.440	1.745	1.724	1.498	1.764	1.592 E6	10.73
6)T C18	1.446	1.461	1.756	1.733	1.561	1.798	1.626 E6	9.58
7)T C20	1.426	1.432	1.759	1.718	1.605	1.787	1.621 E6	9.94
8)T C21	1.628	1.579	1.877	1.827	1.840	1.937	1.781 E6	8.07
9)T C22	1.528	1.523	1.901	1.832	1.702	1.917	1.734 E6	10.29
10)T C24	1.343	1.364	1.704	1.661	1.513	1.709	1.549 E6	10.79
11)T C26	1.393	1.436	1.682	1.733	1.552	1.700	1.583 E6	9.13
12)T C28	1.394	1.543	1.661	1.790	1.599	1.683	1.612 E6	8.41
13)H EPH (C9-C28)	1.452	1.542	1.744	1.794	1.618	1.774	1.654 E6	8.41
14)T C30	1.442	1.602	1.654	1.818	1.627	1.686	1.638 E6	7.46
15)T C32	1.547	1.783	1.656	1.780	1.780	1.674	1.703 E6	5.62
16)T C34	1.472	1.670	1.680	1.841	1.712	1.726	1.684 E6	7.13
17)T C36	1.393	1.577	1.583	1.717	1.631	1.646	1.591 E6	6.89
18)T C38	1.340	1.532	1.510	1.602	1.562	1.574	1.520 E6	6.18
19)T C40	1.265	1.462	1.449	1.545	1.455	1.552	1.455 E6	7.11
20)H EPH (>C28-C40)	1.410	1.604	1.589	1.717	1.628	1.643	1.598 E6	6.42
21)H TOTAL PHC	1.438	1.563	1.692	1.768	1.622	1.730	1.636 E6	7.46
22)S o-Terphenyl (S)	1.629	1.650	1.930	1.937	1.767	1.960	1.812 E6	8.31
23)S 1-chlorooctadecan	1.158	1.193	1.532	1.516	1.224	1.536	1.360 E6	13.64
24)S 2-Fluorobiphenyl							0.000#	-1.00
25)S 2-Bromonaphthalen							0.000#	-1.00

(#) = Out of Range

EPH5Z249.M Sat Apr 06 06:35:16 2013

10.7.9

10

Initial Calibration Verification

Job Number: JB40127 **Sample:** G5Z249-ICV249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z6981.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z249\5z6981.D            Vial: 58
Acq On    :  5 Apr 2013   9:29 pm                     Operator: gwend
Sample    : icv249-50                                 Inst    : GC5Y5Z
Misc      : op64993,g5z249,15.0,,,2,1                 Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Apr 06 06:28:34 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.633 E6	4.5	98	0.00	3.01- 3.07
2	T	C10	1.702	1.878 E6	-10.3	109	0.00	3.81- 3.87
3	T	C12	1.681	1.867 E6	-11.1	109	0.00	5.01- 5.07
4	T	C14	1.658	1.737 E6	-4.8	99	0.00	5.96- 6.02
5	T	C16	1.592	1.687 E6	-6.0	97	0.00	6.78- 6.84
6	T	C18	1.626	1.686 E6	-3.7	96	0.00	7.51- 7.57
7	T	C20	1.621	1.684 E6	-3.9	96	0.00	8.18- 8.24
8	T	C21	1.781	1.747 E6	1.9	93	0.00	8.49- 8.55
9	T	C22	1.734	1.662 E6	4.2	87	0.00	8.79- 8.85
10	T	C24	1.549	1.646 E6	-6.3	97	0.00	9.32- 9.38
11	T	C26	1.583	1.679 E6	-6.1	100	0.00	9.81- 9.87
12	T	C28	1.612	1.713 E6	-6.3	103	0.00	10.26-10.32
13	H	EPH (C9-C28)	1.654	1.718 E6	-3.9	96	0.00	2.97-10.41
14	T	C30	1.638	1.734 E6	-5.9	105	0.00	10.66-10.72
15	T	C32	1.703	1.749 E6	-2.7	106	0.00	11.05-11.11
16	T	C34	1.684	1.718 E6	-2.0	102	0.00	11.49-11.57
17	T	C36	1.591	1.674 E6	-5.2	106	0.00	12.08-12.14
18	T	C38	1.520	1.580 E6	-3.9	105	0.00	12.88-12.94
19	T	C40	1.455	1.467 E6	-0.8	101	0.00	14.00-14.06
20	H	EPH (>C28-C40)	1.598	1.654 E6	-3.5	102	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.697 E6	-3.7	102	0.00	2.97-14.21

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z6979.D EPH5Z249.M Sat Apr 06 06:33:14 2013

10.7.10 10

Continuing Calibration Summary

Job Number: JB40127 **Sample:** G5Z309-CC249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z9182.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z309\5z9182.D          Vial: 53
Acq On    : 24 Jun 2013   9:03 am                  Operator: khaliahd
Sample    : cc249-50                               Inst    : GC5Y5Z
Misc      : op66756,g5z309,400,,,1,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jun 27 08:11:52 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.728 E6	-1.1	104	0.00	2.85- 2.91
2	T	C10	1.702	1.747 E6	-2.6	102	0.00	3.67- 3.73
3	T	C12	1.681	1.711 E6	-1.8	99	0.00	4.90- 4.96
4	T	C14	1.658	1.738 E6	-4.8	99	0.00	5.85- 5.91
5	T	C16	1.592	1.734 E6	-8.9	99	0.00	6.66- 6.72
6	T	C18	1.626	1.705 E6	-4.9	97	0.00	7.40- 7.46
7	T	C20	1.621	1.683 E6	-3.8	96	0.00	8.06- 8.12
8	T	C21	1.781	1.738 E6	2.4	93	0.00	8.38- 8.44
9	T	C22	1.734	1.790 E6	-3.2	94	0.00	8.68- 8.74
10	T	C24	1.549	1.619 E6	-4.5	95	0.00	9.22- 9.28
11	T	C26	1.583	1.629 E6	-2.9	97	0.01	9.73- 9.79
12	T	C28	1.612	1.612 E6	0.0	97	0.02	10.20-10.26
13	H	EPH (C9-C28)	1.654	1.702 E6	-2.9	98	0.00	2.97-10.41
14	T	C30	1.638	1.634 E6	0.2	99	0.03	10.62-10.68
15	T	C32	1.703	1.604 E6	5.8	97	0.04	11.02-11.08
16	T	C34	1.684	1.665 E6	1.1	99	0.05	11.44-11.52
17	T	C36	1.591	1.549 E6	2.6	98	0.05	12.00-12.06
18	T	C38	1.520	1.434 E6	5.7	95	0.06	12.73-12.79
19	T	C40	1.455	1.333 E6	8.4	92	0.06	13.75-13.81
20	H	EPH (>C28-C40)	1.598	1.537 E6	3.8	90	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.647 E6	-0.7	94	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.861 E6	-2.7	96	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.406 E6	-3.4	92	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z8755.D EPH5Z249.M Thu Jun 27 16:28:31 2013

10.7.11 10

Continuing Calibration Summary

Job Number: JB40127 **Sample:** G5Z309-CC249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z9200.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z309\5z9200.D          Vial: 52
Acq On    : 24 Jun 2013   5:07 pm                  Operator: khaliahd
Sample    : cc249-20                               Inst    : GC5Y5Z
Misc      : op66967,g5z309,960,,,1,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jun 27 08:11:52 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.494 E6	12.6	86	0.00	2.85- 2.91
2	T	C10	1.702	1.514 E6	11.0	86	0.00	3.67- 3.73
3	T	C12	1.681	1.440 E6	14.3	83	0.00	4.89- 4.95
4	T	C14	1.658	1.501 E6	9.5	84	0.00	5.84- 5.90
5	T	C16	1.592	1.503 E6	5.6	85	0.00	6.66- 6.72
6	T	C18	1.626	1.489 E6	8.4	83	0.00	7.39- 7.45
7	T	C20	1.621	1.483 E6	8.5	83	0.00	8.06- 8.12
8	T	C21	1.781	1.570 E6	11.8	81	0.00	8.37- 8.43
9	T	C22	1.734	1.587 E6	8.5	83	0.00	8.67- 8.73
10	T	C24	1.549	1.417 E6	8.5	83	0.00	9.22- 9.28
11	T	C26	1.583	1.467 E6	7.3	86	0.00	9.72- 9.78
12	T	C28	1.612	1.534 E6	4.8	91	0.02	10.19-10.25
13	H	EPH (C9-C28)	1.654	1.500 E6	9.3	93	0.00	2.97-10.41
14	T	C30	1.638	1.716 E6	-4.8	102	0.02	10.61-10.67
15	T	C32	1.703	1.567 E6	8.0	94	0.03	11.01-11.07
16	T	C34	1.684	1.680 E6	0.2	97	0.04	11.43-11.51
17	T	C36	1.591	1.439 E6	9.6	87	0.04	11.98-12.04
18	T	C38	1.520	1.343 E6	11.6	85	0.04	12.71-12.77
19	T	C40	1.455	1.331 E6	8.5	86	0.04	13.73-13.79
20	H	EPH (>C28-C40)	1.598	1.513 E6	5.4	85	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.504 E6	8.0	84	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.635 E6	9.8	83	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.212 E6	10.9	79	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z9211.D EPH5Z249.M Thu Jun 27 16:35:07 2013

10.7.12 10

New Jersey

ACCUTEST LABORATORIES

GC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9185.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 11:11 am
Operator : khaliahd
Sample : jb40127-1
Misc : op66957,g5z309,16.1,,,2,1
ALS Vial : 55 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:40:08 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.784	65499450	36.142 ug/L
Spiked Amount 50.000		Recovery =	72.28%
23) S 1-chlorooctadecane (S)	8.380	49057112	36.076 ug/L
Spiked Amount 50.000		Recovery =	72.15%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

11.1.1

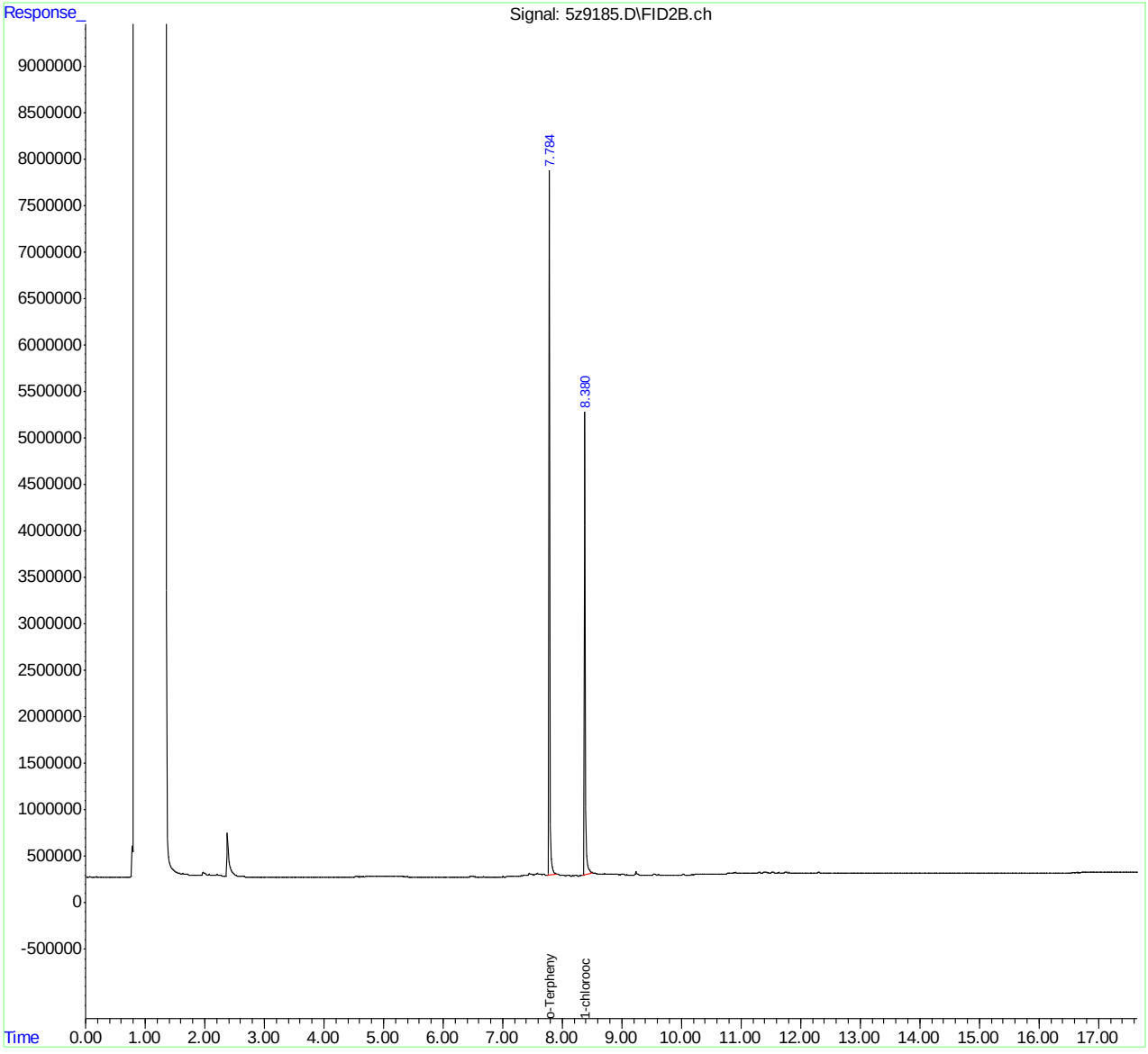
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9185.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 11:11 am
Operator : khaliahd
Sample : jb40127-1
Misc : op66957,g5z309,16.1,,,2,1
ALS Vial : 55 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:40:08 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



EPH5Z249.M Tue Jun 25 16:40:16 2013

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9186.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 11:33 am
Operator : khaliahd
Sample : jb40127-2
Misc : op66957,g5z309,16.9,,,2,1
ALS Vial : 56 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:40:30 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.784	73273958	40.432 ug/L
Spiked Amount 50.000		Recovery =	80.86%
23) S 1-chlorooctadecane (S)	8.379	56131100	41.278 ug/L
Spiked Amount 50.000		Recovery =	82.56%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

11.1.2

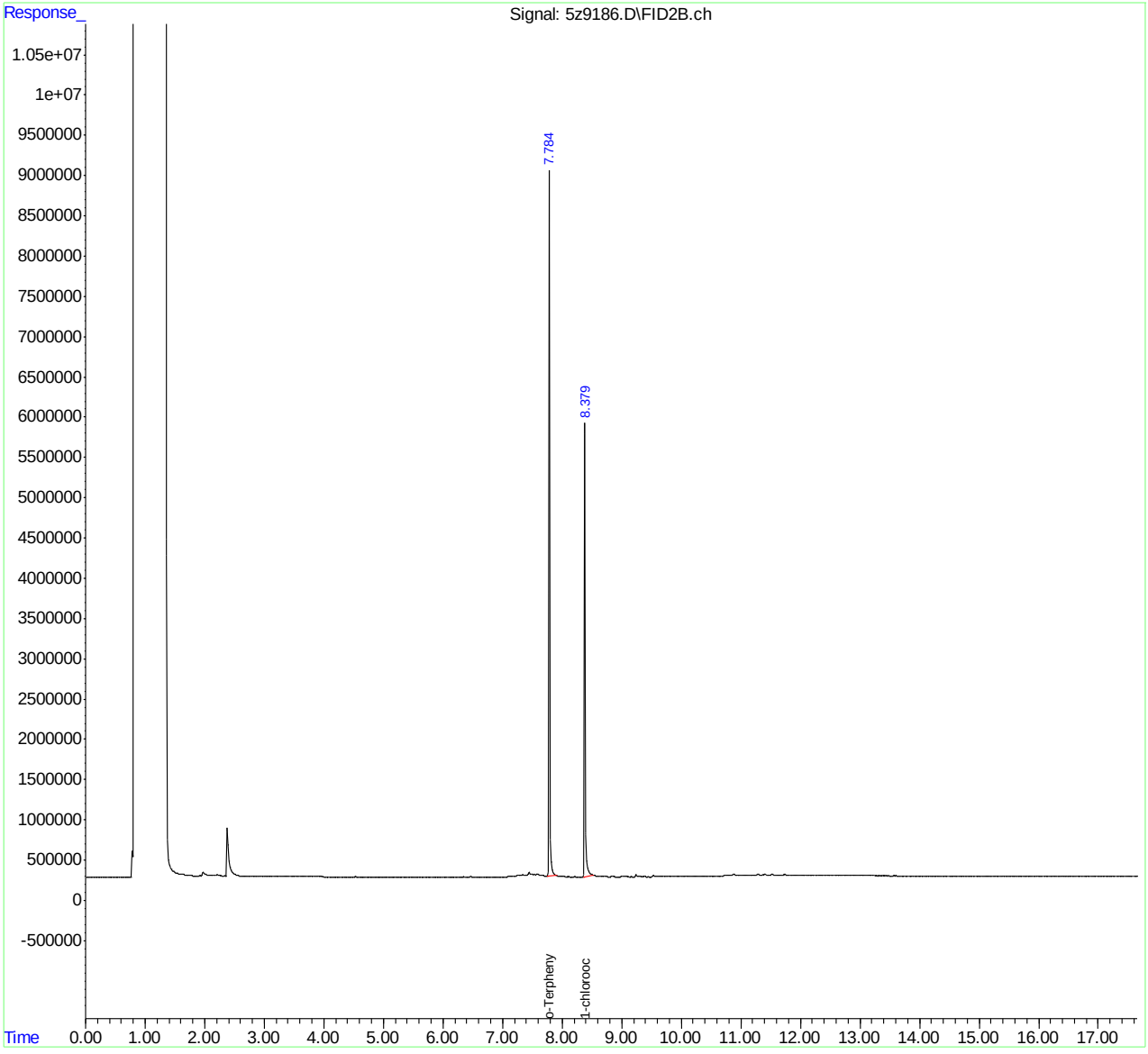
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9186.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 11:33 am
Operator : khaliahd
Sample : jb40127-2
Misc : op66957,g5z309,16.9,,,2,1
ALS Vial : 56 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:40:30 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



EPH5Z249.M Tue Jun 25 16:40:38 2013 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9187.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 11:54 am
Operator : khaliahd
Sample : jb40127-3
Misc : op66957,g5z309,16.5,,,2,1
ALS Vial : 57 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:41:07 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.783	61186976	33.763 ug/L
Spiked Amount 50.000		Recovery =	67.53%
23) S 1-chlorooctadecane (S)	8.379	45764510	33.654 ug/L
Spiked Amount 50.000		Recovery =	67.31%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

11.1.3

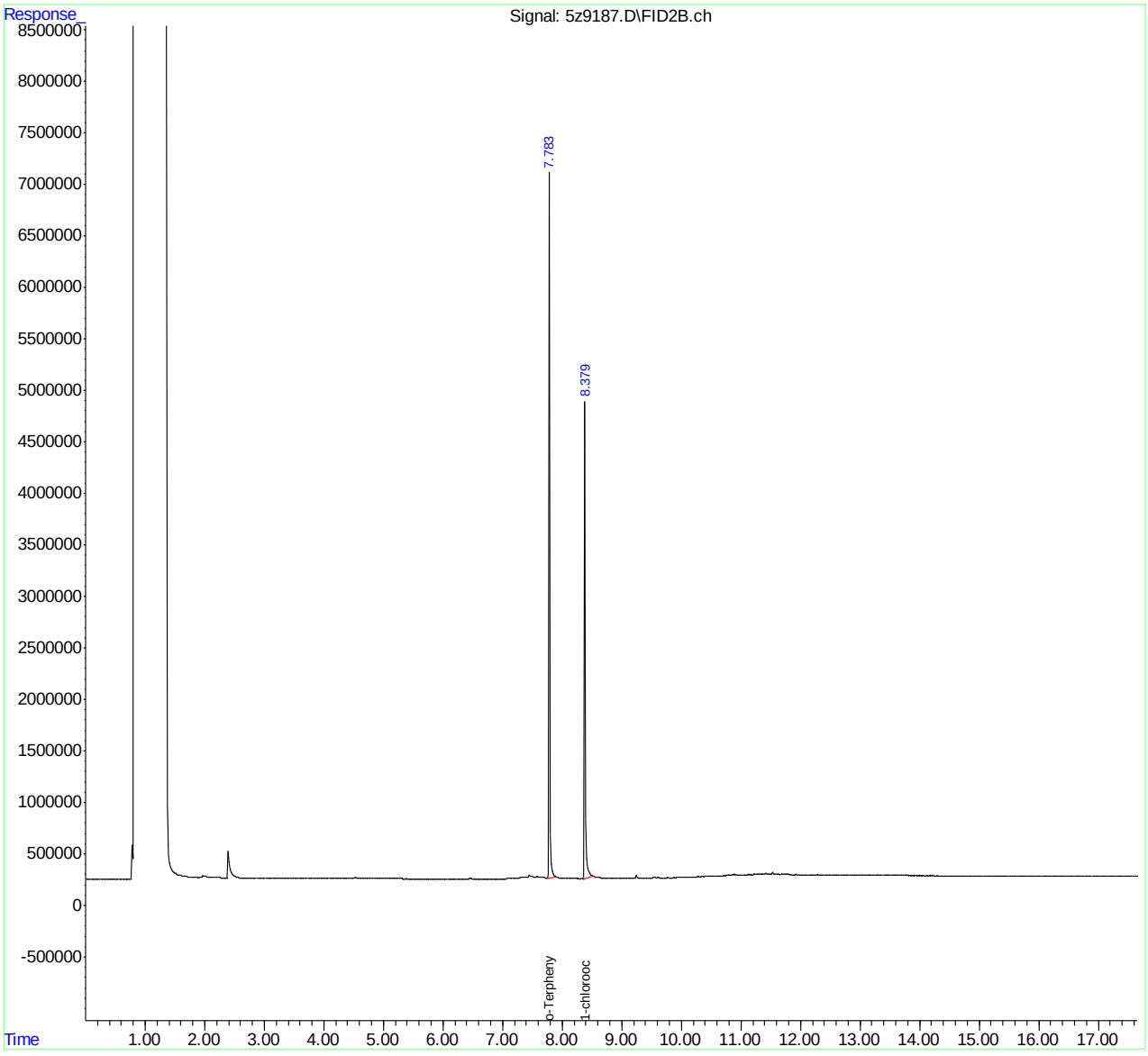
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9187.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 11:54 am
Operator : khaliahd
Sample : jb40127-3
Misc : op66957,g5z309,16.5,,,2,1
ALS Vial : 57 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:41:07 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9188.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 12:16 pm
Operator : khaliahd
Sample : jb40127-4
Misc : op66957,g5z309,17.0,,,2,1
ALS Vial : 58 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:41:34 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.783	72688117	40.109 ug/L
Spiked Amount 50.000		Recovery =	80.22%
23) S 1-chlorooctadecane (S)	8.380	53861289	39.609 ug/L
Spiked Amount 50.000		Recovery =	79.22%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

11.1.4

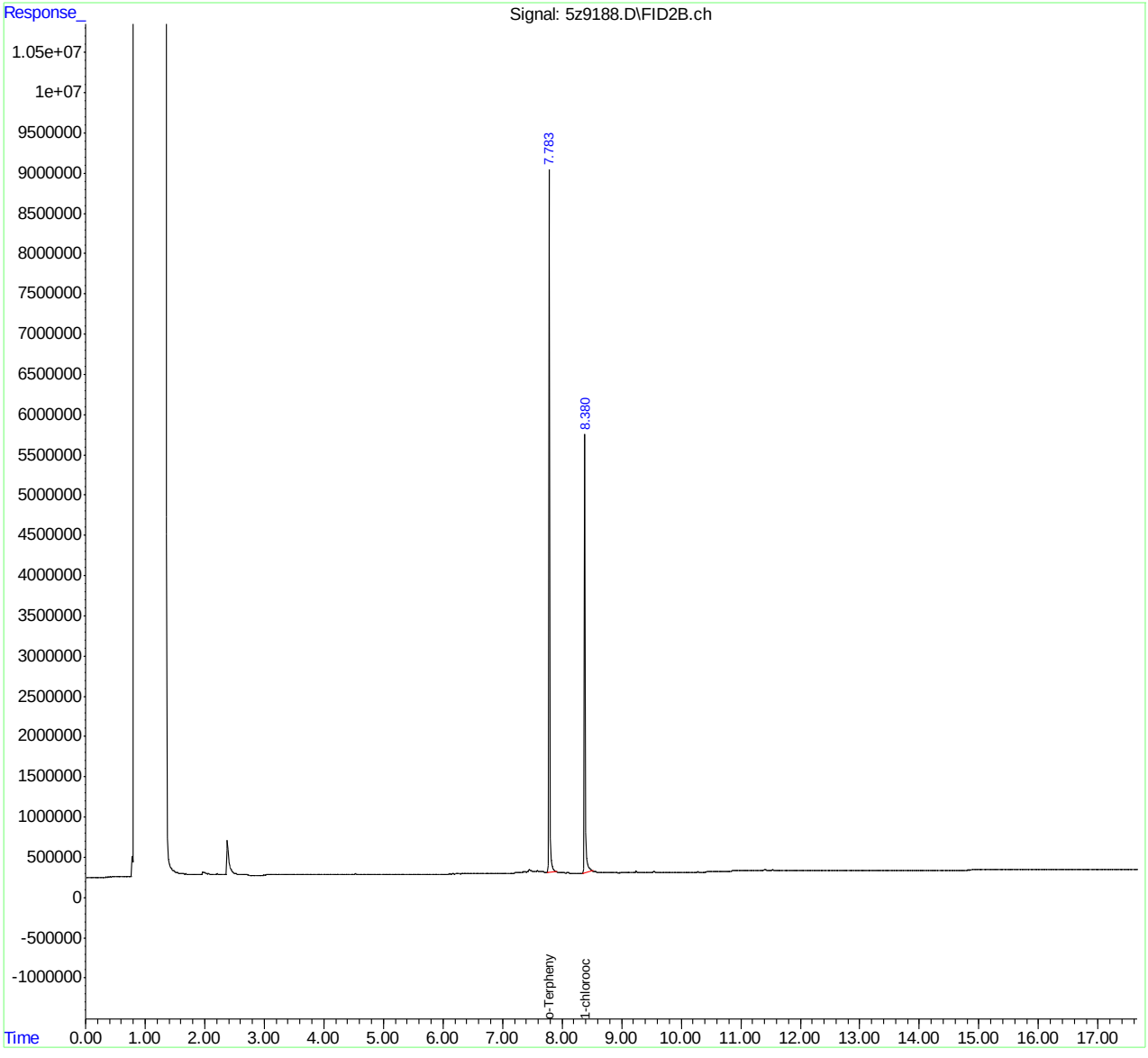
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9188.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 12:16 pm
Operator : khaliahd
Sample : jb40127-4
Misc : op66957,g5z309,17.0,,,2,1
ALS Vial : 58 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:41:34 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



EPH5Z249.M Tue Jun 25 16:41:43 2013

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9189.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 12:38 pm
Operator : khaliahd
Sample : jb40127-5
Misc : op66957,g5z309,15.7,,,2,1
ALS Vial : 59 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:41:58 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.784	59117273	32.621 ug/L
Spiked Amount 50.000		Recovery =	65.24%
23) S 1-chlorooctadecane (S)	8.380	45528984	33.481 ug/L
Spiked Amount 50.000		Recovery =	66.96%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

11.1.5

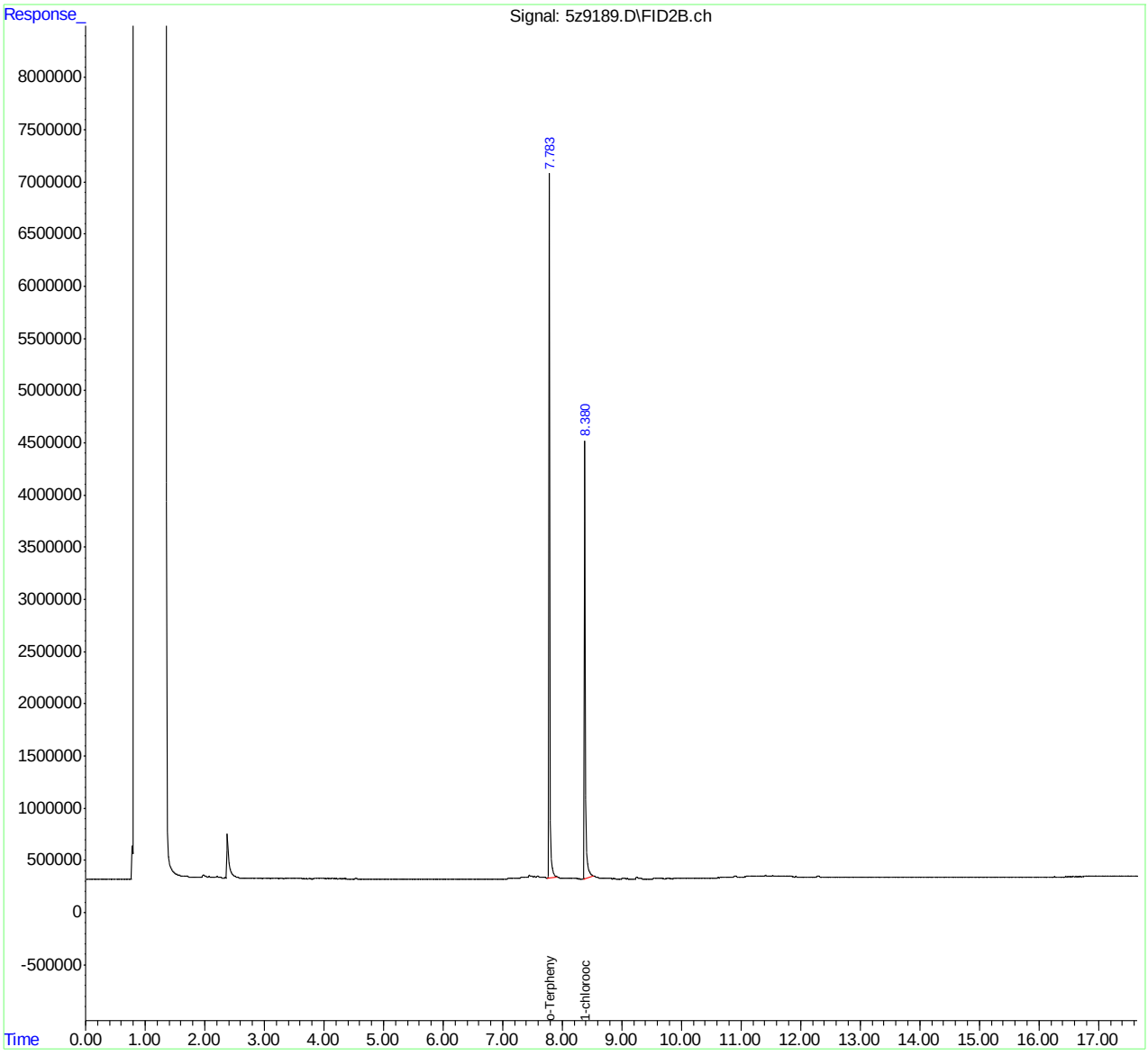
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9189.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 12:38 pm
Operator : khaliahd
Sample : jb40127-5
Misc : op66957,g5z309,15.7,,,2,1
ALS Vial : 59 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:41:58 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9190.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 1:00 pm
Operator : khaliahd
Sample : jb40127-6
Misc : op66957,g5z309,16.1,,,2,1
ALS Vial : 60 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:42:35 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.783	60697743	33.493 ug/L
Spiked Amount 50.000		Recovery =	66.99%
23) S 1-chlorooctadecane (S)	8.380	47857092	35.193 ug/L
Spiked Amount 50.000		Recovery =	70.39%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

11.1.6

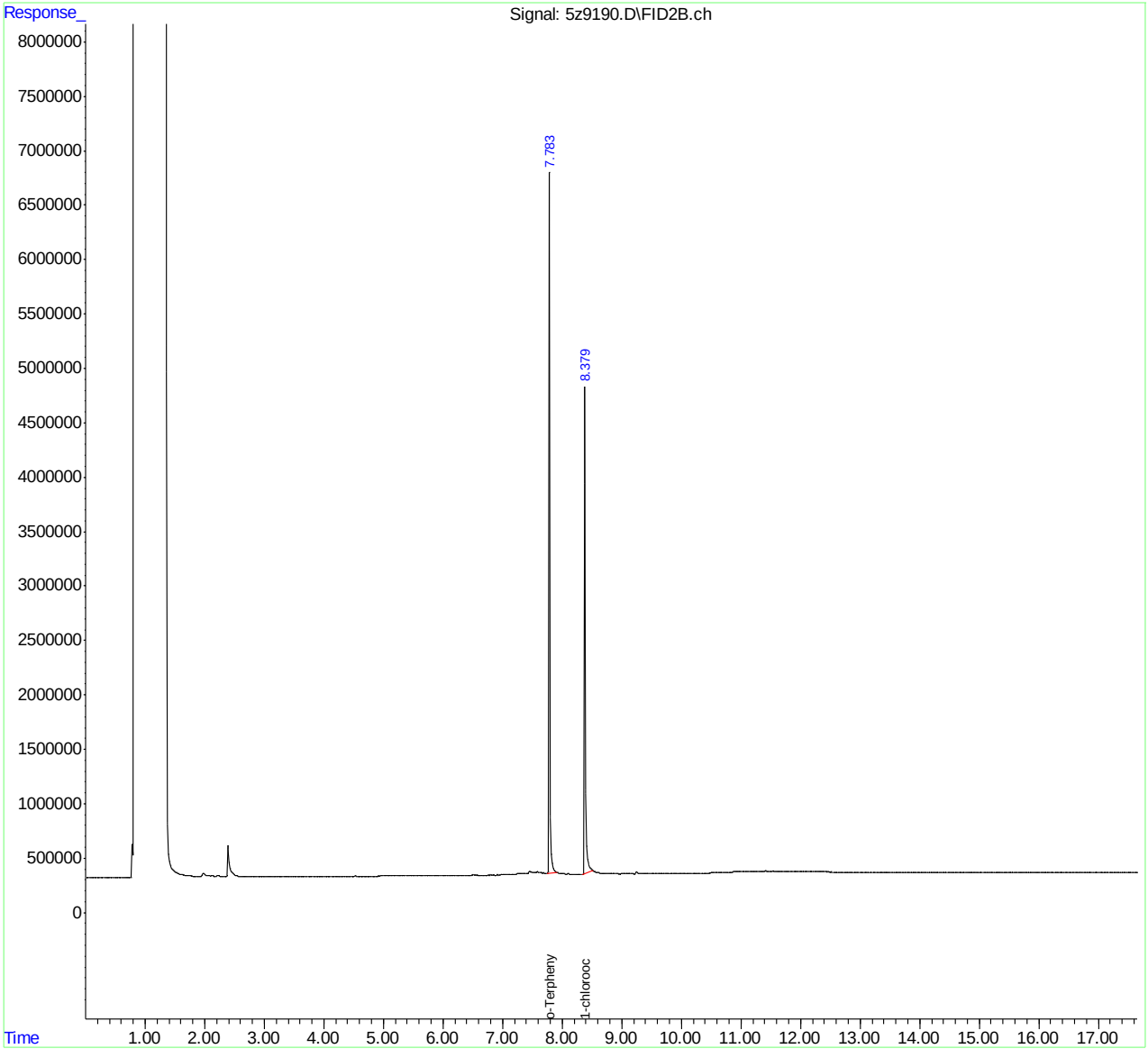
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z309\
Data File : 5z9190.D
Signal(s) : FID2B.ch
Acq On : 24 Jun 2013 1:00 pm
Operator : khaliahd
Sample : jb40127-6
Misc : op66957,g5z309,16.1,,,2,1
ALS Vial : 60 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 25 16:42:35 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:40:09 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



EPH5Z249.M Tue Jun 25 16:42:52 2013 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y386\
Data File : 5y12942.D
Signal(s) : FID1A.ch
Acq On : 27 Jun 2013 12:23 pm
Operator : khaliahd
Sample : jb40127-7
Misc : op67031,g5y386,15.7,,,2,1
ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 15:55:57 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.847	72848126	45.131 ug/L
Spiked Amount 50.000		Recovery =	90.26%
23) S 1-chlorooctadecane (S)	8.395	55687320	42.576 ug/L
Spiked Amount 50.000		Recovery =	85.15%
Target Compounds			
20) H EPH (>C28-C40)	12.970	298142111	213.329 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

11.1.7

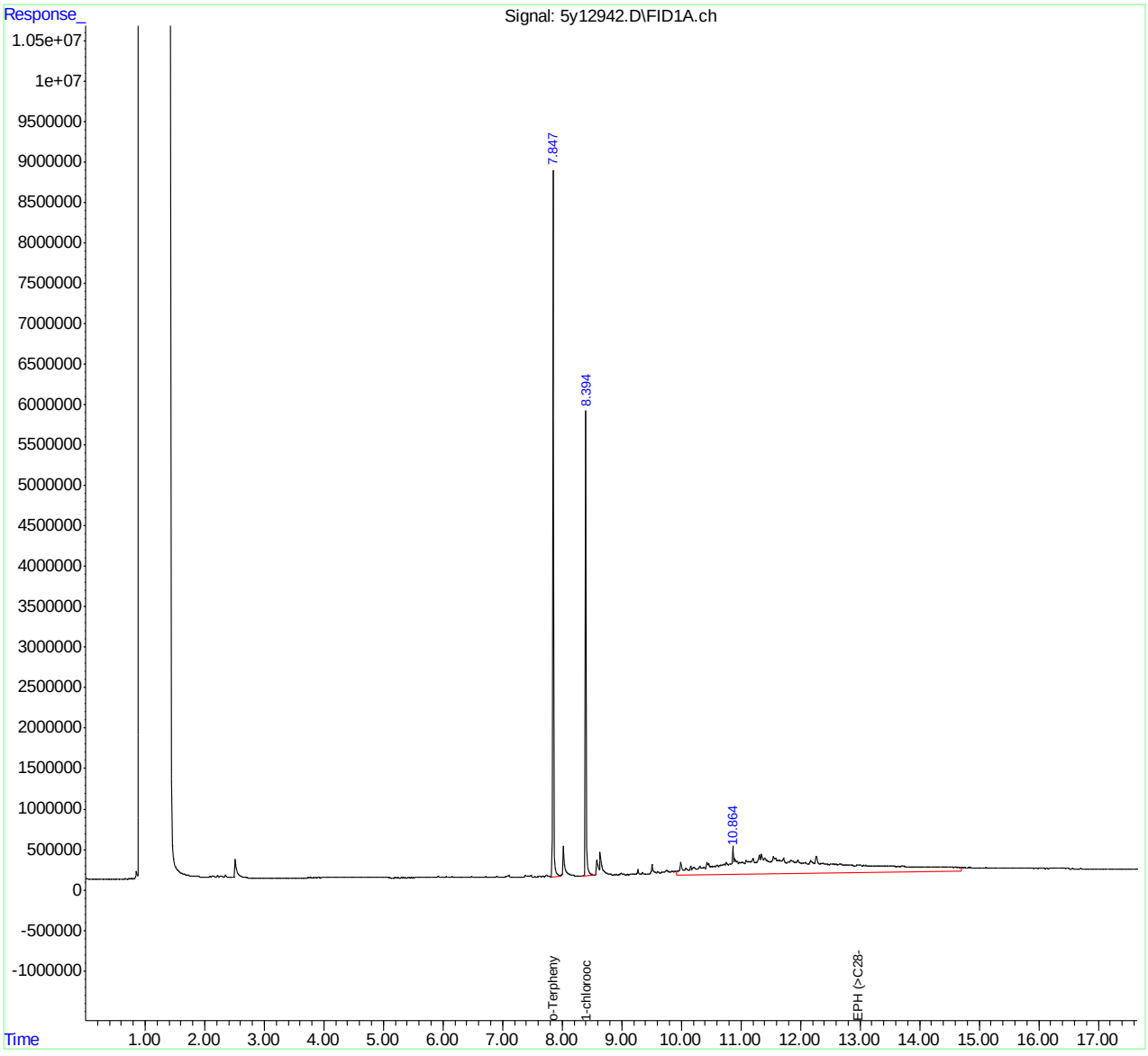
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y386\
Data File : 5y12942.D
Signal(s) : FID1A.ch
Acq On : 27 Jun 2013 12:23 pm
Operator : khaliahd
Sample : jb40127-7
Misc : op67031,g5y386,15.7,,,2,1
ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 15:55:57 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y383\
Data File : 5y12833.D
Signal(s) : FID1A.ch
Acq On : 24 Jun 2013 10:49 am
Operator : khaliahd
Sample : op66957-mb1
Misc : op66957,g5y383,15.0,,,2,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 24 14:17:54 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:43:52 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.851	55284432	34.250 ug/L
Spiked Amount 50.000		Recovery =	68.50%
23) S 1-chlorooctadecane (S)	8.400	42675330	32.628 ug/L
Spiked Amount 50.000		Recovery =	65.26%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

11.2.1

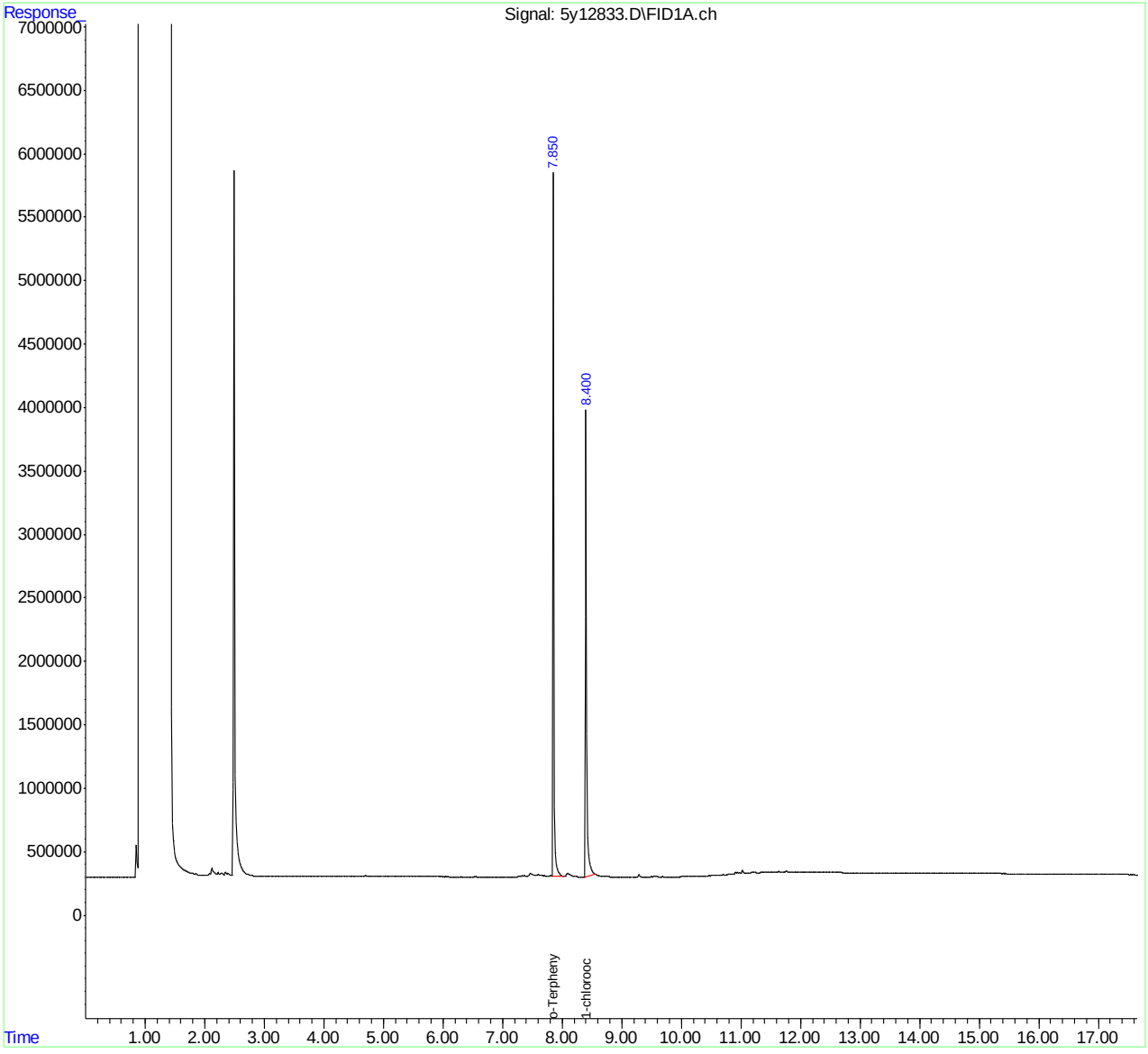
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y383\
Data File : 5y12833.D
Signal(s) : FID1A.ch
Acq On : 24 Jun 2013 10:49 am
Operator : khaliahd
Sample : op66957-mb1
Misc : op66957,g5y383,15.0,,,2,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 24 14:17:54 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 11 09:43:52 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y386\
Data File : 5y12937.D
Signal(s) : FID1A.ch
Acq On : 27 Jun 2013 10:34 am
Operator : khaliahd
Sample : op67031-mb1
Misc : op67031,g5y386,15.0,,,2,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 15:47:14 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.855	91333554	56.584 ug/L
Spiked Amount 50.000		Recovery =	113.17%
23) S 1-chlorooctadecane (S)	8.403	69706798	53.295 ug/L
Spiked Amount 50.000		Recovery =	106.59%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

11.2.2

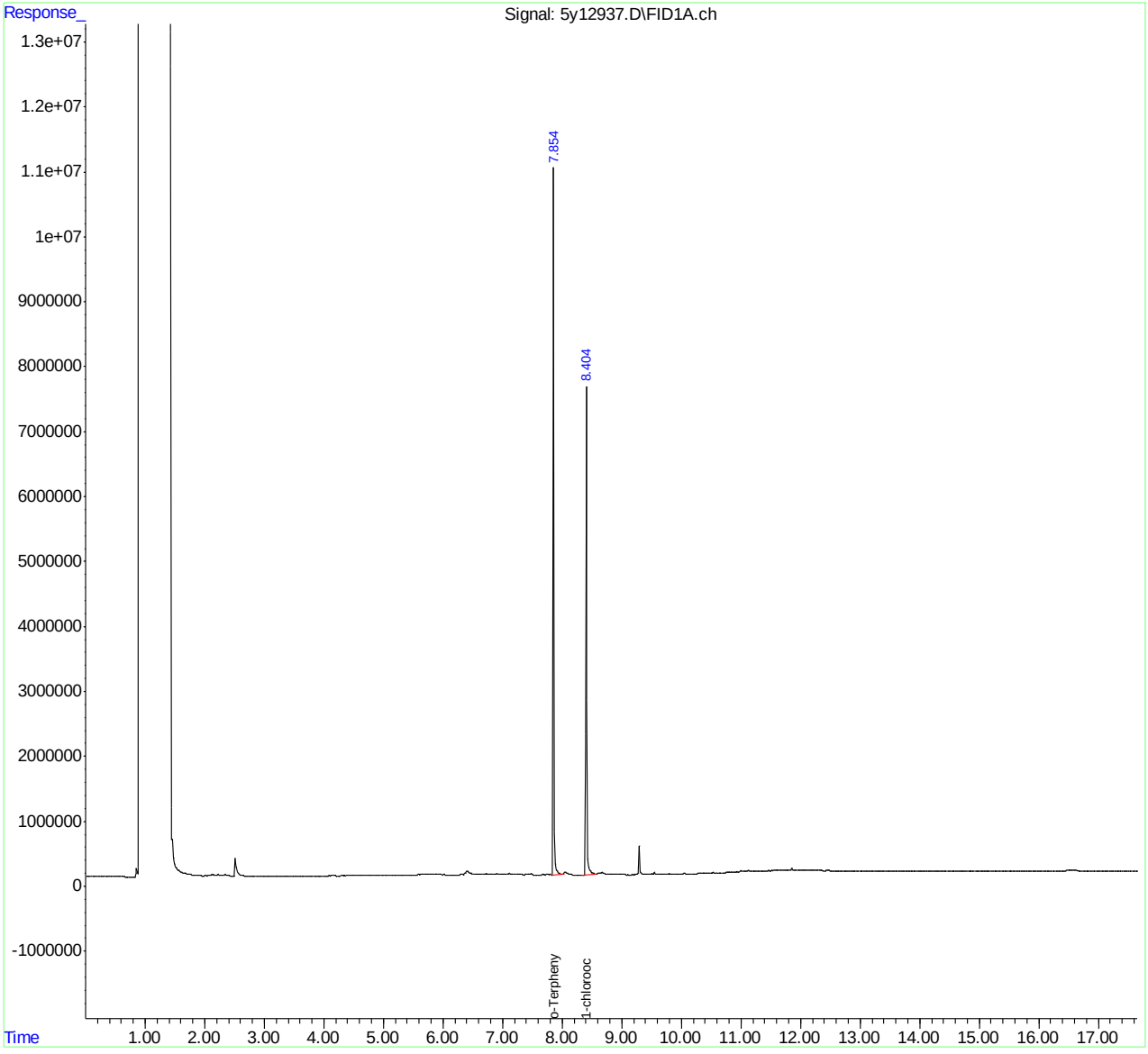
11

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y386\
Data File : 5y12937.D
Signal(s) : FID1A.ch
Acq On : 27 Jun 2013 10:34 am
Operator : khaliahd
Sample : op67031-mb1
Misc : op67031,g5y386,15.0,,,2,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 15:47:14 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



New Jersey

ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
Analyst: VC Run ID: MA31520
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:32	MA31520-STD1	1		STDA
08:38	MA31520-STD2	1		STDD
08:45	ZZZZZZ	1		
08:51	ZZZZZZ	1		
09:01	MA31520-ICV1	1		
09:15	MA31520-ICB1	1		
09:22	MA31520-ICCV1	1		
09:35	MA31520-CCB1	1		
09:39	MA31520-CRI1	1		See rerun.
09:46	MA31520-CRID1	1		
09:52	MA31520-CRIA1	1		
09:59	MA31520-ICSA1	1		
10:05	MA31520-ICSAB1	1		
10:11	ZZZZZZ	1		
10:18	ZZZZZZ	1		
10:24	MA31520-CCV1	1		
10:30	MA31520-CCB2	1		
10:37	ZZZZZZ	2		
10:44	MA31520-CRI2	1		
10:50	MP72788-MB1	1		To be rerun with the batch.
10:56	MP72788-LC1	1		To be rerun with the batch.
11:03	MP72788-B1	1		To be rerun with the batch.
11:09	ZZZZZZ	1		
11:15	ZZZZZZ	1		
11:21	ZZZZZZ	1		
11:28	ZZZZZZ	1		
11:34	MA31520-CCV2	1		
11:41	MA31520-CCB3	1		
11:47	ZZZZZZ	1		
11:53	ZZZZZZ	1		
12:00	MP72807-MB1	1		
12:06	MP72807-B1	1		
12:13	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
Analyst: VC Run ID: MA31520
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:19	ZZZZZZ	1		
12:25	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:44	MA31520-CCV3	1		
12:53	MA31520-CCB4	1		
12:59	MA31520-CRI3	1		
13:03	MA31520-CRIA2	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
Analyst: VC Run ID: MA31520
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
08:32	MA31520-STD1	2580 R	111950 R	15354 R	7765 R
08:38	MA31520-STD2	2425	106200	14611	6948
08:45	ZZZZZZ	2489	109810	15011	7145
08:51	ZZZZZZ	2593	111810	15008	7789
09:01	MA31520-ICV1	2496	108390	14778	7159
09:15	MA31520-ICB1	2591	110860	14815	7776
09:22	MA31520-ICCV1	2495	110020	14979	7163
09:35	MA31520-CCB1	2579	110370	14792	7743
09:39	MA31520-CRI1	No results reported for the elements associated with this internal standard.			
09:46	MA31520-CRID1	2572	113480	15352	7727
09:52	MA31520-CRIA1	2573	112110	15009	7731
09:59	MA31520-ICSA1	2261	100280	13373	6398
10:05	MA31520-ICSAB1	2276	99807	13280	6434
10:11	ZZZZZZ	2597	106150	12667	7059
10:18	ZZZZZZ	2526	113020	15107	7827
10:24	MA31520-CCV1	2476	108690	14675	7088
10:30	MA31520-CCB2	2562	109790	14456	7706
10:37	ZZZZZZ	2558	112520	14948	7636
10:44	MA31520-CRI2	2562	111790	14882	7617
10:50	MP72788-MB1	No results reported for the elements associated with this internal standard.			
10:56	MP72788-LC1	No results reported for the elements associated with this internal standard.			
11:03	MP72788-B1	No results reported for the elements associated with this internal standard.			
11:09	ZZZZZZ	2669	116520	15462	7549
11:15	ZZZZZZ	2521	112320	14882	7158
11:21	ZZZZZZ	2559	109230	14445	7150
11:28	ZZZZZZ	2549	110830	14336	7249
11:34	MA31520-CCV2	2472	109400	14430	7089
11:41	MA31520-CCB3	2576	111810	14573	7754
11:47	ZZZZZZ	2645	115110	14814	7421
11:53	ZZZZZZ	2504	108950	14247	7071
12:00	MP72807-MB1	2588	112660	14469	7797
12:06	MP72807-B1	2528	112800	14590	7419
12:13	ZZZZZZ	2658	116180	14757	7421

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
Analyst: VC Run ID: MA31520
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:19	ZZZZZZ	2564	110020	13931	7315
12:25	ZZZZZZ	2554	112810	14225	7707
12:31	ZZZZZZ	2586	114160	14228	7394
12:38	ZZZZZZ	2593	115420	14512	7381
12:44	MA31520-CCV3	2464	106930	13490	7043
12:53	MA31520-CCB4	2555	110700	13780	7682
12:59	MA31520-CRI3	2548	112770	14079	7605
13:03	MA31520-CRIA2	2573	112940	14049	7743

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA31520 Units: ug/l

Time:			09:15		09:35		10:30		11:41	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	500	6.7	10.7	<500	-5.9	<500	9.8	<500	5.0	<500
Antimony	20	1.1	0.30	<20	0.90	<20	0.30	<20	0.40	<20
Arsenic	20	.9	0.60	<20	0.70	<20	0.50	<20	0.50	<20
Barium	200	.3	0.10	<200	-0.10	<200	0.40	<200	0.50	<200
Beryllium	2.0	.2	0.10	<2.0	0.10	<2.0	0.0	<2.0	0.0	<2.0
Bismuth	20	1.1								
Boron	100	2								
Cadmium	5.0	.4	-0.20	<5.0	0.0	<5.0	0.0	<5.0	0.30	<5.0
Calcium	5000	15	1.8	<5000	0.50	<5000	-4.1	<5000	-3.6	<5000
Chromium	10	.4	0.10	<10	0.0	<10	0.0	<10	-0.10	<10
Cobalt	50	.3	0.10	<50	-0.10	<50	0.0	<50	0.10	<50
Copper	25	.5	-0.20	<25	-0.30	<25	0.0	<25	0.0	<25
Iron	500	4.4	2.1	<500	0.20	<500	1.9	<500	-2.0	<500
Lead	20	1.2	-0.50	<20	2.2	<20	-1.3	<20	-2.0	<20
Lithium	20	1								
Magnesium	5000	12	27.0	<5000	4.4	<5000	22.6	<5000	-6.3	<5000
Manganese	15	.2	0.10	<15	0.10	<15	0.10	<15	0.0	<15
Molybdenum	20	.6								
Nickel	40	.5	0.20	<40	0.80	<40	0.10	<40	0.20	<40
Palladium	50	1.6								
Potassium	10000	28	-18	<10000	-3.8	<10000	-34	<10000	18.1	<10000
Selenium	20	1.4	0.0	<20	-0.50	<20	-0.20	<20	1.4	<20
Silicon	200	5.4								
Silver	5.0	.4	-0.10	<5.0	0.0	<5.0	-0.20	<5.0	-0.10	<5.0
Sodium	10000	14	56.2	<10000	78.2	<10000	70.2	<10000	80.3	<10000
Strontium	10	.1								
Sulfur	50	3.2								
Thallium	10	1.5	-0.20	<10	0.10	<10	0.70	<10	-0.30	<10
Tin	50	.9								
Titanium	10	.6								
Tungsten	50	6.6								
Vanadium	50	.4	0.40	<50	0.20	<50	0.30	<50	0.20	<50
Zinc	20	.6	-0.50	<20	80.0	* (a)	-0.10	<20	0.0	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA31520 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	20	.3

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA31520 Units: ug/l

Time:			12:53	
Sample ID:			CCB4	
Metal	RL	IDL	raw	final
Aluminum	500	6.7	22.0	<500
Antimony	20	1.1	1.3	<20
Arsenic	20	.9	0.50	<20
Barium	200	.3	1.0	<200
Beryllium	2.0	.2	0.10	<2.0
Bismuth	20	1.1		
Boron	100	2		
Cadmium	5.0	.4	0.40	<5.0
Calcium	5000	15	-4.5	<5000
Chromium	10	.4	0.10	<10
Cobalt	50	.3	0.30	<50
Copper	25	.5	1.5	<25
Iron	500	4.4	3.8	<500
Lead	20	1.2	-1.8	<20
Lithium	20	1		
Magnesium	5000	12	-0.80	<5000
Manganese	15	.2	0.30	<15
Molybdenum	20	.6		
Nickel	40	.5	0.0	<40
Palladium	50	1.6		
Potassium	10000	28	-95	<10000
Selenium	20	1.4	0.60	<20
Silicon	200	5.4		
Silver	5.0	.4	-0.10	<5.0
Sodium	10000	14	78.6	<10000
Strontium	10	.1		
Sulfur	50	3.2		
Thallium	10	1.5	-0.20	<10
Tin	50	.9		
Titanium	10	.6		
Tungsten	50	6.6		
Vanadium	50	.4	0.40	<50
Zinc	20	.6	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA31520 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	20	.3

(*) Outside of QC limits
(anr) Analyte not requested

12.1.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: to % Recovery Run ID: MA31520 Units: ug/l

Time:		09:22	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	39500	98.8
Antimony	2000	2020	101.0
Arsenic	2000	2020	101.0
Barium	2000	1980	99.0
Beryllium	2000	2000	100.0
Bismuth			
Boron			
Cadmium	2000	2010	100.5
Calcium	40000	40200	100.5
Chromium	2000	2050	102.5
Cobalt	2000	2070	103.5
Copper	2000	1970	98.5
Iron	40000	39300	98.3
Lead	2000	2060	103.0
Lithium			
Magnesium	40000	39300	98.3
Manganese	2000	2070	103.5
Molybdenum			
Nickel	2000	2060	103.0
Palladium			
Potassium	40000	38900	97.3
Selenium	2000	2030	101.5
Silicon			
Silver	250	245	98.0
Sodium	40000	39000	97.5
Strontium			
Sulfur			
Thallium	2000	2110	105.5
Tin			
Titanium			
Tungsten			
Vanadium	2000	2040	102.0
Zinc	2000	2070	103.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: to % Recovery Run ID: MA31520 Units: ug/l

Time:	
Sample ID:	
Metal	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA31520 Units: ug/l

Time:		09:01			10:24			11:34	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39900	99.8	40000	40000	100.0	40000	40500	101.3
Antimony	2000	2020	101.0	2000	2050	102.5	2000	2050	102.5
Arsenic	2000	2020	101.0	2000	2060	103.0	2000	2050	102.5
Barium	2000	2020	101.0	2000	2040	102.0	2000	2050	102.5
Beryllium	2000	2040	102.0	2000	1970	98.5	2000	1940	97.0
Bismuth									
Boron									
Cadmium	2000	2020	101.0	2000	2050	102.5	2000	2040	102.0
Calcium	40000	40500	101.3	40000	39200	98.0	40000	38700	96.8
Chromium	2000	2060	103.0	2000	2060	103.0	2000	2060	103.0
Cobalt	2000	2070	103.5	2000	2090	104.5	2000	2080	104.0
Copper	2000	1980	99.0	2000	1990	99.5	2000	1990	99.5
Iron	40000	40600	101.5	40000	37900	94.8	40000	36200	90.5
Lead	2000	2060	103.0	2000	2070	103.5	2000	2060	103.0
Lithium									
Magnesium	40000	39600	99.0	40000	37700	94.3	40000	36800	92.0
Manganese	2000	2110	105.5	2000	2120	106.0	2000	2090	104.5
Molybdenum									
Nickel	2000	2070	103.5	2000	2090	104.5	2000	2080	104.0
Palladium									
Potassium	40000	39400	98.5	40000	40000	100.0	40000	40500	101.3
Selenium	2000	2020	101.0	2000	2050	102.5	2000	2050	102.5
Silicon									
Silver	250	250	100.0	250	251	100.4	250	247	98.8
Sodium	40000	39300	98.3	40000	40000	100.0	40000	40400	101.0
Strontium									
Sulfur									
Thallium	2000	2100	105.0	2000	2130	106.5	2000	2120	106.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5
Zinc	2000	2070	103.5	2000	2080	104.0	2000	2080	104.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA31520 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA31520 Units: ug/l

Time:		12:44	
Sample ID:	CCV	CCV3	
Metal	True	Results	% Rec
Aluminum	40000	42100	105.3
Antimony	2000	2070	103.5
Arsenic	2000	2080	104.0
Barium	2000	2180	109.0
Beryllium	2000	1960	98.0
Bismuth			
Boron			
Cadmium	2000	2060	103.0
Calcium	40000	38800	97.0
Chromium	2000	2090	104.5
Cobalt	2000	2090	104.5
Copper	2000	2040	102.0
Iron	40000	36500	91.3
Lead	2000	2080	104.0
Lithium			
Magnesium	40000	36100	90.3
Manganese	2000	2180	109.0
Molybdenum			
Nickel	2000	2110	105.5
Palladium			
Potassium	40000	43800	109.5
Selenium	2000	2070	103.5
Silicon			
Silver	250	256	102.4
Sodium	40000	43400	108.5
Strontium			
Sulfur			
Thallium	2000	2140	107.0
Tin			
Titanium			
Tungsten			
Vanadium	2000	2100	105.0
Zinc	2000	2090	104.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA31520 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA31520 Units: ug/l

Time:				09:46		09:52		10:44	
Sample ID:	CRI	CRIA	CRID	CRID1		CRIA1		CRI2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	108	108.0	550	110.0	171	85.5
Antimony	6.0	20	3.0	3.1	103.3	19.9	99.5	6.3	105.0
Arsenic	8.0	20	3.0	2.9	96.7	20.4	102.0	7.6	95.0
Barium	200		4.0	4.0	100.0			202	101.0
Beryllium	2.0		1.0	1.0	100.0			1.9	95.0
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	0.90	90.0			2.5	83.3
Calcium	5000		1000	972	97.2			4820	96.4
Chromium	10		2.0	2.0	100.0			10.6	106.0
Cobalt	50		3.0	3.1	103.3			54.1	108.2
Copper	10		2.0	1.8	90.0			7.2	72.0
Iron	100	500				512	102.4	96.1	96.1
Lead	3.0	20	2.5	2.1	84.0	19.2	96.0	3.6	120.0
Lithium	20								
Magnesium	5000		100	90.7	90.7			4610	92.2
Manganese	15		3.0	3.3	110.0			16.8	112.0
Molybdenum	20		4.0						
Nickel	10		4.0	4.2	105.0			10.8	108.0
Palladium	50								
Potassium	5000		2000	1840	92.0			4760	95.2
Selenium	10	20	5.0	6.3	126.0	22.5	112.5	9.6	96.0
Silicon	200								
Silver	5.0		1.0	0.70	70.0			4.5	90.0
Sodium	5000		1000	941	94.1			4910	98.2
Strontium	10								
Sulfur	50	50	50						
Thallium	10		2.0	1.6	80.0			11.1	111.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	2.0	100.0			51.9	103.8
Zinc	20		10	13.0	130.0			22.6	113.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA31520 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA31520 Units: ug/l

Time:				12:59		13:03	
Sample ID:	CRI	CRIA	CRID	CRI3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	184	92.0	570	114.0
Antimony	6.0	20	3.0	6.9	115.0	20.4	102.0
Arsenic	8.0	20	3.0	7.8	97.5	20.4	102.0
Barium	200		4.0	205	102.5		
Beryllium	2.0		1.0	1.9	95.0		
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0	2.6	86.7		
Calcium	5000		1000	4670	93.4		
Chromium	10		2.0	10.9	109.0		
Cobalt	50		3.0	54.6	109.2		
Copper	10		2.0	7.1	71.0		
Iron	100	500		89.8	89.8	434	86.8
Lead	3.0	20	2.5	3.7	123.3	18.3	91.5
Lithium	20						
Magnesium	5000		100	4380	87.6		
Manganese	15		3.0	16.6	110.7		
Molybdenum	20		4.0				
Nickel	10		4.0	10.7	107.0		
Palladium	50						
Potassium	5000		2000	4940	98.8		
Selenium	10	20	5.0	10.3	103.0	21.9	109.5
Silicon	200						
Silver	5.0		1.0	4.5	90.0		
Sodium	5000		1000	4990	99.8		
Strontium	10						
Sulfur	50	50	50				
Thallium	10		2.0	10.4	104.0		
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	51.4	102.8		
Zinc	20		10	22.8	114.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA31520 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

12.1.5

12

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31520 Units: ug/l

Time:			09:59		10:05	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	567000	113.4	573000	114.6
Antimony		1000	-6.8		1040	104.0
Arsenic		1000	-2.6		1090	109.0
Barium		500	-0.10		551	110.2
Beryllium		500	-0.10		510	102.0
Bismuth		500	11.8		497	99.4
Boron			-19		-13	
Cadmium		1000	2.3		1070	107.0
Calcium	400000	400000	384000	96.0	381000	95.3
Chromium		500	-0.60		486	97.2
Cobalt		500	-0.20		493	98.6
Copper		500	7.3		540	108.0
Iron	200000	200000	197000	98.5	199000	99.5
Lead		1000	-1.4		935	93.5
Lithium		500	4.7		550	110.0
Magnesium	500000	500000	545000	109.0	538000	107.6
Manganese		500	-4.1		507	101.4
Molybdenum		500	10.9		508	101.6
Nickel		1000	-3.8		955	95.5
Palladium		500				
Potassium			-11		4.4	
Selenium		1000	-3.0		1060	106.0
Silicon			24.6		29.7	
Silver		1000	8.8		903	90.3
Sodium			75.8		133	
Strontium			-0.40		-0.30	
Sulfur		500				
Thallium		1000	2.8		978	97.8
Tin			-0.20		-0.60	
Titanium			4.2		7.2	
Tungsten		500	23.4		491	98.2
Vanadium		500	-2.6		479	95.8
Zinc		1000	-1.6		997	99.7

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SB062513M1.ICP Date Analyzed: 06/25/13 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31520 Units: ug/l

Time:				
Sample ID:				
Metal				
Zirconium	500	-7.6	424	84.8

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:52	MA31529-STD1	1		STDA
18:58	MA31529-STD2	1		STDD
19:04	ZZZZZZ	1		
19:10	ZZZZZZ	1		
19:16	MA31529-ICV1	1		
19:22	MA31529-ICB1	1		
19:28	MA31529-CCV1	1		
19:34	MA31529-CCB1	1		
19:40	MA31529-CRI1	1		
19:46	MA31529-CRID1	1		
19:52	MA31529-CRIA1	1		
19:58	MA31529-CRID2	1		
20:04	MA31529-ICSA1	1		
20:10	MA31529-ICSAB1	1		
20:16	ZZZZZZ	1		
20:22	ZZZZZZ	1		
20:29	ZZZZZZ	1		
20:35	ZZZZZZ	1		
20:41	MA31529-CCV2	1		
20:47	MA31529-CCB2	1		
20:53	ZZZZZZ	1		
20:59	MP72706-B1	1		
21:05	ZZZZZZ	1		
21:11	ZZZZZZ	1		
21:17	ZZZZZZ	1		
21:23	ZZZZZZ	1		
21:29	ZZZZZZ	1		
21:35	MP72807-S1	1		
21:41	MP72807-S2	1		
21:47	JB40127-1	1		
21:53	MA31529-CCV3	1		
21:59	MA31529-CCB3	1		
22:05	MP72807-SD1	5		

----------> Last reportable sample/prep for job JB40127

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:11	MP72789-SD1	5		
22:17	MP72706-S1	1		
22:23	MP72706-S2	1		
22:29	MP72706-SD1	5		
22:35	MP72779-S1	1		
22:41	MP72779-S2	1		
22:47	MP72779-SD1	5		
22:53	MP72793-S1	1		
22:59	MP72793-S2	1		
23:05	MA31529-CCV4	1		
23:11	MA31529-CCB4	1		
23:17	MP72793-SD1	5		
23:23	MP72683-S1	1		
23:29	MP72683-S2	1		
23:35	MP72683-SD1	5		
23:41	ZZZZZZ	1		
23:47	ZZZZZZ	1		
23:53	ZZZZZZ	1		
23:59	MP72683-MB3	1		
00:05	MP72683-LC2	1		
00:11	ZZZZZZ	1		
00:17	MA31529-CCV5	1		
00:23	MA31529-CCB5	1		
00:29	ZZZZZZ	1		
00:35	ZZZZZZ	5		
00:41	ZZZZZZ	5		
00:48	ZZZZZZ	5		
00:54	ZZZZZZ	5		
01:00	MP72641-MB3	1		
01:06	MP72641-B3	1		
01:12	ZZZZZZ	1		
01:18	ZZZZZZ	1		
01:24	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:30	MA31529-CCV6	1		
01:36	MA31529-CCB6	1		
01:42	MP72676-MB1	1		
01:48	MP72676-B1	1		
01:54	MP72676-S1	1		
02:00	MP72676-S2	1		
02:06	JB39501-1	1		(sample used for QC only; not part of login JB40127)
02:12	MP72676-SD1	5		
02:18	ZZZZZZ	1		
02:24	ZZZZZZ	1		
02:29	ZZZZZZ	1		
02:35	ZZZZZZ	1		
02:41	MA31529-CCV7	1		
02:47	MA31529-CCB7	1		
02:53	MA31529-CRID3	1		
03:00	MA31529-CRI2	1		
03:06	MA31529-CRID4	1		
03:12	MA31529-CRIA2	1		
03:18	MA31529-ICSA2	1		
03:24	MA31529-ICSAB2	1		
03:30	MA31529-CCV8	1		
03:36	MA31529-CCB8	1		
---------->	Last reportable CCB for job JB40127			
03:42	ZZZZZZ	1		
03:48	ZZZZZZ	1		
03:54	ZZZZZZ	1		
04:00	ZZZZZZ	1		
04:06	ZZZZZZ	1		
04:12	ZZZZZZ	1		
04:18	ZZZZZZ	1		
04:24	ZZZZZZ	1		
04:30	ZZZZZZ	1		
04:36	ZZZZZZ	1		
04:42	MA31529-CCV9	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
04:48	MA31529-CCB9	1		
04:54	ZZZZZZ	1		
05:00	ZZZZZZ	1		
05:06	ZZZZZZ	1		
05:12	ZZZZZZ	1		
05:18	ZZZZZZ	1		
05:24	MP72710-MB1	1		
05:30	MP72710-LC1	1		
05:36	MP72710-B1	1		
05:42	MP72710-S1	1		
05:48	MP72710-S2	1		
05:54	MA31529-CCV10	1		
06:00	MA31529-CCB10	1		
06:06	JB39650-1	1		(sample used for QC only; not part of login JB40127)
06:12	MP72710-SD1	5		
06:18	ZZZZZZ	1		
06:24	ZZZZZZ	1		
06:30	ZZZZZZ	1		
06:36	ZZZZZZ	1		
06:42	ZZZZZZ	1		
06:49	ZZZZZZ	1		
06:55	ZZZZZZ	1		
07:01	MA31529-CCV11	1		
07:07	MA31529-CCB11	1		
07:13	ZZZZZZ	1		
07:19	ZZZZZZ	1		
07:25	ZZZZZZ	1		
07:31	ZZZZZZ	1		
07:37	MP72842-MB1	1		
07:43	MP72842-LC1	1		
07:49	ZZZZZZ	1		
07:55	ZZZZZZ	1		
08:01	MA31529-CCV12	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:07	MA31529-CCB12	1		
08:13	MA31529-CRI3	1		
08:19	MA31529-CRID5	1		
08:25	MA31529-ICSA3	1		
08:31	MA31529-ICSAB3	1		
08:37	MA31529-CCV13	1		
08:43	MA31529-CCB13	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:52	MA31529-STD1	1924 R	56115 R	18098 R	2815 R
18:58	MA31529-STD2	1772	50843	17515	2377
19:04	ZZZZZZ	1832	52505	17881	2489
19:10	ZZZZZZ	1928	56058	18208	2820
19:16	MA31529-ICV1	1826	52409	18055	2485
19:22	MA31529-ICB1	1931	56265	18082	2831
19:28	MA31529-CCV1	1828	52445	17800	2489
19:34	MA31529-CCB1	1936	56083	18043	2835
19:40	MA31529-CRI1	1904	55129	18072	2753
19:46	MA31529-CRID1	1927	55899	18059	2814
19:52	MA31529-CRIA1	1940	56349	17969	2831
19:58	MA31529-CRID2	1922	55918	18124	2799
20:04	MA31529-ICSA1	1666	47771	17144	2147
20:10	MA31529-ICSAB1	1689	48128	17145	2173
20:16	ZZZZZZ	1884	54384	17819	2734
20:22	ZZZZZZ	1940	56284	18102	2832
20:29	ZZZZZZ	1862	55842	17836	2801
20:35	ZZZZZZ	1928	55882	17918	2804
20:41	MA31529-CCV2	1832	52505	17734	2486
20:47	MA31529-CCB2	1929	55998	17974	2821
20:53	ZZZZZZ	1663	46140	17228	2174
20:59	MP72706-B1	1664	45814	17169	2151
21:05	ZZZZZZ	1755	49058	17436	2357
21:11	ZZZZZZ	1927	56009	17879	2824
21:17	ZZZZZZ	1700	48006	17212	2229
21:23	ZZZZZZ	1926	56246	18236	2833
21:29	ZZZZZZ	1877	53993	17939	2620
21:35	MP72807-S1	1914	54807	18608	2524
21:41	MP72807-S2	1917	54646	18431	2531
21:47	JB40127-1	1959	56308	18452	2618
21:53	MA31529-CCV3	1834	52434	17475	2486
21:59	MA31529-CCB3	1937	56215	17718	2826
22:05	MP72807-SD1	1954	56009	17868	2746

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:11	MP72789-SD1	1882	54439	17646	2696
22:17	MP72706-S1	1570	44689	16682	2049
22:23	MP72706-S2	1571	44623	16675	2049
22:29	MP72706-SD1	1771	50513	17454	2414
22:35	MP72779-S1	1928	56049	17928	2805
22:41	MP72779-S2	1927	55929	17838	2802
22:47	MP72779-SD1	1940	56173	17861	2839
22:53	MP72793-S1	1911	55343	17979	2795
22:59	MP72793-S2	1906	55346	17872	2775
23:05	MA31529-CCV4	1835	52584	17548	2493
23:11	MA31529-CCB4	1937	56379	17718	2830
23:17	MP72793-SD1	1924	56336	17894	2816
23:23	MP72683-S1	1849	53730	17672	2621
23:29	MP72683-S2	1867	53875	17406	2638
23:35	MP72683-SD1	1921	55463	17611	2776
23:41	ZZZZZZ	1781	51276	17330	2464
23:47	ZZZZZZ	1761	50702	17086	2433
23:53	ZZZZZZ	1648	47082	16849	2174
23:59	MP72683-MB3	1927	55925	17790	2823
00:05	MP72683-LC2	1893	54469	17541	2703
00:11	ZZZZZZ	1395	38572 !	16155	1953 !
00:17	MA31529-CCV5	1838	52552	17392	2503
00:23	MA31529-CCB5	1937	56224	17781	2834
00:29	ZZZZZZ	1645	45657	17035	2143
00:35	ZZZZZZ	1740	49804	17138	2346
00:41	ZZZZZZ	1740	49836	17110	2343
00:48	ZZZZZZ	1750	50138	17175	2353
00:54	ZZZZZZ	1725	49822	17069	2332
01:00	MP72641-MB3	1909	56265	17810	2823
01:06	MP72641-B3	1860	54298	17776	2602
01:12	ZZZZZZ	1910	55267	18304	2558
01:18	ZZZZZZ	1914	55246	18124	2579
01:24	ZZZZZZ	1885	54264	18078	2546

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:30	MA31529-CCV6	1834	52395	17217	2494
01:36	MA31529-CCB6	1935	56028	17532	2832
01:42	MP72676-MB1	1930	56359	17723	2850
01:48	MP72676-B1	1872	53915	17412	2625
01:54	MP72676-S1	1888	54299	17803	2563
02:00	MP72676-S2	1894	54559	17916	2579
02:06	JB39501-1	1936	56013	17965	2684
02:12	MP72676-SD1	1937	56333	17470	2765
02:18	ZZZZZZ	1915	55603	17949	2644
02:24	ZZZZZZ	1922	55808	17914	2667
02:29	ZZZZZZ	1902	55670	17694	2701
02:35	ZZZZZZ	1909	55728	18018	2642
02:41	MA31529-CCV7	1827	52493	17073	2485
02:47	MA31529-CCB7	1927	56205	17304	2821
02:53	MA31529-CRID3	1922	55947	17436	2804
03:00	MA31529-CRI2	1907	55258	17346	2756
03:06	MA31529-CRID4	1928	55943	17260	2814
03:12	MA31529-CRIA2	1931	56020	17258	2832
03:18	MA31529-ICSA2	1665	47462	16234	2154
03:24	MA31529-ICSAB2	1688	47999	16372	2182
03:30	MA31529-CCV8	1834	52521	17057	2497
03:36	MA31529-CCB8	1934	56158	17259	2833
03:42	ZZZZZZ	1934	55933	17832	2660
03:48	ZZZZZZ	1909	55394	17709	2637
03:54	ZZZZZZ	1904	55106	17591	2633
04:00	ZZZZZZ	1816	52702	17309	2413
04:06	ZZZZZZ	1910	55636	17893	2629
04:12	ZZZZZZ	1900	55068	17623	2612
04:18	ZZZZZZ	1919	56091	17777	2685
04:24	ZZZZZZ	1909	55560	17698	2662
04:30	ZZZZZZ	1905	55341	17874	2636
04:36	ZZZZZZ	1906	55130	17843	2614
04:42	MA31529-CCV9	1832	52372	16964	2495

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:48	MA31529-CCB9	1934	55989	17149	2830
04:54	ZZZZZZ	1927	55455	17886	2641
05:00	ZZZZZZ	1928	55327	17800	2646
05:06	ZZZZZZ	1983	56204	18235	2619
05:12	ZZZZZZ	1943	55717	17762	2594
05:18	ZZZZZZ	1943	55918	17808	2568
05:24	MP72710-MB1	1913	55847	16948	2801
05:30	MP72710-LC1	1884	54625	16939	2688
05:36	MP72710-B1	1849	53493	16824	2581
05:42	MP72710-S1	1609	45071	15905	2067
05:48	MP72710-S2	1611	45199	15848	2074
05:54	MA31529-CCV10	1838	52703	16668	2491
06:00	MA31529-CCB10	1935	56106	17111	2825
06:06	JB39650-1	1617	45007	15879	2101
06:12	MP72710-SD1	1807	50988	16639	2455
06:18	ZZZZZZ	999999 !	49957	16709	999999 !
06:24	ZZZZZZ	1913	55450	16950	2815
06:30	ZZZZZZ	1878	54301	16813	2683
06:36	ZZZZZZ	1847	53668	16782	2632
06:42	ZZZZZZ	1657	45870	16285	2162
06:49	ZZZZZZ	1661	46148	16251	2154
06:55	ZZZZZZ	1592	45018	15919	2075
07:01	MA31529-CCV11	1826	52507	16710	2481
07:07	MA31529-CCB11	1931	56326	17011	2819
07:13	ZZZZZZ	1652	45856	16169	2147
07:19	ZZZZZZ	1870	54554	17011	2663
07:25	ZZZZZZ	1629	45820	16177	2110
07:31	ZZZZZZ	1626	45775	16051	2098
07:37	MP72842-MB1	1916	56225	17109	2820
07:43	MP72842-LC1	1896	55082	17544	2590
07:49	ZZZZZZ	1932	55870	17740	2597
07:55	ZZZZZZ	1960	56517	17703	2686
08:01	MA31529-CCV12	1827	52565	16922	2488

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31529
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
08:07	MA31529-CCB12	1936	56391	17072	2838
08:13	MA31529-CRI3	1915	55341	16790	2761
08:19	MA31529-CRID5	1921	55941	16935	2804
08:25	MA31529-ICSA3	1671	47774	16055	2161
08:31	MA31529-ICSAB3	1674	47855	16077	2165
08:37	MA31529-CCV13	1830	52871	16821	2491
08:43	MA31529-CCB13	1933	56729	16951	2827

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31529 Units: ug/l

Time:			19:22		19:34		20:47		21:59	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	-0.70	<200	8.7	<200	8.9	<200	-3.2	<200
Antimony	6.0	1.3	1.4	<6.0	1.8	<6.0	0.80	<6.0	0.30	<6.0
Arsenic	3.0	1.2	2.4	<3.0	1.6	<3.0	1.8	<3.0	1.3	<3.0
Barium	200	.3	0.0	<200	0.40	<200	0.20	<200	0.10	<200
Beryllium	1.0	.09	0.20	<1.0	0.40	<1.0	0.40	<1.0	0.0	<1.0
Bismuth	20	1.5								
Boron	100	.8								
Cadmium	3.0	.2	1.0	<3.0	1.1	<3.0	0.70	<3.0	0.40	<3.0
Calcium	5000	16	2.4	<5000	9.2	<5000	5.1	<5000	0.70	<5000
Chromium	10	.7	0.20	<10	0.30	<10	0.30	<10	0.10	<10
Cobalt	50	.3	1.1	<50	1.3	<50	1.0	<50	0.60	<50
Copper	10	.8	-0.80	<10	-0.20	<10	0.0	<10	0.10	<10
Iron	100	2.6	3.7	<100	9.8	<100	7.2	<100	0.80	<100
Lead	3.0	1.5	2.1	<3.0	1.9	<3.0	2.3	<3.0	1.0	<3.0
Lithium	20	1.2								
Magnesium	5000	21	0.20	<5000	15.7	<5000	5.4	<5000	2.3	<5000
Manganese	15	.2	0.30	<15	0.60	<15	0.70	<15	0.20	<15
Molybdenum	20	.3								
Nickel	10	.6	0.80	<10	1.7	<10	0.80	<10	0.40	<10
Palladium	50	2								
Potassium	10000	29	15.9	<10000	17.7	<10000	3.4	<10000	13.8	<10000
Selenium	10	2.2	1.4	<10	1.9	<10	0.80	<10	1.1	<10
Silicon	200	1.6								
Silver	10	.6	-0.10	<10	-0.30	<10	-0.10	<10	-0.20	<10
Sodium	10000	21	-5.3	<10000	-4.2	<10000	-21	<10000	-18	<10000
Sulfur	50	2.3								
Strontium	10	.1								
Thallium	2.0	1	1.95	<2.0	0.90	<2.0	1.3	<2.0	0.90	<2.0
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	7.2								
Vanadium	50	.4	0.30	<50	0.60	<50	0.60	<50	0.0	<50
Zinc	20	.9	1.2	<20	1.2	<20	0.80	<20	0.60	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31529 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.2

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31529 Units: ug/l

Time:			23:11		00:23		01:36		02:47	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	2.3	<200	11.5	<200	10.6	<200	22.3	<200
Antimony	6.0	1.3	1.2	<6.0	1.8	<6.0	1.0	<6.0	0.50	<6.0
Arsenic	3.0	1.2	1.5	<3.0	1.9	<3.0	1.8	<3.0	2.7	<3.0
Barium	200	.3	0.0	<200	0.30	<200	0.40	<200	0.50	<200
Beryllium	1.0	.09	0.10	<1.0	0.30	<1.0	0.40	<1.0	0.60	<1.0
Bismuth	20	1.5								
Boron	100	.8								
Cadmium	3.0	.2	1.0	<3.0	0.80	<3.0	0.90	<3.0	1.0	<3.0
Calcium	5000	16	4.0	<5000	8.0	<5000	7.9	<5000	14.1	<5000
Chromium	10	.7	0.10	<10	0.20	<10	0.20	<10	0.80	<10
Cobalt	50	.3	1.2	<50	0.90	<50	0.90	<50	1.3	<50
Copper	10	.8	0.20	<10	0.50	<10	0.0	<10	0.30	<10
Iron	100	2.6	1.5	<100	8.0	<100	8.7	<100	15.2	<100
Lead	3.0	1.5	2.0	<3.0	0.60	<3.0	0.90	<3.0	1.9	<3.0
Lithium	20	1.2								
Magnesium	5000	21	3.9	<5000	6.3	<5000	1.0	<5000	19.0	<5000
Manganese	15	.2	0.30	<15	0.70	<15	0.70	<15	1.0	<15
Molybdenum	20	.3								
Nickel	10	.6	1.2	<10	0.60	<10	0.90	<10	1.1	<10
Palladium	50	2								
Potassium	10000	29	1.6	<10000	11.5	<10000	-2.9	<10000	7.8	<10000
Selenium	10	2.2	2.0	<10	0.80	<10	0.20	<10	0.10	<10
Silicon	200	1.6								
Silver	10	.6	-0.10	<10	-0.20	<10	-0.20	<10	0.40	<10
Sodium	10000	21	-1.4	<10000	153	<10000	2.7	<10000	-29	<10000
Sulfur	50	2.3								
Strontium	10	.1								
Thallium	2.0	1	2.4	* (a)	1.1	<2.0	0.50	<2.0	1.3	<2.0
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	7.2								
Vanadium	50	.4	0.20	<50	0.60	<50	0.60	<50	0.80	<50
Zinc	20	.9	1.4	<20	1.0	<20	1.3	<20	1.5	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31529 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.2

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31529 Units: ug/l

Time:			03:36	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Aluminum	200	11	14.8	<200
Antimony	6.0	1.3	1.5	<6.0
Arsenic	3.0	1.2	1.5	<3.0
Barium	200	.3	0.60	<200
Beryllium	1.0	.09	0.50	<1.0
Bismuth	20	1.5		
Boron	100	.8		
Cadmium	3.0	.2	1.2	<3.0
Calcium	5000	16	17.2	<5000
Chromium	10	.7	0.40	<10
Cobalt	50	.3	0.90	<50
Copper	10	.8	-0.10	<10
Iron	100	2.6	11.6	<100
Lead	3.0	1.5	1.5	<3.0
Lithium	20	1.2		
Magnesium	5000	21	30.7	<5000
Manganese	15	.2	0.80	<15
Molybdenum	20	.3		
Nickel	10	.6	0.70	<10
Palladium	50	2		
Potassium	10000	29	13.1	<10000
Selenium	10	2.2	0.80	<10
Silicon	200	1.6		
Silver	10	.6	-0.20	<10
Sodium	10000	21	-40	<10000
Sulfur	50	2.3		
Strontium	10	.1		
Thallium	2.0	1	1.1	<2.0
Tin	10	.7		
Titanium	10	.5		
Tungsten	50	7.2		
Vanadium	50	.4	0.80	<50
Zinc	20	.9	1.3	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31529 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.2

(*) Outside of QC limits
(anr) Analyte not requested

12.2.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31529 Units: ug/l

Time:		19:16			19:28			20:41	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39400	98.5	40000	39500	98.8	40000	39500	98.8
Antimony	2000	2010	100.5	2000	2000	100.0	2000	2000	100.0
Arsenic	2000	1990	99.5	2000	1980	99.0	2000	1990	99.5
Barium	2000	2020	101.0	2000	2010	100.5	2000	2010	100.5
Beryllium	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Bismuth									
Boron									
Cadmium	2000	2010	100.5	2000	2010	100.5	2000	2010	100.5
Calcium	40000	39800	99.5	40000	40000	100.0	40000	40000	100.0
Chromium	2000	2050	102.5	2000	2050	102.5	2000	2050	102.5
Cobalt	2000	2070	103.5	2000	2070	103.5	2000	2060	103.0
Copper	2000	1980	99.0	2000	1980	99.0	2000	1970	98.5
Iron	40000	40400	101.0	40000	40700	101.8	40000	40600	101.5
Lead	2000	2050	102.5	2000	2050	102.5	2000	2060	103.0
Lithium									
Magnesium	40000	39100	97.8	40000	39500	98.8	40000	39600	99.0
Manganese	2000	2050	102.5	2000	2050	102.5	2000	2060	103.0
Molybdenum									
Nickel	2000	2040	102.0	2000	2040	102.0	2000	2040	102.0
Palladium									
Potassium	40000	39300	98.3	40000	39400	98.5	40000	39400	98.5
Selenium	2000	2010	100.5	2000	2010	100.5	2000	2000	100.0
Silicon									
Silver	250	247	98.8	250	248	99.2	250	246	98.4
Sodium	40000	39800	99.5	40000	39800	99.5	40000	40100	100.3
Sulfur									
Strontium									
Thallium	2000	2070	103.5	2000	2070	103.5	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Zinc	2000	2060	103.0	2000	2050	102.5	2000	2060	103.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31529 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.2.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31529 Units: ug/l

Time:		21:53			23:05			00:17	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	39600	99.0	40000	39500	98.8
Antimony	2000	1990	99.5	2000	2010	100.5	2000	2010	100.5
Arsenic	2000	2000	100.0	2000	1990	99.5	2000	2000	100.0
Barium	2000	2020	101.0	2000	2010	100.5	2000	2010	100.5
Beryllium	2000	2050	102.5	2000	2030	101.5	2000	2040	102.0
Bismuth									
Boron									
Cadmium	2000	2000	100.0	2000	2010	100.5	2000	2010	100.5
Calcium	40000	40400	101.0	40000	40200	100.5	40000	40200	100.5
Chromium	2000	2060	103.0	2000	2050	102.5	2000	2070	103.5
Cobalt	2000	2060	103.0	2000	2070	103.5	2000	2070	103.5
Copper	2000	1950	97.5	2000	1980	99.0	2000	1990	99.5
Iron	40000	40600	101.5	40000	40600	101.5	40000	40600	101.5
Lead	2000	2060	103.0	2000	2050	102.5	2000	2050	102.5
Lithium									
Magnesium	40000	40000	100.0	40000	39700	99.3	40000	39800	99.5
Manganese	2000	2070	103.5	2000	2060	103.0	2000	2060	103.0
Molybdenum									
Nickel	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0
Palladium									
Potassium	40000	39600	99.0	40000	39700	99.3	40000	39700	99.3
Selenium	2000	2000	100.0	2000	2010	100.5	2000	2010	100.5
Silicon									
Silver	250	245	98.0	250	247	98.8	250	247	98.8
Sodium	40000	39900	99.8	40000	39800	99.5	40000	39300	98.3
Sulfur									
Strontium									
Thallium	2000	2090	104.5	2000	2080	104.0	2000	2090	104.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2030	101.5	2000	2040	102.0	2000	2040	102.0
Zinc	2000	2070	103.5	2000	2060	103.0	2000	2070	103.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31529 Units: ug/l

Time:	
Sample ID:	
Metal	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31529 Units: ug/l

Time:		01:30			02:41			03:30	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39500	98.8	40000	39800	99.5	40000	39800	99.5
Antimony	2000	1990	99.5	2000	2000	100.0	2000	2000	100.0
Arsenic	2000	1970	98.5	2000	2000	100.0	2000	1980	99.0
Barium	2000	2020	101.0	2000	2040	102.0	2000	2030	101.5
Beryllium	2000	2030	101.5	2000	2050	102.5	2000	2040	102.0
Bismuth									
Boron									
Cadmium	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Calcium	40000	40000	100.0	40000	40200	100.5	40000	40200	100.5
Chromium	2000	2040	102.0	2000	2040	102.0	2000	2060	103.0
Cobalt	2000	2060	103.0	2000	2060	103.0	2000	2080	104.0
Copper	2000	1970	98.5	2000	1960	98.0	2000	1980	99.0
Iron	40000	40400	101.0	40000	40300	100.8	40000	40500	101.3
Lead	2000	2050	102.5	2000	2050	102.5	2000	2050	102.5
Lithium									
Magnesium	40000	39400	98.5	40000	39400	98.5	40000	39600	99.0
Manganese	2000	2050	102.5	2000	2060	103.0	2000	2060	103.0
Molybdenum									
Nickel	2000	2030	101.5	2000	2040	102.0	2000	2040	102.0
Palladium									
Potassium	40000	39900	99.8	40000	40200	100.5	40000	40200	100.5
Selenium	2000	1990	99.5	2000	2000	100.0	2000	2010	100.5
Silicon									
Silver	250	247	98.8	250	245	98.0	250	247	98.8
Sodium	40000	39800	99.5	40000	40100	100.3	40000	39900	99.8
Sulfur									
Strontium									
Thallium	2000	2070	103.5	2000	2070	103.5	2000	2070	103.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2020	101.0	2000	2010	100.5	2000	2020	101.0
Zinc	2000	2050	102.5	2000	2050	102.5	2000	2060	103.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31529 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.2.3
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31529 Units: ug/l

Time:				19:40		19:46		19:52	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	205	102.5	98.0	98.0	507	101.4
Antimony	6.0	20	3.0	5.8	96.7			19.4	97.0
Arsenic	8.0	20	3.0	8.7	108.8	2.1	70.0	20.2	101.0
Barium	200		4.0	191	95.5	3.8	95.0		
Beryllium	2.0		1.0	2.1	105.0	1.0	100.0		
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	3.1	103.3	0.90	90.0		
Calcium	5000		1000	5130	102.6	982	98.2		
Chromium	10		2.0	10.2	102.0	2.0	100.0		
Cobalt	50		3.0	53.6	107.2	3.5	116.7		
Copper	10		2.0	8.1	81.0	1.7	85.0		
Iron	100	500		107	107.0			524	104.8
Lead	3.0	20	2.5	2.6	86.7	2.5	100.0	21.2	106.0
Lithium	20								
Magnesium	5000		100	5190	103.8	112	112.0		
Manganese	15		3.0	15.7	104.7	3.1	103.3		
Molybdenum	20		4.0						
Nickel	10		4.0	10.8	108.0	3.8	95.0		
Palladium	50								
Potassium	5000		2000	4910	98.2	1850	92.5		
Selenium	10	20	5.0	10.5	105.0	5.1	102.0	19.3	96.5
Silicon	200								
Silver	5.0		1.0	4.3	86.0	0.70	70.0		
Sodium	5000		1000	5000	100.0	932	93.2		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	8.2	82.0	2.2	110.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	50.4	100.8	2.1	105.0		
Zinc	20		10	23.1	115.5	10.4	104.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31529 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31529 Units: ug/l

Time: / Sample ID: / Metal	CRI True	CRIA True	CRID True	19:58 CRID2 Results	% Rec	02:53 CRID3 Results	% Rec	03:00 CRI2 Results	% Rec
Aluminum	200	500	100	95.7	95.7	104	104.0	206	103.0
Antimony	6.0	20	3.0					5.4	90.0
Arsenic	8.0	20	3.0	2.3	76.7	3.6	120.0	8.4	105.0
Barium	200		4.0	3.9	97.5	4.0	100.0	194	97.0
Beryllium	2.0		1.0	1.0	100.0	1.0	100.0	2.1	105.0
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	0.90	90.0	1.1	110.0	3.3	110.0
Calcium	5000		1000	985	98.5	985	98.5	5150	103.0
Chromium	10		2.0	1.7	85.0	1.7	85.0	9.7	97.0
Cobalt	50		3.0	3.5	116.7	3.5	116.7	53.4	106.8
Copper	10		2.0	1.8	90.0	1.4	70.0	7.7	77.0
Iron	100	500						106	106.0
Lead	3.0	20	2.5	2.9	116.0	3.0	120.0	3.1	103.3
Lithium	20								
Magnesium	5000		100	85.5	85.5	88.4	88.4	5200	104.0
Manganese	15		3.0	3.2	106.7	3.1	103.3	15.9	106.0
Molybdenum	20		4.0						
Nickel	10		4.0	3.7	92.5	3.9	97.5	10.6	106.0
Palladium	50								
Potassium	5000		2000	1850	92.5	1890	94.5	5000	100.0
Selenium	10	20	5.0	4.6	92.0	4.7	94.0	10.6	106.0
Silicon	200								
Silver	5.0		1.0	1.0	100.0	0.70	70.0	4.5	90.0
Sodium	5000		1000	928	92.8	902	90.2	4990	99.8
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.5	125.0	2.4	120.0	8.9	89.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	2.3	115.0	2.2	110.0	49.8	99.6
Zinc	20		10	10.5	105.0	10.6	106.0	23.1	115.5

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31529 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

12.2.4

12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31529 Units: ug/l

Time:				03:06		03:12	
Sample ID:	CRI	CRIA	CRID	CRID4		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	100	100.0	513	102.6
Antimony	6.0	20	3.0			19.9	99.5
Arsenic	8.0	20	3.0	3.5	116.7	19.8	99.0
Barium	200		4.0	4.2	105.0		
Beryllium	2.0		1.0	1.1	110.0		
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0	1.0	100.0		
Calcium	5000		1000	986	98.6		
Chromium	10		2.0	1.6	80.0		
Cobalt	50		3.0	3.5	116.7		
Copper	10		2.0	1.8	90.0		
Iron	100	500				524	104.8
Lead	3.0	20	2.5	3.0	120.0	20.6	103.0
Lithium	20						
Magnesium	5000		100	103	103.0		
Manganese	15		3.0	3.2	106.7		
Molybdenum	20		4.0				
Nickel	10		4.0	3.3	82.5		
Palladium	50						
Potassium	5000		2000	1880	94.0		
Selenium	10	20	5.0	4.6	92.0	21.3	106.5
Silicon	200						
Silver	5.0		1.0	0.80	80.0		
Sodium	5000		1000	897	89.7		
Sulfur	50	50	50				
Strontium	10						
Thallium	10		2.0	2.5	125.0		
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	2.2	110.0		
Zinc	20		10	10.6	106.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31529 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

12.2.4

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INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31529 Units: ug/l

Time: / Sample ID: / Metal	ICSA True	ICSAB True	20:04 ICSA1 Results	% Rec	20:10 ICSAB1 Results	% Rec	03:18 ICSA2 Results	% Rec	03:24 ICSAB2 Results	% Rec
Aluminum	500000	500000	507000	101.4	508000	101.6	520000	104.0	508000	101.6
Antimony		1000	0.90		1030	103.0	-1.0		1030	103.0
Arsenic		1000	-1.1		1010	101.0	-1.7		989	98.9
Barium		500	-1.1		514	102.8	-1.0		522	104.4
Beryllium		500	0.60		486	97.2	0.60		488	97.6
Bismuth		500	29.7		505	101.0	28.9		508	101.6
Boron			-0.70		-1.4		1.6		1.8	
Cadmium		1000	0.50		1010	101.0	0.20		1010	101.0
Calcium	400000	400000	361000	90.3	366000	91.5	365000	91.3	366000	91.5
Chromium		500	-0.80		477	95.4	-0.30		478	95.6
Cobalt		500	-2.3		465	93.0	-2.4		471	94.2
Copper		500	-1.2		510	102.0	-0.60		515	103.0
Iron	200000	200000	185000	92.5	191000	95.5	186000	93.0	192000	96.0
Lead		1000	0.10		962	96.2	5.1		957	95.7
Lithium		500	7.3		521	104.2	8.6		529	105.8
Magnesium	500000	500000	508000	101.6	419000	83.8	513000	102.6	413000	82.6
Manganese		500	-3.5		481	96.2	-4.4		478	95.6
Molybdenum		500	0.0		495	99.0	-0.10		487	97.4
Nickel		1000	-1.2		926	92.6	-1.4		921	92.1
Palladium		500	36.5		576	115.2	36.2		581	116.2
Potassium			28.7		13.9		-3.9		14.8	
Selenium		1000	4.5		1030	103.0	8.5		1030	103.0
Silicon			0.30		0.20		1.3		-0.60	
Silver		1000	1.2		960	96.0	0.80		967	96.7
Sodium			-19		-2.9		-49		-40	
Sulfur		500	-28		446	89.2	-26		445	89.0
Strontium			6.3		6.2		5.9		6.2	
Thallium		1000	0.20		1020	102.0	0.50		1020	102.0
Tin			-3.1		-2.9		-3.2		-2.9	
Titanium			1.0		1.6		1.2		1.4	
Tungsten		500	-33		461	92.2	-39		464	92.8
Vanadium		500	1.5		470	94.0	1.4		468	93.6
Zinc		1000	2.9		965	96.5	2.6		960	96.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC062613M2.ICP Date Analyzed: 06/26/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31529 Units: ug/l

Time:							
Sample ID:							
Metal							
Zirconium	500	-0.70	489	97.8	-1.1	491	98.2

(*) Outside of QC limits
(anr) Analyte not requested

12.2.5
12

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:31	MA31563-STD1	1		STDA
11:37	MA31563-STD2	1		STDD
11:43	ZZZZZZ	1		
11:48	ZZZZZZ	1		
11:55	MA31563-ICV1	1		
12:07	MA31563-ICB1	1		
12:12	MA31563-ICCV1	1		
12:22	MA31563-ICCV2	1		
12:30	MA31563-ICCV3	1		
12:42	MA31563-CCB1	1		
13:00	MA31563-CRID1	1		
13:06	MA31563-CRI1	1		
13:12	MA31563-CRID2	1		
13:18	MA31563-CRIA1	1		
13:24	MA31563-ICSA1	1		
13:30	MA31563-ICSAB1	1		
13:36	ZZZZZZ	1		
13:42	ZZZZZZ	1		
13:48	MA31563-CCV1	1		
13:53	MA31563-CCB2	1		
13:59	ZZZZZZ	1		
14:05	ZZZZZZ	1		
14:11	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:23	ZZZZZZ	1		
14:29	ZZZZZZ	1		
14:35	ZZZZZZ	1		
14:40	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:52	MA31563-CCV2	1		
14:58	MA31563-CCB3	1		
15:04	ZZZZZZ	1		
15:10	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:16	ZZZZZZ	1		
15:22	ZZZZZZ	1		
15:28	ZZZZZZ	1		
15:34	ZZZZZZ	1		
15:40	MP72936-MB1	1		
15:46	MP72936-LC1	1		
15:51	ZZZZZZ	1		
15:57	MA31563-CCV3	1		
16:03	MA31563-CCB4	1		
16:09	ZZZZZZ	1		
16:15	ZZZZZZ	1		
16:21	ZZZZZZ	1		
16:27	MP72762-MB1	1		CCV out
16:33	MP72762-B1	1		CCV out
16:38	MP72762-LC1	1		CCV out
16:44	MP72762-S1	1		CCV out
16:50	MP72762-S2	1		CCV out
16:56	JB39962-6	1		(sample used for QC only; not part of login JB40127)
17:01	MA31563-CCV4	1		
17:07	MA31563-CCB5	1		
17:13	MP72762-SD1	5		CCV out
17:30	MA31563-CCV5	1		
17:35	MA31563-CCB6	1		
17:41	ZZZZZZ	5		
17:47	ZZZZZZ	5		
17:53	ZZZZZZ	5		
17:59	ZZZZZZ	5		
18:05	ZZZZZZ	10		
18:11	MP72762-MB1	1		CCV cup empty
18:17	MP72762-B1	1		CCV cup empty
18:23	MP72762-LC1	1		CCV cup empty
18:29	MP72762-S1	1		CCV cup empty
18:34	MP72762-S2	1		CCV cup empty

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:40	MA31563-CCV6	1		CCV cup empty
18:52	MA31563-CCV7	1		
18:57	MA31563-CCB7	1		
19:03	JB39962-6	1		(sample used for QC only; not part of login JB40127)
19:09	MP72762-SD1	5		
19:15	ZZZZZZ	1		
19:21	ZZZZZZ	1		
19:27	ZZZZZZ	1		
19:33	ZZZZZZ	1		
19:39	ZZZZZZ	1		
19:45	ZZZZZZ	1		
19:51	ZZZZZZ	1		
19:57	MA31563-CCV8	1		
20:02	MA31563-CCB8	1		
20:08	ZZZZZZ	1		
20:14	ZZZZZZ	1		
20:20	ZZZZZZ	1		
20:26	ZZZZZZ	1		
20:32	ZZZZZZ	1		
20:38	ZZZZZZ	1		
20:44	ZZZZZZ	1		
20:50	ZZZZZZ	1		
20:56	ZZZZZZ	1		
21:02	MA31563-CCV9	1		
21:08	MA31563-CCB9	1		
21:14	MA31563-CRID3	1		
21:19	MA31563-CRI2	1		
21:25	MA31563-CRID4	1		
21:31	MA31563-CRIA2	1		
21:37	MA31563-ICSA2	1		
21:43	MA31563-ICSAB2	1		
21:49	MA31563-CCV10	1		
21:55	MA31563-CCB10	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	22:01	ZZZZZZ	1		
	22:07	ZZZZZZ	1		
	22:13	ZZZZZZ	1		
	22:19	ZZZZZZ	1		
	22:24	ZZZZZZ	1		
	22:30	ZZZZZZ	1		
	22:36	ZZZZZZ	1		
	22:42	ZZZZZZ	1		
	22:48	ZZZZZZ	1		
	22:54	MA31563-CCV11	1		
	22:59	MA31563-CCB11	1		
	23:05	ZZZZZZ	1		
	23:11	ZZZZZZ	1		
	23:17	ZZZZZZ	1		
	23:23	ZZZZZZ	1		
	23:29	MP72915-MB2	1		
	23:35	MP72915-LC1	1		
	23:41	ZZZZZZ	1		
	23:47	MP72937-MB1	1		
	23:53	MP72937-B1	1		
	23:58	MA31563-CCV12	1		
	00:04	MA31563-CCB12	1		
	00:10	MP72937-S1	1		
	00:16	MP72937-S2	1		
	00:21	JB40798-1	1		(sample used for QC only; not part of login JB40127)
	00:27	MP72937-SD1	5		
	00:33	ZZZZZZ	1		
	00:39	MP72852-MB1	1		
	00:45	MP72852-B1	1		
---------->	Last reportable sample/prep for job JB40127				
	00:51	ZZZZZZ	1		
	00:57	ZZZZZZ	1		
	01:02	MA31563-CCV13	1		
	01:08	MA31563-CCB13	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:14	ZZZZZZ	1		
01:20	MP72916-MB1	1		
01:26	MP72916-B1	1		
01:32	MP72916-S1	1		
01:37	MP72916-S2	1		
01:43	JB35609-1R	1		(sample used for QC only; not part of login JB40127)
01:49	MP72916-SD1	5		
01:55	ZZZZZZ	1		
02:01	ZZZZZZ	1		
02:06	MA31563-CCV14	1		
02:12	MA31563-CCB14	1		
02:18	ZZZZZZ	1		
02:24	ZZZZZZ	1		
02:30	MP72887-MB2	1		
02:36	MP72887-LC1	1		
02:41	ZZZZZZ	1		
02:47	ZZZZZZ	1		
02:53	ZZZZZZ	1		
02:59	ZZZZZZ	1		
03:05	ZZZZZZ	1		
03:11	MA31563-CCV15	1		
03:17	MA31563-CCB15	1		
03:22	ZZZZZZ	1		
03:28	ZZZZZZ	1		
03:34	ZZZZZZ	1		
03:40	ZZZZZZ	1		
03:46	ZZZZZZ	1		
03:52	ZZZZZZ	1		
03:58	ZZZZZZ	1		
04:04	ZZZZZZ	1		
04:10	ZZZZZZ	1		
04:16	MA31563-CCV16	1		
04:22	MA31563-CCB16	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	04:27	MA31563-CRID5	1		
	04:33	MA31563-CRI3	1		
	04:39	MA31563-CRID6	1		
	04:45	MA31563-CRIA3	1		
	04:51	MA31563-ICSA3	1		
	04:57	MA31563-ICSAB3	1		
	05:03	MA31563-CCV17	1		
	05:09	MA31563-CCB17	1		
---------->	Last reportable CCB for job JB40127				
	05:15	ZZZZZZ	1		
	05:21	ZZZZZZ	1		
	05:26	ZZZZZZ	5		
	05:32	ZZZZZZ	5		
	05:38	ZZZZZZ	1		
	05:44	ZZZZZZ	1		
	05:50	ZZZZZZ	1		
	05:56	ZZZZZZ	1		
	06:02	ZZZZZZ	1		
	06:08	MA31563-CCV18	1		
	06:14	MA31563-CCB18	1		
	06:20	MA31563-CRID7	1		
	06:25	MA31563-CRI4	1		
	06:31	MA31563-CRID8	1		
	06:37	MA31563-ICSA4	1		
	06:43	MA31563-ICSAB4	1		
	06:49	MA31563-CCV19	1		
	06:53	MA31563-CCB19	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:31	MA31563-STD1	2262 R	110980 R	29996 R	6742 R
11:37	MA31563-STD2	2033	98858	28891	5678
11:43	ZZZZZZ	2169	104900	29422	6091
11:48	ZZZZZZ	2269	111310	30264	6767
11:55	MA31563-ICV1	2138	104010	29760	5995
12:07	MA31563-ICB1	2265	110870	30064	6757
12:12	MA31563-ICCV1	No results reported for the elements associated with this internal standard.			
12:22	MA31563-ICCV2	No results reported for the elements associated with this internal standard.			
12:30	MA31563-ICCV3	2170	104740	29602	6033
12:42	MA31563-CCB1	2322	114530	30851	6859
13:00	MA31563-CRID1	No results reported for the elements associated with this internal standard.			
13:06	MA31563-CRI1	2254	111410	30520	6575
13:12	MA31563-CRID2	2281	112620	30347	6738
13:18	MA31563-CRIA1	2284	112600	30125	6758
13:24	MA31563-ICSA1	1914	92973	27964	5143
13:30	MA31563-ICSAB1	1923	92728	27864	5166
13:36	ZZZZZZ	2186	108290	29777	6490
13:42	ZZZZZZ	2193	101680	29751	5821
13:48	MA31563-CCV1	2142	105070	29401	5966
13:53	MA31563-CCB2	2279	112860	30332	6755
13:59	ZZZZZZ	2246	111470	30325	6681
14:05	ZZZZZZ	2134	105280	29328	6106
14:11	ZZZZZZ	2137	105460	30057	5936
14:17	ZZZZZZ	2174	106730	29871	6174
14:23	ZZZZZZ	2247	111680	29996	6676
14:29	ZZZZZZ	2164	107870	29938	6284
14:35	ZZZZZZ	2103	104520	29689	6005
14:40	ZZZZZZ	1590	77479 !	26017	4105 !
14:46	ZZZZZZ	1763	85799	27524	4543 !
14:52	MA31563-CCV2	2118	103400	29259	5915
14:58	MA31563-CCB3	2267	112190	30173	6736
15:04	ZZZZZZ	1700	84696	26378	4519 !
15:10	ZZZZZZ	1696	83325	27278	4416 !

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:16	ZZZZZZ	1606	78039	26312	4133 !
15:22	ZZZZZZ	1718	83608	27290	4431 !
15:28	ZZZZZZ	1682	84163	26450	4491 !
15:34	ZZZZZZ	1681	81229	26334	4384 !
15:40	MP72936-MB1	2241	111980	30001	6663
15:46	MP72936-LC1	2153	106690	29188	6254
15:51	ZZZZZZ	2251	111710	29730	6705
15:57	MA31563-CCV3	2157	105640	29893	5991
16:03	MA31563-CCB4	2249	112100	29881	6673
16:09	ZZZZZZ	2250	112150	30195	6688
16:15	ZZZZZZ	2104	104980	29563	5933
16:21	ZZZZZZ	2050	101450	29618	5543
16:27	MP72762-MB1	2255	112400	30385	6734
16:33	MP72762-B1	2167	107580	29846	6192
16:38	MP72762-LC1	2195	109650	29964	6373
16:44	MP72762-S1	2061	103560	29960	5814
16:50	MP72762-S2	2074	103270	29817	5839
16:56	JB39962-6	No results reported for the elements associated with this internal standard.			
17:01	MA31563-CCV4	2135	105070	29555	5943
17:07	MA31563-CCB5	2334	112460	29990	6892
17:13	MP72762-SD1	2235	110650	30013	6535
17:30	MA31563-CCV5	2142	104680	29327	5973
17:35	MA31563-CCB6	2274	112860	30168	6745
17:41	ZZZZZZ	No results reported for the elements associated with this internal standard.			
17:47	ZZZZZZ	No results reported for the elements associated with this internal standard.			
17:53	ZZZZZZ	No results reported for the elements associated with this internal standard.			
17:59	ZZZZZZ	No results reported for the elements associated with this internal standard.			
18:05	ZZZZZZ	No results reported for the elements associated with this internal standard.			
18:11	MP72762-MB1	No results reported for the elements associated with this internal standard.			
18:17	MP72762-B1	No results reported for the elements associated with this internal standard.			
18:23	MP72762-LC1	No results reported for the elements associated with this internal standard.			
18:29	MP72762-S1	No results reported for the elements associated with this internal standard.			
18:34	MP72762-S2	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:40	MA31563-CCV6	No results reported for the elements associated with this internal standard.			
18:52	MA31563-CCV7	2120	103610	28712	5907
18:57	MA31563-CCB7	2313	113780	29625	6851
19:03	JB39962-6	2163	107820	29974	6171
19:09	MP72762-SD1	2259	111800	30080	6569
19:15	ZZZZZZ	2018	100460	28643	5606
19:21	ZZZZZZ	1941	98198	28827	5362
19:27	ZZZZZZ	2087	104810	29318	5924
19:33	ZZZZZZ	2020	101490	29163	5595
19:39	ZZZZZZ	2128	105800	29123	6023
19:45	ZZZZZZ	2010	101660	29308	5552
19:51	ZZZZZZ	2158	107570	29563	6144
19:57	MA31563-CCV8	2180	107230	29556	6047
20:02	MA31563-CCB8	2290	114440	30162	6752
20:08	ZZZZZZ	2084	105450	29470	5842
20:14	ZZZZZZ	2013	100980	29003	5575
20:20	ZZZZZZ	1978	99781	28915	5423
20:26	ZZZZZZ	2117	106550	29541	6005
20:32	ZZZZZZ	1939	97466	27766	5358
20:38	ZZZZZZ	2100	105040	28977	5911
20:44	ZZZZZZ	2021	101930	29197	5581
20:50	ZZZZZZ	2150	107130	29628	6117
20:56	ZZZZZZ	2081	105590	29370	5829
21:02	MA31563-CCV9	2141	106390	29532	5915
21:08	MA31563-CCB9	2277	114510	29847	6716
21:14	MA31563-CRID3	2274	114100	29584	6663
21:19	MA31563-CRI2	2232	111760	29810	6486
21:25	MA31563-CRID4	2282	113720	29672	6700
21:31	MA31563-CRIA2	2284	114480	29808	6747
21:37	MA31563-ICSA2	1954	96338	28005	5219
21:43	MA31563-ICSAB2	1953	96478	28132	5227
21:49	MA31563-CCV10	2148	106360	29172	5957
21:55	MA31563-CCB10	2291	114180	29701	6765

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:01	ZZZZZZ	2058	102520	28586	5696
22:07	ZZZZZZ	2292	114320	30149	6875
22:13	ZZZZZZ	2284	113540	29616	6755
22:19	ZZZZZZ	2064	102260	28460	5700
22:24	ZZZZZZ	2250	113580	29903	6756
22:30	ZZZZZZ	2276	114750	30225	6709
22:36	ZZZZZZ	2180	109510	29685	6163
22:42	ZZZZZZ	2409	121890	30017	6622
22:48	ZZZZZZ	2197	109860	28084	6428
22:54	MA31563-CCV11	2134	103780	27486	5873
22:59	MA31563-CCB11	2257	110400	27982	6573
23:05	ZZZZZZ	2206	107790	28153	6250
23:11	ZZZZZZ	2217	109000	28083	6337
23:17	ZZZZZZ	2189	107360	28025	6189
23:23	ZZZZZZ	2201	108260	28015	6263
23:29	MP72915-MB2	1906	90799	27022	4967
23:35	MP72915-LC1	2222	109270	28162	6361
23:41	ZZZZZZ	1821	88554	26429	4692 !
23:47	MP72937-MB1	2278	111600	27902	6653
23:53	MP72937-B1	2261	111650	28222	6556
23:58	MA31563-CCV12	2102	102720	27315	5768
00:04	MA31563-CCB12	2256	110270	27795	6550
00:10	MP72937-S1	2185	107940	28179	6193
00:16	MP72937-S2	2174	107620	28261	6163
00:21	JB40798-1	2199	107900	28203	6235
00:27	MP72937-SD1	2255	111010	28117	6519
00:33	ZZZZZZ	1881	90127	26825	4881
00:39	MP72852-MB1	2335	114070	28736	6856
00:45	MP72852-B1	2191	106840	27622	6176
00:51	ZZZZZZ	2239	105130	26086	6214
00:57	ZZZZZZ	2220	105720	26995	6079
01:02	MA31563-CCV13	2121	100750	25756	5795
01:08	MA31563-CCB13	2206	105600	25676	6375

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:14	ZZZZZZ	2194	104210	26540	6010
01:20	MP72916-MB1	2326	110590	27161	6730
01:26	MP72916-B1	2332	112020	27731	6696
01:32	MP72916-S1	2309	110110	27499	6537
01:37	MP72916-S2	2312	110370	27603	6569
01:43	JB35609-1R	2308	110780	27379	6591
01:49	MP72916-SD1	2243	108710	26711	6434
01:55	ZZZZZZ	2319	110610	27151	6617
02:01	ZZZZZZ	2226	107310	25933	6428
02:06	MA31563-CCV14	2105	99974	25415	5759
02:12	MA31563-CCB14	2177	104340	25485	6281
02:18	ZZZZZZ	2307	109880	27101	6575
02:24	ZZZZZZ	2301	109700	27029	6586
02:30	MP72887-MB2	2322	110570	27302	6735
02:36	MP72887-LC1	2195	105040	26210	6202
02:41	ZZZZZZ	2313	110340	27401	6621
02:47	ZZZZZZ	2315	110400	27468	6634
02:53	ZZZZZZ	2315	111050	27725	6598
02:59	ZZZZZZ	2298	110360	27830	6564
03:05	ZZZZZZ	2231	107630	26180	6440
03:11	MA31563-CCV15	2071	99301	25417	5645
03:17	MA31563-CCB15	2172	104660	25620	6244
03:22	ZZZZZZ	2253	108180	26631	6469
03:28	ZZZZZZ	2313	110020	27296	6627
03:34	ZZZZZZ	2299	109420	27296	6589
03:40	ZZZZZZ	2296	109330	27231	6544
03:46	ZZZZZZ	1977	93890	26414	5068
03:52	ZZZZZZ	2211	104940	27710	5913
03:58	ZZZZZZ	1876	90155	26299	4852
04:04	ZZZZZZ	2224	106220	27000	6167
04:10	ZZZZZZ	2228	107400	26458	6492
04:16	MA31563-CCV16	2097	99701	25488	5709
04:22	MA31563-CCB16	2210	105940	25794	6349

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
Analyst: JY Run ID: MA31563
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:27	MA31563-CRID5	2234	106780	25781	6406
04:33	MA31563-CRI3	2193	105240	25869	6213
04:39	MA31563-CRID6	2165	104150	25216	6206
04:45	MA31563-CRIA3	2228	106410	25717	6405
04:51	MA31563-ICSA3	1943	92225	25106	5121
04:57	MA31563-ICSAB3	1962	92301	24946	5202
05:03	MA31563-CCV17	2142	100350	25174	5859
05:09	MA31563-CCB17	2250	107350	25650	6491
05:15	ZZZZZZ	2296	109460	27021	6456
05:21	ZZZZZZ	2247	107050	26902	6189
05:26	ZZZZZZ	2054	95894	24924	5437
05:32	ZZZZZZ	2030	95343	25120	5323
05:38	ZZZZZZ	2287	109370	27227	6428
05:44	ZZZZZZ	2185	103800	26583	5920
05:50	ZZZZZZ	2038	97861	26583	5352
05:56	ZZZZZZ	2290	109440	27255	6407
06:02	ZZZZZZ	2339	111760	26735	6803
06:08	MA31563-CCV18	2087	99313	25229	5685
06:14	MA31563-CCB18	2221	106600	25433	6371
06:20	MA31563-CRID7	2237	106890	25588	6406
06:25	MA31563-CRI4	2218	105870	25717	6284
06:31	MA31563-CRID8	2254	107530	25569	6476
06:37	MA31563-ICSA4	1999	93576	24754	5280
06:43	MA31563-ICSAB4	1990	93164	24651	5261
06:49	MA31563-CCV19	2159	101960	25445	5871
06:53	MA31563-CCB19	2278	108250	25681	6555

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:			12:07		12:42		13:53		14:58	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	1.3	<200	5.6	<200	-0.20	<200	2.5	<200
Antimony	6.0	1	-0.80	<6.0	0.0	<6.0	0.30	<6.0	0.40	<6.0
Arsenic	3.0	.5	0.40	<3.0	0.60	<3.0	0.10	<3.0	0.60	<3.0
Barium	200	.7	-0.10	<200	0.0	<200	0.0	<200	-0.10	<200
Beryllium	1.0	.05	-0.10	<1.0	0.0	<1.0	0.0	<1.0	-0.10	<1.0
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	0.10	<3.0	0.20	<3.0	0.10	<3.0	-0.10	<3.0
Calcium	5000	15	-5.3	<5000	1.0	<5000	3.5	<5000	-3.5	<5000
Chromium	10	.4	0.0	<10	-0.20	<10	0.0	<10	-0.20	<10
Cobalt	50	.2	0.0	<50	0.20	<50	0.20	<50	0.0	<50
Copper	10	.6	0.20	<10	0.30	<10	0.30	<10	-0.10	<10
Iron	100	8.7	-1.7	<100	0.70	<100	1.4	<100	0.50	<100
Lead	3.0	1.2	-0.80	<3.0	-0.40	<3.0	-0.60	<3.0	-0.50	<3.0
Lithium	20	.3								
Magnesium	5000	10	-10	<5000	-5.0	<5000	-6.5	<5000	-1.0	<5000
Manganese	15	.1	-0.20	<15	-0.20	<15	-0.10	<15	-0.20	<15
Molybdenum	20	.6								
Nickel	10	.5	-0.20	<10	0.40	<10	-0.20	<10	-0.10	<10
Palladium	50	1								
Potassium	10000	14	7.4	<10000	15.8	<10000	11.2	<10000	7.5	<10000
Selenium	10	1.5	-0.10	<10	-0.80	<10	-0.10	<10	-0.40	<10
Silicon	200	7.9								
Silver	10	.5	0.50	<10	-0.10	<10	0.20	<10	-0.10	<10
Sodium	10000	3.8	1.1	<10000	7.2	<10000	7.3	<10000	63.6	<10000
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	-0.50	<2.0	0.70	<2.0	-0.50	<2.0	-0.60	<2.0
Tin	10	.7								
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	0.0	<50	0.10	<50	0.10	<50	0.0	<50
Zinc	20	2.5	-0.20	<20	-0.10	<20	0.0	<20	-0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:			16:03		17:07		17:35		18:57	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	8.8	<200	3.4	<200	4.4	<200	5.9	<200
Antimony	6.0	1	0.10	<6.0	0.30	<6.0	0.50	<6.0	0.20	<6.0
Arsenic	3.0	.5	0.10	<3.0	1.3	<3.0	0.70	<3.0	0.50	<3.0
Barium	200	.7	0.0	<200	0.10	<200	-0.10	<200	0.0	<200
Beryllium	1.0	.05	0.0	<1.0	0.10	<1.0	-0.10	<1.0	0.0	<1.0
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	0.30	<3.0	0.20	<3.0	0.10	<3.0	0.20	<3.0
Calcium	5000	15	-0.60	<5000	-0.60	<5000	-1.9	<5000	-4.2	<5000
Chromium	10	.4	0.0	<10	0.10	<10	-0.20	<10	-0.10	<10
Cobalt	50	.2	0.30	<50	0.30	<50	0.20	<50	0.20	<50
Copper	10	.6	0.20	<10	0.0	<10	0.20	<10	0.10	<10
Iron	100	8.7	1.2	<100	4.1	<100	-0.60	<100	1.0	<100
Lead	3.0	1.2	-0.30	<3.0	-0.10	<3.0	-0.30	<3.0	0.20	<3.0
Lithium	20	.3								
Magnesium	5000	10	-7.0	<5000	-1.0	<5000	-8.5	<5000	-11	<5000
Manganese	15	.1	-0.10	<15	0.0	<15	-0.20	<15	-0.20	<15
Molybdenum	20	.6								
Nickel	10	.5	0.0	<10	0.20	<10	-0.10	<10	-0.10	<10
Palladium	50	1								
Potassium	10000	14	-6.9	<10000	13.7	<10000	1.4	<10000	-4.5	<10000
Selenium	10	1.5	0.40	<10	-0.30	<10	0.0	<10	-0.50	<10
Silicon	200	7.9								
Silver	10	.5	-0.10	<10	-0.20	<10	0.0	<10	0.0	<10
Sodium	10000	3.8	40.1	<10000	24.5	<10000	10.4	<10000	12.4	<10000
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	0.60	<2.0	0.90	<2.0	0.70	<2.0	0.90	<2.0
Tin	10	.7								
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	-0.10	<50	0.20	<50	0.0	<50	-0.10	<50
Zinc	20	2.5	0.10	<20	37.0	* (a)	-0.10	<20	0.0	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:			20:02		21:08		21:55		22:59	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	-3.9	<200	2.4	<200	27.7	<200	7.0	<200
Antimony	6.0	1	-0.30	<6.0	0.10	<6.0	0.10	<6.0	0.10	<6.0
Arsenic	3.0	.5	0.60	<3.0	0.50	<3.0	0.90	<3.0	0.70	<3.0
Barium	200	.7	0.10	<200	0.30	<200	0.40	<200	0.30	<200
Beryllium	1.0	.05	0.0	<1.0	0.20	<1.0	0.30	<1.0	0.30	<1.0
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	0.10	<3.0	0.40	<3.0	0.30	<3.0	0.30	<3.0
Calcium	5000	15	-1.3	<5000	3.2	<5000	20.9	<5000	7.0	<5000
Chromium	10	.4	0.0	<10	0.0	<10	0.40	<10	0.50	<10
Cobalt	50	.2	0.20	<50	0.30	<50	0.50	<50	0.40	<50
Copper	10	.6	0.40	<10	0.50	<10	0.70	<10	0.70	<10
Iron	100	8.7	2.1	<100	4.1	<100	13.7	<100	6.0	<100
Lead	3.0	1.2	-0.70	<3.0	-0.20	<3.0	-0.40	<3.0	-0.10	<3.0
Lithium	20	.3								
Magnesium	5000	10	5.6	<5000	-3.5	<5000	24.6	<5000	2.3	<5000
Manganese	15	.1	-0.10	<15	0.10	<15	0.30	<15	0.40	<15
Molybdenum	20	.6								
Nickel	10	.5	0.20	<10	-0.20	<10	0.20	<10	-0.20	<10
Palladium	50	1								
Potassium	10000	14	15.3	<10000	23.7	<10000	20.0	<10000	23.6	<10000
Selenium	10	1.5	-0.80	<10	0.90	<10	1.1	<10	0.80	<10
Silicon	200	7.9								
Silver	10	.5	0.50	<10	0.40	<10	0.70	<10	0.70	<10
Sodium	10000	3.8	11.0	<10000	14.5	<10000	10.0	<10000	9.4	<10000
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	0.70	<2.0	0.30	<2.0	1.3	<2.0	0.70	<2.0
Tin	10	.7								
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	0.20	<50	0.20	<50	0.30	<50	0.40	<50
Zinc	20	2.5	0.0	<20	0.20	<20	0.30	<20	1.3	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:			00:04		01:08		02:12		03:17	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	12.5	<200	13.7	<200	7.7	<200	8.2	<200
Antimony	6.0	1	0.10	<6.0	-0.10	<6.0	0.30	<500	0.0	<500
Arsenic	3.0	.5	1.0	<3.0	0.80	<3.0	1.3	<500	1.5	<500
Barium	200	.7	0.40	<200	0.60	<200	0.60	<1000	0.40	<1000
Beryllium	1.0	.05	0.40	<1.0	0.50	<1.0	0.40	<5.0	0.30	<5.0
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	0.40	<3.0	0.40	<3.0	0.40	<5.0	0.40	<5.0
Calcium	5000	15	7.0	<5000	11.9	<5000	9.0	<5000	7.9	<5000
Chromium	10	.4	0.20	<10	0.50	<10	0.60	<10	0.70	<10
Cobalt	50	.2	0.50	<50	0.60	<50	0.60	<50	0.60	<50
Copper	10	.6	0.90	<10	1.2	<10	1.2	<25	1.0	<25
Iron	100	8.7	6.6	<100	16.6	<100	9.2	<100	7.5	<100
Lead	3.0	1.2	0.20	<3.0	-0.20	<3.0	-0.20	<500	0.10	<500
Lithium	20	.3								
Magnesium	5000	10	-0.10	<5000	7.3	<5000	3.2	<5000	-1.7	<5000
Manganese	15	.1	0.30	<15	0.60	<15	0.40	<15	0.30	<15
Molybdenum	20	.6								
Nickel	10	.5	0.10	<10	0.20	<10	0.60	<40	0.40	<40
Palladium	50	1								
Potassium	10000	14	24.2	<10000	6.5	<10000	8.5	<10000	-19	<10000
Selenium	10	1.5	-0.20	<10	0.10	<10	0.20	<500	1.2	<500
Silicon	200	7.9								
Silver	10	.5	0.60	<10	0.70	<10	0.60	<10	0.80	<10
Sodium	10000	3.8	31.1	<10000	19.7	<10000	14.3	<10000	8.7	<10000
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	1.5	<2.0	0.60	<2.0	1.2	<500	1.1	<500
Tin	10	.7								
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	0.40	<50	0.60	<50	0.30	<50	0.50	<50
Zinc	20	2.5	1.4	<20	1.6	<20	1.6	<20	1.6	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

12.3.2
12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:			04:22		05:09	
Sample ID:			CCB16		CCB17	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	7	5.2	<200	20.1	<200
Antimony	6.0	1	0.40	<6.0	0.20	<6.0
Arsenic	3.0	.5	1.1	<3.0	0.70	<3.0
Barium	200	.7	0.50	<200	0.30	<200
Beryllium	1.0	.05	0.30	<1.0	0.30	<1.0
Bismuth	20	.5				
Boron	100	.6	anr			
Cadmium	3.0	.2	0.40	<3.0	0.30	<3.0
Calcium	5000	15	8.2	<5000	19.2	<5000
Chromium	10	.4	0.40	<10	0.60	<10
Cobalt	50	.2	0.50	<50	0.30	<50
Copper	10	.6	1.1	<10	0.70	<10
Iron	100	8.7	6.1	<100	12.1	<100
Lead	3.0	1.2	-1.0	<3.0	-0.40	<3.0
Lithium	20	.3				
Magnesium	5000	10	1.8	<5000	15.4	<5000
Manganese	15	.1	0.30	<15	0.40	<15
Molybdenum	20	.6				
Nickel	10	.5	0.20	<10	0.10	<10
Palladium	50	1				
Potassium	10000	14	3.5	<10000	-9.5	<10000
Selenium	10	1.5	0.60	<10	0.60	<10
Silicon	200	7.9				
Silver	10	.5	0.70	<10	0.70	<10
Sodium	10000	3.8	37.4	<10000	11.8	<10000
Sulfur	50	2.5				
Strontium	10	.09				
Thallium	2.0	1.5	2.5	* (a)	1.6	<2.0
Tin	10	.7				
Titanium	10	.6				
Tungsten	50	5.2				
Vanadium	50	.3	0.30	<50	0.70	<50
Zinc	20	2.5	1.5	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31563 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

12.3.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:		12:30	
Sample ID:	ICCV	ICCV3	
Metal	True	Results	% Rec
Aluminum	40000	38600	96.5
Antimony	2000	1930	96.5
Arsenic	2000	1930	96.5
Barium	2000	2000	100.0
Beryllium	2000	2040	102.0
Bismuth			
Boron	anr		
Cadmium	2000	1940	97.0
Calcium	40000	41500	103.8
Chromium	2000	1980	99.0
Cobalt	2000	2000	100.0
Copper	2000	1940	97.0
Iron	40000	40100	100.3
Lead	2000	2030	101.5
Lithium			
Magnesium	40000	39400	98.5
Manganese	2000	1990	99.5
Molybdenum			
Nickel	2000	2090	104.5
Palladium			
Potassium	40000	38600	96.5
Selenium	2000	1940	97.0
Silicon			
Silver	250	244	97.6
Sodium	40000	38800	97.0
Sulfur			
Strontium			
Thallium	2000	2110	105.5*(a
Tin			
Titanium			
Tungsten			
Vanadium	2000	1980	99.0
Zinc	2000	2070	103.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 90 to 110 percent limits required for SW846 6010. No EPA 200.7 samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:		11:55			13:48			14:52	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38500	96.3	40000	38300	95.8	40000	38500	96.3
Antimony	2000	1940	97.0	2000	1940	97.0	2000	1960	98.0
Arsenic	2000	1940	97.0	2000	1940	97.0	2000	1960	98.0
Barium	2000	1990	99.5	2000	1990	99.5	2000	2010	100.5
Beryllium	2000	2020	101.0	2000	2040	102.0	2000	2040	102.0
Bismuth									
Boron	anr								
Cadmium	2000	1940	97.0	2000	1950	97.5	2000	1970	98.5
Calcium	40000	39500	98.8	40000	41800	104.5	40000	42000	105.0
Chromium	2000	1980	99.0	2000	1970	98.5	2000	1990	99.5
Cobalt	2000	2000	100.0	2000	2010	100.5	2000	2030	101.5
Copper	2000	1930	96.5	2000	1940	97.0	2000	1970	98.5
Iron	40000	39800	99.5	40000	39900	99.8	40000	40000	100.0
Lead	2000	1990	99.5	2000	2040	102.0	2000	2050	102.5
Lithium									
Magnesium	40000	38800	97.0	40000	39100	97.8	40000	39100	97.8
Manganese	2000	1980	99.0	2000	1970	98.5	2000	1990	99.5
Molybdenum									
Nickel	2000	1990	99.5	2000	2090	104.5	2000	2130	106.5
Palladium									
Potassium	40000	38600	96.5	40000	38300	95.8	40000	38600	96.5
Selenium	2000	1950	97.5	2000	1960	98.0	2000	1970	98.5
Silicon									
Silver	250	242	96.8	250	244	97.6	250	247	98.8
Sodium	40000	38800	97.0	40000	38700	96.8	40000	38800	97.0
Sulfur									
Strontium									
Thallium	2000	2040	102.0	2000	2110	105.5	2000	2130	106.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1980	99.0	2000	1970	98.5	2000	1990	99.5
Zinc	2000	1990	99.5	2000	2070	103.5	2000	2110	105.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:		15:57			17:01			17:30	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	37700	94.3	40000	38500	96.3	40000	38800	97.0
Antimony	2000	1920	96.0	2000	1960	98.0	2000	1960	98.0
Arsenic	2000	1920	96.0	2000	1960	98.0	2000	1950	97.5
Barium	2000	1990	99.5	2000	2030	101.5	2000	2020	101.0
Beryllium	2000	2000	100.0	2000	2030	101.5	2000	2030	101.5
Bismuth									
Boron	anr								
Cadmium	2000	1920	96.0	2000	1960	98.0	2000	1960	98.0
Calcium	40000	41300	103.3	40000	41200	103.0	40000	41800	104.5
Chromium	2000	1940	97.0	2000	1970	98.5	2000	1980	99.0
Cobalt	2000	1990	99.5	2000	2020	101.0	2000	2020	101.0
Copper	2000	1930	96.5	2000	1980	99.0	2000	1960	98.0
Iron	40000	39000	97.5	40000	39500	98.8	40000	39700	99.3
Lead	2000	2020	101.0	2000	2060	103.0	2000	2040	102.0
Lithium									
Magnesium	40000	38100	95.3	40000	38400	96.0	40000	38800	97.0
Manganese	2000	1940	97.0	2000	1960	98.0	2000	1990	99.5
Molybdenum									
Nickel	2000	2100	105.0	2000	2120	106.0	2000	2110	105.5
Palladium									
Potassium	40000	38100	95.3	40000	38900	97.3	40000	39100	97.8
Selenium	2000	1940	97.0	2000	1980	99.0	2000	1970	98.5
Silicon									
Silver	250	242	96.8	250	247	98.8	250	245	98.0
Sodium	40000	38300	95.8	40000	39200	98.0	40000	39400	98.5
Sulfur									
Strontium									
Thallium	2000	2100	105.0	2000	2130	106.5	2000	2120	106.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1940	97.0	2000	1980	99.0	2000	1970	98.5
Zinc	2000	2060	103.0	2000	2090	104.5	2000	2080	104.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:		18:52			19:57			21:02	
Sample ID:	CCV	CCV7		CCV	CCV8		CCV	CCV9	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39200	98.0	40000	37600	94.0	40000	37500	93.8
Antimony	2000	1990	99.5	2000	1930	96.5	2000	1970	98.5
Arsenic	2000	1990	99.5	2000	1920	96.0	2000	1950	97.5
Barium	2000	2070	103.5	2000	2000	100.0	2000	2030	101.5
Beryllium	2000	2060	103.0	2000	1970	98.5	2000	1980	99.0
Bismuth									
Boron	anr								
Cadmium	2000	2000	100.0	2000	1930	96.5	2000	1940	97.0
Calcium	40000	42100	105.3	40000	39700	99.3	40000	38900	97.3
Chromium	2000	2010	100.5	2000	1950	97.5	2000	1950	97.5
Cobalt	2000	2060	103.0	2000	1990	99.5	2000	2020	101.0
Copper	2000	2000	100.0	2000	1940	97.0	2000	1970	98.5
Iron	40000	39800	99.5	40000	38300	95.8	40000	38600	96.5
Lead	2000	2080	104.0	2000	2010	100.5	2000	2020	101.0
Lithium									
Magnesium	40000	39000	97.5	40000	37600	94.0	40000	37400	93.5
Manganese	2000	2000	100.0	2000	1910	95.5	2000	1890	94.5
Molybdenum									
Nickel	2000	2130	106.5	2000	2030	101.5	2000	1990	99.5
Palladium									
Potassium	40000	39800	99.5	40000	38500	96.3	40000	38600	96.5
Selenium	2000	2010	100.5	2000	1940	97.0	2000	1990	99.5
Silicon									
Silver	250	251	100.4	250	245	98.0	250	248	99.2
Sodium	40000	40000	100.0	40000	38300	95.8	40000	38200	95.5
Sulfur									
Strontium									
Thallium	2000	2150	107.5	2000	2050	102.5	2000	2030	101.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2010	100.5	2000	1950	97.5	2000	1970	98.5
Zinc	2000	2130	106.5	2000	1990	99.5	2000	1920	96.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:	
Sample ID:	
Metal	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

12.3.4
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:		21:49			22:54			23:58	
Sample ID:	CCV	CCV10		CCV	CCV11		CCV	CCV12	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38000	95.0	40000	39200	98.0	40000	39500	98.8
Antimony	2000	1970	98.5	2000	1990	99.5	2000	2030	101.5
Arsenic	2000	1940	97.0	2000	1990	99.5	2000	2020	101.0
Barium	2000	2020	101.0	2000	2070	103.5	2000	2100	105.0
Beryllium	2000	1990	99.5	2000	2070	103.5	2000	2090	104.5
Bismuth									
Boron	anr								
Cadmium	2000	1950	97.5	2000	2000	100.0	2000	2020	101.0
Calcium	40000	38500	96.3	40000	41100	102.8	40000	40800	102.0
Chromium	2000	1960	98.0	2000	2060	103.0	2000	2080	104.0
Cobalt	2000	2020	101.0	2000	2090	104.5	2000	2120	106.0
Copper	2000	1970	98.5	2000	2000	100.0	2000	2030	101.5
Iron	40000	38800	97.0	40000	40600	101.5	40000	40800	102.0
Lead	2000	2010	100.5	2000	2100	105.0	2000	2120	106.0
Lithium									
Magnesium	40000	37800	94.5	40000	40300	100.8	40000	40300	100.8
Manganese	2000	1910	95.5	2000	2010	100.5	2000	2000	100.0
Molybdenum									
Nickel	2000	1960	98.0	2000	2050	102.5	2000	2040	102.0
Palladium									
Potassium	40000	39000	97.5	40000	40300	100.8	40000	40600	101.5
Selenium	2000	1980	99.0	2000	2010	100.5	2000	2050	102.5
Silicon									
Silver	250	247	98.8	250	256	102.4	250	261	104.4
Sodium	40000	38600	96.5	40000	39800	99.5	40000	40000	100.0
Sulfur									
Strontium									
Thallium	2000	2020	101.0	2000	2080	104.0	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1980	99.0	2000	2070	103.5	2000	2100	105.0
Zinc	2000	1910	95.5	2000	2030	101.5	2000	2000	100.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:	
Sample ID:	
Metal	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:		01:02			02:06			03:11	
Sample ID:	CCV	CCV13		CCV	CCV14		CCV	CCV15	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40200	100.5	40000	40600	101.5	40000	40800	102.0
Antimony	2000	1990	99.5	2000	2010	100.5	2000	2050	102.5
Arsenic	2000	2010	100.5	2000	2020	101.0	2000	2070	103.5
Barium	2000	2100	105.0	2000	2120	106.0	2000	2150	107.5
Beryllium	2000	2120	106.0	2000	2150	107.5	2000	2180	109.0
Bismuth									
Boron	anr								
Cadmium	2000	2030	101.5	2000	2040	102.0	2000	2080	104.0
Calcium	40000	42700	106.8	40000	42500	106.3	40000	44100	110.3*(a
Chromium	2000	2140	107.0	2000	2170	108.5	2000	2190	109.5
Cobalt	2000	2130	106.5	2000	2140	107.0	2000	2190	109.5
Copper	2000	2010	100.5	2000	2030	101.5	2000	2060	103.0
Iron	40000	41500	103.8	40000	42200	105.5	40000	42700	106.8
Lead	2000	2170	108.5	2000	2160	108.0	2000	2230	111.5*(a
Lithium									
Magnesium	40000	42100	105.3	40000	42800	107.0	40000	43100	107.8
Manganese	2000	2070	103.5	2000	2090	104.5	2000	2100	105.0
Molybdenum									
Nickel	2000	2110	105.5	2000	2070	103.5	2000	2170	108.5
Palladium									
Potassium	40000	41400	103.5	40000	41800	104.5	40000	41900	104.8
Selenium	2000	2020	101.0	2000	2030	101.5	2000	2090	104.5
Silicon									
Silver	250	262	104.8	250	264	105.6	250	269	107.6
Sodium	40000	40700	101.8	40000	41000	102.5	40000	41300	103.3
Sulfur									
Strontium									
Thallium	2000	2140	107.0	2000	2110	105.5	2000	2200	110.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2130	106.5	2000	2160	108.0	2000	2180	109.0
Zinc	2000	2130	106.5	2000	2090	104.5	2000	2190	109.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:		04:16			05:03	
Sample ID:	CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40400	101.0	40000	41000	102.5
Antimony	2000	2020	101.0	2000	1980	99.0
Arsenic	2000	2030	101.5	2000	2000	100.0
Barium	2000	2130	106.5	2000	2110	105.5
Beryllium	2000	2140	107.0	2000	2140	107.0
Bismuth						
Boron	anr					
Cadmium	2000	2040	102.0	2000	2030	101.5
Calcium	40000	43400	108.5	40000	43100	107.8
Chromium	2000	2160	108.0	2000	2180	109.0
Cobalt	2000	2150	107.5	2000	2120	106.0
Copper	2000	2040	102.0	2000	2010	100.5
Iron	40000	41800	104.5	40000	41700	104.3
Lead	2000	2200	110.0	2000	2160	108.0
Lithium						
Magnesium	40000	42300	105.8	40000	42800	107.0
Manganese	2000	2080	104.0	2000	2130	106.5
Molybdenum						
Nickel	2000	2150	107.5	2000	2100	105.0
Palladium						
Potassium	40000	41800	104.5	40000	42300	105.8
Selenium	2000	2050	102.5	2000	2000	100.0
Silicon						
Silver	250	266	106.4	250	261	104.4
Sodium	40000	41000	102.5	40000	41500	103.8
Sulfur						
Strontium						
Thallium	2000	2170	108.5	2000	2120	106.0
Tin						
Titanium						
Tungsten						
Vanadium	2000	2160	108.0	2000	2140	107.0
Zinc	2000	2150	107.5	2000	2130	106.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31563 Units: ug/l

Time:	
Sample ID:	
Metal	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31563 Units: ug/l

Time:				13:06		13:12		13:18	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	203	101.5	96.7	96.7	480	96.0
Antimony	6.0	20	3.0	4.9	81.7	2.7	90.0	18.0	90.0
Arsenic	8.0	20	3.0	8.4	105.0	2.9	96.7	18.8	94.0
Barium	200		4.0	190	95.0	3.9	97.5		
Beryllium	2.0		1.0	2.0	100.0	1.0	100.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	2.9	96.7	0.90	90.0		
Calcium	5000		1000	5100	102.0	1010	101.0		
Chromium	10		2.0	9.4	94.0	1.5	75.0		
Cobalt	50		3.0	51.6	103.2	3.3	110.0		
Copper	10		2.0	11.6	116.0				
Iron	100	500		101	101.0			505	101.0
Lead	3.0	20	2.5	2.5	83.3			19.4	97.0
Lithium	20								
Magnesium	5000		100	4950	99.0	91.4	91.4		
Manganese	15		3.0	13.6	90.7	2.9	96.7		
Molybdenum	20		4.0						
Nickel	10		4.0	10.0	100.0	3.9	97.5		
Palladium	50								
Potassium	5000		2000	4720	94.4	1850	92.5		
Selenium	10	20	5.0	9.1	91.0	4.2	84.0	20.1	100.5
Silicon	200								
Silver	5.0		1.0	5.1	102.0				
Sodium	5000		1000	4840	96.8	925	92.5		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	9.1	91.0	1.5	75.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	48.3	96.6	1.8	90.0		
Zinc	20		10	18.7	93.5				

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31563 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31563 Units: ug/l

Time:				21:14		21:19		21:25	
Sample ID:	CRI	CRIA	CRID	CRID3		CRI2		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	104	104.0	204	102.0	101	101.0
Antimony	6.0	20	3.0	2.4	80.0	5.3	88.3	2.4	80.0
Arsenic	8.0	20	3.0	3.2	106.7	7.8	97.5	2.7	90.0
Barium	200		4.0	4.1	102.5	195	97.5	4.0	100.0
Beryllium	2.0		1.0	1.0	100.0	2.0	100.0	1.0	100.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	1.0	100.0	3.0	100.0	1.0	100.0
Calcium	5000		1000	1000	100.0	5040	100.8	974	97.4
Chromium	10		2.0	1.9	95.0	9.7	97.0	1.8	90.0
Cobalt	50		3.0	3.4	113.3	52.8	105.6	3.3	110.0
Copper	10		2.0			12.0	120.0		
Iron	100	500				100	100.0		
Lead	3.0	20	2.5			3.7	123.3		
Lithium	20								
Magnesium	5000		100	89.7	89.7	4840	96.8	96.3	96.3
Manganese	15		3.0	3.1	103.3	13.6	90.7	3.1	103.3
Molybdenum	20		4.0						
Nickel	10		4.0	4.2	105.0	9.7	97.0	4.1	102.5
Palladium	50								
Potassium	5000		2000	1910	95.5	4860	97.2	1920	96.0
Selenium	10	20	5.0	4.0	80.0	9.2	92.0	4.2	84.0
Silicon	200								
Silver	5.0		1.0			5.5	110.0		
Sodium	5000		1000	945	94.5	4920	98.4	948	94.8
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.1	105.0	8.2	82.0	2.3	115.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	2.0	100.0	49.2	98.4	2.0	100.0
Zinc	20		10			18.2	91.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31563 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31563 Units: ug/l

Time:				21:31		04:27		04:33	
Sample ID:	CRI	CRIA	CRID	CRIA2		CRID5		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	481	96.2	107	107.0	216	108.0
Antimony	6.0	20	3.0	18.5	92.5	3.0	100.0	5.6	93.3
Arsenic	8.0	20	3.0	18.2	91.0	3.5	116.7	8.8	110.0
Barium	200		4.0			4.3	107.5	205	102.5
Beryllium	2.0		1.0			1.1	110.0	2.2	110.0
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0			1.0	100.0	3.1	103.3
Calcium	5000		1000			1120	112.0	5670	113.4
Chromium	10		2.0			2.2	110.0	10.7	107.0
Cobalt	50		3.0			3.6	120.0	55.8	111.6
Copper	10		2.0					12.6	126.0
Iron	100	500		492	98.4			108	108.0
Lead	3.0	20	2.5	18.4	92.0			3.4	113.3
Lithium	20								
Magnesium	5000		100			101	101.0	5550	111.0
Manganese	15		3.0			3.3	110.0	14.9	99.3
Molybdenum	20		4.0						
Nickel	10		4.0			4.7	117.5	10.6	106.0
Palladium	50								
Potassium	5000		2000			2050	102.5	5270	105.4
Selenium	10	20	5.0	20.5	102.5	4.0	80.0	10.6	106.0
Silicon	200								
Silver	5.0		1.0					5.9	118.0
Sodium	5000		1000			1030	103.0	5310	106.2
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0			3.0	150.0*(a	10.3	103.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0			2.2	110.0	54.0	108.0
Zinc	20		10					20.4	102.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31563 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31563 Units: ug/l

Time:				04:39		04:45	
Sample ID:	CRI	CRIA	CRID	CRID6		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	114	114.0	518	103.6
Antimony	6.0	20	3.0	2.5	83.3	19.4	97.0
Arsenic	8.0	20	3.0	4.0	133.3*(a	19.6	98.0
Barium	200		4.0	4.5	112.5		
Beryllium	2.0		1.0	1.1	110.0		
Bismuth	20						
Boron	100		10	anr			
Cadmium	3.0		1.0	1.1	110.0		
Calcium	5000		1000	1140	114.0		
Chromium	10		2.0	2.2	110.0		
Cobalt	50		3.0	3.5	116.7		
Copper	10		2.0				
Iron	100	500				539	107.8
Lead	3.0	20	2.5			21.4	107.0
Lithium	20						
Magnesium	5000		100	112	112.0		
Manganese	15		3.0	3.3	110.0		
Molybdenum	20		4.0				
Nickel	10		4.0	4.6	115.0		
Palladium	50						
Potassium	5000		2000	2080	104.0		
Selenium	10	20	5.0	5.0	100.0	21.1	105.5
Silicon	200						
Silver	5.0		1.0				
Sodium	5000		1000	1040	104.0		
Sulfur	50	50	50				
Strontium	10						
Thallium	10		2.0	0.80U	0.0* (b)		
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	2.3	115.0		
Zinc	20		10				

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31563 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested
(a) No AQ samples reported for this element in the area bracketed by this QC.
(b) No samples reported for TLNJ in the area bracketed by this QC.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31563 Units: ug/l

Time:			13:24		13:30		21:37		21:43	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	501000	100.2	498000	99.6	488000	97.6	470000	94.0
Antimony		1000	3.8		1010	101.0	2.7		1010	101.0
Arsenic		1000	1.3		937	93.7	1.3		924	92.4
Barium		500	-0.10		505	101.0	-0.20		501	100.2
Beryllium		500	-0.10		475	95.0	-0.10		455	91.0
Bismuth		500	5.9		484	96.8	5.3		482	96.4
Boron			-1.3		-2.2		-1.2		-2.4	
Cadmium		1000	-2.1		974	97.4	-1.9		957	95.7
Calcium	400000	400000	373000	93.3	379000	94.8	344000	86.0	344000	86.0
Chromium		500	1.1		461	92.2	1.2		446	89.2
Cobalt		500	-0.50		462	92.4	-0.40		457	91.4
Copper		500	-4.5		499	99.8	-6.2		494	98.8
Iron	200000	200000	181000	90.5	185000	92.5	172000	86.0	175000	87.5
Lead		1000	-0.60		936	93.6	2.3		901	90.1
Lithium		500	0.60		507	101.4	0.90		511	102.2
Magnesium	500000	500000	526000	105.2	511000	102.2	501000	100.2	482000	96.4
Manganese		500	2.4		467	93.4	2.6		437	87.4
Molybdenum		500	-2.2		480	96.0	-2.1		474	94.8
Nickel		1000	-1.8		952	95.2	0.20		877	87.7
Palladium		500	11.2		557	111.4	6.0		550	110.0
Potassium			42.3		57.6		44.2		36.3	
Selenium		1000	5.9		1030	103.0	4.9		1030	103.0
Silicon			2.9		3.9		2.5		2.4	
Silver		1000	-2.4		974	97.4	-3.6		964	96.4
Sodium			13.0		20.0		5.6		9.8	
Sulfur		500	50.6		510	102.0	48.2		503	100.6
Strontium			4.2		4.0		5.0		4.9	
Thallium		1000	-1.8		1020	102.0	0.50		955	95.5
Tin			-1.2		-1.7		-0.40		-0.80	
Titanium			0.0		0.50		0.0		0.30	
Tungsten		500	20.6		594	118.8	12.9		578	115.6
Vanadium		500	1.9		455	91.0	1.6		448	89.6
Zinc		1000	9.6		1000	100.0	10.6		907	90.7

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31563 Units: ug/l

Time:							
Sample ID:							
Metal							
Zirconium	500	-2.2	413	82.6	-2.4	390	78.0*

(*) Outside of QC limits
(anr) Analyte not requested

12.3.6
12

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31563 Units: ug/l

Time:			04:51		04:57	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	507000	101.4	507000	101.4
Antimony		1000	2.4		1010	101.0
Arsenic		1000	1.4		946	94.6
Barium		500	-0.10		518	103.6
Beryllium		500	-0.10		482	96.4
Bismuth		500	5.4		478	95.6
Boron			-1.6		-1.2	
Cadmium		1000	-2.2		986	98.6
Calcium	400000	400000	381000	95.3	376000	94.0
Chromium		500	1.3		488	97.6
Cobalt		500	-1.0		477	95.4
Copper		500	-6.9		498	99.6
Iron	200000	200000	183000	91.5	187000	93.5
Lead		1000	-2.2		966	96.6
Lithium		500	0.80		528	105.6
Magnesium	500000	500000	548000	109.6	531000	106.2
Manganese		500	2.8		474	94.8
Molybdenum		500	-1.8		489	97.8
Nickel		1000	0.70		922	92.2
Palladium		500	8.1		559	111.8
Potassium			38.6		18.6	
Selenium		1000	6.5		1040	104.0
Silicon			4.3		3.3	
Silver		1000	-3.7		1010	101.0
Sodium			23.4		14.9	
Sulfur		500	48.6		524	104.8
Strontium			3.9		4.2	
Thallium		1000	-2.0		1000	100.0
Tin			-1.3		0.40	
Titanium			0.10		0.20	
Tungsten		500	16.7		605	121.0*
Vanadium		500	1.5		480	96.0
Zinc		1000	11.6		993	99.3

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070113M1.ICP Date Analyzed: 07/01/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31563 Units: ug/l

Time:				
Sample ID:				
Metal				
Zirconium	500	-2.0	413	82.6

(*) Outside of QC limits
(anr) Analyte not requested

12.3.6
12

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
Analyst: AA Run ID: MA31569
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:16	MA31569-STD1	1		STDA
11:17	MA31569-STD2	1		STDB
11:18	MA31569-STD3	1		STDC
11:20	MA31569-STD4	1		STDD
11:21	MA31569-STD5	1		STDE
11:23	MA31569-STD6	1		STDF
11:40	MA31569-ICV1	1		
11:42	MA31569-ICB1	1		
11:43	MA31569-CCV1	1		
11:44	MA31569-CCB1	1		
11:46	MA31569-CRI1	1		
11:49	ZZZZZZ	1		
11:51	ZZZZZZ	1		
12:22	MP72968-MB1	1		
12:24	MP72968-LC1	5		
12:25	MP72968-S1	1		
12:26	MP72968-S2	1		
12:28	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:32	MA31569-CCV2	1		
12:33	MA31569-CCB2	1		
12:35	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:39	ZZZZZZ	1		
12:40	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:43	ZZZZZZ	1		
12:44	ZZZZZZ	1		
12:45	ZZZZZZ	1		
12:47	ZZZZZZ	1		
12:48	MA31569-CCV3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
Analyst: AA Run ID: MA31569
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:49	MA31569-CCB3	1		
12:51	JB40709-3	1		(sample used for QC only; not part of login JB40127)
12:52	ZZZZZZ	1		
12:54	ZZZZZZ	1		
12:55	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:58	MP72969-MB1	1		
12:59	MP72969-LC1	5		
13:00	MP72969-S1	1		
13:02	MP72969-S2	1		
13:03	ZZZZZZ	1		
13:05	MA31569-CCV4	1		
13:06	MA31569-CCB4	1		
13:08	ZZZZZZ	1		
13:09	ZZZZZZ	1		
13:10	ZZZZZZ	1		
13:12	JB40939-2A	1		(sample used for QC only; not part of login JB40127)
13:13	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:16	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:18	ZZZZZZ	1		
13:20	ZZZZZZ	1		
13:21	MA31569-CCV5	1		
13:22	MA31569-CCB5	1		
13:24	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:32	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:37	ZZZZZZ	1		
13:38	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
Analyst: AA Run ID: MA31569
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:39	ZZZZZZ	1		
13:41	MA31569-CCV6	1		
13:42	MA31569-CCB6	1		
13:50	ZZZZZZ	1		
13:52	MP72970-MB1	1		
13:53	MP72970-LC1	10		
13:54	MP72970-S1	1		See at dilution.
13:56	MP72970-S2	1		See at dilution.
13:57	ZZZZZZ	1		
13:59	ZZZZZZ	1		
14:00	JB40127-1	1		
14:06	JB40127-2	1		
14:08	MA31569-CCV7	1		
14:09	MA31569-CCB7	1		
14:10	JB40127-3	1		
14:16	JB40127-4	1		
14:17	JB40127-5	1		
14:19	JB40127-6	1		
14:20	JB40127-7	1		
14:21	ZZZZZZ	1		
14:23	JB40214-1	1		(sample used for QC only; not part of login JB40127)
14:24	ZZZZZZ	1		
14:26	ZZZZZZ	1		
14:27	ZZZZZZ	1		
14:29	MA31569-CCV8	1		
14:30	MA31569-CCB8	1		
14:31	ZZZZZZ	1		
14:33	ZZZZZZ	1		
14:34	ZZZZZZ	1		
14:35	ZZZZZZ	1		
14:49	MP72970-S1	2		
14:50	MP72970-S2	2		
---------->	Last reportable sample/prep for job JB40127			
14:52	ZZZZZZ	2		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
Analyst: AA Run ID: MA31569
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:53	ZZZZZZ	1		
14:55	ZZZZZZ	1		
14:56	MA31569-CCV9	1		
14:58	MA31569-CCB9	1		

----------> Last reportable CCB for job JB40127
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA31569 Units: ug/l

Time:			11:42		11:44		12:33		12:49	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.043	-0.027	<0.20	-0.0089	<0.20	-0.0027	<0.20	-0.014	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA31569 Units: ug/l

Time:			13:06		13:22		13:42		14:09	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.043	-0.010	<0.20	-0.013	<0.20	-0.032	<0.20	-0.0076	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA31569 Units: ug/l

Time:			14:30		14:58	
Sample ID:			CCB8		CCB9	
Metal	RL	IDL	raw	final	raw	final
Mercury	0.20	.043	-0.010	<0.20	-0.010	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

12.4.1
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31569 Units: ug/l

Time:		11:40			11:43			12:32	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	2.5	2.6	104.0	2.5	2.7	108.0

(*) Outside of QC limits
(anr) Analyte not requested

12.4.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31569 Units: ug/l

Time:		12:48			13:05			13:21	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.7	108.0	2.5	2.7	108.0	2.5	2.7	108.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31569 Units: ug/l

Time:		13:41			14:08			14:29	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.7	108.0	2.5	2.7	108.0	2.5	2.7	108.0

(*) Outside of QC limits
(anr) Analyte not requested

12.4.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31569 Units: ug/l

Time:		14:56	
Sample ID:	CCV	CCV9	
Metal	True	Results	% Rec
Mercury	2.5	2.7	108.0

(*) Outside of QC limits
(anr) Analyte not requested

12.4.2
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H8070213S1.CSV Date Analyzed: 07/02/13 Methods: SW846 7471B
QC Limits: 50 to 150 % Recovery Run ID: MA31569 Units: ug/l

Time:			11:46	
Sample ID:	CRI	CRIA	CRI1	
Metal	True	True	Results	% Rec
Mercury	0.20		0.20	100.0

(*) Outside of QC limits
(anr) Analyte not requested

12.4.3

12

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:10	MA31586-STD1	1		STDA
18:16	MA31586-STD2	1		STDD
18:22	MA31586-ICV1	1		
18:28	MA31586-ICB1	1		
18:34	MA31586-ICCV1	1		
18:40	MA31586-CCB1	1		
18:46	MA31586-ICCV2	1		
18:51	MA31586-CCB2	1		
18:57	MA31586-CRID1	1		
19:03	MA31586-CRI1	1		
19:09	MA31586-CRID2	1		
19:15	MA31586-CRIA1	1		
19:21	MA31586-ICSA1	1		
19:27	MA31586-ICSAB1	1		
19:33	MA31586-CCV1	1		
19:38	MA31586-CCB3	1		
19:44	ZZZZZZ	1		
19:50	MP72896-MB2	1		
19:56	MP72896-S1	1		
20:02	MP72896-S2	1		
20:08	JB40473-17	1		(sample used for QC only; not part of login JB40127)
20:14	MP72896-SD1	5		
20:20	MP72947-S1	1		
20:25	MP72947-S2	1		
20:31	JB40954-1	1		(sample used for QC only; not part of login JB40127)
20:37	MA31586-CCV2	1		
20:43	MA31586-CCB4	1		
20:49	MP72947-SD1	5		
20:54	ZZZZZZ	1		
21:00	ZZZZZZ	1		
21:06	ZZZZZZ	1		
21:12	ZZZZZZ	1		
21:18	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:24	ZZZZZZ	1		
21:30	ZZZZZZ	1		
21:36	ZZZZZZ	1		
21:42	MA31586-CCV3	1		
21:48	MA31586-CCB5	1		
21:54	ZZZZZZ	1		
22:00	ZZZZZZ	1		
22:06	ZZZZZZ	1		
22:12	ZZZZZZ	1		
22:18	ZZZZZZ	1		
22:24	ZZZZZZ	1		
22:29	MP72852-S1	1		
22:35	MP72852-S2	1		
22:41	JB40236-10	1		(sample used for QC only; not part of login JB40127)
22:47	MA31586-CCV4	1		
22:53	MA31586-CCB6	1		
22:59	MP72852-SD1	5		
23:05	JB40127-7	1		Mn high
23:11	ZZZZZZ	1		
23:17	ZZZZZZ	1		
23:22	ZZZZZZ	1		
23:28	ZZZZZZ	1		
23:34	ZZZZZZ	1		
23:40	ZZZZZZ	1		
23:46	ZZZZZZ	1		
23:51	MA31586-CCV5	1		
23:57	MA31586-CCB7	1		
00:03	ZZZZZZ	1		
00:09	ZZZZZZ	1		
00:15	ZZZZZZ	1		
00:21	ZZZZZZ	1		
00:27	ZZZZZZ	1		
00:33	MP72808-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:39	MP72808-S2	1		
00:45	JB39636-7	1		(sample used for QC only; not part of login JB40127)
00:50	MP72808-SD1	5		
00:56	MA31586-CCV6	1		
01:02	MA31586-CCB8	1		
01:08	ZZZZZZ	1		
01:14	ZZZZZZ	1		
01:20	ZZZZZZ	1		
01:26	ZZZZZZ	1		
01:32	ZZZZZZ	1		
01:38	ZZZZZZ	1		
01:44	ZZZZZZ	1		
01:49	MP72816-MB2	1		
01:55	MP72816-LC2	1		
02:01	MA31586-CCV7	1		
02:07	MA31586-CCB9	1		
02:13	MA31586-CRID3	1		
02:19	MA31586-CRI2	1		
02:25	MA31586-CRID4	1		
02:31	MA31586-CRIA2	1		
02:37	MA31586-ICSA2	1		
02:43	MA31586-ICSAB2	1		
02:49	MA31586-CCV8	1		
02:54	MA31586-CCB10	1		
03:00	MP72816-B2	1		
03:06	MP72816-S1	1		
03:12	MP72816-S2	1		
03:18	JB40226-2F	1		(sample used for QC only; not part of login JB40127)
03:24	MP72816-SD1	5		
03:30	ZZZZZZ	1		
03:36	ZZZZZZ	1		
03:41	ZZZZZZ	1		
03:47	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:53	MA31586-CCV9	1		
03:59	MA31586-CCB11	1		
04:05	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:17	ZZZZZZ	1		
04:23	ZZZZZZ	1		
04:29	ZZZZZZ	1		
04:35	ZZZZZZ	1		
04:41	ZZZZZZ	1		
04:47	MP72820-MB1	1		
04:53	MP72820-B1	1		
04:59	MA31586-CCV10	1		
05:04	MA31586-CCB12	1		
05:10	MP72820-S1	1		
05:16	MP72820-S2	1		
05:22	JB39637-2	1		(sample used for QC only; not part of login JB40127)
05:28	MP72820-SD1	5		
05:34	ZZZZZZ	1		
05:40	ZZZZZZ	1		
05:45	ZZZZZZ	1		
05:51	ZZZZZZ	1		
05:57	ZZZZZZ	1		
06:03	MA31586-CCV11	1		
06:09	MA31586-CCB13	1		
06:15	ZZZZZZ	1		
06:21	MP72852-S1	2		
06:26	MP72852-S2	2		
---------->	Last reportable sample/prep for job JB40127			
06:32	MA31586-CRIA3	1		
06:38	MA31586-CRID5	1		
06:44	MA31586-CRI3	1		
06:50	MA31586-ICSA3	1		
06:56	MA31586-ICSAB3	1		
07:02	MA31586-CCV12	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:08	MA31586-CCB14	1		
----------> Last reportable CCB for job JB40127				
07:13	ZZZZZZ	1		
07:20	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:10	MA31586-STD1	2249 R	124810 R	32406 R	6441 R
18:16	MA31586-STD2	2055	111300	30409	5424
18:22	MA31586-ICV1	2124	115520	30954	5678
18:28	MA31586-ICB1	2247	124170	31893	6429
18:34	MA31586-ICCV1	No results reported for the elements associated with this internal standard.			
18:40	MA31586-CCB1	2268	124440	31746	6469
18:46	MA31586-ICCV2	2128	115810	31116	5676
18:51	MA31586-CCB2	2277	126800	31863	6520
18:57	MA31586-CRID1	2250	124030	31715	6380
19:03	MA31586-CRI1	2219	122440	31905	6243
19:09	MA31586-CRID2	2270	123860	31840	6458
19:15	MA31586-CRIA1	2248	124870	31788	6419
19:21	MA31586-ICSA1	1884	103920	29593	4795
19:27	MA31586-ICSAB1	1907	103990	30139	4868
19:33	MA31586-CCV1	2124	115760	31067	5679
19:38	MA31586-CCB3	2227	123790	32066	6368
19:44	ZZZZZZ	2261	121210	31878	6465
19:50	MP72896-MB2	2242	126020	31778	6426
19:56	MP72896-S1	1998	109970	30675	5251
20:02	MP72896-S2	2012	110290	30626	5271
20:08	JB40473-17	2052	111820	31043	5399
20:14	MP72896-SD1	2183	120780	31880	6001
20:20	MP72947-S1	2151	118830	32070	5872
20:25	MP72947-S2	2144	118700	31407	5854
20:31	JB40954-1	2248	125880	32293	6411
20:37	MA31586-CCV2	2139	117320	31242	5680
20:43	MA31586-CCB4	2278	125460	31923	6464
20:49	MP72947-SD1	2243	125380	32262	6386
20:54	ZZZZZZ	2121	119030	32346	5920
21:00	ZZZZZZ	2055	110770	30800	5363
21:06	ZZZZZZ	1808	100230	29563	4602
21:12	ZZZZZZ	1834	101470	29336	4654
21:18	ZZZZZZ	2247	125470	31890	6416

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:24	ZZZZZZ	2225	124230	31773	6349
21:30	ZZZZZZ	1954	106740	29729	5074
21:36	ZZZZZZ	2123	116470	30998	5737
21:42	MA31586-CCV3	2143	117530	31491	5672
21:48	MA31586-CCB5	2273	125820	32208	6439
21:54	ZZZZZZ	2038	112220	30713	5394
22:00	ZZZZZZ	2120	116700	30873	5732
22:06	ZZZZZZ	2136	117510	31124	5798
22:12	ZZZZZZ	1708	94694	28851	4286 !
22:18	ZZZZZZ	1706	94389	28603	4278 !
22:24	ZZZZZZ	2181	121130	31626	6027
22:29	MP72852-S1	2141	117830	31950	5587
22:35	MP72852-S2	2191	119100	31773	5707
22:41	JB40236-10	2214	122440	32338	5834
22:47	MA31586-CCV4	2113	116110	31096	5605
22:53	MA31586-CCB6	2274	125970	31989	6443
22:59	MP72852-SD1	2226	123570	31656	6155
23:05	JB40127-7	2222	120670	31888	5859
23:11	ZZZZZZ	2296	124780	32886	5903
23:17	ZZZZZZ	2211	121220	31949	5932
23:22	ZZZZZZ	2288	125540	33239	5915
23:28	ZZZZZZ	2257	123130	32576	5860
23:34	ZZZZZZ	2254	123200	32377	5885
23:40	ZZZZZZ	2286	125300	32900	5930
23:46	ZZZZZZ	2242	122580	32232	5811
23:51	MA31586-CCV5	2135	116850	30955	5654
23:57	MA31586-CCB7	2265	125470	31981	6435
00:03	ZZZZZZ	2249	122670	32499	5794
00:09	ZZZZZZ	2228	121930	32092	5787
00:15	ZZZZZZ	2184	120940	32306	5693
00:21	ZZZZZZ	2200	121330	32206	5704
00:27	ZZZZZZ	2199	121040	32261	5701
00:33	MP72808-S1	1966	109650	29823	5121

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:39	MP72808-S2	2128	117620	31055	5723
00:45	JB39636-7	2074	116300	30720	5684
00:50	MP72808-SD1	2203	122400	31531	6200
00:56	MA31586-CCV6	2132	116180	30796	5670
01:02	MA31586-CCB8	2263	125270	31726	6445
01:08	ZZZZZZ	2025	113920	30697	5520
01:14	ZZZZZZ	1965	110020	30119	5181
01:20	ZZZZZZ	2053	115080	30768	5556
01:26	ZZZZZZ	2097	115740	30421	5673
01:32	ZZZZZZ	2065	114840	30675	5580
01:38	ZZZZZZ	2030	113880	30680	5533
01:44	ZZZZZZ	2240	124110	31498	6388
01:49	MP72816-MB2	2229	124580	31389	6359
01:55	MP72816-LC2	2179	120840	31333	6055
02:01	MA31586-CCV7	2123	116060	30923	5647
02:07	MA31586-CCB9	2256	123690	31762	6399
02:13	MA31586-CRID3	2237	124230	31533	6344
02:19	MA31586-CRI2	2236	122350	31042	6274
02:25	MA31586-CRID4	2272	125200	31380	6433
02:31	MA31586-CRIA2	2266	125730	31657	6438
02:37	MA31586-ICSA2	1928	105020	28936	4888
02:43	MA31586-ICSAB2	1916	104880	29001	4880
02:49	MA31586-CCV8	2126	116530	30838	5656
02:54	MA31586-CCB10	2256	125620	31633	6426
03:00	MP72816-B2	2138	118480	30194	5857
03:06	MP72816-S1	2010	110730	30080	5300
03:12	MP72816-S2	1988	110970	30219	5253
03:18	JB40226-2F	2020	112210	30570	5377
03:24	MP72816-SD1	2209	121070	31217	6089
03:30	ZZZZZZ	1989	110600	30409	5216
03:36	ZZZZZZ	2149	119970	31237	5946
03:41	ZZZZZZ	2196	121060	31074	6042
03:47	ZZZZZZ	1930	107240	29886	5057

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:53	MA31586-CCV9	2136	116790	30763	5677
03:59	MA31586-CCB11	2273	126220	31995	6450
04:05	ZZZZZZ	1496 !	82723 !	26292	3627 !
04:11	ZZZZZZ	2029	112180	30112	5403
04:17	ZZZZZZ	2006	110440	30042	5308
04:23	ZZZZZZ	2000	110420	30040	5298
04:29	ZZZZZZ	2049	113480	30323	5456
04:35	ZZZZZZ	2124	115490	30382	5658
04:41	ZZZZZZ	2083	114660	30250	5537
04:47	MP72820-MB1	2246	126160	31875	6443
04:53	MP72820-B1	2203	120450	30789	6004
04:59	MA31586-CCV10	2124	116790	30536	5634
05:04	MA31586-CCB12	2247	125010	31522	6383
05:10	MP72820-S1	2102	115880	30237	5598
05:16	MP72820-S2	2078	115250	30080	5529
05:22	JB39637-2	2110	117310	30788	5739
05:28	MP72820-SD1	2231	123520	31323	6244
05:34	ZZZZZZ	2129	117830	30733	5786
05:40	ZZZZZZ	2084	115860	30506	5616
05:45	ZZZZZZ	2102	116420	30422	5669
05:51	ZZZZZZ	2111	117510	30671	5717
05:57	ZZZZZZ	2089	115850	30333	5580
06:03	MA31586-CCV11	2149	116860	30520	5695
06:09	MA31586-CCB13	2307	126620	31415	6546
06:15	ZZZZZZ	2086	116520	30739	5654
06:21	MP72852-S1	2156	119310	31312	5747
06:26	MP72852-S2	2229	121580	31248	5930
06:32	MA31586-CRIA3	2251	125950	31612	6379
06:38	MA31586-CRID5	2256	125100	31578	6372
06:44	MA31586-CRI3	2276	124120	31131	6347
06:50	MA31586-ICSA3	1936	105590	29208	4905
06:56	MA31586-ICSAB3	1948	106020	28943	4919
07:02	MA31586-CCV12	2158	117380	30716	5709

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31586
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
07:08	MA31586-CCB14	2291	126220	31430	6482
07:13	ZZZZZZ	2224	122350	31022	6317
07:20	ZZZZZZ	2262	116780	30586	5648

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31586 Units: ug/l

Time:			18:28		18:40		18:51		19:38	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	4.1	<200	6.3	<200	-0.60	<200	10.9	<200
Antimony	6.0	1	0.60	<6.0	0.50	<6.0	0.70	<6.0	0.20	<6.0
Arsenic	3.0	.5	0.40	<3.0	1.1	<3.0	1.0	<3.0	1.1	<3.0
Barium	200	.7	0.20	<200	0.40	<200	0.40	<200	0.30	<200
Beryllium	1.0	.05	0.20	<1.0	0.30	<1.0	0.30	<1.0	0.40	<1.0
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	0.40	<3.0	0.50	<3.0	0.50	<3.0	0.40	<3.0
Calcium	5000	15	5.5	<5000	7.8	<5000	7.1	<5000	17.7	<5000
Chromium	10	.4	0.0	<10	0.30	<10	0.30	<10	0.10	<10
Cobalt	50	.2	0.50	<50	0.50	<50	0.70	<50	0.50	<50
Copper	10	.6	0.50	<10	0.60	<10	0.50	<10	0.50	<10
Iron	100	8.7	6.2	<100	8.2	<100	7.0	<100	11.0	<100
Lead	3.0	1.2	0.60	<3.0	0.60	<3.0	0.70	<3.0	0.20	<3.0
Lithium	20	.3								
Magnesium	5000	10	4.1	<5000	1.3	<5000	9.1	<5000	20.6	<5000
Manganese	15	.1	0.10	<15	0.30	<15	0.30	<15	0.30	<15
Molybdenum	20	.6								
Nickel	10	.5	0.60	<10	0.50	<10	0.60	<10	0.50	<10
Palladium	50	1								
Potassium	10000	14	21.5	<10000	22.3	<10000	21.8	<10000	22.4	<10000
Selenium	10	1.5	1.6	<10	1.4	<10	0.90	<10	0.40	<10
Silicon	200	7.9								
Silver	10	.5	0.20	<10	0.20	<10	0.20	<10	0.50	<10
Sodium	10000	3.8	8.6	<10000	6.9	<10000	7.7	<10000	6.1	<10000
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	0.20	<2.0	0.40	<2.0	0.60	<2.0	0.50	<2.0
Tin	10	.7	anr							
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	0.20	<50	0.40	<50	0.40	<50	0.20	<50
Zinc	20	2.5	0.20	<20	0.20	<20	0.10	<20	0.10	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31586 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

12.5.2
12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31586 Units: ug/l

Time:			20:43		21:48		22:53		23:57	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	-0.30	<200	3.5	<200	0.90	<200	4.5	<200
Antimony	6.0	1	0.40	<6.0	0.30	<6.0	0.0	<6.0	0.20	<6.0
Arsenic	3.0	.5	0.10	<3.0	0.60	<3.0	0.20	<3.0	0.20	<3.0
Barium	200	.7	0.0	<200	0.0	<200	0.30	<200	0.30	<200
Beryllium	1.0	.05	0.0	<1.0	0.20	<1.0	0.30	<1.0	0.40	<1.0
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	-0.10	<3.0	0.0	<3.0	0.10	<3.0	0.30	<3.0
Calcium	5000	15	2.7	<5000	4.4	<5000	8.3	<5000	11.2	<5000
Chromium	10	.4	-0.10	<10	-0.10	<10	0.20	<10	0.20	<10
Cobalt	50	.2	0.10	<50	0.30	<50	0.40	<50	0.50	<50
Copper	10	.6	-0.10	<10	0.30	<10	0.20	<10	0.30	<10
Iron	100	8.7	2.6	<100	4.1	<100	7.3	<100	10.7	<100
Lead	3.0	1.2	0.10	<3.0	0.70	<3.0	-0.10	<3.0	0.50	<3.0
Lithium	20	.3								
Magnesium	5000	10	4.4	<5000	5.4	<5000	5.8	<5000	3.2	<5000
Manganese	15	.1	-0.10	<15	0.0	<15	0.30	<15	0.40	<15
Molybdenum	20	.6								
Nickel	10	.5	0.10	<10	0.20	<10	0.60	<10	0.10	<10
Palladium	50	1								
Potassium	10000	14	-2.0	<10000	-0.30	<10000	17.3	<10000	26.9	<10000
Selenium	10	1.5	0.30	<10	0.50	<10	1.0	<10	1.4	<10
Silicon	200	7.9								
Silver	10	.5	0.40	<10	-0.10	<10	0.40	<10	0.40	<10
Sodium	10000	3.8	0.70	<10000	6.9	<10000	12.2	<10000	10.2	<10000
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	-0.20	<2.0	0.40	<2.0	0.10	<2.0	0.80	<2.0
Tin	10	.7	anr							
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	-0.20	<50	0.0	<50	0.0	<50	0.30	<50
Zinc	20	2.5	-1.1	<20	-0.80	<20	-0.20	<20	-0.40	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31586 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

12.5.2
12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31586 Units: ug/l

Time:			01:02		02:07		02:54		03:59	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	7.5	<200	10.6	<200	15.1	<200	-1.4	<200
Antimony	6.0	1	0.40	<6.0	0.30	<6.0	-0.20	<6.0	0.0	<6.0
Arsenic	3.0	.5	0.40	<3.0	0.80	<3.0	0.10	<3.0	-0.20	<3.0
Barium	200	.7	0.50	<200	0.60	<200	0.30	<200	0.10	<200
Beryllium	1.0	.05	0.50	<1.0	0.60	<1.0	0.40	<1.0	0.10	<1.0
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	0.50	<3.0	0.40	<3.0	0.20	<3.0	0.0	<3.0
Calcium	5000	15	14.6	<5000	17.2	<5000	24.6	<5000	4.1	<5000
Chromium	10	.4	0.50	<10	0.50	<10	0.20	<10	0.0	<10
Cobalt	50	.2	0.60	<50	0.70	<50	0.40	<50	0.0	<50
Copper	10	.6	0.30	<10	0.60	<10	0.30	<10	-0.30	<10
Iron	100	8.7	13.1	<100	15.8	<100	13.1	<100	1.5	<100
Lead	3.0	1.2	0.70	<3.0	0.60	<3.0	0.60	<3.0	-0.30	<3.0
Lithium	20	.3								
Magnesium	5000	10	15.4	<5000	9.2	<5000	10.9	<5000	2.5	<5000
Manganese	15	.1	0.50	<15	0.60	<15	0.50	<15	0.0	<15
Molybdenum	20	.6								
Nickel	10	.5	0.10	<10	0.80	<10	0.50	<10	0.10	<10
Palladium	50	1								
Potassium	10000	14	36.3	<10000	17.7	<10000	14.8	<10000	10.0	<10000
Selenium	10	1.5	0.80	<10	0.70	<10	1.5	<10	0.10	<10
Silicon	200	7.9								
Silver	10	.5	0.70	<10	0.80	<10	0.50	<10	0.50	<10
Sodium	10000	3.8	10.9	<10000	13.3	<10000	4.5	<10000	2.4	<10000
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	0.90	<2.0	1.0	<2.0	0.40	<2.0	0.50	<2.0
Tin	10	.7	anr							
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	0.40	<50	0.40	<50	0.30	<50	-0.10	<50
Zinc	20	2.5	-0.10	<20	-0.30	<20	0.50	<20	-0.70	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31586 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

12.5.2
12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31586 Units: ug/l

Time:			05:04		06:09		07:08	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	7	0.10	<200	6.0	<200	6.9	<200
Antimony	6.0	1	-0.30	<6.0	0.20	<6.0	0.70	<6.0
Arsenic	3.0	.5	-0.20	<3.0	0.80	<3.0	0.50	<3.0
Barium	200	.7	0.10	<200	0.40	<200	0.40	<200
Beryllium	1.0	.05	0.20	<1.0	0.40	<1.0	0.40	<1.0
Bismuth	20	.5						
Boron	100	.6	anr					
Cadmium	3.0	.2	0.10	<3.0	0.40	<3.0	0.30	<3.0
Calcium	5000	15	8.4	<5000	13.4	<5000	12.5	<5000
Chromium	10	.4	0.0	<10	0.30	<10	0.0	<10
Cobalt	50	.2	0.10	<50	0.70	<50	0.50	<50
Copper	10	.6	0.10	<10	0.30	<10	0.10	<10
Iron	100	8.7	4.8	<100	8.5	<100	10.0	<100
Lead	3.0	1.2	0.10	<3.0	1.1	<3.0	0.80	<3.0
Lithium	20	.3						
Magnesium	5000	10	12.6	<5000	0.10	<5000	8.8	<5000
Manganese	15	.1	0.10	<15	0.60	<15	0.40	<15
Molybdenum	20	.6						
Nickel	10	.5	0.10	<10	0.40	<10	0.50	<10
Palladium	50	1						
Potassium	10000	14	25.2	<10000	17.0	<10000	13.6	<10000
Selenium	10	1.5	1.3	<10	0.30	<10	0.50	<10
Silicon	200	7.9						
Silver	10	.5	0.60	<10	0.60	<10	0.40	<10
Sodium	10000	3.8	9.2	<10000	9.6	<10000	6.6	<10000
Sulfur	50	2.5						
Strontium	10	.09						
Thallium	2.0	1.5	0.20	<2.0	0.80	<2.0	0.40	<2.0
Tin	10	.7	anr					
Titanium	10	.6						
Tungsten	50	5.2						
Vanadium	50	.3	-0.10	<50	0.50	<50	0.20	<50
Zinc	20	2.5	-0.40	<20	-0.10	<20	-0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31586 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:		18:46	
Sample ID:	ICCV	ICCV2	
Metal	True	Results	% Rec
Aluminum	40000	39500	98.8
Antimony	2000	2020	101.0
Arsenic	2000	2020	101.0
Barium	2000	2070	103.5
Beryllium	2000	2090	104.5
Bismuth			
Boron	anr		
Cadmium	2000	2010	100.5
Calcium	40000	40600	101.5
Chromium	2000	2060	103.0
Cobalt	2000	2080	104.0
Copper	2000	1980	99.0
Iron	40000	40900	102.3
Lead	2000	2070	103.5
Lithium			
Magnesium	40000	39500	98.8
Manganese	2000	2070	103.5
Molybdenum			
Nickel	2000	2070	103.5
Palladium			
Potassium	40000	39500	98.8
Selenium	2000	2030	101.5
Silicon			
Silver	250	246	98.4
Sodium	40000	39900	99.8
Sulfur			
Strontium			
Thallium	2000	2110	105.5*(a
Tin	anr		
Titanium			
Tungsten			
Vanadium	2000	2020	101.0
Zinc	2000	2090	104.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 90 to 110 percent limits required for SW846 6010. No EPA 200.7 samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:		18:22			19:33			20:37	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	39700	99.3	40000	38800	97.0
Antimony	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Arsenic	2000	2030	101.5	2000	2030	101.5	2000	2020	101.0
Barium	2000	2070	103.5	2000	2070	103.5	2000	2080	104.0
Beryllium	2000	2110	105.5*(a	2000	2080	104.0	2000	2080	104.0
Bismuth									
Boron	anr								
Cadmium	2000	2020	101.0	2000	2020	101.0	2000	2020	101.0
Calcium	40000	40700	101.8	40000	40700	101.8	40000	41100	102.8
Chromium	2000	2070	103.5	2000	2060	103.0	2000	2060	103.0
Cobalt	2000	2080	104.0	2000	2080	104.0	2000	2100	105.0
Copper	2000	1990	99.5	2000	1950	97.5	2000	1980	99.0
Iron	40000	41100	102.8	40000	40800	102.0	40000	40900	102.3
Lead	2000	2080	104.0	2000	2070	103.5	2000	2100	105.0
Lithium									
Magnesium	40000	40000	100.0	40000	39600	99.0	40000	39400	98.5
Manganese	2000	2090	104.5	2000	2060	103.0	2000	2040	102.0
Molybdenum									
Nickel	2000	2070	103.5	2000	2080	104.0	2000	2100	105.0
Palladium									
Potassium	40000	39700	99.3	40000	39700	99.3	40000	38900	97.3
Selenium	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0
Silicon									
Silver	250	245	98.0	250	246	98.4	250	250	100.0
Sodium	40000	40000	100.0	40000	40200	100.5	40000	39200	98.0
Sulfur									
Strontium									
Thallium	2000	2120	106.0*(a	2000	2090	104.5	2000	2120	106.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	2020	101.0	2000	2020	101.0	2000	2030	101.5
Zinc	2000	2100	105.0	2000	2110	105.5	2000	2110	105.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 90 to 110 percent limits required for SW846 6010. No EPA 200.7 samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:		21:42			22:47			23:51	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38600	96.5	40000	38900	97.3	40000	38900	97.3
Antimony	2000	2040	102.0	2000	2050	102.5	2000	2040	102.0
Arsenic	2000	2020	101.0	2000	2020	101.0	2000	2020	101.0
Barium	2000	2070	103.5	2000	2090	104.5	2000	2090	104.5
Beryllium	2000	2070	103.5	2000	2070	103.5	2000	2070	103.5
Bismuth									
Boron	anr								
Cadmium	2000	2020	101.0	2000	2020	101.0	2000	2010	100.5
Calcium	40000	41100	102.8	40000	41500	103.8	40000	41100	102.8
Chromium	2000	2050	102.5	2000	2050	102.5	2000	2050	102.5
Cobalt	2000	2100	105.0	2000	2100	105.0	2000	2090	104.5
Copper	2000	1990	99.5	2000	1950	97.5	2000	1970	98.5
Iron	40000	40700	101.8	40000	40800	102.0	40000	40500	101.3
Lead	2000	2100	105.0	2000	2110	105.5	2000	2100	105.0
Lithium									
Magnesium	40000	39200	98.0	40000	39100	97.8	40000	38900	97.3
Manganese	2000	2010	100.5	2000	2000	100.0	2000	2010	100.5
Molybdenum									
Nickel	2000	2110	105.5	2000	2120	106.0	2000	2110	105.5
Palladium									
Potassium	40000	38700	96.8	40000	39100	97.8	40000	38900	97.3
Selenium	2000	2040	102.0	2000	2060	103.0	2000	2040	102.0
Silicon									
Silver	250	249	99.6	250	251	100.4	250	249	99.6
Sodium	40000	39000	97.5	40000	39800	99.5	40000	39500	98.8
Sulfur									
Strontium									
Thallium	2000	2120	106.0	2000	2090	104.5	2000	2110	105.5
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	2020	101.0	2000	2040	102.0	2000	2020	101.0
Zinc	2000	2110	105.5	2000	2120	106.0	2000	2110	105.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.5.4
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:		00:56			02:01			02:49	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39500	98.8	40000	39300	98.3	40000	39100	97.8
Antimony	2000	2040	102.0	2000	2050	102.5	2000	2030	101.5
Arsenic	2000	2020	101.0	2000	2030	101.5	2000	2010	100.5
Barium	2000	2080	104.0	2000	2100	105.0	2000	2080	104.0
Beryllium	2000	2070	103.5	2000	2060	103.0	2000	2050	102.5
Bismuth									
Boron	anr								
Cadmium	2000	2030	101.5	2000	2020	101.0	2000	2000	100.0
Calcium	40000	41200	103.0	40000	41200	103.0	40000	40700	101.8
Chromium	2000	2080	104.0	2000	2070	103.5	2000	2040	102.0
Cobalt	2000	2100	105.0	2000	2100	105.0	2000	2080	104.0
Copper	2000	1930	96.5	2000	1930	96.5	2000	1920	96.0
Iron	40000	40600	101.5	40000	40500	101.3	40000	40100	100.3
Lead	2000	2100	105.0	2000	2110	105.5	2000	2090	104.5
Lithium									
Magnesium	40000	39200	98.0	40000	39000	97.5	40000	38700	96.8
Manganese	2000	2050	102.5	2000	2030	101.5	2000	2010	100.5
Molybdenum									
Nickel	2000	2120	106.0	2000	2120	106.0	2000	2100	105.0
Palladium									
Potassium	40000	39500	98.8	40000	39400	98.5	40000	39200	98.0
Selenium	2000	2040	102.0	2000	2050	102.5	2000	2030	101.5
Silicon									
Silver	250	249	99.6	250	251	100.4	250	247	98.8
Sodium	40000	40300	100.8	40000	40300	100.8	40000	40000	100.0
Sulfur									
Strontium									
Thallium	2000	2090	104.5	2000	2090	104.5	2000	2070	103.5
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	2050	102.5	2000	2050	102.5	2000	2020	101.0
Zinc	2000	2140	107.0	2000	2150	107.5	2000	2120	106.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.5.4
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:		03:53			04:59			06:03	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39200	98.0	40000	39100	97.8	40000	39100	97.8
Antimony	2000	2030	101.5	2000	2040	102.0	2000	2020	101.0
Arsenic	2000	2020	101.0	2000	2020	101.0	2000	2000	100.0
Barium	2000	2080	104.0	2000	2090	104.5	2000	2080	104.0
Beryllium	2000	2060	103.0	2000	2070	103.5	2000	2060	103.0
Bismuth									
Boron	anr								
Cadmium	2000	2010	100.5	2000	2010	100.5	2000	2000	100.0
Calcium	40000	40900	102.3	40000	41100	102.8	40000	41000	102.5
Chromium	2000	2060	103.0	2000	2050	102.5	2000	2060	103.0
Cobalt	2000	2090	104.5	2000	2100	105.0	2000	2080	104.0
Copper	2000	1940	97.0	2000	1950	97.5	2000	1930	96.5
Iron	40000	40400	101.0	40000	40400	101.0	40000	40200	100.5
Lead	2000	2100	105.0	2000	2110	105.5	2000	2100	105.0
Lithium									
Magnesium	40000	39000	97.5	40000	39100	97.8	40000	38900	97.3
Manganese	2000	2020	101.0	2000	2020	101.0	2000	2040	102.0
Molybdenum									
Nickel	2000	2110	105.5	2000	2120	106.0	2000	2110	105.5
Palladium									
Potassium	40000	39400	98.5	40000	39500	98.8	40000	39500	98.8
Selenium	2000	2030	101.5	2000	2050	102.5	2000	2020	101.0
Silicon									
Silver	250	249	99.6	250	249	99.6	250	248	99.2
Sodium	40000	40000	100.0	40000	40000	100.0	40000	40000	100.0
Sulfur									
Strontium									
Thallium	2000	2090	104.5	2000	2100	105.0	2000	2080	104.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Zinc	2000	2130	106.5	2000	2120	106.0	2000	2130	106.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:	
Sample ID:	
Metal	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:		07:02	
Sample ID:	CCV	CCV12	
Metal	True	Results	% Rec
Aluminum	40000	38700	96.8
Antimony	2000	2020	101.0
Arsenic	2000	2010	100.5
Barium	2000	2080	104.0
Beryllium	2000	2050	102.5
Bismuth			
Boron	anr		
Cadmium	2000	2010	100.5
Calcium	40000	41100	102.8
Chromium	2000	2050	102.5
Cobalt	2000	2080	104.0
Copper	2000	1950	97.5
Iron	40000	40100	100.3
Lead	2000	2100	105.0
Lithium			
Magnesium	40000	38800	97.0
Manganese	2000	2020	101.0
Molybdenum			
Nickel	2000	2110	105.5
Palladium			
Potassium	40000	39200	98.0
Selenium	2000	2030	101.5
Silicon			
Silver	250	249	99.6
Sodium	40000	39600	99.0
Sulfur			
Strontium			
Thallium	2000	2090	104.5
Tin	anr		
Titanium			
Tungsten			
Vanadium	2000	2020	101.0
Zinc	2000	2120	106.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31586 Units: ug/l

Time:	
Sample ID:	
Metal	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31586 Units: ug/l

Time:				18:57		19:03		19:09	
Sample ID:	CRI	CRIA	CRID	CRID1		CRI1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	101	101.0	204	102.0	101	101.0
Antimony	6.0	20	3.0	2.9	96.7	5.7	95.0	2.9	96.7
Arsenic	8.0	20	3.0	3.4	113.3	8.2	102.5	3.3	110.0
Barium	200		4.0	4.1	102.5	199	99.5	4.2	105.0
Beryllium	2.0		1.0	1.2	120.0	2.2	110.0	1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	1.0	100.0	3.1	103.3	0.90	90.0
Calcium	5000		1000	1010	101.0	5210	104.2	1000	100.0
Chromium	10		2.0	2.0	100.0	10.1	101.0	2.0	100.0
Cobalt	50		3.0	3.6	120.0	55.0	110.0	3.4	113.3
Copper	10		2.0	2.0	100.0	11.7	117.0	1.8	90.0
Iron	100	500				109	109.0		
Lead	3.0	20	2.5	2.8	112.0	3.4	113.3	2.2	88.0
Lithium	20								
Magnesium	5000		100	100	100.0	5030	100.6	107	107.0
Manganese	15		3.0	3.2	106.7	15.0	100.0	3.3	110.0
Molybdenum	20		4.0						
Nickel	10		4.0	4.5	112.5	10.0	100.0	3.9	97.5
Palladium	50								
Potassium	5000		2000	1920	96.0	4910	98.2	1910	95.5
Selenium	10	20	5.0	5.3	106.0	10.8	108.0	5.8	116.0
Silicon	200								
Silver	5.0		1.0	1.2	120.0	5.3	106.0	0.90	90.0
Sodium	5000		1000	973	97.3	5060	101.2	978	97.8
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.1	105.0	10.1	101.0	1.8	90.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	2.3	115.0	51.4	102.8	2.0	100.0
Zinc	20		10	11.0	110.0	19.8	99.0	10.9	109.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31586 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31586 Units: ug/l

Time:				19:15		02:13		02:19	
Sample ID:	CRI	CRIA	CRID	CRIA1		CRID3		CRI2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	499	99.8	99.3	99.3	210	105.0
Antimony	6.0	20	3.0	20.0	100.0	2.6	86.7	5.8	96.7
Arsenic	8.0	20	3.0	19.1	95.5	3.4	113.3	8.5	106.3
Barium	200		4.0			4.3	107.5	201	100.5
Beryllium	2.0		1.0			1.1	110.0	2.3	115.0
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0			0.80	80.0	2.9	96.7
Calcium	5000		1000			1010	101.0	5320	106.4
Chromium	10		2.0			1.9	95.0	10.5	105.0
Cobalt	50		3.0			3.4	113.3	55.0	110.0
Copper	10		2.0			1.5	75.0	11.3	113.0
Iron	100	500		531	106.2			109	109.0
Lead	3.0	20	2.5	20.9	104.5	2.9	116.0	3.4	113.3
Lithium	20								
Magnesium	5000		100			96.6	96.6	5070	101.4
Manganese	15		3.0			3.3	110.0	15.2	101.3
Molybdenum	20		4.0						
Nickel	10		4.0			4.4	110.0	10.7	107.0
Palladium	50								
Potassium	5000		2000			1910	95.5	4990	99.8
Selenium	10	20	5.0	22.8	114.0	5.6	112.0	10.0	100.0
Silicon	200								
Silver	5.0		1.0					5.9	118.0
Sodium	5000		1000			976	97.6	5190	103.8
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0			2.1	105.0	10.2	102.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0			2.0	100.0	52.1	104.2
Zinc	20		10			11.5	115.0	21.3	106.5

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31586 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31586 Units: ug/l

Time:				02:25		02:31		06:32	
Sample ID:	CRI	CRIA	CRID	CRID4		CRIA2		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	103	103.0	496	99.2	492	98.4
Antimony	6.0	20	3.0	2.7	90.0	19.3	96.5	19.9	99.5
Arsenic	8.0	20	3.0	2.9	96.7	19.1	95.5	19.0	95.0
Barium	200		4.0	4.3	107.5				
Beryllium	2.0		1.0	1.1	110.0				
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	0.80	80.0				
Calcium	5000		1000	1020	102.0				
Chromium	10		2.0	2.1	105.0				
Cobalt	50		3.0	3.4	113.3				
Copper	10		2.0	1.4	70.0				
Iron	100	500				521	104.2	518	103.6
Lead	3.0	20	2.5	2.4	96.0	21.0	105.0	21.5	107.5
Lithium	20								
Magnesium	5000		100	98.9	98.9				
Manganese	15		3.0	3.3	110.0				
Molybdenum	20		4.0						
Nickel	10		4.0	4.0	100.0				
Palladium	50								
Potassium	5000		2000	1910	95.5				
Selenium	10	20	5.0	5.7	114.0	21.4	107.0	22.0	110.0
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000	980	98.0				
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.5	125.0				
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	2.0	100.0				
Zinc	20		10	11.5	115.0				

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31586 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31586 Units: ug/l

Time:				06:38		06:44	
Sample ID:	CRI	CRIA	CRID	CRID5		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	97.3	97.3	203	101.5
Antimony	6.0	20	3.0	2.9	96.7	6.3	105.0
Arsenic	8.0	20	3.0	2.9	96.7	8.0	100.0
Barium	200		4.0	4.3	107.5	200	100.0
Beryllium	2.0		1.0	1.2	120.0	2.2	110.0
Bismuth	20						
Boron	100		10	anr			
Cadmium	3.0		1.0	0.90	90.0	3.0	100.0
Calcium	5000		1000	1010	101.0	5280	105.6
Chromium	10		2.0	1.9	95.0	10.3	103.0
Cobalt	50		3.0	3.4	113.3	54.2	108.4
Copper	10		2.0	1.7	85.0	10.9	109.0
Iron	100	500				107	107.0
Lead	3.0	20	2.5	3.0	120.0	3.5	116.7
Lithium	20						
Magnesium	5000		100	89.3	89.3	4980	99.6
Manganese	15		3.0	3.3	110.0	14.9	99.3
Molybdenum	20		4.0				
Nickel	10		4.0	4.5	112.5	10.3	103.0
Palladium	50						
Potassium	5000		2000	1890	94.5	4910	98.2
Selenium	10	20	5.0	4.6	92.0	10.8	108.0
Silicon	200						
Silver	5.0		1.0			5.7	114.0
Sodium	5000		1000	967	96.7	5080	101.6
Sulfur	50	50	50				
Strontium	10						
Thallium	10		2.0	2.1	105.0	10.2	102.0
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	1.8	90.0	51.3	102.6
Zinc	20		10	11.5	115.0	20.9	104.5

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31586 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31586 Units: ug/l

Time:			19:21		19:27		02:37		02:43	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	506000	101.2	499000	99.8	508000	101.6	500000	100.0
Antimony		1000	3.8		1050	105.0	3.7		1060	106.0
Arsenic		1000	0.40		1050	105.0	1.3		1050	105.0
Barium		500	-0.10		538	107.6	-0.20		536	107.2
Beryllium		500	0.0		495	99.0	0.0		492	98.4
Bismuth		500	2.7		4.2	0.8	2.4		4.1	0.8*
Boron			-0.70		-3.5		-1.7		-6.1	
Cadmium		1000	-2.0		1040	104.0	-2.1		1030	103.0
Calcium	400000	400000	365000	91.3	370000	92.5	367000	91.8	373000	93.3
Chromium		500	1.3		477	95.4	1.3		478	95.6
Cobalt		500	-0.20		482	96.4	-0.10		482	96.4
Copper		500	-2.9		495	99.0	-4.1		476	95.2
Iron	200000	200000	184000	92.0	183000	91.5	182000	91.0	182000	91.0
Lead		1000	-0.80		957	95.7	1.3		966	96.6
Lithium		500	0.90		4.9	1.0	0.50		4.3	0.9*
Magnesium	500000	500000	526000	105.2	518000	103.6	525000	105.0	515000	103.0
Manganese		500	2.7		493	98.6	3.2		488	97.6
Molybdenum		500	-2.8		503	100.6	-2.8		502	100.4
Nickel		1000	-9.2		948	94.8	-9.0		961	96.1
Palladium		500	8.3		562	112.4	6.0		556	111.2
Potassium			48.9		61.7		49.2		44.7	
Selenium		1000	5.5		1080	108.0	6.6		1080	108.0
Silicon			-2.2		-7.8		-0.50		-8.3	
Silver		1000	-0.20		1020	102.0	0.70		1020	102.0
Sodium			8.2		7.5		9.2		9.2	
Sulfur		500	52.6		64.4	12.9*	51.2		64.2	12.8*
Strontium			5.3		3.1		5.2		2.9	
Thallium		1000	0.30		988	98.8	1.2		971	97.1
Tin			-0.10		0.30		-0.50		-0.90	
Titanium			0.10		-0.20		-0.10		-0.30	
Tungsten		500	20.0		23.6	4.7*	10.9		14.9	3.0*
Vanadium		500	1.0		470	94.0	0.60		472	94.4
Zinc		1000	-5.5		1020	102.0	-4.3		1030	103.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31586 Units: ug/l

Time:								
Sample ID:								
Metal								
Zirconium	500	-2.5	-0.30	0.0*	-2.7	-0.60	0.0*	

(*) Outside of QC limits
(anr) Analyte not requested

12.5.6
12

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31586 Units: ug/l

Time:			06:50		06:56	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	501000	100.2	498000	99.6
Antimony		1000	3.4		1050	105.0
Arsenic		1000	0.60		1040	104.0
Barium		500	0.0		536	107.2
Beryllium		500	0.10		490	98.0
Bismuth		500	2.6		3.7	0.7*
Boron			-1.0		-5.5	
Cadmium		1000	-2.0		1020	102.0
Calcium	400000	400000	368000	92.0	373000	93.3
Chromium		500	1.3		477	95.4
Cobalt		500	-0.10		479	95.8
Copper		500	-3.9		484	96.8
Iron	200000	200000	180000	90.0	181000	90.5
Lead		1000	-1.6		964	96.4
Lithium		500	1.0		4.6	0.9*
Magnesium	500000	500000	519000	103.8	514000	102.8
Manganese		500	3.1		486	97.2
Molybdenum		500	-2.7		498	99.6
Nickel		1000	-8.3		955	95.5
Palladium		500	6.8		557	111.4
Potassium			37.4		37.4	
Selenium		1000	7.0		1070	107.0
Silicon			-0.50		-7.9	
Silver		1000	-0.50		1020	102.0
Sodium			10.5		10.4	
Sulfur		500	50.4		62.1	12.4*
Strontium			5.1		2.8	
Thallium		1000	0.70		981	98.1
Tin			-0.90		-0.50	
Titanium			0.0		-0.50	
Tungsten		500	9.8		16.3	3.3*
Vanadium		500	0.70		469	93.8
Zinc		1000	-4.6		1020	102.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070313M1.ICP Date Analyzed: 07/03/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31586 Units: ug/l

Time:				
Sample ID:				
Metal				
Zirconium	500	-2.8	-0.70	0.0*

(*) Outside of QC limits
(anr) Analyte not requested

12.5.6
12

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:00	MA31590-STD1	1		STDA
09:06	MA31590-STD2	1		STDD
09:12	ZZZZZZ	1		
09:18	ZZZZZZ	1		
09:30	MA31590-ICV1	1		
09:37	MA31590-ICV2	1		
09:57	MA31590-ICB1	1		
10:08	MA31590-ICCV1	1		
10:18	MA31590-CCB1	1		
10:26	MA31590-CRI1	1		
10:32	MA31590-CRID1	1		
10:38	MA31590-CRIA1	1		
10:44	MA31590-ICSA1	1		
10:50	MA31590-ICSAB1	1		
10:56	MA31590-CCV1	1		
11:02	MA31590-CCB2	1		
11:08	MP72929-MB1	1		CRI out
11:13	MP72929-LC1	1		CRI out
11:19	ZZZZZZ	1		
11:25	ZZZZZZ	1		
11:31	ZZZZZZ	1		
11:37	ZZZZZZ	1		
11:43	ZZZZZZ	1		
11:49	ZZZZZZ	1		
11:55	ZZZZZZ	1		
12:01	MA31590-CCV2	1		
12:06	MA31590-CCB3	1		
12:12	ZZZZZZ	1		
12:18	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:30	ZZZZZZ	5		
12:36	ZZZZZZ	1		
12:42	MP72859-MB1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:48	MP72859-MB2	1		
12:54	MP72859-LC1	1		
12:59	MP72859-LC2	1		
13:05	MP72859-S1	1		CRI out
13:11	MA31590-CCV3	1		
13:16	MA31590-CCB4	1		
13:22	MP72859-S2	1		CRI out
13:28	JB40309-27	1		(sample used for QC only; not part of login JB40127)
13:34	MP72859-SD1	5		CRI out
13:40	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:52	ZZZZZZ	1		
13:58	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:10	ZZZZZZ	1		
14:15	ZZZZZZ	1		
14:21	MA31590-CCV4	1		
14:27	MA31590-CCB5	1		
14:33	ZZZZZZ	1		
14:39	ZZZZZZ	5		
14:45	MP72858-MB1	1		CRI out
14:50	MP72858-LC1	1		CRI out
14:56	MP72858-S1	1		CRI out
15:02	MP72858-S2	1		CRI out
15:08	JB40309-11	1		(sample used for QC only; not part of login JB40127)
15:13	MP72858-SD1	5		CRI out
15:19	MP72858-S3	1		CRI out
15:25	JB40309-12	1		(sample used for QC only; not part of login JB40127)
15:31	MA31590-CCV5	1		
15:37	MA31590-CCB6	1		
15:43	ZZZZZZ	1		
15:49	ZZZZZZ	1		
15:55	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:00	ZZZZZZ	1		
16:06	ZZZZZZ	1		
16:12	ZZZZZZ	1		
16:18	ZZZZZZ	1		
16:24	ZZZZZZ	1		
16:30	ZZZZZZ	1		
16:35	MA31590-CCV6	1		
16:41	MA31590-CCB7	1		
16:47	ZZZZZZ	1		
16:53	MA31590-CRID2	1		
16:59	ZZZZZZ	1		
17:05	ZZZZZZ	100		
17:11	ZZZZZZ	100		
17:17	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:34	ZZZZZZ	1		
17:41	ZZZZZZ	1		
17:47	MA31590-CCV7	1		
17:52	MA31590-CCB8	1		
17:58	MA31590-CRI2	1		
18:04	MA31590-CRID3	1		
18:10	MA31590-CRIA2	1		
18:16	MA31590-ICSA2	1		
18:22	MA31590-ICSAB2	1		
18:28	MA31590-CCV8	1		
18:34	MA31590-CCB9	1		
18:39	ZZZZZZ	1		
18:45	ZZZZZZ	1		
18:51	ZZZZZZ	1		
18:57	ZZZZZZ	1		
19:03	ZZZZZZ	1		
19:09	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:15	ZZZZZZ	1		
19:21	ZZZZZZ	1		
19:27	ZZZZZZ	1		
19:33	MA31590-CCV9	1		
19:38	MA31590-CCB10	1		
19:44	MP72974-MB2	1		
19:50	MP72974-LC1	1		
19:56	ZZZZZZ	1		
20:02	MP72976-MB2	1		
20:08	MP72976-LC1	1		
20:14	ZZZZZZ	1		
20:19	ZZZZZZ	1		
20:25	ZZZZZZ	1		
20:31	ZZZZZZ	1		
20:37	MA31590-CCV10	1		
20:43	MA31590-CCB11	1		
20:49	ZZZZZZ	1		
20:55	ZZZZZZ	1		
21:01	MP72854-MB1	1		CRI out
21:07	MP72854-MB2	1		CRI out
21:12	MP72854-LC1	1		CRI out
21:18	MP72854-LC2	1		CRI out
21:24	MP72854-S1	1		CRI out
21:30	MP72854-S2	1		CRI out
21:35	JB40126-1	1		(sample used for QC only; not part of login JB40127)
21:41	MP72854-SD1	5		CRI out
21:47	MA31590-CCV11	1		
21:53	MA31590-CCB12	1		
21:59	ZZZZZZ	1		
22:04	ZZZZZZ	1		
22:10	ZZZZZZ	1		
22:16	ZZZZZZ	1		
22:22	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:28	ZZZZZZ	1		
22:34	ZZZZZZ	1		
22:40	ZZZZZZ	1		
22:46	ZZZZZZ	1		
22:52	MA31590-CCV12	1		
22:57	MA31590-CCB13	1		
23:03	ZZZZZZ	1		
23:09	ZZZZZZ	1		
23:15	ZZZZZZ	1		
23:21	ZZZZZZ	1		
23:27	ZZZZZZ	1		
23:33	ZZZZZZ	1		
23:39	ZZZZZZ	1		
23:44	ZZZZZZ	1		
23:50	ZZZZZZ	1		
23:56	ZZZZZZ	1		
00:02	MA31590-CCV13	1		
00:08	MA31590-CCB14	1		
00:14	MP72855-MB1	1		CRI out
00:20	MP72855-LC1	1		CRI out
00:25	MP72855-S1	1		CRI out
00:31	MP72855-S2	1		CRI out
00:37	JB40228-6	1		(sample used for QC only; not part of login JB40127)
00:43	MP72855-SD1	5		CRI out
00:49	ZZZZZZ	1		
00:54	ZZZZZZ	1		
01:00	ZZZZZZ	1		
01:06	ZZZZZZ	1		
01:12	MA31590-CCV14	1		
01:18	MA31590-CCB15	1		
01:24	MA31590-CRID4	1		
01:30	MA31590-CRI3	1		
01:36	MA31590-CRIA3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:42	MA31590-ICSA3	1		
01:48	MA31590-ICSAB3	1		
01:53	MA31590-CCV15	1		
01:59	MA31590-CCB16	1		
02:05	ZZZZZZ	1		
02:11	ZZZZZZ	1		
02:17	ZZZZZZ	1		
02:23	ZZZZZZ	1		
02:29	MP72773-MB1	1		
02:35	MP72773-LC1	1		empty
02:41	MP72869-MB1	1		
02:47	ZZZZZZ	1		
02:53	MP72869-MB2	1		
02:58	MA31590-CCV16	1		
03:04	MA31590-CCB17	1		
03:10	MP72869-LC1	1		
03:16	MP72869-LC2	1		
03:22	MP72869-B1	1		
03:27	MP72869-S1	1		
03:33	MP72869-S2	1		
03:39	JB40317-1F	1		(sample used for QC only; not part of login JB40127)
03:45	MP72869-SD1	5		
03:51	ZZZZZZ	1		
03:57	ZZZZZZ	1		
04:02	ZZZZZZ	1		
04:08	MA31590-CCV17	1		
04:14	MA31590-CCB18	1		
04:20	ZZZZZZ	1		
04:26	ZZZZZZ	1		
04:32	ZZZZZZ	1		
04:38	ZZZZZZ	1		
04:44	ZZZZZZ	1		
04:50	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Dilution Factor	PS Recov	Comments
04:56	ZZZZZZ	1		
05:02	ZZZZZZ	1		
05:07	ZZZZZZ	1		
05:13	ZZZZZZ	1		
05:19	MA31590-CCV18	1		
05:25	MA31590-CCB19	1		
05:31	ZZZZZZ	1		
05:37	ZZZZZZ	1		
05:43	ZZZZZZ	1		
05:49	ZZZZZZ	1		
05:55	JB40127-7	2		
---------->	Last reportable sample/prep for job JB40127			
06:01	ZZZZZZ	3		
06:06	ZZZZZZ	3		
06:12	MP72778-MB2	1		
06:18	MP72778-LC1	1		
06:24	MA31590-CCV19	1		
06:30	MA31590-CCB20	1		
06:36	MA31590-CRI4	1		
06:41	MA31590-CRID5	1		
06:47	MA31590-ICSA4	1		
06:53	MA31590-ICSAB4	1		
06:59	MA31590-CCV20	1		
07:04	MA31590-CCB21	1		
---------->	Last reportable CCB for job JB40127			
07:08	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:00	MA31590-STD1	2229 R	122340 R	30416 R	6560 R
09:06	MA31590-STD2	2027	110160	29342	5525
09:12	ZZZZZZ	2080	114160	30191	5709
09:18	ZZZZZZ	2207	122370	30599	6502
09:30	MA31590-ICV1	No results reported for the elements associated with this internal standard.			
09:37	MA31590-ICV2	2081	113510	30093	5726
09:57	MA31590-ICB1	2222	122510	30831	6521
10:08	MA31590-ICCV1	2099	113840	29893	5780
10:18	MA31590-CCB1	2241	123190	30666	6582
10:26	MA31590-CRI1	2185	120530	30427	6328
10:32	MA31590-CRID1	2197	122040	31109	6422
10:38	MA31590-CRIA1	2212	122350	30130	6477
10:44	MA31590-ICSA1	1888	103150	27857	4949
10:50	MA31590-ICSAB1	1873	102950	28198	4928
10:56	MA31590-CCV1	2084	114360	29574	5743
11:02	MA31590-CCB2	2218	122940	30406	6516
11:08	MP72929-MB1	2201	123450	30809	6552
11:13	MP72929-LC1	2163	119880	30374	6236
11:19	ZZZZZZ	2109	117230	30101	6056
11:25	ZZZZZZ	2144	119100	30335	6177
11:31	ZZZZZZ	2027	111940	29631	5610
11:37	ZZZZZZ	1873	103880	28913	5017
11:43	ZZZZZZ	2161	119850	30542	6222
11:49	ZZZZZZ	1922	105030	29057	5105
11:55	ZZZZZZ	2238	123700	30643	6590
12:01	MA31590-CCV2	2097	114500	29703	5784
12:06	MA31590-CCB3	2240	123920	30777	6586
12:12	ZZZZZZ	2003	110070	29205	5489
12:18	ZZZZZZ	1996	110240	29331	5488
12:24	ZZZZZZ	2048	112620	29392	5687
12:30	ZZZZZZ	2187	120250	30132	6265
12:36	ZZZZZZ	1815	98249	28294	4711
12:42	MP72859-MB1	2237	123950	30466	6579

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:48	MP72859-MB2	2252	101010	31001	6712
12:54	MP72859-LC1	2182	121570	30733	6303
12:59	MP72859-LC2	2170	120610	30586	6268
13:05	MP72859-S1	2031	111720	29901	5509
13:11	MA31590-CCV3	2091	114210	29608	5756
13:16	MA31590-CCB4	2231	123440	30357	6560
13:22	MP72859-S2	2049	112740	29800	5531
13:28	JB40309-27	2079	114410	30327	5665
13:34	MP72859-SD1	2169	119100	29849	6180
13:40	ZZZZZZ	2107	116960	30178	5965
13:46	ZZZZZZ	2201	123040	30794	6572
13:52	ZZZZZZ	2045	112210	29741	5628
13:58	ZZZZZZ	2074	115190	29749	5878
14:04	ZZZZZZ	2184	122110	29121	6522
14:10	ZZZZZZ	2182	120900	30404	6382
14:15	ZZZZZZ	2146	120730	30224	6285
14:21	MA31590-CCV4	2058	113590	29182	5687
14:27	MA31590-CCB5	2200	122570	30120	6483
14:33	ZZZZZZ	2186	121480	30624	6386
14:39	ZZZZZZ	2093	114670	29680	5840
14:45	MP72858-MB1	2207	122310	30053	6504
14:50	MP72858-LC1	2145	120070	30347	6209
14:56	MP72858-S1	2074	115960	30050	5836
15:02	MP72858-S2	2078	115380	29795	5845
15:08	JB40309-11	2120	118470	30379	6110
15:13	MP72858-SD1	2174	120940	30515	6384
15:19	MP72858-S3	2012	111770	29664	5589
15:25	JB40309-12	2001	113040	29966	5642
15:31	MA31590-CCV5	2057	112780	29038	5712
15:37	MA31590-CCB6	2187	122110	30022	6472
15:43	ZZZZZZ	1549 !	86966	26501	3958 !
15:49	ZZZZZZ	2099	115830	29899	5916
15:55	ZZZZZZ	2036	113060	29451	5724

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:00	ZZZZZZ	2142	118720	30109	6129
16:06	ZZZZZZ	2114	118410	30203	6115
16:12	ZZZZZZ	2145	117810	30230	6069
16:18	ZZZZZZ	2147	118240	30190	6084
16:24	ZZZZZZ	2110	118020	30490	6034
16:30	ZZZZZZ	2086	116370	30080	5971
16:35	MA31590-CCV6	2086	113300	29279	5759
16:41	MA31590-CCB7	2191	122350	30433	6460
16:47	ZZZZZZ	2212	123430	30768	6621
16:53	MA31590-CRID2	2195	121480	29925	6458
16:59	ZZZZZZ	1931	106240	29029	5142
17:05	ZZZZZZ	No results reported for the elements associated with this internal standard.			
17:11	ZZZZZZ	No results reported for the elements associated with this internal standard.			
17:17	ZZZZZZ	1852	104180	28637	4974
17:23	ZZZZZZ	2084	115790	29905	5900
17:29	ZZZZZZ	1879	104780	28574	5018
17:34	ZZZZZZ	1868	103300	28269	5005
17:41	ZZZZZZ	2100	116090	29863	5918
17:47	MA31590-CCV7	2081	114420	29352	5752
17:52	MA31590-CCB8	2200	122670	29701	6501
17:58	MA31590-CRI2	2189	121200	29616	6371
18:04	MA31590-CRID3	2206	122850	30123	6492
18:10	MA31590-CRIA2	2221	122870	29922	6543
18:16	MA31590-ICSA2	1897	103370	27587	4994
18:22	MA31590-ICSAB2	1888	103600	27663	4972
18:28	MA31590-CCV8	2073	114010	29068	5733
18:34	MA31590-CCB9	2221	123070	30008	6565
18:39	ZZZZZZ	2056	115090	29510	5820
18:45	ZZZZZZ	2020	113610	29449	5717
18:51	ZZZZZZ	2051	114940	29353	5891
18:57	ZZZZZZ	1973	106170	28767	5222
19:03	ZZZZZZ	1679	94685	26732	4277 !
19:09	ZZZZZZ	2244	123040	31150	5926

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:15	ZZZZZZ	2241	122810	31109	5889
19:21	ZZZZZZ	1701	95860	26844	4622
19:27	ZZZZZZ	1710	96490	26994	4641
19:33	MA31590-CCV9	2090	114870	29009	5794
19:38	MA31590-CCB10	2228	123740	30037	6562
19:44	MP72974-MB2	1821	97406	27706	4740
19:50	MP72974-LC1	2181	120260	29412	6286
19:56	ZZZZZZ	1776	97029	27332	4570 !
20:02	MP72976-MB2	2182	121970	29698	6492
20:08	MP72976-LC1	2153	119070	29286	6232
20:14	ZZZZZZ	2147	120320	29577	6308
20:19	ZZZZZZ	1780	97227	27530	4679
20:25	ZZZZZZ	1761	96817	27283	4575 !
20:31	ZZZZZZ	2042	111980	28601	5698
20:37	MA31590-CCV10	2101	115330	28918	5811
20:43	MA31590-CCB11	2225	123650	29769	6573
20:49	ZZZZZZ	1972	108850	28432	5405
20:55	ZZZZZZ	2040	112390	28793	5692
21:01	MP72854-MB1	2226	123760	29694	6604
21:07	MP72854-MB2	2214	124220	29877	6575
21:12	MP72854-LC1	2175	119580	29157	6258
21:18	MP72854-LC2	2171	119950	29299	6269
21:24	MP72854-S1	2128	116510	29045	5831
21:30	MP72854-S2	2119	116310	28928	5794
21:35	JB40126-1	2154	118530	29343	6051
21:41	MP72854-SD1	2212	121590	29460	6419
21:47	MA31590-CCV11	2094	114590	28807	5793
21:53	MA31590-CCB12	2226	123190	29478	6580
21:59	ZZZZZZ	2154	117240	29451	5903
22:04	ZZZZZZ	2130	117060	29646	5821
22:10	ZZZZZZ	2105	116530	29305	5751
22:16	ZZZZZZ	2132	117910	29147	6090
22:22	ZZZZZZ	2136	118290	29170	6145

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:28	ZZZZZZ	2073	114180	28886	5822
22:34	ZZZZZZ	2132	117090	28948	6044
22:40	ZZZZZZ	2067	114300	28794	5830
22:46	ZZZZZZ	2124	116490	28873	5995
22:52	MA31590-CCV12	2103	115460	28768	5808
22:57	MA31590-CCB13	2238	123580	29399	6587
23:03	ZZZZZZ	2079	114240	28693	5799
23:09	ZZZZZZ	2082	114870	28744	5848
23:15	ZZZZZZ	2133	117810	28948	6129
23:21	ZZZZZZ	2132	118050	28892	6158
23:27	ZZZZZZ	2185	120830	29247	6358
23:33	ZZZZZZ	1926	106770	27573	5301
23:39	ZZZZZZ	2160	119850	29082	6285
23:44	ZZZZZZ	2137	118040	29066	6092
23:50	ZZZZZZ	2064	112810	28555	5694
23:56	ZZZZZZ	2220	123320	29483	6572
00:02	MA31590-CCV13	2117	115010	28656	5843
00:08	MA31590-CCB14	2250	123700	29417	6612
00:14	MP72855-MB1	2265	125180	30025	6757
00:20	MP72855-LC1	2192	121090	29500	6328
00:25	MP72855-S1	2044	113410	29103	5656
00:31	MP72855-S2	2033	112270	29003	5617
00:37	JB40228-6	2079	114270	28953	5785
00:43	MP72855-SD1	2161	119480	29022	6235
00:49	ZZZZZZ	2135	118730	29545	6145
00:54	ZZZZZZ	1983	108840	28250	5428
01:00	ZZZZZZ	2058	113830	28863	5751
01:06	ZZZZZZ	2169	119220	29349	6041
01:12	MA31590-CCV14	2084	114160	28454	5763
01:18	MA31590-CCB15	2224	123000	28778	6545
01:24	MA31590-CRID4	2221	122350	29213	6507
01:30	MA31590-CRI3	2198	120960	29102	6380
01:36	MA31590-CRIA3	2228	123040	28973	6545

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:42	MA31590-ICSA3	1894	103650	26827	4984
01:48	MA31590-ICSAB3	1904	103850	26907	5003
01:53	MA31590-CCV15	2118	115170	28329	5821
01:59	MA31590-CCB16	2227	123900	29455	6532
02:05	ZZZZZZ	2331	128610	31912	6029
02:11	ZZZZZZ	2177	120440	29231	6285
02:17	ZZZZZZ	2225	123340	29202	6621
02:23	ZZZZZZ	1558 !	85022 !	24863	3959 !
02:29	MP72773-MB1	No results reported for the elements associated with this internal standard.			
02:35	MP72773-LC1	No results reported for the elements associated with this internal standard.			
02:41	MP72869-MB1	2212	122890	28830	6517
02:47	ZZZZZZ	2225	123530	29269	6509
02:53	MP72869-MB2	2216	123120	29169	6557
02:58	MA31590-CCV16	2112	115510	28464	5817
03:04	MA31590-CCB17	2233	123350	29334	6571
03:10	MP72869-LC1	2169	119920	28591	6257
03:16	MP72869-LC2	2173	119960	28724	6266
03:22	MP72869-B1	2128	117620	28563	6026
03:27	MP72869-S1	2013	109160	27937	5409
03:33	MP72869-S2	2003	109240	27823	5384
03:39	JB40317-1F	2036	109980	28064	5522
03:45	MP72869-SD1	2161	118180	28408	6127
03:51	ZZZZZZ	2034	112880	27685	5682
03:57	ZZZZZZ	2024	112420	27827	5715
04:02	ZZZZZZ	2016	110850	27486	5671
04:08	MA31590-CCV17	2100	114090	27905	5814
04:14	MA31590-CCB18	2229	123010	28803	6586
04:20	ZZZZZZ	2025	112430	27766	5682
04:26	ZZZZZZ	2027	111920	27695	5705
04:32	ZZZZZZ	2019	110890	27777	5654
04:38	ZZZZZZ	2074	113470	28007	5755
04:44	ZZZZZZ	2046	112840	27957	5733
04:50	ZZZZZZ	2008	111210	27819	5642

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31590
Parameters: Mn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:56	ZZZZZZ	2032	112340	27900	5707
05:02	ZZZZZZ	2026	111730	27779	5671
05:07	ZZZZZZ	2018	111970	28047	5628
05:13	ZZZZZZ	2045	112590	27937	5709
05:19	MA31590-CCV18	2113	115240	28297	5823
05:25	MA31590-CCB19	2257	124090	28782	6619
05:31	ZZZZZZ	2022	111690	27720	5678
05:37	ZZZZZZ	2021	111140	27574	5661
05:43	ZZZZZZ	2027	111630	27497	5695
05:49	ZZZZZZ	2253	123760	28614	6626
05:55	JB40127-7	2240	121010	29062	6224
06:01	ZZZZZZ	2237	121810	29029	6316
06:06	ZZZZZZ	2271	123740	29485	6339
06:12	MP72778-MB2	1844	99012	27056	4817
06:18	MP72778-LC1	2198	120710	28590	6340
06:24	MA31590-CCV19	2134	116180	28191	5884
06:30	MA31590-CCB20	2265	124880	28917	6657
06:36	MA31590-CRI4	2240	122590	28851	6475
06:41	MA31590-CRID5	2238	124010	28959	6552
06:47	MA31590-ICSA4	1925	104100	26541	5053
06:53	MA31590-ICSAB4	1935	104890	26741	5085
06:59	MA31590-CCV20	2113	115580	27911	5827
07:04	MA31590-CCB21	2257	124200	28552	6624
07:08	ZZZZZZ	2214	121520	28666	6508

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:			09:57		10:18		11:02		12:06	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	anr							
Antimony	6.0	1	anr							
Arsenic	3.0	.5	anr							
Barium	200	.7	anr							
Beryllium	1.0	.05	anr							
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	15	anr							
Chromium	10	.4	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	8.7	anr							
Lead	3.0	1.2	anr							
Lithium	20	.3								
Magnesium	5000	10	anr							
Manganese	15	.1	0.40	<15	-0.20	<15	0.10	<15	0.0	<15
Molybdenum	20	.6	anr							
Nickel	10	.5	anr							
Palladium	50	1								
Potassium	10000	14	anr							
Selenium	10	1.5	anr							
Silicon	200	7.9								
Silver	10	.5	anr							
Sodium	10000	3.8	anr							
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	anr							
Tin	10	.7								
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	anr							
Zinc	20	2.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:			13:16		14:27		15:37		16:41	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	anr							
Antimony	6.0	1	anr							
Arsenic	3.0	.5	anr							
Barium	200	.7	anr							
Beryllium	1.0	.05	anr							
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	15	anr							
Chromium	10	.4	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	8.7	anr							
Lead	3.0	1.2	anr							
Lithium	20	.3								
Magnesium	5000	10	anr							
Manganese	15	.1	-0.10	<15	-0.10	<15	0.0	<15	0.10	<15
Molybdenum	20	.6	anr							
Nickel	10	.5	anr							
Palladium	50	1								
Potassium	10000	14	anr							
Selenium	10	1.5	anr							
Silicon	200	7.9								
Silver	10	.5	anr							
Sodium	10000	3.8	anr							
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	anr							
Tin	10	.7								
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	anr							
Zinc	20	2.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

12.6.2
12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:			17:52		18:34		19:38		20:43	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	anr							
Antimony	6.0	1	anr							
Arsenic	3.0	.5	anr							
Barium	200	.7	anr							
Beryllium	1.0	.05	anr							
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	15	anr							
Chromium	10	.4	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	8.7	anr							
Lead	3.0	1.2	anr							
Lithium	20	.3								
Magnesium	5000	10	anr							
Manganese	15	.1	0.30	<15	-0.10	<15	0.70	<15	0.0	<15
Molybdenum	20	.6	anr							
Nickel	10	.5	anr							
Palladium	50	1								
Potassium	10000	14	anr							
Selenium	10	1.5	anr							
Silicon	200	7.9								
Silver	10	.5	anr							
Sodium	10000	3.8	anr							
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	anr							
Tin	10	.7								
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	anr							
Zinc	20	2.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

12.6.2
12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:			21:53		22:57		00:08		01:18	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	anr							
Antimony	6.0	1	anr							
Arsenic	3.0	.5	anr							
Barium	200	.7	anr							
Beryllium	1.0	.05	anr							
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	15	anr							
Chromium	10	.4	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	8.7	anr							
Lead	3.0	1.2	anr							
Lithium	20	.3								
Magnesium	5000	10	anr							
Manganese	15	.1	0.20	<15	0.40	<15	0.40	<15	0.30	<15
Molybdenum	20	.6	anr							
Nickel	10	.5	anr							
Palladium	50	1								
Potassium	10000	14	anr							
Selenium	10	1.5	anr							
Silicon	200	7.9								
Silver	10	.5	anr							
Sodium	10000	3.8	anr							
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	anr							
Tin	10	.7								
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	anr							
Zinc	20	2.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:			01:59		03:04		04:14		05:25	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	7	anr							
Antimony	6.0	1	anr							
Arsenic	3.0	.5	anr							
Barium	200	.7	anr							
Beryllium	1.0	.05	anr							
Bismuth	20	.5								
Boron	100	.6	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	15	anr							
Chromium	10	.4	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	8.7	anr							
Lead	3.0	1.2	anr							
Lithium	20	.3								
Magnesium	5000	10	anr							
Manganese	15	.1	0.20	<15	0.40	<15	0.20	<15	0.30	<15
Molybdenum	20	.6	anr							
Nickel	10	.5	anr							
Palladium	50	1								
Potassium	10000	14	anr							
Selenium	10	1.5	anr							
Silicon	200	7.9								
Silver	10	.5	anr							
Sodium	10000	3.8	anr							
Sulfur	50	2.5								
Strontium	10	.09								
Thallium	2.0	1.5	anr							
Tin	10	.7								
Titanium	10	.6								
Tungsten	50	5.2								
Vanadium	50	.3	anr							
Zinc	20	2.5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

12.6.2
12

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:			06:30		07:04	
Sample ID:			CCB20		CCB21	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	7	anr			
Antimony	6.0	1	anr			
Arsenic	3.0	.5	anr			
Barium	200	.7	anr			
Beryllium	1.0	.05	anr			
Bismuth	20	.5				
Boron	100	.6	anr			
Cadmium	3.0	.2	anr			
Calcium	5000	15	anr			
Chromium	10	.4	anr			
Cobalt	50	.2	anr			
Copper	10	.6	anr			
Iron	100	8.7	anr			
Lead	3.0	1.2	anr			
Lithium	20	.3				
Magnesium	5000	10	anr			
Manganese	15	.1	0.30	<15	0.50	<15
Molybdenum	20	.6	anr			
Nickel	10	.5	anr			
Palladium	50	1				
Potassium	10000	14	anr			
Selenium	10	1.5	anr			
Silicon	200	7.9				
Silver	10	.5	anr			
Sodium	10000	3.8	anr			
Sulfur	50	2.5				
Strontium	10	.09				
Thallium	2.0	1.5	anr			
Tin	10	.7				
Titanium	10	.6				
Tungsten	50	5.2				
Vanadium	50	.3	anr			
Zinc	20	2.5	anr			

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31590 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.4

(*) Outside of QC limits
(anr) Analyte not requested

12.6.2
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:		10:08	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	2000	2080	104.0
Molybdenum	anr		
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.6.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:		09:37			10:56			12:01	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2040	102.0	2000	2040	102.0	2000	2050	102.5
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:		13:11			14:21			15:31	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2040	102.0	2000	2020	101.0	2000	2050	102.5
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:		16:35			17:47			18:28	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2050	102.5	2000	2020	101.0	2000	2050	102.5
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.6.4

12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:		19:33			20:37			21:47	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2040	102.0	2000	2020	101.0	2000	2020	101.0
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:	
Sample ID:	
Metal	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:		22:52			00:02			01:12	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2010	100.5	2000	2040	102.0	2000	2000	100.0
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:		01:53			02:58			04:08	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2060	103.0	2000	2010	100.5	2000	2110	105.5
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:	
Sample ID:	
Metal	

Zirconium

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:		05:19			06:24			06:59	
Sample ID:	CCV	CCV18		CCV	CCV19		CCV	CCV20	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2080	104.0	2000	2080	104.0	2000	2060	103.0
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31590 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.6.4

12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31590 Units: ug/l

Time:				10:26		10:32		10:38	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	15.0	100.0	3.1	103.3		
Molybdenum	20		4.0	anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31590 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31590 Units: ug/l

Time:				16:53		17:58		18:04	
Sample ID:	CRI	CRIA	CRID	CRID2		CRI2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500							
Lead	3.0	20	2.5						
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	3.2	106.7	15.3	102.0	3.2	106.7
Molybdenum	20		4.0						
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000	anr					
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	anr					
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31590 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

12.6.5

12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31590 Units: ug/l

Time:				18:10		01:24		01:30	
Sample ID:	CRI	CRIA	CRID	CRIA2		CRID4		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0						
Beryllium	2.0		1.0						
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0						
Calcium	5000		1000						
Chromium	10		2.0						
Cobalt	50		3.0						
Copper	10		2.0						
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100						
Manganese	15		3.0			3.3	110.0	15.3	102.0
Molybdenum	20		4.0						
Nickel	10		4.0						
Palladium	50								
Potassium	5000		2000						
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000						
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0						
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0						
Zinc	20		10						

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31590 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31590 Units: ug/l

Time:				01:36		06:36		06:41	
Sample ID:	CRI	CRIA	CRID	CRIA3		CRI4		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0						
Beryllium	2.0		1.0						
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0						
Calcium	5000		1000						
Chromium	10		2.0						
Cobalt	50		3.0						
Copper	10		2.0						
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100						
Manganese	15		3.0			15.2	101.3	3.4	113.3
Molybdenum	20		4.0						
Nickel	10		4.0						
Palladium	50								
Potassium	5000		2000						
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0						
Sodium	5000		1000						
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0						
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0						
Zinc	20		10						

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31590 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

12.6.5

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INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31590 Units: ug/l

Time:			10:44		10:50		18:16		18:22	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	526000	105.2	508000	101.6	521000	104.2	514000	102.8
Antimony		1000	5.0		1070	107.0	4.1		1060	106.0
Arsenic		1000	-0.80		1070	107.0	-0.90		1050	105.0
Barium		500	0.0		538	107.6	0.0		534	106.8
Beryllium		500	0.0		504	100.8	0.0		500	100.0
Bismuth		500	2.1		2.9	0.6	2.8		3.2	0.6
Boron			0.60		-3.1		0.80		-4.0	
Cadmium		1000	-1.8		1050	105.0	-1.7		1040	104.0
Calcium	400000	400000	381000	95.3	379000	94.8	372000	93.0	376000	94.0
Chromium		500	1.5		481	96.2	1.3		480	96.0
Cobalt		500	-0.30		491	98.2	-0.10		484	96.8
Copper		500	-3.2		504	100.8	-4.1		489	97.8
Iron	200000	200000	187000	93.5	188000	94.0	184000	92.0	186000	93.0
Lead		1000	0.90		985	98.5	0.60		973	97.3
Lithium		500	1.3		3.9	0.8	0.70		3.7	0.7
Magnesium	500000	500000	544000	108.8	530000	106.0	535000	107.0	528000	105.6
Manganese		500	2.9		497	99.4	3.0		496	99.2
Molybdenum		500	-1.8		512	102.4	-1.7		505	101.0
Nickel		1000	-1.4		967	96.7	-1.4		948	94.8
Palladium		500	8.7		566	113.2	7.7		556	111.2
Potassium			98.2		68.6		63.2		55.7	
Selenium		1000	5.8		1100	110.0	5.8		1080	108.0
Silicon			-1.8		-10		-2.9		-8.6	
Silver		1000	0.60		1040	104.0	1.0		1020	102.0
Sodium			13.7		14.1		17.2		19.3	
Sulfur		500	56.6		63.9	12.8*	59.8		67.9	13.6*
Strontium			4.1		2.8		4.6		2.9	
Thallium		1000	0.20		1000	100.0	-0.30		979	97.9
Tin			0.0		-0.20		0.0		0.10	
Titanium			0.20		0.0		0.20		0.10	
Tungsten		500	22.9		27.1	5.4*	15.8		23.2	4.6*
Vanadium		500	1.1		483	96.6	0.90		480	96.0
Zinc		1000	-4.1		1030	103.0	-2.8		1010	101.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31590 Units: ug/l

Time:							
Sample ID:							
Metal							
Zirconium	500	-1.8	-0.50	0.0*	-2.2	-0.60	0.0*

(*) Outside of QC limits
(anr) Analyte not requested

12.6.6
12

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31590 Units: ug/l

Time:			01:42		01:48		06:47		06:53	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3		ICSA4		ICSAB4	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	525000	105.0	513000	102.6	529000	105.8	513000	102.6
Antimony		1000	4.1		1060	106.0	4.7		1050	105.0
Arsenic		1000	0.60		1050	105.0	0.0		1050	105.0
Barium		500	0.10		539	107.8	0.10		535	107.0
Beryllium		500	0.0		501	100.2	0.0		501	100.2
Bismuth		500	3.2		3.4	0.7	3.3		2.8	0.6*
Boron			-0.60		-2.5		1.2		-4.3	
Cadmium		1000	-1.8		1050	105.0	-1.9		1040	104.0
Calcium	400000	400000	374000	93.5	378000	94.5	372000	93.0	375000	93.8
Chromium		500	1.0		486	97.2	1.1		487	97.4
Cobalt		500	-0.20		485	97.0	0.10		485	97.0
Copper		500	-4.4		484	96.8	-4.6		483	96.6
Iron	200000	200000	183000	91.5	186000	93.0	183000	91.5	186000	93.0
Lead		1000	0.10		982	98.2	0.90		983	98.3
Lithium		500	1.2		3.6	0.7	1.0		3.6	0.7*
Magnesium	500000	500000	532000	106.4	528000	105.6	535000	107.0	532000	106.4
Manganese		500	3.3		501	100.2	3.1		507	101.4
Molybdenum		500	-2.1		505	101.0	-2.1		504	100.8
Nickel		1000	-1.2		951	95.1	-1.3		955	95.5
Palladium		500	7.2		554	110.8	7.5		550	110.0
Potassium			47.8		66.0		51.7		45.7	
Selenium		1000	7.2		1080	108.0	6.2		1080	108.0
Silicon			-2.3		-7.9		-1.4		-9.0	
Silver		1000	0.70		1030	103.0	0.30		1020	102.0
Sodium			14.1		14.5		15.5		16.2	
Sulfur		500	58.6		68.4	13.7*	59.8		66.8	13.4*
Strontium			4.5		3.1		4.7		3.1	
Thallium		1000	-0.60		980	98.0	0.30		981	98.1
Tin			1.0		-0.20		0.40		0.0	
Titanium			0.50		-0.20		0.10		0.20	
Tungsten		500	9.2		16.3	3.3*	10.2		14.9	3.0*
Vanadium		500	1.0		485	97.0	0.90		485	97.0
Zinc		1000	-2.7		1020	102.0	-2.8		1030	103.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SA070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31590 Units: ug/l

Time:							
Sample ID:							
Metal							
Zirconium	500	-2.4	-1.0	0.0*	-2.3	-0.70	0.0*

(*) Outside of QC limits
(anr) Analyte not requested

12.6.6

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Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:12	MA31592-STD1	1		STDA
10:19	MA31592-STD2	1		STDD
10:24	ZZZZZZ	1		
10:30	ZZZZZZ	1		
10:36	MA31592-ICV1	1		
10:42	MA31592-ICB1	1		
10:48	MA31592-CCV1	1		
10:54	MA31592-CCB1	1		
11:00	MA31592-CRI1	1		
11:06	MA31592-CRID1	1		
11:12	MA31592-CRIA1	1		
11:18	MA31592-CRID2	1		
11:25	ZZZZZZ	1		
11:31	MA31592-ICSA1	1		
11:37	MA31592-ICSAB1	1		
11:43	ZZZZZZ	1		
11:49	ZZZZZZ	1		
11:55	MA31592-CCV2	1		
12:04	MA31592-CCB2	1		
12:10	ZZZZZZ	5		
12:16	MP72948-S1	1		
12:22	MP72948-S2	1		
12:27	JB40986-1	1		(sample used for QC only; not part of login JB40127)
12:33	MP72948-SD1	5		
12:39	ZZZZZZ	1		
12:45	MP72948-MB1	1		
12:51	ZZZZZZ	1		
12:58	MP72930-S1	10		
13:04	MP72930-S2	10		
13:10	MA31592-CCV3	1		
13:16	MA31592-CCB3	1		
13:22	ZZZZZZ	5		
13:28	MP72948-LC1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:34	ZZZZZZ	1		
13:40	MP72972-S2	5		
13:46	MP72871-MB1	1		HIgh RSD on CCV
13:52	MP72871-LC1	1		HIgh RSD on CCV
13:58	MP72871-S1	1		HIgh RSD on CCV
14:04	MP72871-S2	1		HIgh RSD on CCV
14:10	JB40356-4	1		(sample used for QC only; not part of login JB40127)
14:16	MP72871-SD1	5		HIgh RSD on CCV
14:22	MA31592-CCV4	1		
14:28	MA31592-CCB4	1		
14:34	ZZZZZZ	1		
14:40	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:58	ZZZZZZ	1		
15:04	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:22	ZZZZZZ	1		
15:28	ZZZZZZ	1		
15:34	MA31592-CCV5	1		
15:40	MA31592-CCB5	1		
15:46	ZZZZZZ	1		
15:52	ZZZZZZ	1		
15:58	ZZZZZZ	1		
16:04	ZZZZZZ	1		
16:10	ZZZZZZ	1		
16:16	ZZZZZZ	1		
16:22	ZZZZZZ	1		
16:28	ZZZZZZ	1		
16:34	ZZZZZZ	1		
16:41	MA31592-CCV6	1		
16:46	MA31592-CCB6	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:52	ZZZZZZ	1		
16:58	ZZZZZZ	10		
17:04	ZZZZZZ	10		
17:10	ZZZZZZ	10		
17:16	ZZZZZZ	10		
17:22	ZZZZZZ	10		
17:28	ZZZZZZ	10		
17:34	ZZZZZZ	10		
17:40	ZZZZZZ	1		
17:46	ZZZZZZ	1		
17:52	MA31592-CCV7	1		
17:58	MA31592-CCB7	1		
18:04	ZZZZZZ	1		
18:10	ZZZZZZ	1		
18:16	ZZZZZZ	1		
18:23	ZZZZZZ	1		
18:29	ZZZZZZ	10		
18:35	ZZZZZZ	2		
18:41	ZZZZZZ	10		
18:47	ZZZZZZ	5		
18:53	ZZZZZZ	1		
18:59	ZZZZZZ	1		
19:05	MA31592-CCV8	1		
19:11	MA31592-CCB8	1		
19:17	MA31592-CRI2	1		
19:23	MA31592-CRID3	1		
19:29	MA31592-CRIA2	1		
19:35	MA31592-ICSA2	1		
19:41	MA31592-ICSAB2	1		
19:47	ZZZZZZ	1		
19:53	ZZZZZZ	1		
19:59	ZZZZZZ	1		
20:05	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:11	ZZZZZZ	1		
20:18	MA31592-CCV9	1		
20:24	MA31592-CCB9	1		
20:30	ZZZZZZ	1		
20:36	ZZZZZZ	1		
20:42	ZZZZZZ	1		
20:48	ZZZZZZ	1		
20:54	ZZZZZZ	1		
21:00	ZZZZZZ	1		
21:06	JB40127-2	1		
21:12	JB40127-3	1		
21:18	JB40127-4	1		
21:24	JB40127-5	1		
21:30	MA31592-CCV10	1		
21:36	MA31592-CCB10	1		
21:42	JB40127-6	1		
---------->	Last reportable sample/prep for job JB40127			
21:48	ZZZZZZ	1		
21:54	ZZZZZZ	1		
22:00	ZZZZZZ	1		
22:06	ZZZZZZ	1		
22:12	ZZZZZZ	1		
22:18	ZZZZZZ	1		
22:24	ZZZZZZ	1		
22:30	ZZZZZZ	1		
22:36	ZZZZZZ	1		
22:42	MA31592-CCV11	1		
22:47	MA31592-CCB11	1		
22:53	MP72942-MB1	1		
23:00	MP72942-B1	1		
23:05	MP72942-S1	1		
23:11	MP72942-S2	1		
23:17	JB40969-29	1		(sample used for QC only; not part of login JB40127)
23:23	MP72942-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:29	ZZZZZZ	1		
23:35	ZZZZZZ	1		
23:41	ZZZZZZ	1		
23:47	ZZZZZZ	1		
23:53	MA31592-CCV12	1		
23:59	MA31592-CCB12	1		
00:05	ZZZZZZ	1		
00:11	ZZZZZZ	1		
00:17	ZZZZZZ	1		
00:23	ZZZZZZ	1		
00:29	ZZZZZZ	1		
00:35	ZZZZZZ	1		
00:41	ZZZZZZ	1		
00:47	ZZZZZZ	1		
00:53	ZZZZZZ	1		
00:59	ZZZZZZ	1		
01:05	MA31592-CCV13	1		
01:11	MA31592-CCB13	1		
01:17	ZZZZZZ	1		
01:23	ZZZZZZ	1		
01:29	ZZZZZZ	1		
01:35	ZZZZZZ	1		
01:41	ZZZZZZ	1		
01:47	ZZZZZZ	2		
01:53	ZZZZZZ	1		
01:59	ZZZZZZ	1		
02:05	ZZZZZZ	1		
02:11	ZZZZZZ	1		
02:16	MA31592-CCV14	1		
02:22	MA31592-CCB14	1		
02:28	ZZZZZZ	1		
02:34	MP72982-B1	1		
02:40	MP72982-MB1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:46	MP72982-S1	1		
02:52	MP72982-S2	1		
02:58	JB41043-41	1		(sample used for QC only; not part of login JB40127)
03:04	MP72982-SD1	5		
03:10	ZZZZZZ	1		
03:16	ZZZZZZ	1		
03:22	ZZZZZZ	1		
03:28	MA31592-CCV15	1		
03:34	MA31592-CCB15	1		
03:40	MA31592-CRID4	1		
03:46	MA31592-CRI3	1		
03:52	MA31592-CRIA3	1		
03:58	MA31592-ICSA3	1		
04:04	MA31592-ICSAB3	1		
04:10	ZZZZZZ	1		
04:16	MA31592-CCV16	1		
04:22	MA31592-CCB16	1		
---------->	Last reportable CCB for job JB40127			
04:28	ZZZZZZ	1		
04:34	ZZZZZZ	1		
04:40	ZZZZZZ	1		
04:46	ZZZZZZ	1		
04:52	ZZZZZZ	1		
04:58	ZZZZZZ	1		
05:04	MP72882-B1	1		CCV out
05:10	MP72882-MB1	1		CCV out
05:16	MP72882-S1	1		CCV out
05:22	MP72882-S2	1		CCV out
05:28	MA31592-CCV17	1		
05:34	MA31592-CCB17	1		
05:40	JB40471-1	1		(sample used for QC only; not part of login JB40127)
05:46	MP72882-SD1	5		CCV out
05:52	ZZZZZZ	1		
05:58	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:04	ZZZZZZ	1		
06:10	ZZZZZZ	1		
06:16	ZZZZZZ	1		
06:22	ZZZZZZ	1		
06:28	ZZZZZZ	1		
06:34	ZZZZZZ	1		
06:40	MA31592-CCV18	1		
06:45	MA31592-CCB18	1		
06:52	ZZZZZZ	1		
06:57	ZZZZZZ	1		
07:03	MA31592-CCV19	1		
07:09	MA31592-CCB19	1		
07:15	ZZZZZZ	1		
07:21	ZZZZZZ	1		
07:27	ZZZZZZ	1		
07:33	ZZZZZZ	1		
07:39	ZZZZZZ	1		
07:57	MP72941-S1	3		
08:03	MP72941-S2	3		
08:09	JB40819-2	3		(sample used for QC only; not part of login JB40127)
08:15	MP72941-SD1	15		HIgh RSD-s
08:21	MA31592-CCV20	1		
08:27	MA31592-CCB20	1		
08:35	ZZZZZZ	3		
08:40	ZZZZZZ	2		
08:45	ZZZZZZ	2		
08:49	ZZZZZZ	2		
08:54	ZZZZZZ	5		
08:59	ZZZZZZ	1		
09:04	ZZZZZZ	1		
09:09	ZZZZZZ	3		
09:13	ZZZZZZ	1		
09:18	MA31592-CCV21	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:25	MA31592-CCB21	1		
09:30	ZZZZZZ	2		
09:34	ZZZZZZ	2		
09:39	ZZZZZZ	3		
09:47	MA31592-CRIA4	1		
09:52	MA31592-CRI4	1		
09:56	MA31592-ICSA4	1		
10:01	MA31592-ICSAB4	1		
10:05	MA31592-CCV22	1		
10:10	MA31592-CCB22	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:12	MA31592-STD1	1754 R	44208 R	13334 R	2529 R
10:19	MA31592-STD2	1603	40987	13148	2177
10:24	ZZZZZZ	1655	43337	13102	2265
10:30	ZZZZZZ	1738	45754	13350	2505
10:36	MA31592-ICV1	1664	43407	13058	2276
10:42	MA31592-ICB1	1744	44936	13467	2520
10:48	MA31592-CCV1	1659	43110	13057	2265
10:54	MA31592-CCB1	1751	45806	13259	2521
11:00	MA31592-CRI1	1706	44773	13162	2442
11:06	MA31592-CRID1	No results reported for the elements associated with this internal standard.			
11:12	MA31592-CRIA1	1742	45393	13319	2513
11:18	MA31592-CRID2	1757	45662	13200	2527
11:25	ZZZZZZ	1731	45182	13228	2478
11:31	MA31592-ICSA1	1503	39410	12470	1987
11:37	MA31592-ICSAB1	1502	39357	12979	1987
11:43	ZZZZZZ	1744	45566	13345	2531
11:49	ZZZZZZ	1709	44704	13322	2467
11:55	MA31592-CCV2	1668	43204	13123	2283
12:04	MA31592-CCB2	1757	45822	13276	2536
12:10	ZZZZZZ	1759	45691	13216	2504
12:16	MP72948-S1	1628	43056	13099	2259
12:22	MP72948-S2	1633	42965	12911	2263
12:27	JB40986-1	1682	44011	13001	2372
12:33	MP72948-SD1	1734	45771	13177	2493
12:39	ZZZZZZ	1730	45658	13382	2462
12:45	MP72948-MB1	1743	45821	13295	2528
12:51	ZZZZZZ	1762	46327	13210	2551
12:58	MP72930-S1	1486	37580	12586	1924
13:04	MP72930-S2	1478	38117	12459	1916
13:10	MA31592-CCV3	1660	43392	12965	2278
13:16	MA31592-CCB3	1758	45913	13260	2546
13:22	ZZZZZZ	2192	57124	16829	2403
13:28	MP72948-LC1	1718	44967	13210	2435

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:34	ZZZZZZ	1525	38663	12491	1995
13:40	MP72972-S2	1548	41086	12436	2106
13:46	MP72871-MB1	1749	45756	13043	2529
13:52	MP72871-LC1	1716	44239	13200	2431
13:58	MP72871-S1	1650	44003	13032	2285
14:04	MP72871-S2	1657	43737	13077	2293
14:10	JB40356-4	1708	45055	13113	2433
14:16	MP72871-SD1	1743	45753	13151	2520
14:22	MA31592-CCV4	1663	44171	12903	2276
14:28	MA31592-CCB4	1754	46131	13156	2536
14:34	ZZZZZZ	1694	44768	13182	2407
14:40	ZZZZZZ	1703	44888	13262	2421
14:46	ZZZZZZ	1735	44982	13247	2417
14:52	ZZZZZZ	1613	41798	12886	2141
14:58	ZZZZZZ	1730	45384	13236	2468
15:04	ZZZZZZ	1768	44256	13122	2527
15:10	ZZZZZZ	1616	41862	12828	2145
15:16	ZZZZZZ	1765	45964	13167	2553
15:22	ZZZZZZ	1711	45061	13069	2456
15:28	ZZZZZZ	1698	44002	13674	2425
15:34	MA31592-CCV5	1666	43646	12920	2285
15:40	MA31592-CCB5	1763	46127	13380	2549
15:46	ZZZZZZ	1717	45189	12625	2481
15:52	ZZZZZZ	1726	45298	13055	2493
15:58	ZZZZZZ	1737	45224	13195	2492
16:04	ZZZZZZ	1744	45102	12655	2513
16:10	ZZZZZZ	1711	44710	12938	2452
16:16	ZZZZZZ	1658	44972	12816	2334
16:22	ZZZZZZ	1654	43304	12840	2301
16:28	ZZZZZZ	1754	46090	12845	2540
16:34	ZZZZZZ	1676	44013	12994	2223
16:41	MA31592-CCV6	1674	43558	12708	2295
16:46	MA31592-CCB6	1766	45931	13015	2552

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:52	ZZZZZZ	1723	45295	13547	2271
16:58	ZZZZZZ	1674	44892	13014	2402
17:04	ZZZZZZ	1554	43056	12675	2250
17:10	ZZZZZZ	1608	43293	12694	2299
17:16	ZZZZZZ	1580	43494	12667	2283
17:22	ZZZZZZ	1558	42845	12646	2242
17:28	ZZZZZZ	1562	43223	12785	2272
17:34	ZZZZZZ	1597	43316	12624	2294
17:40	ZZZZZZ	1760	46110	13287	2568
17:46	ZZZZZZ	1756	45647	12992	2535
17:52	MA31592-CCV7	1672	43474	12816	2293
17:58	MA31592-CCB7	1769	46065	13036	2564
18:04	ZZZZZZ	1469	44317	13122	2108
18:10	ZZZZZZ	812 !	36679	11745	1868
18:16	ZZZZZZ	881 !	35692	11645	1962
18:23	ZZZZZZ	1125 !	38439	11788	2002
18:29	ZZZZZZ	1575	43129	12604	2268
18:35	ZZZZZZ	1563	43722	12995	2199
18:41	ZZZZZZ	1565	44243	12534	2258
18:47	ZZZZZZ	1529	42349	12455	2211
18:53	ZZZZZZ	1710	44381	13068	2482
18:59	ZZZZZZ	1765	46296	13010	2550
19:05	MA31592-CCV8	1666	43481	12625	2283
19:11	MA31592-CCB8	1762	45885	12827	2553
19:17	MA31592-CRI2	1740	45329	12710	2497
19:23	MA31592-CRID3	1756	45744	12747	2536
19:29	MA31592-CRIA2	1767	46279	12730	2556
19:35	MA31592-ICSA2	1513	38846	12187	2001
19:41	MA31592-ICSAB2	1517	39512	12052	2007
19:47	ZZZZZZ	1590	42020	12262	2194
19:53	ZZZZZZ	1762	46011	12829	2536
19:59	ZZZZZZ	1792	46724	13145	2624
20:05	ZZZZZZ	1761	45904	12823	2542

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:11	ZZZZZZ	1765	45601	12560	2534
20:18	MA31592-CCV9	1654	43683	12491	2269
20:24	MA31592-CCB9	1752	46994	12878	2535
20:30	ZZZZZZ	1691	45890	12748	2542
20:36	ZZZZZZ	1521	38448	12020	1996
20:42	ZZZZZZ	1518	38514	12063	1987
20:48	ZZZZZZ	1508	38403	12004	1949
20:54	ZZZZZZ	1482	38097	12034	1926
21:00	ZZZZZZ	1779	46391	13028	2583
21:06	JB40127-2	1780	46244	13269	2388
21:12	JB40127-3	1786	47261	13441	2371
21:18	JB40127-4	1758	46872	13087	2398
21:24	JB40127-5	1777	46370	13113	2447
21:30	MA31592-CCV10	1672	43430	12458	2289
21:36	MA31592-CCB10	1759	46121	12905	2539
21:42	JB40127-6	1775	46342	13096	2404
21:48	ZZZZZZ	1765	46305	12938	2563
21:54	ZZZZZZ	1762	45872	13297	2357
22:00	ZZZZZZ	1741	45104	13130	2344
22:06	ZZZZZZ	1833	47425	13677	2373
22:12	ZZZZZZ	1777	45716	13289	2383
22:18	ZZZZZZ	1813	46583	13543	2383
22:24	ZZZZZZ	1803	46707	13610	2377
22:30	ZZZZZZ	1814	47428	13652	2360
22:36	ZZZZZZ	1773	45695	13265	2366
22:42	MA31592-CCV11	1663	43206	12601	2282
22:47	MA31592-CCB11	1760	46380	12633	2541
22:53	MP72942-MB1	1763	46083	12791	2551
23:00	MP72942-B1	1707	44777	12983	2382
23:05	MP72942-S1	1737	44587	12914	2304
23:11	MP72942-S2	1731	45887	12741	2321
23:17	JB40969-29	1767	45894	13095	2414
23:23	MP72942-SD1	1780	46043	12638	2507

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:29	ZZZZZZ	1874	48107	14060	2374
23:35	ZZZZZZ	1883	48272	13765	2400
23:41	ZZZZZZ	1894	49212	14073	2374
23:47	ZZZZZZ	1950	49683	14246	2342
23:53	MA31592-CCV12	1667	43410	12358	2284
23:59	MA31592-CCB12	1754	45766	12663	2537
00:05	ZZZZZZ	1849	47074	13715	2356
00:11	ZZZZZZ	1807	46967	13401	2365
00:17	ZZZZZZ	1844	46964	13673	2330
00:23	ZZZZZZ	1840	46716	13429	2370
00:29	ZZZZZZ	1832	47335	13813	2337
00:35	ZZZZZZ	1977	51543	15166	2300
00:41	ZZZZZZ	1841	47638	13670	2331
00:47	ZZZZZZ	1903	49276	14442	2301
00:53	ZZZZZZ	1923	49531	14575	2291
00:59	ZZZZZZ	1871	49079	14163	2309
01:05	MA31592-CCV13	1670	43216	12332	2287
01:11	MA31592-CCB13	1774	45664	12543	2565
01:17	ZZZZZZ	1787	45564	13319	2318
01:23	ZZZZZZ	1920	49423	14106	2365
01:29	ZZZZZZ	1876	47480	13542	2419
01:35	ZZZZZZ	1837	47113	13521	2368
01:41	ZZZZZZ	1856	47099	13602	2348
01:47	ZZZZZZ	1725	44725	12704	2481
01:53	ZZZZZZ	1767	46133	12601	2552
01:59	ZZZZZZ	1765	46492	12775	2414
02:05	ZZZZZZ	1762	45837	13078	2446
02:11	ZZZZZZ	1770	46002	12827	2424
02:16	MA31592-CCV14	1665	43335	12222	2278
02:22	MA31592-CCB14	1761	45816	12478	2543
02:28	ZZZZZZ	1761	45793	12934	2401
02:34	MP72982-B1	1715	44576	12312	2396
02:40	MP72982-MB1	1764	46161	12635	2563

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:46	MP72982-S1	1738	44619	12611	2363
02:52	MP72982-S2	1738	44716	12504	2358
02:58	JB41043-41	1791	46264	12844	2476
03:04	MP72982-SD1	1783	46083	12523	2528
03:10	ZZZZZZ	1800	46634	12864	2454
03:16	ZZZZZZ	1765	46017	12842	2468
03:22	ZZZZZZ	1772	46392	12777	2520
03:28	MA31592-CCV15	1679	43354	12091	2293
03:34	MA31592-CCB15	1771	44702	12429	2553
03:40	MA31592-CRID4	1753	45885	12435	2525
03:46	MA31592-CRI3	1746	44842	12430	2501
03:52	MA31592-CRIA3	1766	45932	12396	2547
03:58	MA31592-ICSA3	1505	39295	11613	1990
04:04	MA31592-ICSAB3	1506	39257	11568	1993
04:10	ZZZZZZ	1765	46346	12611	2548
04:16	MA31592-CCV16	1654	43665	12255	2265
04:22	MA31592-CCB16	1763	45533	12361	2548
04:28	ZZZZZZ	1769	46284	12676	2458
04:34	ZZZZZZ	1772	46132	12810	2447
04:40	ZZZZZZ	1761	45982	12607	2453
04:46	ZZZZZZ	1753	45671	12646	2434
04:52	ZZZZZZ	1768	45916	12547	2457
04:58	ZZZZZZ	1777	46302	12347	2522
05:04	MP72882-B1	1722	44506	12295	2403
05:10	MP72882-MB1	1753	46505	12879	2552
05:16	MP72882-S1	1706	44740	12580	2329
05:22	MP72882-S2	1700	44254	12603	2311
05:28	MA31592-CCV17	1670	41861	12019	2286
05:34	MA31592-CCB17	1758	45096	12394	2539
05:40	JB40471-1	1771	45078	12651	2446
05:46	MP72882-SD1	1756	45737	12491	2494
05:52	ZZZZZZ	1733	47116	13020	2307
05:58	ZZZZZZ	1456	38407	11485	1908

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:04	ZZZZZZ	1770	46394	13043	2390
06:10	ZZZZZZ	1780	46440	13089	2369
06:16	ZZZZZZ	1749	45374	12888	2332
06:22	ZZZZZZ	1766	46056	12921	2356
06:28	ZZZZZZ	1779	46228	12821	2350
06:34	ZZZZZZ	1764	47507	12732	2365
06:40	MA31592-CCV18	1653	43571	11656	2263
06:45	MA31592-CCB18	1756	46779	12206	2536
06:52	ZZZZZZ	1710	45327	12430	2403
06:57	ZZZZZZ	1697	43879	12600	2277
07:03	MA31592-CCV19	1656	43629	11984	2269
07:09	MA31592-CCB19	1762	45756	12195	2549
07:15	ZZZZZZ	1640	43119	12232	2142
07:21	ZZZZZZ	1747	45511	12610	2490
07:27	ZZZZZZ	1669	44640	12130	2255
07:33	ZZZZZZ	1703	44764	12451	2352
07:39	ZZZZZZ	1606	42169	11811	2197
07:57	MP72941-S1	1486	39891	11283	1968
08:03	MP72941-S2	1501	41216	11198	1977
08:09	JB40819-2	1475	39657	11197	1965
08:15	MP72941-SD1	1642	43140	11889	2264
08:21	MA31592-CCV20	1671	43661	11966	2282
08:27	MA31592-CCB20	1754	46909	12087	2532
08:35	ZZZZZZ	1511	39444	11390	2026
08:40	ZZZZZZ	2236	57944 !	16197	2374
08:45	ZZZZZZ	2139	55479	15163	2356
08:49	ZZZZZZ	1857	48519	13357	2364
08:54	ZZZZZZ	1664	44055	12086	2359
08:59	ZZZZZZ	1540	999999 !	11826	2108
09:04	ZZZZZZ	1666	43927	11907	2366
09:09	ZZZZZZ	1614	42632	11893	2238
09:13	ZZZZZZ	1704	45755	12869	2239
09:18	MA31592-CCV21	1658	43605	11989	2279

INTERNAL STANDARD SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31592
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:25	MA31592-CCB21	1757	46086	12197	2542
09:30	ZZZZZZ	1729	45298	12298	2401
09:34	ZZZZZZ	1727	44986	12378	2403
09:39	ZZZZZZ	1734	45332	12286	2487
09:47	MA31592-CRIA4	1748	46323	12269	2528
09:52	MA31592-CRI4	1735	46464	12106	2484
09:56	MA31592-ICSA4	1515	39820	11242	2001
10:01	MA31592-ICSAB4	1503	39892	11413	1990
10:05	MA31592-CCV22	1666	43959	11470	2280
10:10	MA31592-CCB22	1751	47039	11919	2536

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:			10:42		10:54		12:04		13:16	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	0.60	<200	0.90	<200	0.30	<200	-7.9	<200
Antimony	6.0	1.3	0.50	<6.0	0.70	<6.0	1.3	<6.0	1.1	<6.0
Arsenic	3.0	1.2	1.7	<3.0	2.6	<3.0	1.3	<3.0	-0.50	<3.0
Barium	200	.3	0.20	<200	0.30	<200	0.20	<200	-0.10	<200
Beryllium	1.0	.09	0.10	<1.0	0.20	<1.0	0.10	<1.0	-0.20	<1.0
Bismuth	20	1.5								
Boron	100	.8								
Cadmium	3.0	.2	0.70	<3.0	0.60	<3.0	0.70	<3.0	0.10	<3.0
Calcium	5000	16	-0.20	<5000	0.70	<5000	3.5	<5000	-4.9	<5000
Chromium	10	.7	0.60	<10	0.40	<10	0.0	<10	-0.30	<10
Cobalt	50	.3	2.1	<50	2.2	<50	1.2	<50	0.30	<50
Copper	10	.8	-0.50	<10	-0.70	<10	0.30	<10	-0.40	<10
Iron	100	2.6	2.5	<100	3.7	<100	3.6	<100	-3.3	<100
Lead	3.0	1.5	1.2	<3.0	0.20	<3.0	0.0	<3.0	1.1	<3.0
Lithium	20	1.2								
Magnesium	5000	21	-12	<5000	-14	<5000	-10	<5000	-22	<5000
Manganese	15	.2	0.50	<15	0.20	<15	0.70	<15	-0.20	<15
Molybdenum	20	.3								
Nickel	10	.6	1.8	<10	0.80	<10	1.0	<10	0.0	<10
Palladium	50	2								
Potassium	10000	29	7.6	<10000	17.5	<10000	36.4	<10000	49.2	<10000
Selenium	10	2.2	0.50	<10	-1.8	<10	1.6	<10	-0.50	<10
Silicon	200	1.6								
Silver	10	.6	0.30	<10	0.40	<10	0.0	<10	-0.10	<10
Sodium	10000	21	0.90	<10000	-3.9	<10000	-11	<10000	155	<10000
Sulfur	50	2.3								
Strontium	10	.1								
Thallium	2.0	1	1.6	<2.0	1.5	<2.0	1.0	<2.0	0.20	<2.0
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	7.2								
Vanadium	50	.4	0.20	<50	0.0	<50	0.70	<50	-0.30	<50
Zinc	20	.9	0.90	<20	0.90	<20	0.80	<20	0.0	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.2

(*) Outside of QC limits
(anr) Analyte not requested

12.7.2
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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:			14:28		15:40		16:46		17:58	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	-7.0	<200	5.1	<200	-1.6	<200	1.3	<200
Antimony	6.0	1.3	0.30	<6.0	1.3	<6.0	1.5	<6.0	2.0	<6.0
Arsenic	3.0	1.2	0.80	<3.0	1.5	<3.0	2.5	<3.0	1.7	<3.0
Barium	200	.3	-0.10	<200	0.10	<200	0.0	<200	0.40	<200
Beryllium	1.0	.09	-0.10	<1.0	0.10	<1.0	0.10	<1.0	0.30	<1.0
Bismuth	20	1.5								
Boron	100	.8								
Cadmium	3.0	.2	0.60	<3.0	0.70	<3.0	0.70	<3.0	0.90	<3.0
Calcium	5000	16	-2.5	<5000	0.0	<5000	1.3	<5000	4.0	<5000
Chromium	10	.7	-0.50	<10	0.0	<10	0.0	<10	0.30	<10
Cobalt	50	.3	0.80	<50	0.90	<50	1.3	<50	1.4	<50
Copper	10	.8	-0.50	<10	0.10	<10	-0.60	<10	0.20	<10
Iron	100	2.6	-1.6	<100	2.5	<100	2.3	<100	6.4	<100
Lead	3.0	1.5	0.70	<3.0	0.60	<3.0	1.6	<3.0	0.60	<3.0
Lithium	20	1.2								
Magnesium	5000	21	-8.4	<5000	-9.2	<5000	-16	<5000	-10	<5000
Manganese	15	.2	-0.10	<15	0.30	<15	0.10	<15	0.50	<15
Molybdenum	20	.3								
Nickel	10	.6	0.50	<10	0.40	<10	0.40	<10	0.90	<10
Palladium	50	2								
Potassium	10000	29	32.6	<10000	38.4	<10000	39.6	<10000	30.8	<10000
Selenium	10	2.2	-0.30	<10	-0.70	<10	-0.50	<10	0.0	<10
Silicon	200	1.6								
Silver	10	.6	-0.10	<10	0.0	<10	0.0	<10	-0.20	<10
Sodium	10000	21	-2.0	<10000	-6.2	<10000	-6.6	<10000	-19	<10000
Sulfur	50	2.3								
Strontium	10	.1								
Thallium	2.0	1	2.5	* (a)	0.80	<2.0	0.80	<2.0	1.1	<2.0
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	7.2								
Vanadium	50	.4	-0.30	<50	0.20	<50	0.20	<50	0.30	<50
Zinc	20	.9	0.70	<20	0.70	<20	0.90	<20	1.0	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.2

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

12.7.2
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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:			19:11		20:24		21:36		22:47	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	3.9	<200	-6.5	<200	1.0	<200	4.4	<200
Antimony	6.0	1.3	1.7	<6.0	0.80	<6.0	1.5	<6.0	0.40	<6.0
Arsenic	3.0	1.2	0.70	<3.0	0.30	<3.0	1.1	<3.0	0.80	<3.0
Barium	200	.3	0.60	<200	0.0	<200	0.0	<200	0.0	<200
Beryllium	1.0	.09	0.40	<1.0	0.0	<1.0	-0.10	<1.0	0.10	<1.0
Bismuth	20	1.5								
Boron	100	.8								
Cadmium	3.0	.2	1.0	<3.0	0.70	<3.0	0.70	<3.0	0.60	<3.0
Calcium	5000	16	6.5	<5000	-3.2	<5000	-4.8	<5000	-0.70	<5000
Chromium	10	.7	0.80	<10	0.10	<10	-0.10	<10	-0.20	<10
Cobalt	50	.3	1.6	<50	0.90	<50	1.3	<50	1.0	<50
Copper	10	.8	0.10	<10	-0.60	<10	-0.40	<10	-0.10	<10
Iron	100	2.6	10.4	<100	-1.8	<100	-2.3	<100	5.1	<100
Lead	3.0	1.5	1.1	<3.0	1.2	<3.0	1.2	<3.0	0.20	<3.0
Lithium	20	1.2								
Magnesium	5000	21	5.8	<5000	-5.4	<5000	-17	<5000	-11	<5000
Manganese	15	.2	0.70	<15	0.50	<15	0.10	<15	0.30	<15
Molybdenum	20	.3								
Nickel	10	.6	1.0	<10	0.70	<10	1.0	<10	0.90	<10
Palladium	50	2								
Potassium	10000	29	57.5	<10000	53.9	<10000	39.8	<10000	101	<10000
Selenium	10	2.2	0.50	<10	1.8	<10	-1.0	<10	-0.20	<10
Silicon	200	1.6								
Silver	10	.6	0.30	<10	0.40	<10	0.40	<10	0.40	<10
Sodium	10000	21	-28	<10000	-52	<10000	15.4	<10000	-43	<10000
Sulfur	50	2.3								
Strontium	10	.1								
Thallium	2.0	1	0.60	<2.0	1.1	<2.0	1.9	<2.0	1.4	<2.0
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	7.2								
Vanadium	50	.4	0.60	<50	0.20	<50	-0.10	<50	0.20	<50
Zinc	20	.9	1.1	<20	0.70	<20	1.0	<20	0.70	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.2

(*) Outside of QC limits
(anr) Analyte not requested

12.7.2
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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:			23:59		01:11		02:22		03:34	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	11	7.2	<200	3.4	<200	8.2	<200	15.4	<200
Antimony	6.0	1.3	1.4	<6.0	1.2	<6.0	3.2	<6.0	2.3	<6.0
Arsenic	3.0	1.2	1.8	<3.0	1.3	<3.0	1.9	<3.0	3.4	* (b)
Barium	200	.3	0.20	<200	0.30	<200	0.10	<200	0.40	<200
Beryllium	1.0	.09	0.20	<1.0	0.30	<1.0	0.40	<1.0	0.60	<1.0
Bismuth	20	1.5								
Boron	100	.8								
Cadmium	3.0	.2	1.0	<3.0	0.80	<3.0	1.2	<3.0	1.3	<3.0
Calcium	5000	16	1.8	<5000	-0.60	<5000	1.3	<5000	4.9	<5000
Chromium	10	.7	-0.10	<10	0.20	<10	0.60	<10	0.30	<10
Cobalt	50	.3	1.3	<50	1.2	<50	1.6	<50	1.6	<50
Copper	10	.8	0.10	<10	0.60	<10	0.10	<10	0.50	<10
Iron	100	2.6	11.1	<100	10.1	<100	13.2	<100	15.3	<100
Lead	3.0	1.5	1.4	<3.0	1.6	<3.0	2.0	<3.0	1.8	<3.0
Lithium	20	1.2								
Magnesium	5000	21	-7.3	<5000	-5.4	<5000	2.0	<5000	9.9	<5000
Manganese	15	.2	0.60	<15	0.70	<15	0.50	<15	0.60	<15
Molybdenum	20	.3								
Nickel	10	.6	1.2	<10	1.0	<10	1.1	<10	1.3	<10
Palladium	50	2								
Potassium	10000	29	91.8	<10000	96.6	<10000	98.8	<10000	116	<10000
Selenium	10	2.2	0.0	<10	0.90	<10	-0.20	<10	1.5	<10
Silicon	200	1.6								
Silver	10	.6	-0.20	<10	0.50	<10	-0.20	<10	0.30	<10
Sodium	10000	21	-60	<10000	-90	<10000	-91	<10000	-90	<10000
Sulfur	50	2.3								
Strontium	10	.1								
Thallium	2.0	1	1.1	<2.0	1.0	<2.0	2.4	* (a)	1.7	<2.0
Tin	10	.7								
Titanium	10	.5								
Tungsten	50	7.2								
Vanadium	50	.4	0.70	<50	0.60	<50	0.30	<50	0.60	<50
Zinc	20	.9	1.3	<20	1.2	<20	1.6	<20	5.7	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.2

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.
(b) No AQ samples reported for this element in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:			04:22	
Sample ID:			CCB16	
Metal	RL	IDL	raw	final
Aluminum	200	11	-8.9	<200
Antimony	6.0	1.3	1.2	<6.0
Arsenic	3.0	1.2	1.5	<3.0
Barium	200	.3	-0.20	<200
Beryllium	1.0	.09	-0.10	<1.0
Bismuth	20	1.5		
Boron	100	.8		
Cadmium	3.0	.2	0.10	<3.0
Calcium	5000	16	-5.1	<5000
Chromium	10	.7	-0.20	<10
Cobalt	50	.3	0.90	<50
Copper	10	.8	-0.50	<10
Iron	100	2.6	-0.70	<100
Lead	3.0	1.5	0.20	<3.0
Lithium	20	1.2		
Magnesium	5000	21	9.6	<5000
Manganese	15	.2	0.0	<15
Molybdenum	20	.3		
Nickel	10	.6	0.10	<10
Palladium	50	2		
Potassium	10000	29	101	<10000
Selenium	10	2.2	-0.70	<10
Silicon	200	1.6		
Silver	10	.6	0.0	<10
Sodium	10000	21	-95	<10000
Sulfur	50	2.3		
Strontium	10	.1		
Thallium	2.0	1	-0.30	<2.0
Tin	10	.7		
Titanium	10	.5		
Tungsten	50	7.2		
Vanadium	50	.4	0.20	<50
Zinc	20	.9	0.50	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31592 Units: ug/l

Time:
Sample ID:

Metal		
Zirconium	10	.2

(*) Outside of QC limits
(anr) Analyte not requested

12.7.2
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CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:		10:36			10:48			11:55	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40500	101.3	40000	40500	101.3	40000	40400	101.0
Antimony	2000	1970	98.5	2000	1980	99.0	2000	1970	98.5
Arsenic	2000	1970	98.5	2000	1980	99.0	2000	1960	98.0
Barium	2000	2060	103.0	2000	2060	103.0	2000	2050	102.5
Beryllium	2000	2070	103.5	2000	2080	104.0	2000	2050	102.5
Bismuth									
Boron									
Cadmium	2000	1980	99.0	2000	1980	99.0	2000	1970	98.5
Calcium	40000	41200	103.0	40000	41200	103.0	40000	40800	102.0
Chromium	2000	1960	98.0	2000	1980	99.0	2000	1980	99.0
Cobalt	2000	2020	101.0	2000	2030	101.5	2000	2010	100.5
Copper	2000	1870	93.5*(a)	2000	1890	94.5	2000	1900	95.0
Iron	40000	41400	103.5	40000	41300	103.3	40000	41000	102.5
Lead	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Lithium									
Magnesium	40000	40500	101.3	40000	40500	101.3	40000	40200	100.5
Manganese	2000	1990	99.5	2000	2010	100.5	2000	1990	99.5
Molybdenum									
Nickel	2000	2020	101.0	2000	2020	101.0	2000	2010	100.5
Palladium									
Potassium	40000	40500	101.3	40000	40600	101.5	40000	40300	100.8
Selenium	2000	1970	98.5	2000	1980	99.0	2000	1970	98.5
Silicon									
Silver	250	236	94.4*(a)	250	238	95.2	250	238	95.2
Sodium	40000	40300	100.8	40000	40300	100.8	40000	40700	101.8
Sulfur									
Strontium									
Thallium	2000	2050	102.5	2000	2050	102.5	2000	2050	102.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1940	97.0	2000	1960	98.0	2000	1960	98.0
Zinc	2000	2020	101.0	2000	2020	101.0	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 90 to 110 percent limits required for SW846 6010. No EPA 200.7 samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:		13:10			14:22			15:34	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40300	100.8	40000	40500	101.3	40000	40300	100.8
Antimony	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5
Arsenic	2000	1960	98.0	2000	1960	98.0	2000	1950	97.5
Barium	2000	2050	102.5	2000	2060	103.0	2000	2060	103.0
Beryllium	2000	2060	103.0	2000	2060	103.0	2000	2040	102.0
Bismuth									
Boron									
Cadmium	2000	1980	99.0	2000	1970	98.5	2000	1970	98.5
Calcium	40000	40700	101.8	40000	40800	102.0	40000	40500	101.3
Chromium	2000	1950	97.5	2000	1920	96.0	2000	1950	97.5
Cobalt	2000	2020	101.0	2000	2010	100.5	2000	2010	100.5
Copper	2000	1890	94.5	2000	1850	92.5	2000	1870	93.5
Iron	40000	40600	101.5	40000	40700	101.8	40000	40100	100.3
Lead	2000	2020	101.0	2000	2030	101.5	2000	2020	101.0
Lithium									
Magnesium	40000	40000	100.0	40000	40000	100.0	40000	39400	98.5
Manganese	2000	1980	99.0	2000	1940	97.0	2000	1970	98.5
Molybdenum									
Nickel	2000	2010	100.5	2000	2020	101.0	2000	2010	100.5
Palladium									
Potassium	40000	40600	101.5	40000	40800	102.0	40000	40700	101.8
Selenium	2000	1960	98.0	2000	1970	98.5	2000	1970	98.5
Silicon									
Silver	250	236	94.4	250	233	93.2	250	233	93.2
Sodium	40000	39900	99.8	40000	40800	102.0	40000	40500	101.3
Sulfur									
Strontium									
Thallium	2000	2040	102.0	2000	2040	102.0	2000	2030	101.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1940	97.0	2000	1910	95.5	2000	1930	96.5
Zinc	2000	2020	101.0	2000	2020	101.0	2000	2010	100.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.7.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:		16:41			17:52			19:05	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40600	101.5	40000	40300	100.8	40000	40600	101.5
Antimony	2000	1970	98.5	2000	1960	98.0	2000	1970	98.5
Arsenic	2000	1930	96.5	2000	1920	96.0	2000	1940	97.0
Barium	2000	2070	103.5	2000	2060	103.0	2000	2090	104.5
Beryllium	2000	2040	102.0	2000	2020	101.0	2000	2020	101.0
Bismuth									
Boron									
Cadmium	2000	1970	98.5	2000	1960	98.0	2000	1970	98.5
Calcium	40000	40600	101.5	40000	40100	100.3	40000	40100	100.3
Chromium	2000	1960	98.0	2000	1960	98.0	2000	1960	98.0
Cobalt	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Copper	2000	1880	94.0	2000	1890	94.5	2000	1890	94.5
Iron	40000	40300	100.8	40000	39700	99.3	40000	39300	98.3
Lead	2000	2020	101.0	2000	2020	101.0	2000	2030	101.5
Lithium									
Magnesium	40000	39600	99.0	40000	39100	97.8	40000	38800	97.0
Manganese	2000	1970	98.5	2000	1980	99.0	2000	1980	99.0
Molybdenum									
Nickel	2000	2010	100.5	2000	2000	100.0	2000	2020	101.0
Palladium									
Potassium	40000	40800	102.0	40000	40600	101.5	40000	41100	102.8
Selenium	2000	1970	98.5	2000	1970	98.5	2000	1980	99.0
Silicon									
Silver	250	235	94.0	250	236	94.4	250	236	94.4
Sodium	40000	41100	102.8	40000	41000	102.5	40000	41400	103.5
Sulfur									
Strontium									
Thallium	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1930	96.5	2000	1940	97.0	2000	1940	97.0
Zinc	2000	2020	101.0	2000	2010	100.5	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.7.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:		20:18			21:30			22:42	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40900	102.3	40000	40800	102.0	40000	40300	100.8
Antimony	2000	1990	99.5	2000	1980	99.0	2000	1990	99.5
Arsenic	2000	1960	98.0	2000	1960	98.0	2000	1970	98.5
Barium	2000	2100	105.0	2000	2090	104.5	2000	2070	103.5
Beryllium	2000	2040	102.0	2000	2020	101.0	2000	2000	100.0
Bismuth									
Boron									
Cadmium	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5
Calcium	40000	40600	101.5	40000	40300	100.8	40000	39600	99.0
Chromium	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5
Cobalt	2000	2020	101.0	2000	2020	101.0	2000	2030	101.5
Copper	2000	1900	95.0	2000	1910	95.5	2000	1920	96.0
Iron	40000	39500	98.8	40000	39100	97.8	40000	38200	95.5
Lead	2000	2040	102.0	2000	2040	102.0	2000	2040	102.0
Lithium									
Magnesium	40000	39200	98.0	40000	39000	97.5	40000	38100	95.3
Manganese	2000	2010	100.5	2000	2000	100.0	2000	2010	100.5
Molybdenum									
Nickel	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Palladium									
Potassium	40000	41800	104.5	40000	41800	104.5	40000	41800	104.5
Selenium	2000	1990	99.5	2000	1990	99.5	2000	1980	99.0
Silicon									
Silver	250	238	95.2	250	239	95.6	250	240	96.0
Sodium	40000	41700	104.3	40000	41600	104.0	40000	41200	103.0
Sulfur									
Strontium									
Thallium	2000	2050	102.5	2000	2050	102.5	2000	2060	103.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1960	98.0	2000	1970	98.5	2000	1970	98.5
Zinc	2000	2020	101.0	2000	2030	101.5	2000	2040	102.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.7.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:		23:53			01:05			02:16	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40800	102.0	40000	40600	101.5	40000	40700	101.8
Antimony	2000	1990	99.5	2000	1990	99.5	2000	2000	100.0
Arsenic	2000	1960	98.0	2000	1960	98.0	2000	1970	98.5
Barium	2000	2100	105.0	2000	2090	104.5	2000	2110	105.5
Beryllium	2000	2020	101.0	2000	2000	100.0	2000	2000	100.0
Bismuth									
Boron									
Cadmium	2000	1990	99.5	2000	2000	100.0	2000	2000	100.0
Calcium	40000	40000	100.0	40000	39600	99.0	40000	39600	99.0
Chromium	2000	1990	99.5	2000	2000	100.0	2000	1980	99.0
Cobalt	2000	2030	101.5	2000	2030	101.5	2000	2030	101.5
Copper	2000	1910	95.5	2000	1910	95.5	2000	1910	95.5
Iron	40000	38500	96.3	40000	37900	94.8	40000	37700	94.3
Lead	2000	2050	102.5	2000	2050	102.5	2000	2060	103.0
Lithium									
Magnesium	40000	38400	96.0	40000	37900	94.8	40000	37800	94.5
Manganese	2000	2000	100.0	2000	2000	100.0	2000	2000	100.0
Molybdenum									
Nickel	2000	2040	102.0	2000	2030	101.5	2000	2040	102.0
Palladium									
Potassium	40000	42400	106.0	40000	42500	106.3	40000	42900	107.3
Selenium	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5
Silicon									
Silver	250	238	95.2	250	240	96.0	250	238	95.2
Sodium	40000	42000	105.0	40000	42100	105.3	40000	42100	105.3
Sulfur									
Strontium									
Thallium	2000	2060	103.0	2000	2060	103.0	2000	2070	103.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1960	98.0	2000	1980	99.0	2000	1960	98.0
Zinc	2000	2040	102.0	2000	2040	102.0	2000	2040	102.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.7.3
12

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:		03:28			04:16	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	41100	102.8	40000	40700	101.8
Antimony	2000	1980	99.0	2000	2010	100.5
Arsenic	2000	1960	98.0	2000	1990	99.5
Barium	2000	2120	106.0	2000	2110	105.5
Beryllium	2000	2010	100.5	2000	2000	100.0
Bismuth						
Boron						
Cadmium	2000	1990	99.5	2000	2010	100.5
Calcium	40000	39900	99.8	40000	39300	98.3
Chromium	2000	1990	99.5	2000	1970	98.5
Cobalt	2000	2020	101.0	2000	2050	102.5
Copper	2000	1910	95.5	2000	1900	95.0
Iron	40000	37700	94.3	40000	37200	93.0
Lead	2000	2050	102.5	2000	2070	103.5
Lithium						
Magnesium	40000	37800	94.5	40000	37200	93.0
Manganese	2000	2010	100.5	2000	1990	99.5
Molybdenum						
Nickel	2000	2040	102.0	2000	2060	103.0
Palladium						
Potassium	40000	43300	108.3	40000	43100	107.8
Selenium	2000	1980	99.0	2000	2010	100.5
Silicon						
Silver	250	238	95.2	250	237	94.8
Sodium	40000	42300	105.8	40000	42200	105.5
Sulfur						
Strontium						
Thallium	2000	2070	103.5	2000	2080	104.0
Tin						
Titanium						
Tungsten						
Vanadium	2000	1970	98.5	2000	1960	98.0
Zinc	2000	2040	102.0	2000	2060	103.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31592 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

12.7.3
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31592 Units: ug/l

Time:				11:00		11:12		11:18	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	214	107.0	509	101.8	99.0	99.0
Antimony	6.0	20	3.0	6.2	103.3	19.4	97.0		
Arsenic	8.0	20	3.0	9.5	118.8	20.0	100.0	3.6	120.0
Barium	200		4.0	198	99.0			4.1	102.5
Beryllium	2.0		1.0	2.1	105.0			1.0	100.0
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	3.3	110.0			0.90	90.0
Calcium	5000		1000	5390	107.8			1030	103.0
Chromium	10		2.0	9.7	97.0			1.4	70.0
Cobalt	50		3.0	54.2	108.4			2.8	93.3
Copper	10		2.0	7.8	78.0			1.6	80.0
Iron	100	500		110	110.0	535	107.0		
Lead	3.0	20	2.5	2.5	83.3	21.2	106.0	2.1	84.0
Lithium	20								
Magnesium	5000		100	5350	107.0			97.7	97.7
Manganese	15		3.0	15.5	103.3			2.9	96.7
Molybdenum	20		4.0						
Nickel	10		4.0	11.6	116.0			4.0	100.0
Palladium	50								
Potassium	5000		2000	5160	103.2			2010	100.5
Selenium	10	20	5.0	10.3	103.0	20.6	103.0	3.5	70.0
Silicon	200								
Silver	5.0		1.0	4.6	92.0			1.0	100.0
Sodium	5000		1000	5230	104.6			986	98.6
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	9.1	91.0			1.8	90.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	49.6	99.2			1.7	85.0
Zinc	20		10	22.5	112.5			11.2	112.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31592 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31592 Units: ug/l

Time:				19:17		19:23		19:29	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	209	104.5	101	101.0	520	104.0
Antimony	6.0	20	3.0	6.6	110.0	3.8	126.7	21.5	107.5
Arsenic	8.0	20	3.0	9.1	113.8	3.8	126.7	17.5	87.5
Barium	200		4.0	202	101.0	4.1	102.5		
Beryllium	2.0		1.0	2.0	100.0	0.90	90.0		
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	3.2	106.7	1.0	100.0		
Calcium	5000		1000	5290	105.8	1020	102.0		
Chromium	10		2.0	9.9	99.0	1.4	70.0		
Cobalt	50		3.0	52.1	104.2	2.6	86.7		
Copper	10		2.0	7.4	74.0	1.5	75.0		
Iron	100	500		106	106.0			516	103.2
Lead	3.0	20	2.5	2.2	73.3			19.8	99.0
Lithium	20								
Magnesium	5000		100	5140	102.8	86.3	86.3		
Manganese	15		3.0	15.4	102.7	2.9	96.7		
Molybdenum	20		4.0						
Nickel	10		4.0	10.5	105.0	3.9	97.5		
Palladium	50								
Potassium	5000		2000	5270	105.4	2080	104.0		
Selenium	10	20	5.0	8.8	88.0	4.5	90.0	19.2	96.0
Silicon	200								
Silver	5.0		1.0	4.5	90.0	0.80	80.0		
Sodium	5000		1000	5380	107.6	988	98.8		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	8.4	84.0	1.9	95.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	49.1	98.2	1.8	90.0		
Zinc	20		10	22.6	113.0	11.7	117.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31592 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

12.7.4
12

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31592 Units: ug/l

Time:				03:40		03:46		03:52	
Sample ID:	CRI	CRIA	CRID	CRID4		CRI3		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	102	102.0	209	104.5	533	106.6
Antimony	6.0	20	3.0	3.0	100.0	7.1	118.3	19.8	99.0
Arsenic	8.0	20	3.0	2.8	93.3	8.8	110.0	18.4	92.0
Barium	200		4.0	4.0	100.0	201	100.5		
Beryllium	2.0		1.0	0.90	90.0	2.0	100.0		
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	1.0	100.0	3.2	106.7		
Calcium	5000		1000	1010	101.0	5130	102.6		
Chromium	10		2.0	1.5	75.0	9.8	98.0		
Cobalt	50		3.0	2.8	93.3	52.1	104.2		
Copper	10		2.0	1.6	80.0	7.6	76.0		
Iron	100	500				99.0	99.0	488	97.6
Lead	3.0	20	2.5	2.5	100.0	3.0	100.0	20.5	102.5
Lithium	20								
Magnesium	5000		100	89.4	89.4	4930	98.6		
Manganese	15		3.0	3.0	100.0	15.7	104.7		
Molybdenum	20		4.0						
Nickel	10		4.0	4.2	105.0	10.5	105.0		
Palladium	50								
Potassium	5000		2000	2230	111.5	5540	110.8		
Selenium	10	20	5.0			10.1	101.0	19.9	99.5
Silicon	200								
Silver	5.0		1.0	0.80	80.0	4.7	94.0		
Sodium	5000		1000	947	94.7	5350	107.0		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.0	100.0	9.2	92.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	1.8	90.0	50.2	100.4		
Zinc	20		10	11.9	119.0	22.6	113.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31592 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31592 Units: ug/l

Time:			11:31		11:37		19:35		19:41	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	513000	102.6	492000	98.4	519000	103.8	524000	104.8
Antimony		1000	1.9		1010	101.0	2.8		1010	101.0
Arsenic		1000	2.1		1020	102.0	2.7		1010	101.0
Barium		500	-1.0		503	100.6	-1.1		534	106.8
Beryllium		500	0.60		471	94.2	0.50		485	97.0
Bismuth		500	34.6		507	101.4	35.2		509	101.8
Boron			-2.4		-2.1		-2.1		-1.9	
Cadmium		1000	-0.10		1010	101.0	-0.10		1000	100.0
Calcium	400000	400000	388000	97.0	370000	92.5	378000	94.5	377000	94.3
Chromium		500	-1.4		458	91.6	-1.1		460	92.0
Cobalt		500	-8.5		462	92.4	-7.7		459	91.8
Copper		500	-1.1		492	98.4	-3.7		493	98.6
Iron	200000	200000	204000	102.0	193000	96.5	192000	96.0	193000	96.5
Lead		1000	-3.0		944	94.4	-2.9		944	94.4
Lithium		500	11.7		498	99.6	10.8		530	106.0
Magnesium	500000	500000	506000	101.2	484000	96.8	479000	95.8	488000	97.6
Manganese		500	5.8		470	94.0	3.1		471	94.2
Molybdenum		500	-0.30		487	97.4	-0.30		483	96.6
Nickel		1000	-1.1		908	90.8	-0.60		908	90.8
Palladium		500	34.3		554	110.8	33.0		555	111.0
Potassium			3.8		29.2		46.7		50.2	
Selenium		1000	2.7		1000	100.0	0.70		1010	101.0
Silicon			3.0		2.6		4.3		2.5	
Silver		1000	7.0		948	94.8	2.0		947	94.7
Sodium			-8.1		-7.4		-52		-41	
Sulfur		500	-13		453	90.6	-13		455	91.0
Strontium			4.3		3.9		4.7		4.9	
Thallium		1000	1.0		998	99.8	1.8		992	99.2
Tin			-2.4		-3.0		-3.1		-2.1	
Titanium			1.3		1.3		1.5		1.7	
Tungsten		500	-50		447	89.4	-49		448	89.6
Vanadium		500	-1.2		460	92.0	0.30		457	91.4
Zinc		1000	3.7		950	95.0	3.6		947	94.7

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31592 Units: ug/l

Time:							
Sample ID:							
Metal							
Zirconium	500	0.90	450	90.0	-0.10	451	90.2

(*) Outside of QC limits
(anr) Analyte not requested

12.7.5
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INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31592 Units: ug/l

Time:			03:58		04:04	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	523000	104.6	522000	104.4
Antimony		1000	1.2		1030	103.0
Arsenic		1000	1.8		1030	103.0
Barium		500	-1.1		543	108.6
Beryllium		500	0.50		481	96.2
Bismuth		500	35.1		515	103.0
Boron			-2.2		-1.6	
Cadmium		1000	0.30		1020	102.0
Calcium	400000	400000	377000	94.3	377000	94.3
Chromium		500	-1.4		464	92.8
Cobalt		500	-7.4		466	93.2
Copper		500	-4.8		499	99.8
Iron	200000	200000	185000	92.5	184000	92.0
Lead		1000	0.40		955	95.5
Lithium		500	9.8		542	108.4
Magnesium	500000	500000	470000	94.0	473000	94.6
Manganese		500	3.3		475	95.0
Molybdenum		500	-0.60		490	98.0
Nickel		1000	-0.90		916	91.6
Palladium		500	30.4		561	112.2
Potassium			87.7		109	
Selenium		1000	0.0		1010	101.0
Silicon			7.6		4.8	
Silver		1000	2.2		959	95.9
Sodium			-110		-100	
Sulfur		500	-11		459	91.8
Strontium			5.5		5.3	
Thallium		1000	-0.10		1000	100.0
Tin			-2.7		-3.7	
Titanium			1.4		1.4	
Tungsten		500	-49		451	90.2
Vanadium		500	-0.90		466	93.2
Zinc		1000	3.6		957	95.7

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SC070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31592 Units: ug/l

Time:				
Sample ID:				
Metal				
Zirconium	500	0.10	455	91.0

(*) Outside of QC limits
(anr) Analyte not requested

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BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/24/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.67	1.5	3.4	<50
Antimony	2.0	.11	.24	0.040	<2.0
Arsenic	2.0	.09	.23	0.030	<2.0
Barium	20	.03	.054	0.080	<20
Beryllium	0.20	.02	.015	-0.010	<0.20
Bismuth	2.0	.11	.14		
Boron	10	.2	.14		
Cadmium	0.50	.04	.071	0.0	<0.50
Calcium	500	1.5	8.4	1.2	<500
Chromium	1.0	.04	.074	0.040	<1.0
Cobalt	5.0	.03	.042	0.0	<5.0
Copper	2.5	.05	.083	0.11	<2.5
Iron	50	.44	2.9	2.7	<50
Lead	2.0	.12	.21	-0.17	<2.0
Lithium	2.0	.1	.14		
Magnesium	500	1.2	9.3	1.5	<500
Manganese	1.5	.02	.054	0.050	<1.5
Molybdenum	2.0	.06	.14		
Nickel	4.0	.05	.079	0.010	<4.0
Palladium	5.0	.16	.26		
Potassium	1000	2.8	6.1	-2.8	<1000
Selenium	2.0	.14	.26	0.13	<2.0
Silicon	20	.54	3.7		
Silver	0.50	.04	.1	-0.030	<0.50
Sodium	1000	1.4	2	9.4	<1000
Strontium	1.0	.01	.024		
Sulfur	5.0	.32	.34		
Thallium	1.0	.15	.29	0.0	<1.0
Tin	5.0	.09	.76		
Titanium	1.0	.06	.093		
Tungsten	5.0	.66	1.7		
Vanadium	5.0	.04	.073	-0.010	<5.0
Zinc	2.0	.06	.23	0.24	<2.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal			
Zirconium	2.0	.03	.057

Associated samples MP72807: JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/24/13

Metal	JB40127-1 Original	MS	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	9740	16600	6110	112.2	75-125
Antimony	0.27	66.5	113	58.5N(a)	75-125
Arsenic	3.0	410	453	89.9	75-125
Barium	42.7	467	453	93.7	75-125
Beryllium	0.61	11.3	11.3	94.5	75-125
Bismuth					
Boron					
Cadmium	0.0	9.8	11.3	86.6	75-125
Calcium	828	2070	1410	87.8	75-125
Chromium	14.7	57.4	45.3	94.3	75-125
Cobalt	5.8	113	113	94.7	75-125
Copper	9.1	64.0	56.6	97.0	75-125
Iron	17000	20900	5890	66.3N(a)	75-125
Lead	7.9	115	113	94.6	75-125
Lithium					
Magnesium	2670	3940	1410	89.8	75-125
Manganese	156	260	113	91.9	75-125
Molybdenum					
Nickel	13.3	120	113	94.3	75-125
Palladium					
Potassium	1480	2990	1410	106.7	75-125
Selenium	0.65	400	453	88.2	75-125
Silicon					
Silver	0.0	9.8	11.3	86.6	75-125
Sodium	104	1380	1410	90.2	75-125
Strontium					
Sulfur					
Thallium	0.28	465	453	102.7	75-125
Tin					
Titanium					
Tungsten					
Vanadium	20.1	120	113	88.3	75-125
Zinc	39.1	145	113	93.6	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal
Zirconium

Associated samples MP72807: JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/24/13

Metal	JB40127-1 Original	MSD	Spikelot MPIRS1	% Rec	MSD RPD	QC Limit
Aluminum	9740	16600	6310	108.8	0.0	20
Antimony	0.27	71.7	117	61.2N(a)	7.5	20
Arsenic	3.0	421	467	89.5	2.6	20
Barium	42.7	483	467	94.2	3.4	20
Beryllium	0.61	11.8	11.7	95.8	4.3	20
Bismuth						
Boron						
Cadmium	0.0	10.2	11.7	87.3	4.0	20
Calcium	828	2110	1460	87.8	1.9	20
Chromium	14.7	59.7	46.7	96.3	3.9	20
Cobalt	5.8	116	117	94.3	2.6	20
Copper	9.1	65.8	58.4	97.1	2.8	20
Iron	17000	21100	6070	67.5N(a)	1.0	20
Lead	7.9	119	117	95.1	3.4	20
Lithium						
Magnesium	2670	4040	1460	93.8	2.5	20
Manganese	156	264	117	92.5	1.5	20
Molybdenum						
Nickel	13.3	124	117	94.8	3.3	20
Palladium						
Potassium	1480	3040	1460	106.8	1.7	20
Selenium	0.65	412	467	88.0	3.0	20
Silicon						
Silver	0.0	10.2	11.7	87.3	4.0	20
Sodium	104	1430	1460	90.8	3.6	20
Strontium						
Sulfur						
Thallium	0.28	480	467	102.7	3.2	20
Tin						
Titanium						
Tungsten						
Vanadium	20.1	122	117	87.2	1.7	20
Zinc	39.1	149	117	94.1	2.7	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal
Zirconium

Associated samples MP72807: JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/24/13

Metal	BSP Result	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	5350	5350	100.1	80-120
Antimony	94.2	99	95.1	80-120
Arsenic	374	396	94.4	80-120
Barium	389	396	98.2	80-120
Beryllium	8.8	9.9	88.9	80-120
Bismuth				
Boron				
Cadmium	8.8	9.9	88.9	80-120
Calcium	1070	1240	86.5	80-120
Chromium	39.5	39.6	99.7	80-120
Cobalt	99.9	99	100.9	80-120
Copper	49.3	49.5	99.6	80-120
Iron	4260	5150	82.7	80-120
Lead	90.9	99	91.8	80-120
Lithium				
Magnesium	1010	1240	81.6	80-120
Manganese	99.0	99	100.0	80-120
Molybdenum				
Nickel	96.9	99	97.9	80-120
Palladium				
Potassium	1110	1240	89.7	80-120
Selenium	391	396	98.7	80-120
Silicon				
Silver	8.0	9.9	80.8	80-120
Sodium	1120	1240	90.5	80-120
Strontium				
Sulfur				
Thallium	393	396	99.2	80-120
Tin				
Titanium				
Tungsten				
Vanadium	89.9	99	90.8	80-120
Zinc	100	99	101.0	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:

Metal
Zirconium

Associated samples MP72807: JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/24/13

Metal	JB40127-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	83300	83600	0.3	0-10
Antimony	2.30	0.00	100.0(a)	0-10
Arsenic	25.3	27.3	7.9	0-10
Barium	365	368	0.8	0-10
Beryllium	5.20	5.20	0.0	0-10
Bismuth				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	7080	7270	2.7	0-10
Chromium	126	129	2.3	0-10
Cobalt	49.4	50.2	1.6	0-10
Copper	77.8	77.5	0.4	0-10
Iron	146000	153000	5.2	0-10
Lead	67.4	66.7	1.0	0-10
Lithium				
Magnesium	22800	23200	1.4	0-10
Manganese	1330	1370	2.9	0-10
Molybdenum				
Nickel	114	111	2.2	0-10
Palladium				
Potassium	12700	12600	1.0	0-10
Selenium	5.60	11.7	108.9(a)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium	886	820	7.5	0-10
Strontium				
Sulfur				
Thallium	2.40	5.90	145.8(a)	0-10
Tin				
Titanium				
Tungsten				
Vanadium	172	174	1.3	0-10
Zinc	335	354	5.6	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72807 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date:

Metal
Zirconium

Associated samples MP72807: JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.7	1.5	0.64	<50
Antimony	2.0	.1	.24	-0.090	<2.0
Arsenic	2.0	.05	.23	0.010	<2.0
Barium	20	.07	.054	0.10	<20
Beryllium	0.20	.005	.015	-0.010	<0.20
Bismuth	2.0	.05	.14		
Boron	10	.06	.14		
Cadmium	0.50	.02	.071	-0.010	<0.50
Calcium	500	1.5	8.4	2.0	<500
Chromium	1.0	.04	.074	-0.020	<1.0
Cobalt	5.0	.02	.042	0.010	<5.0
Copper	2.5	.06	.083	0.010	<2.5
Iron	50	.87	2.9	1.3	<50
Lead	2.0	.12	.21	-0.040	<2.0
Lithium	2.0	.03	.14		
Magnesium	500	1	9.3	0.24	<500
Manganese	1.5	.01	.054	0.060	<1.5
Molybdenum	2.0	.06	.14		
Nickel	4.0	.05	.079	-0.060	<4.0
Palladium	5.0	.1	.26		
Potassium	1000	1.4	6.1	-0.72	<1000
Selenium	2.0	.15	.26	-0.17	<2.0
Silicon	20	.79	3.7		
Silver	0.50	.05	.1	0.060	<0.50
Sodium	1000	.38	2	27.0	<1000
Strontium	1.0	.009	.024		
Sulfur	5.0	.25	.34		
Thallium	1.0	.15	.29	0.10	<1.0
Tin	5.0	.07	.77		
Titanium	1.0	.06	.093		
Tungsten	5.0	.52	1.7		
Vanadium	5.0	.03	.073	-0.020	<5.0
Zinc	2.0	.25	.23	0.39	<2.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal			
Zirconium	2.0	.04	.057

Associated samples MP72852: JB40127-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	JB40236-10 Original	MS	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	10500	20800	6390	161.1N(a	75-125
Antimony	0.0	54.3	118	45.9N(a)	75-125
Arsenic	5.0	465	474	97.1	75-125
Barium	87.0	573	474	102.6	75-125
Beryllium	0.62	12.8	11.8	102.9	75-125
Bismuth					
Boron					
Cadmium	0.0	11.0	11.8	92.9	75-125
Calcium	2030	10800	1480	592.5N(a	75-125
Chromium	12.5	65.1	47.4	111.0	75-125
Cobalt	9.0	130	118	102.2	75-125
Copper	18.3	73.1	59.2	92.6	75-125
Iron	17400	34600	6160	279.3N(a	75-125
Lead	233	148	118	-71.8N(a	75-125
Lithium					
Magnesium	1390	3460	1480	139.8N(a	75-125
Manganese	468	694	118	190.9N(a	75-125
Molybdenum					
Nickel	12.5	138	118	106.0	75-125
Palladium					
Potassium	1210	3200	1480	134.4N(a	75-125
Selenium	1.0	450	474	94.8	75-125
Silicon					
Silver	0.20	11.3	11.8	93.7	75-125
Sodium	1640	3380	1480	117.6	75-125
Strontium					
Sulfur					
Thallium	0.43	457	474	96.4	75-125
Tin					
Titanium					
Tungsten					
Vanadium	16.7	132	118	97.4	75-125
Zinc	59.5	193	118	112.7	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal

Zirconium

Associated samples MP72852: JB40127-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	JB40236-10 Original	MSD	Spikelot MPIRS1	% Rec	MSD RPD	QC Limit
Aluminum	10500	19200	6330	137.4N(a	8.0	20
Antimony	0.0	54.0	117	46.1N(a)	0.6	20
Arsenic	5.0	449	469	94.7	3.5	20
Barium	87.0	561	469	101.1	2.1	20
Beryllium	0.62	12.4	11.7	100.5	3.2	20
Bismuth						
Boron						
Cadmium	0.0	10.6	11.7	90.4	3.7	20
Calcium	2030	5750	1470	253.9N(a	61.0 (b)	20
Chromium	12.5	61.3	46.9	104.1	6.0	20
Cobalt	9.0	125	117	98.9	3.9	20
Copper	18.3	68.1	58.6	85.0	7.1	20
Iron	17400	27900	6100	172.2N(a	17.0	20
Lead	233	144	117	-75.9N(a	2.7	20
Lithium						
Magnesium	1390	2870	1470	101.0	18.6	20
Manganese	468	741	117	232.9N(a	6.6	20
Molybdenum						
Nickel	12.5	132	117	101.9	4.4	20
Palladium						
Potassium	1210	2900	1470	115.3	9.8	20
Selenium	1.0	436	469	92.8	3.2	20
Silicon						
Silver	0.20	11.2	11.7	93.8	0.9	20
Sodium	1640	3200	1470	106.5	5.5	20
Strontium						
Sulfur						
Thallium	0.43	455	469	96.9	0.4	20
Tin						
Titanium						
Tungsten						
Vanadium	16.7	128	117	94.9	3.1	20
Zinc	59.5	178	117	101.1	8.1	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal

Zirconium

Associated samples MP72852: JB40127-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) High rpd due to possible sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	BSP Result	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	5100	5400	94.4	80-120
Antimony	93.7	100	93.7	80-120
Arsenic	372	400	93.0	80-120
Barium	395	400	98.8	80-120
Beryllium	9.9	10	99.0	80-120
Bismuth				
Boron				
Cadmium	10.3	10	103.0	80-120
Calcium	1210	1250	96.8	80-120
Chromium	39.8	40	99.5	80-120
Cobalt	101	100	101.0	80-120
Copper	44.1	50	88.2	80-120
Iron	4970	5200	95.6	80-120
Lead	101	100	101.0	80-120
Lithium				
Magnesium	1170	1250	93.6	80-120
Manganese	98.5	100	98.5	80-120
Molybdenum				
Nickel	99.6	100	99.6	80-120
Palladium				
Potassium	1180	1250	94.4	80-120
Selenium	366	400	91.5	80-120
Silicon				
Silver	9.5	10	95.0	80-120
Sodium	1160	1250	92.8	80-120
Strontium				
Sulfur				
Thallium	433	400	108.3	80-120
Tin				
Titanium				
Tungsten				
Vanadium	92.9	100	92.9	80-120
Zinc	107	100	107.0	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:

Metal

Zirconium

Associated samples MP72852: JB40127-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/26/13

Metal	JB40236-10 Original	SDL 1:5	%DIF	QC Limits
Aluminum	87800	88300	0.6	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	42.0	41.2	1.9	0-10
Barium	727	743	2.2	0-10
Beryllium	5.20	5.90	13.5*(a)	0-10
Bismuth				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	17000	17700	4.4	0-10
Chromium	105	110	4.9	0-10
Cobalt	74.9	79.7	6.4	0-10
Copper	153	154	0.7	0-10
Iron	145000	153000	5.3	0-10
Lead	1950	1990	2.3	0-10
Lithium				
Magnesium	11600	11800	1.5	0-10
Manganese	3920	4150	5.9	0-10
Molybdenum				
Nickel	104	113	8.2	0-10
Palladium				
Potassium	10100	10300	2.0	0-10
Selenium	8.50	10.5	23.5 (b)	0-10
Silicon				
Silver	1.70	5.70	235.3(b)	0-10
Sodium	13700	14000	2.2	0-10
Strontium				
Sulfur				
Thallium	3.60	0.00	100.0(b)	0-10
Tin				
Titanium				
Tungsten				
Vanadium	140	143	2.1	0-10
Zinc	498	554	11.3*(a)	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72852
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

Zirconium

Associated samples MP72852: JB40127-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72970 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/02/13

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0071	.0063	-0.0026	<0.033

Associated samples MP72970: JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6, JB40127-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72970
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/02/13

Metal	JB40214-1 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.70	1.2	0.494	101.3	75-125

Associated samples MP72970: JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6, JB40127-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72970
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/02/13

Metal	JB40214-1 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.70	1.3	0.529	113.4	8.0	20

Associated samples MP72970: JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6, JB40127-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

12.10.2

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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40127
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72970
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/02/13

Metal	LCS Result	Spikelot HGLCS54079	% Rec	QC Limits
Mercury	8.4	9.25	90.8	72-129

Associated samples MP72970: JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6, JB40127-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

New Jersey

ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: JB40127-1 **Analyzed:** 25-JUN-13 by WR **Method:** SM2540 G-97
ClientID: UST-1

Wet Weight (Total)	30.1	g
Tare Weight	23.17	g
Dry Weight (Total)	29.11	g
Solids, Percent	85.7	%

Sample: JB40127-2 **Analyzed:** 25-JUN-13 by WR **Method:** SM2540 G-97
ClientID: UST-2

Wet Weight (Total)	33.4	g
Tare Weight	24.58	g
Dry Weight (Total)	31.97	g
Solids, Percent	83.8	%

Sample: JB40127-3 **Analyzed:** 25-JUN-13 by WR **Method:** SM2540 G-97
ClientID: UST-3

Wet Weight (Total)	28.65	g
Tare Weight	19.77	g
Dry Weight (Total)	27.23	g
Solids, Percent	84	%

Sample: JB40127-4 **Analyzed:** 25-JUN-13 by WR **Method:** SM2540 G-97
ClientID: UST-4

Wet Weight (Total)	31.41	g
Tare Weight	23.47	g
Dry Weight (Total)	29.95	g
Solids, Percent	81.6	%

Sample: JB40127-5 **Analyzed:** 25-JUN-13 by WR **Method:** SM2540 G-97
ClientID: UST-5

Wet Weight (Total)	33.06	g
Tare Weight	26.29	g
Dry Weight (Total)	31.74	g
Solids, Percent	80.5	%

Sample: JB40127-6 **Analyzed:** 26-JUN-13 by PD **Method:** SM2540 G-97
ClientID: UST-6

Wet Weight (Total)	31.64	g
Tare Weight	23.35	g
Dry Weight (Total)	30.26	g
Solids, Percent	83.4	%

Percent Solids Raw Data Summary

Job Number: JB40127
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: JB40127-7 **Analyzed:** 26-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P-1

Wet Weight (Total)	33.58	g
Tare Weight	26.6	g
Dry Weight (Total)	32.43	g
Solids, Percent	83.5	%

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

(Accutest Laboratories Southeast, Inc.)

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

PAGE ___ OF ___

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JB40127

Client / Reporting Information

Company Name: Accutest Laboratories
Street Address: 2235 route 130
City: Dayton State: NJ Zip: 08810
Project Contact: Kevin Dovedytis E-mail: Kevind@accutest.com
Phone #: 732-355-4561 Fax #:
Sampler(s) Name(s): Phone:

Project Information

Project Name: Hess QC Lab
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	B627/TCL11+	Aliquot 60grams
1			6/19/2013	09:59		Soil	1					x				X	X
2			6/19/2013	10:14		Soil	1					x				X	X
3			6/19/2013	10:49		Soil	1					x				X	X
4			6/19/2013	11:12		Soil	1					x				X	X
5			6/19/2013	10:32		Soil	1					x				X	X
6			6/19/2013	09:34		Soil	1					x				X	X

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

LAB USE ONLY

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] other

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULL1 (Level 3+4)
- [X] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Data due 7/3/13

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date/Time: 6/20/13 1700	Received By: 1	Relinquished By: 2 EX	Date Time: 6-21-13	Received By: 2 Courier (ABE) 09:30
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # 779 [ ] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [ ] Cooler Temp. 2-8

14.1 14

JB40127: Chain of Custody
Page 1 of 2
Accutest Laboratories Southeast, Inc.

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: JB 40127 CLIENT: ALNJ PROJECT: HESS OC

DATE/TIME RECEIVED: 6-21-13 09:30 {MM/DD/YY 24:00} NIMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 5633 9345 8169

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 2.4
- [ ] CORRECTED TEMPS: 2.8

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE JC 6-21-13 REVIEWER SIGNATURE/DATE [signature] 06/21/13

NF 12/10

receipt confirmation 122910.xls

14.1

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JB40127: Chain of Custody

Page 2 of 2

Internal Sample Tracking Chronicle

Accutest New Jersey

Job No: JB40127

ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ
Project No: ENVNJSP53399

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40127-1 UST-1	Collected: 19-JUN-13 09:59 By: JP		Received: 20-JUN-13 By: JC			
JB40127-1	SW846 8270D	03-JUL-13 23:14	NAF	26-JUN-13	AN	B8270TCL11+
JB40127-2 UST-2	Collected: 19-JUN-13 10:14 By: JP		Received: 20-JUN-13 By: JC			
JB40127-2	SW846 8270D	03-JUL-13 23:38	NAF	26-JUN-13	AN	B8270TCL11+
JB40127-3 UST-3	Collected: 19-JUN-13 10:49 By: JP		Received: 20-JUN-13 By: JC			
JB40127-3	SW846 8270D	04-JUL-13 00:01	NAF	26-JUN-13	AN	B8270TCL11+
JB40127-4 UST-4	Collected: 19-JUN-13 11:12 By: JP		Received: 20-JUN-13 By: JC			
JB40127-4	SW846 8270D	05-JUL-13 17:06	NAF	26-JUN-13	AN	B8270TCL11+
JB40127-5 UST-5	Collected: 19-JUN-13 10:32 By: JP		Received: 20-JUN-13 By: JC			
JB40127-5	SW846 8270D	05-JUL-13 17:33	NAF	26-JUN-13	AN	B8270TCL11+
JB40127-6 UST-6	Collected: 19-JUN-13 09:34 By: JP		Received: 20-JUN-13 By: JC			
JB40127-6	SW846 8270D	05-JUL-13 18:00	NAF	26-JUN-13	AN	B8270TCL11+

New Jersey

ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

(Accutest Laboratories Southeast, Inc.)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47508-MB	L064515.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	170	20	ug/kg	
208-96-8	Acenaphthylene	ND	170	19	ug/kg	
98-86-2	Acetophenone	ND	170	20	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
1912-24-9	Atrazine	ND	170	17	ug/kg	
100-52-7	Benzaldehyde	ND	830	170	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	21	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
92-52-4	1,1'-Biphenyl	ND	170	22	ug/kg	
105-60-2	Caprolactam	ND	170	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	22	ug/kg	
106-47-8	4-Chloroaniline	ND	170	25	ug/kg	
86-74-8	Carbazole	ND	170	18	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	23	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	23	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	28	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47508-MB	L064515.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	170	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	23	ug/kg	
67-72-1	Hexachloroethane	ND	170	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	19	ug/kg	
88-74-4	2-Nitroaniline	ND	170	25	ug/kg	
99-09-2	3-Nitroaniline	ND	170	23	ug/kg	
100-01-6	4-Nitroaniline	ND	170	36	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	24	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	21	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	61%	40-102%
4165-62-2	Phenol-d5	70%	41-100%
118-79-6	2,4,6-Tribromophenol	81%	42-108%
4165-60-0	Nitrobenzene-d5	69%	40-105%
321-60-8	2-Fluorobiphenyl	69%	43-107%
1718-51-0	Terphenyl-d14	85%	45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [a]		0	ug/kg	

(a) No TICs detected.

Method Blank Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47508-MB	X029286.D	1	07/05/13	NAF	06/26/13	OP47508	SX1399

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	170	20	ug/kg	
208-96-8	Acenaphthylene	ND	170	19	ug/kg	
98-86-2	Acetophenone	ND	170	20	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
1912-24-9	Atrazine	ND	170	17	ug/kg	
100-52-7	Benzaldehyde	ND	830	170	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	21	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
92-52-4	1,1'-Biphenyl	ND	170	22	ug/kg	
105-60-2	Caprolactam	ND	170	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	22	ug/kg	
106-47-8	4-Chloroaniline	ND	170	25	ug/kg	
86-74-8	Carbazole	ND	170	18	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	23	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	23	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	28	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47508-MB	X029286.D	1	07/05/13	NAF	06/26/13	OP47508	SX1399

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	170	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	23	ug/kg	
67-72-1	Hexachloroethane	ND	170	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	19	ug/kg	
88-74-4	2-Nitroaniline	ND	170	25	ug/kg	
99-09-2	3-Nitroaniline	ND	170	23	ug/kg	
100-01-6	4-Nitroaniline	ND	170	36	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	24	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	21	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	64%	40-102%
4165-62-2	Phenol-d5	71%	41-100%
118-79-6	2,4,6-Tribromophenol	76%	42-108%
4165-60-0	Nitrobenzene-d5	68%	40-105%
321-60-8	2-Fluorobiphenyl	69%	43-107%
1718-51-0	Terphenyl-d14	85%	45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47508-BS	L064499.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1670	1330	80	56-109
208-96-8	Acenaphthylene	1670	1350	81	56-106
98-86-2	Acetophenone	1670	1210	73	48-107
120-12-7	Anthracene	1670	1500	90	61-110
1912-24-9	Atrazine	1670	1290	77	60-112
100-52-7	Benzaldehyde	1670	810	49	27-123
56-55-3	Benzo(a)anthracene	1670	1390	83	66-111
50-32-8	Benzo(a)pyrene	1670	1330	80	59-104
205-99-2	Benzo(b)fluoranthene	1670	1400	84	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1460	88	67-113
207-08-9	Benzo(k)fluoranthene	1670	1470	88	67-114
101-55-3	4-Bromophenyl phenyl ether	1670	1460	88	62-110
85-68-7	Butyl benzyl phthalate	1670	1530	92	65-113
92-52-4	1,1'-Biphenyl	1670	1330	80	53-106
105-60-2	Caprolactam	1670	1270	76	40-110
91-58-7	2-Chloronaphthalene	1670	1310	79	53-106
106-47-8	4-Chloroaniline	1670	1360	82	30-115
86-74-8	Carbazole	1670	1510	91	60-111
218-01-9	Chrysene	1670	1460	88	65-112
111-91-1	bis(2-Chloroethoxy)methane	1670	1250	75	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1170	70	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1250	75	40-110
7005-72-3	4-Chlorophenyl phenyl ether	1670	1370	82	58-106
121-14-2	2,4-Dinitrotoluene	1670	1350	81	59-109
606-20-2	2,6-Dinitrotoluene	1670	1390	83	61-107
91-94-1	3,3'-Dichlorobenzidine	1670	1420	85	36-114
53-70-3	Dibenzo(a,h)anthracene	1670	1460	88	68-115
132-64-9	Dibenzofuran	1670	1470	88	57-108
84-74-2	Di-n-butyl phthalate	1670	1500	90	63-108
117-84-0	Di-n-octyl phthalate	1670	1480	89	64-119
84-66-2	Diethyl phthalate	1670	1500	90	61-109
131-11-3	Dimethyl phthalate	1670	1400	84	59-108
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1450	87	64-115
206-44-0	Fluoranthene	1670	1410	85	60-108
86-73-7	Fluorene	1670	1400	84	58-109
118-74-1	Hexachlorobenzene	1670	1470	88	59-111

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47508-BS	L064499.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	1670	1250	75	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1140	68	49-110
67-72-1	Hexachloroethane	1670	1200	72	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1470	88	66-116
78-59-1	Isophorone	1670	1100	66	42-89
91-57-6	2-Methylnaphthalene	1670	1420	85	47-106
88-74-4	2-Nitroaniline	1670	1480	89	56-123
99-09-2	3-Nitroaniline	1670	1370	82	41-111
100-01-6	4-Nitroaniline	1670	1390	83	54-113
91-20-3	Naphthalene	1670	1260	76	44-104
98-95-3	Nitrobenzene	1670	1270	76	43-108
621-64-7	N-Nitroso-di-n-propylamine	1670	1250	75	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1460	88	62-110
85-01-8	Phenanthrene	1670	1500	90	63-111
129-00-0	Pyrene	1670	1410	85	65-115
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1310	79	46-101

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	72%	40-102%
4165-62-2	Phenol-d5	76%	41-100%
118-79-6	2,4,6-Tribromophenol	88%	42-108%
4165-60-0	Nitrobenzene-d5	73%	40-105%
321-60-8	2-Fluorobiphenyl	78%	43-107%
1718-51-0	Terphenyl-d14	90%	45-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47508-MS	L064517.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253
OP47508-MSD	L064518.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253
FA5845-11	L064516.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253
FA5845-11	X029287.D	1	07/05/13	NAF	06/26/13	OP47508	SX1399

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	FA5845-11 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		1990	1470	74	1510	76	3	56-109/23
208-96-8	Acenaphthylene	ND		1990	1400	70	1610	81	14	56-106/23
98-86-2	Acetophenone	ND		1990	1130	57	1360	68	18	48-107/27
120-12-7	Anthracene	ND		1990	1610	81	1620	81	1	61-110/21
1912-24-9	Atrazine	ND		1990	1460	73	1490	75	2	60-112/21
100-52-7	Benzaldehyde	ND		1990	695	35	916	46	27	27-123/30
56-55-3	Benzo(a)anthracene	ND		1990	1640	82	1580	79	4	66-111/23
50-32-8	Benzo(a)pyrene	ND		1990	1570	79	1560	78	1	59-104/23
205-99-2	Benzo(b)fluoranthene	ND		1990	1560	78	1520	76	3	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND		1990	1660	83	1570	79	6	67-113/21
207-08-9	Benzo(k)fluoranthene	ND		1990	1690	85	1670	84	1	67-114/22
101-55-3	4-Bromophenyl phenyl ether	ND		1990	1630	82	1660	83	2	62-110/21
85-68-7	Butyl benzyl phthalate	ND		1990	1740	87	1720	86	1	65-113/20
92-52-4	1,1'-Biphenyl	ND		1990	1300	65	1460	73	12	53-106/24
105-60-2	Caprolactam	ND		1990	1350	68	1380	69	2	40-110/22
91-58-7	2-Chloronaphthalene	ND		1990	1260	63	1470	74	15	53-106/23
106-47-8	4-Chloroaniline	ND		1990	1220	61	1480	74	19	30-115/30
86-74-8	Carbazole	ND		1990	1680	84	1690	85	1	60-111/19
218-01-9	Chrysene	ND		1990	1600	80	1550	78	3	65-112/25
111-91-1	bis(2-Chloroethoxy)methane	ND		1990	1140	57	1430	72	23	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND		1990	1070	54	1300	65	19	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		1990	1140	57	1360	68	18	40-110/25
7005-72-3	4-Chlorophenyl phenyl ether	ND		1990	1510	76	1560	78	3	58-106/21
121-14-2	2,4-Dinitrotoluene	ND		1990	1510	76	1480	74	2	59-109/20
606-20-2	2,6-Dinitrotoluene	ND		1990	1510	76	1450	73	4	61-107/22
91-94-1	3,3'-Dichlorobenzidine	ND		1990	1720	86	1650	83	4	36-114/28
53-70-3	Dibenzo(a,h)anthracene	ND		1990	1660	83	1610	81	3	68-115/23
132-64-9	Dibenzofuran	ND		1990	1610	81	1720	86	7	57-108/22
84-74-2	Di-n-butyl phthalate	ND		1990	1650	83	1730	87	5	63-108/19
117-84-0	Di-n-octyl phthalate	ND		1990	1740	87	1680	84	4	64-119/21
84-66-2	Diethyl phthalate	ND		1990	1600	80	1620	81	1	61-109/20
131-11-3	Dimethyl phthalate	ND		1990	1550	78	1510	76	3	59-108/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1990	1790	90	1730	87	3	64-115/23
206-44-0	Fluoranthene	ND		1990	1530	77	1590	80	4	60-108/25
86-73-7	Fluorene	ND		1990	1540	77	1610	81	4	58-109/21
118-74-1	Hexachlorobenzene	ND		1990	1580	79	1680	84	6	59-111/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47508-MS	L064517.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253
OP47508-MSD	L064518.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253
FA5845-11	L064516.D	1	07/03/13	NAF	06/26/13	OP47508	SL3253
FA5845-11	X029287.D	1	07/05/13	NAF	06/26/13	OP47508	SX1399

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40127-1, JB40127-2, JB40127-3, JB40127-4, JB40127-5, JB40127-6

CAS No.	Compound	FA5845-11 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		1990	1150	58	1470	74	24	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND		1990	767	38*	1030	52	29	49-110/31
67-72-1	Hexachloroethane	ND		1990	1120	56	1420	71	24	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1990	1650	83	1670	84	1	66-116/22
78-59-1	Isophorone	ND		1990	1040	52	1280	64	21	42-89/22
91-57-6	2-Methylnaphthalene	ND		1990	1310	66	1580	79	19	47-106/27
88-74-4	2-Nitroaniline	ND		1990	1600	80	1640	82	2	56-123/24
99-09-2	3-Nitroaniline	ND		1990	1530	77	1550	78	1	41-111/25
100-01-6	4-Nitroaniline	ND		1990	1570	79	1640	82	4	54-113/22
91-20-3	Naphthalene	ND		1990	1170	59	1470	74	23	44-104/27
98-95-3	Nitrobenzene	ND		1990	1160	58	1400	70	19	43-108/25
621-64-7	N-Nitroso-di-n-propylamine	ND		1990	1210	61	1420	71	16	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND		1990	1560	78	1660	83	6	62-110/21
85-01-8	Phenanthrene	ND		1990	1610	81	1700	85	5	63-111/22
129-00-0	Pyrene	ND		1990	1670	84	1650	83	1	65-115/25
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		1990	1200	60	1420	71	17	46-101/24

CAS No.	Surrogate Recoveries	MS	MSD	FA5845-11	FA5845-11	Limits
367-12-4	2-Fluorophenol	54%	66%	65%	68%	40-102%
4165-62-2	Phenol-d5	57%	70%	74%	73%	41-100%
118-79-6	2,4,6-Tribromophenol	79%	85%	87%	77%	42-108%
4165-60-0	Nitrobenzene-d5	57%	67%	69%	71%	40-105%
321-60-8	2-Fluorobiphenyl	64%	75%	77%	72%	43-107%
1718-51-0	Terphenyl-d14	86%	82%	82%	85%	45-119%

15.3.1

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* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample: SL3245-DFTPP
Lab File ID: L064265.D
Instrument ID: GCMSL
Injection Date: 06/26/13
Injection Time: 09:33

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	24448	40.0		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	26369	43.1		Pass
70	Less than 2.0% of mass 69	131	0.21	(0.50) [a]	Pass
127	40.0 - 60.0% of mass 198	29409	48.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	61114	100.0		Pass
199	5.0 - 9.0% of mass 198	4331	7.09		Pass
275	10.0 - 30.0% of mass 198	13927	22.8		Pass
365	1.0 - 100.0% of mass 198	1183	1.94		Pass
441	Present, but less than mass 443	5724	9.37	(71.0) [b]	Pass
442	40.0 - 100.0% of mass 198	41457	67.8		Pass
443	17.0 - 23.0% of mass 442	8061	13.2	(19.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SL3245-IC3245	L064266.D	06/26/13	09:58	00:25	Initial cal 5
SL3245-IC3245	L064267.D	06/26/13	10:22	00:49	Initial cal 10
SL3245-IC3245	L064268.D	06/26/13	10:47	01:14	Initial cal 25
SL3245-ICC3245	L064269.D	06/26/13	11:12	01:39	Initial cal 50
SL3245-IC3245	L064270.D	06/26/13	11:37	02:04	Initial cal 60
SL3245-IC3245	L064271.D	06/26/13	12:03	02:30	Initial cal 75
SL3245-IC3245	L064272.D	06/26/13	12:27	02:54	Initial cal 100
SL3245-ICV3245	L064273.D	06/26/13	12:52	03:19	Initial cal verification 50
SL3245-ICV3245	L064274.D	06/26/13	13:19	03:46	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample: SL3253-DFTPP
Lab File ID: L064497.D
Instrument ID: GCMSL
Injection Date: 07/03/13
Injection Time: 12:23

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	20316	38.3		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	23565	44.4		Pass
70	Less than 2.0% of mass 69	82	0.15	(0.35) [a]	Pass
127	40.0 - 60.0% of mass 198	26780	50.5		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	53058	100.0		Pass
199	5.0 - 9.0% of mass 198	3664	6.91		Pass
275	10.0 - 30.0% of mass 198	12587	23.7		Pass
365	1.0 - 100.0% of mass 198	1305	2.46		Pass
441	Present, but less than mass 443	6129	11.6	(72.4) [b]	Pass
442	40.0 - 100.0% of mass 198	41952	79.1		Pass
443	17.0 - 23.0% of mass 442	8469	16.0	(20.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SL3253-CC3245	L064498.D	07/03/13	12:39	00:16	Continuing cal 50
OP47508-BS	L064499.D	07/03/13	13:06	00:43	Blank Spike
ZZZZZZ	L064502.D	07/03/13	14:57	02:34	(unrelated sample)
ZZZZZZ	L064506.D	07/03/13	16:42	04:19	(unrelated sample)
ZZZZZZ	L064507.D	07/03/13	17:08	04:45	(unrelated sample)
ZZZZZZ	L064508.D	07/03/13	17:34	05:11	(unrelated sample)
ZZZZZZ	L064509.D	07/03/13	17:58	05:35	(unrelated sample)
ZZZZZZ	L064510.D	07/03/13	18:22	05:59	(unrelated sample)
ZZZZZZ	L064511.D	07/03/13	18:46	06:23	(unrelated sample)
ZZZZZZ	L064512.D	07/03/13	19:11	06:48	(unrelated sample)
ZZZZZZ	L064513.D	07/03/13	19:36	07:13	(unrelated sample)
ZZZZZZ	L064514.D	07/03/13	20:01	07:38	(unrelated sample)
OP47508-MB	L064515.D	07/03/13	20:25	08:02	Method Blank
FA5845-11	L064516.D	07/03/13	20:50	08:27	(used for QC only; not part of job JB40127)
OP47508-MS	L064517.D	07/03/13	21:14	08:51	Matrix Spike
OP47508-MSD	L064518.D	07/03/13	21:38	09:15	Matrix Spike Duplicate
ZZZZZZ	L064519.D	07/03/13	22:02	09:39	(unrelated sample)
ZZZZZZ	L064520.D	07/03/13	22:26	10:03	(unrelated sample)
ZZZZZZ	L064521.D	07/03/13	22:50	10:27	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample: SL3253-DFTPP
Lab File ID: L064497.D
Instrument ID: GCMSL
Injection Date: 07/03/13
Injection Time: 12:23

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JB40127-1	L064522.D	07/03/13	23:14	10:51	UST-1
JB40127-2	L064523.D	07/03/13	23:38	11:15	UST-2
JB40127-3	L064524.D	07/04/13	00:01	11:38	UST-3

Instrument Performance Check (DFTPP)

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Sample: SX1399-DFTPP
Lab File ID: X029275.D
Instrument ID: GCMSX
Injection Date: 07/05/13
Injection Time: 11:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	25467	50.8		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	24142	48.1		Pass
70	Less than 2.0% of mass 69	130	0.26	(0.54) [a]	Pass
127	40.0 - 60.0% of mass 198	28320	56.4		Pass
197	Less than 1.0% of mass 198	142	0.28		Pass
198	Base peak, 100% relative abundance	50173	100.0		Pass
199	5.0 - 9.0% of mass 198	3375	6.73		Pass
275	10.0 - 30.0% of mass 198	9875	19.7		Pass
365	1.0 - 100.0% of mass 198	940	1.87		Pass
441	Present, but less than mass 443	5566	11.1	(80.4) [b]	Pass
442	40.0 - 100.0% of mass 198	33602	67.0		Pass
443	17.0 - 23.0% of mass 442	6921	13.8	(20.6) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX1399-IC1399	X029277.D	07/05/13	12:09	00:52	Initial cal 5
SX1399-IC1399	X029278.D	07/05/13	12:36	01:19	Initial cal 10
SX1399-IC1399	X029279.D	07/05/13	13:03	01:46	Initial cal 25
SX1399-IC1399	X029280.D	07/05/13	13:30	02:13	Initial cal 50
SX1399-IC1399	X029281.D	07/05/13	13:56	02:39	Initial cal 60
SX1399-ICC1399	X029282.D	07/05/13	14:23	03:06	Initial cal 75
SX1399-IC1399	X029283.D	07/05/13	14:50	03:33	Initial cal 100
SX1399-ICV1399	X029284.D	07/05/13	15:17	04:00	Initial cal verification 50
SX1399-ICV1399	X029285.D	07/05/13	15:44	04:27	Initial cal verification 50
OP47508-MB	X029286.D	07/05/13	16:11	04:54	Method Blank
FA5845-11	X029287.D	07/05/13	16:38	05:21	(used for QC only; not part of job JB40127)
JB40127-4	X029288.D	07/05/13	17:06	05:49	UST-4
JB40127-5	X029289.D	07/05/13	17:33	06:16	UST-5
JB40127-6	X029290.D	07/05/13	18:00	06:43	UST-6
ZZZZZZ	X029291.D	07/05/13	18:27	07:10	(unrelated sample)
ZZZZZZ	X029292.D	07/05/13	18:54	07:37	(unrelated sample)
ZZZZZZ	X029293.D	07/05/13	19:21	08:04	(unrelated sample)
ZZZZZZ	X029294.D	07/05/13	19:47	08:30	(unrelated sample)

Semivolatile Internal Standard Area Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Check Std:	SL3253-CC3245	**Injection Date:**	07/03/13
Lab File ID:	L064498.D	**Injection Time:**	12:39
Instrument ID:	GCMSL	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	101814	4.45	331946	5.47	203901	6.90	317969	8.10	240565	10.57	244124	12.41
Check Std [b]	81366	4.34	271379	5.37	150625	6.79	243628	7.99	189870	10.43	185598	12.23
Upper Limit [c]	162732	4.84	542758	5.87	301250	7.29	487256	8.49	379740	10.93	371196	12.73
Lower Limit [d]	40683	3.84	135690	4.87	75313	6.29	121814	7.49	94935	9.93	92799	11.73

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP47508-BS	87778	4.35	275536	5.37	166605	6.79	261179	7.99	199807	10.42	191956	12.23
ZZZZZZ	84590	4.34	278700	5.37	163704	6.79	260279	7.99	208995	10.42	189534	12.22
ZZZZZZ	87178	4.34	275380	5.37	168143	6.78	253350	7.99	208336	10.42	191779	12.22
ZZZZZZ	85968	4.34	310957	5.37	176735	6.78	266218	7.99	222142	10.42	206209	12.22
ZZZZZZ	106391	4.34	336341	5.37	200216	6.79	307345	7.99	237939	10.42	215370	12.22
ZZZZZZ	83182	4.34	277849	5.36	156560	6.79	252892	7.99	205755	10.42	194992	12.22
ZZZZZZ	87152	4.34	268224	5.37	142302	6.79	232126	7.99	206374	10.42	175588	12.22
ZZZZZZ	81130	4.34	253482	5.37	130772	6.79	217525	7.99	203936	10.42	186842	12.22
ZZZZZZ	83697	4.34	253593	5.37	130829	6.79	218926	8.00	204474	10.42	180528	12.23
ZZZZZZ	81731	4.34	263245	5.37	135666	6.79	214865	8.00	198551	10.42	170496	12.22
ZZZZZZ	86774	4.34	286583	5.37	156494	6.79	239368	7.99	190277	10.42	174361	12.22
OP47508-MB	87927	4.34	272540	5.36	166556	6.78	260207	7.99	215741	10.42	189291	12.22
FA5845-11	88986	4.34	286545	5.36	172577	6.78	260426	7.99	216676	10.42	186788	12.22
OP47508-MS	87878	4.34	280019	5.37	163963	6.78	259081	7.99	186324	10.42	174548	12.22
OP47508-MSD	85904	4.34	275225	5.37	160526	6.79	243354	7.99	187053	10.42	173947	12.22
ZZZZZZ	88001	4.34	291591	5.36	165606	6.78	262649	7.99	201494	10.41	189798	12.22
ZZZZZZ	91345	4.34	294783	5.36	174391	6.78	267533	7.99	204803	10.41	193682	12.22
ZZZZZZ	91566	4.34	292868	5.36	171863	6.79	254033	7.98	202930	10.41	184989	12.22
JB40127-1	91406	4.34	303097	5.36	179045	6.78	263916	7.98	209758	10.41	189115	12.22
JB40127-2	88752	4.34	281306	5.36	172929	6.78	261709	7.99	207970	10.42	186735	12.22
JB40127-3	88942	4.34	296864	5.36	175466	6.78	260249	7.98	207022	10.41	182704	12.22

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SL3245-ICC3245 L064269.D 06/26/13 11:12
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Check Std:	SX1399-ICC1399	**Injection Date:**	07/05/13
Lab File ID:	X029282.D	**Injection Time:**	14:23
Instrument ID:	GCMSX	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	118190	3.32	442503	4.29	177685	6.36	201137	8.63	243560	13.72	255533	16.44
Check Std [b]	118190	3.32	442503	4.29	177685	6.36	201137	8.63	243560	13.72	255533	16.44
Upper Limit [c]	236380	3.82	885006	4.79	355370	6.86	402274	9.13	487120	14.22	511066	16.94
Lower Limit [d]	59095	2.82	221252	3.79	88843	5.86	100569	8.13	121780	13.22	127767	15.94

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP47508-MB	158887	3.31	576612	4.29	253574	6.35	289763	8.62	371104	13.70	385132	16.44
FA5845-11	131338	3.31	479737	4.29	202231	6.35	227583	8.62	274990	13.70	266366	16.43
JB40127-4	160937	3.32	581196	4.29	250325	6.35	283555	8.62	360367	13.71	367176	16.44
JB40127-5	127917	3.31	467226	4.29	204478	6.35	228395	8.62	300230	13.71	309518	16.43
JB40127-6	119063	3.31	434154	4.29	189883	6.35	217929	8.62	280557	13.70	291127	16.43
ZZZZZZ	106947	3.31	392387	4.29	169101	6.35	190955	8.62	237827	13.70	244597	16.43
ZZZZZZ	109510	3.31	383418	4.29	167070	6.36	192640	8.63	218777	13.71	215257	16.44
ZZZZZZ	97746	3.31	355929	4.29	153501	6.35	176324	8.62	214664	13.71	215916	16.44
ZZZZZZ	103453	3.32	345888	4.30	154321	6.37	177975	8.64	203861	13.72	200939	16.45

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX1399-ICC1399 X029282.D 07/05/13 14:23
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: JB40127
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JB40127-1	L064522.D	58.0	64.0	78.0
JB40127-2	L064523.D	71.0	78.0	88.0
JB40127-3	L064524.D	55.0	63.0	85.0
JB40127-4	X029288.D	52.0	54.0	75.0
JB40127-5	X029289.D	68.0	68.0	81.0
JB40127-6	X029290.D	65.0	66.0	72.0
OP47508-BS	L064499.D	73.0	78.0	90.0
OP47508-MB	L064515.D	69.0	69.0	85.0
OP47508-MB	X029286.D	68.0	69.0	85.0
OP47508-MS	L064517.D	57.0	64.0	86.0
OP47508-MSD	L064518.D	67.0	75.0	82.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	40-105%
S2 = 2-Fluorobiphenyl	43-107%
S3 = Terphenyl-d14	45-119%

Initial Calibration Summary

Job Number: JB40127 **Sample:** SL3245-ICC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064269.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Response Factor Report MSBNA02

Method : C:\msdchem\2\METHODS\8270da.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Wed Jun 26 12:53:03 2013
Response via : Initial Calibration

Calibration Files
5 =L064266.D 10 =L064267.D 25 =L064268.D 50 =L064269.D
60 =L064270.D 75 =L064271.D 100 =L064272.D

Compound	5	10	25	50	60	75	100	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------								
2) 1,4-Dioxane	0.819	0.770	0.767	0.754	0.701	0.717	0.725	0.750	5.34
3) N-nitrosodimethyl	1.103	1.161	1.062	1.054	0.986	1.012	0.983	1.051	6.16
4) Pyridine	2.618	2.603	2.547	2.520	2.402	2.522	2.489	2.529	2.87
5)P Benzaldehyde	1.198	1.194	1.125	1.063	1.013	0.861	0.669	1.018	18.97
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9972									
Response Ratio = 0.00000 + 1.42245 *A + -0.29847 *A^2									
6) Aniline	2.529	2.396	2.362	2.190	2.058	2.029	2.053	2.231	8.91
7)S 2-Fluorophenol	1.556	1.570	1.464	1.364	1.271	1.259	1.191	1.382	10.91
8)P bis(2-Chloroethyl	1.422	1.423	1.380	1.297	1.209	1.215	1.255	1.315	7.10
9)S Phenol-d5	1.967	1.821	1.709	1.570	1.452	1.453	1.426	1.628	12.90
10)P Phenol	1.967	1.893	1.799	1.699	1.586	1.574	1.510	1.718	10.11
11)P 2-Chlorophenol	1.615	1.539	1.498	1.418	1.337	1.324	1.341	1.439	7.93
12) 1,3-Dichlorobenze	1.845	1.716	1.629	1.563	1.459	1.440	1.403	1.579	10.23
13) 1,4-Dichlorobenze	1.852	1.701	1.607	1.517	1.430	1.410	1.380	1.557	11.16
14) 1,2-Dichlorobenze	1.725	1.641	1.526	1.437	1.344	1.313	1.273	1.465	11.74
15) Benzyl alcohol	1.040	0.975	0.949	0.914	0.878	0.878	0.876	0.930	6.67
16)P bis(2-chloroisopr	2.123	1.972	1.880	1.767	1.656	1.675	1.633	1.815	10.15
17)P 2-Methylphenol	1.410	1.384	1.338	1.277	1.204	1.223	1.204	1.291	6.71
18)P Acetophenone	1.993	1.979	1.873	1.760	1.708	1.750	1.643	1.815	7.46
19)P Hexachloroethane	0.715	0.681	0.648	0.631	0.592	0.585	0.580	0.633	8.18
20)P N-Nitroso-di-n-pr	1.066	1.030	0.991	0.951	0.907	0.915	0.893	0.965	6.87
21)P 3&4-Methylphenol	1.485	1.518	1.385	1.350	1.277	1.277	1.260	1.365	7.63
22) I Naphthalene-d8	----------ISTD----------								
23)S Nitrobenzene-d5	0.523	0.496	0.483	0.458	0.433	0.424	0.430	0.464	8.14
24)P Nitrobenzene	0.502	0.485	0.469	0.428	0.415	0.403	0.391	0.442	9.76
25)P Isophorone	0.857	0.845	0.802	0.763	0.703	0.720	0.737	0.775	7.84
26)P 2-Nitrophenol	0.255	0.257	0.254	0.242	0.232	0.230	0.223	0.242	5.69
27)P 2,4-Dimethylpheno	0.470	0.468	0.439	0.416	0.396	0.383	0.379	0.422	9.07
28)P bis(2-Chloroethox	0.552	0.528	0.502	0.470	0.438	0.435	0.425	0.479	10.40
29) Benzoic Acid	0.106	0.159	0.214	0.231	0.224	0.234	0.257	0.204	25.83
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9986									
Response Ratio = 0.00000 + 0.18711 *A + 0.02743 *A^2									
30)P 2,4-Dichloropheno	0.424	0.383	0.381	0.360	0.339	0.330	0.323	0.363	9.85
31) 1,2,4-Trichlorobe	0.448	0.426	0.402	0.381	0.357	0.349	0.340	0.386	10.66
32) alpha-Terpineol								0.000	-1.00
33)P Naphthalene	1.350	1.250	1.152	1.026	0.972	0.925	0.880	1.079	16.30
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990									
Response Ratio = 0.00000 + 1.16686 *A + -0.11870 *A^2									
34)P 4-Chloroaniline	0.588	0.567	0.536	0.501	0.463	0.460	0.435	0.507	11.51
35) 2,6-Dichloropheno	0.414	0.400	0.376	0.352	0.326	0.322	0.315	0.358	11.02
36)P Hexachlorobutadie	0.249	0.226	0.223	0.210	0.195	0.194	0.186	0.212	10.45

Initial Calibration Summary

Job Number: JB40127 **Sample:** SL3245-ICC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064269.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

```
37)P Caprolactam       0.132 0.139 0.133 0.132 0.129 0.129 0.134 0.132   2.76
38)P 4-Chloro-3-methyl 0.396 0.388 0.371 0.354 0.336 0.333 0.342 0.360   7.01
39)P 2-Methylnaphthale 0.865 0.845 0.789 0.716 0.661 0.656 0.625 0.737  13.13
40)  1-Methylnaphthale 0.861 0.847 0.765 0.712 0.660 0.648 0.618 0.730  13.32
41)P 1,2,4,5-Tetrachlo 0.441 0.428 0.397 0.351 0.339 0.329 0.316 0.371  13.46

42) I   Acenaphthene-d10      ----------------ISTD--------------------
43)P Hexachlorocyclope 0.304 0.333 0.359 0.355 0.347 0.340 0.346 0.341   5.32
44)P 2,4,6-Trichloroph 0.472 0.458 0.456 0.416 0.413 0.403 0.403 0.432   6.86
45)P 2,4,5-Trichloroph 0.494 0.472 0.462 0.432 0.420 0.413 0.421 0.445   7.02
46)S 2-Fluorobiphenyl  1.707 1.565 1.476 1.270 1.269 1.205 1.169 1.380  14.79
47)P 1,1'-Biphenyl     1.893 1.727 1.562 1.330 1.350 1.281 1.170 1.473  17.82
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 1.60487 *A + -0.17505 *A^2

48)P 2-Chloronaphthale 1.421 1.328 1.212 1.092 1.065 1.028 1.000 1.164  13.84
49)P 2-Nitroaniline    0.401 0.406 0.407 0.379 0.370 0.373 0.376 0.387   4.21
50)  p-Dinitrobenzene  0.273 0.277 0.269 0.270 0.277 0.277 0.279 0.275   1.42
51)P Acenaphthylene    2.208 2.152 1.969 1.669 1.648 1.581 1.514 1.820  15.65
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
              Response Ratio = 0.00000 + 1.91701 *A + -0.16749 *A^2

52)P Dimethylphthalate 1.524 1.502 1.420 1.244 1.234 1.209 1.210 1.335  10.63
53)  m-Dinitrobenzene  0.256 0.261 0.264 0.254 0.253 0.252 0.260 0.257   1.83
54)P 2,6-Dinitrotoluen 0.354 0.373 0.355 0.336 0.326 0.327 0.325 0.342   5.45
55)  o-Dinitrobenzene  0.241 0.236 0.231 0.218 0.218 0.214 0.212 0.224   5.12
56)P Acenaphthene      1.365 1.343 1.210 1.106 1.085 1.041 0.999 1.164  12.50
57)P 3-Nitroaniline    0.390 0.422 0.386 0.382 0.373 0.375 0.374 0.386   4.49
58)P 2,4-Dinitrophenol 0.091 0.144 0.185 0.218 0.216 0.218 0.234 0.187  27.75
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 0.18272 *A + 0.02056 *A^2

59)P Dibenzofuran      1.981 1.860 1.735 1.501 1.460 1.383 1.343 1.609  15.49
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9985
              Response Ratio = 0.00000 + 1.69837 *A + -0.14900 *A^2

60)P 2,4-Dinitrotoluen 0.480 0.466 0.442 0.426 0.415 0.400 0.413 0.435   6.79
61)P 4-Nitrophenol     0.168 0.177 0.179 0.173 0.171 0.165 0.168 0.171   3.00
62)  2,3,5,6-Tetrachlo 0.328 0.318 0.337 0.338 0.337 0.333 0.337 0.333   2.19
63)P 2,3,4,6-Tetrachlo 0.310 0.363 0.357 0.343 0.337 0.326 0.340 0.339   5.33
64)P Fluorene          1.605 1.534 1.412 1.217 1.208 1.154 1.085 1.316  15.25
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 1.41501 *A + -0.13485 *A^2

65)P 4-Chlorophenyl-ph 0.727 0.708 0.678 0.582 0.584 0.553 0.522 0.622  13.02
66)P Diethylphthalate  1.938 1.561 1.372 1.233 1.222 1.161 1.146 1.376  20.84
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 1.36397 *A + -0.09251 *A^2

67)P 4-Nitroaniline    0.375 0.380 0.371 0.356 0.360 0.362 0.368 0.367   2.36

68) I   Phenanthrene-d10      ----------------ISTD--------------------
69)P 4,6-Dinitro-2-met 0.125 0.147 0.167 0.178 0.172 0.170 0.170 0.161  11.63
70)P n-Nitrosodiphenyl 0.718 0.659 0.630 0.575 0.562 0.529 0.506 0.597  12.68
71)  1,2-Diphenylhydra 0.995 0.946 0.863 0.893 0.869 0.813 0.782 0.880   8.32
72)S 2,4,6-Tribromophe 0.117 0.112 0.117 0.105 0.101 0.098 0.093 0.106   8.73
73)P 4-Bromophenyl-phe 0.260 0.248 0.242 0.231 0.219 0.214 0.209 0.232   8.19
74)P Hexachlorobenzene 0.267 0.254 0.247 0.234 0.218 0.211 0.210 0.234   9.58
75)  Simazine          0.151 0.145 0.143 0.168 0.162 0.162 0.157 0.155   6.14
76)P Atrazine          0.268 0.256 0.277 0.258 0.259 0.254 0.239 0.259   4.57
```

Initial Calibration Summary

Job Number: JB40127 **Sample:** SL3245-ICC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064269.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

```
77)P Pentachlorophenol 0.072 0.099 0.133 0.147 0.141 0.146 0.151 0.127  23.59
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 0.12976 *A + 0.00865 *A^2

78)P Phenanthrene      1.374 1.224 1.192 1.018 0.979 0.940 0.868 1.085  16.76
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 1.19738 *A + -0.13438 *A^2

79)P Anthracene        1.396 1.325 1.204 1.060 1.008 0.950 0.915 1.123  16.75
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
              Response Ratio = 0.00000 + 1.20524 *A + -0.12121 *A^2

80)P Carbazole         1.338 1.295 1.206 1.083 1.011 0.971 0.933 1.120  14.40
81)P Di-n-butylphthala 1.548 1.460 1.357 1.212 1.136 1.078 1.008 1.257  16.13
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 1.39765 *A + -0.16006 *A^2

82)P Fluoranthene      1.472 1.455 1.317 1.183 1.115 1.064 0.994 1.228  15.42
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 1.36004 *A + -0.14980 *A^2


83) I   Chrysene-d12          ----------------ISTD---------------------
84)  Benzidine         0.978 1.000 1.051 1.005 0.973 0.827 0.736 0.938  12.07
85)P Pyrene            1.770 1.686 1.674 1.501 1.491 1.388 1.357 1.552  10.25
86)S Terphenyl-d14     1.101 1.089 1.037 0.985 0.961 0.920 0.911 1.001   7.70
87)P Butylbenzylphthal 0.662 0.655 0.655 0.652 0.647 0.630 0.626 0.647   2.10
88)P 3,3'-Dichlorobenz 0.436 0.440 0.439 0.434 0.411 0.392 0.364 0.416   7.01
89)P Benzo[a]anthracen 1.262 1.178 1.189 1.137 1.094 1.064 1.077 1.143   6.26
90)P Chrysene          1.144 1.089 1.063 1.040 1.009 0.981 0.954 1.040   6.26
91)P bis(2-Ethylhexyl) 0.837 0.830 0.864 0.848 0.817 0.802 0.801 0.828   2.82

92) I   Perylene-d12          ----------------ISTD---------------------
93)P Di-n-octylphthala 1.519 1.515 1.522 1.445 1.383 1.435 1.392 1.459   4.12
94)P Benzo[b]fluoranth 1.256 1.216 1.232 1.134 1.092 1.146 1.127 1.172   5.30
95)P Benzo[k]fluoranth 1.215 1.174 1.109 1.052 1.003 1.032 0.995 1.083   7.91
96)P Benzo[a]pyrene    1.200 1.133 1.153 1.075 1.039 1.062 1.054 1.102   5.47
97)P Indeno[1,2,3-cd]p 1.020 0.975 0.987 0.936 0.905 0.918 0.921 0.952   4.49
98)P Dibenz[a,h]anthra 1.033 0.994 0.986 0.928 0.902 0.915 0.864 0.946   6.35
99)P Benzo[g,h,i]peryl 1.089 1.067 1.062 0.954 0.900 0.927 0.894 0.985   8.62
-------------------------------------------------------------------------------
(#) = Out of Range

          8270da.m          Thu Jun 27 09:10:20 2013
```

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Initial Calibration Verification

Job Number: JB40127 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064273.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\sl3245\L064273.D          Vial: 9
Acq On    : 26 Jun 2013  12:52 pm                   Operator: nancyf
Sample    : icv3245-50                              Inst    : MSBNA02
Misc      : op47159,sl3245,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270da.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Jun 26 12:53:03 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	95	0.00	4.45
2		1,4-Dioxane	50.000	46.402	7.2	88	0.04	1.74
3		N-nitrosodimethylamine	50.000	45.419	9.2	86	0.03	2.08
4		Pyridine		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
5	P	Benzaldehyde		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
6		Aniline		----------NA----------				
7	S	2-Fluorophenol		----------NA----------				
8	P	bis(2-Chloroethyl)ether	50.000	49.635	0.7	95	0.00	4.25
9	S	Phenol-d5		----------NA----------				
10	P	Phenol	50.000	49.607	0.8	95	0.00	4.22
11	P	2-Chlorophenol	50.000	48.318	3.4	93	0.00	4.29
12		1,3-Dichlorobenzene	50.000	47.230	5.5	91	0.00	4.40
13		1,4-Dichlorobenzene	50.000	46.747	6.5	91	0.00	4.46
14		1,2-Dichlorobenzene	50.000	48.454	3.1	94	0.00	4.58
15		Benzyl alcohol		----------NA----------				
16	P	bis(2-chloroisopropyl)eth	50.000	49.001	2.0	95	0.00	4.69
17	P	2-Methylphenol	50.000	45.534	8.9	87	0.00	4.69
18	P	Acetophenone	50.000	48.334	3.3	95	0.00	4.78
19	P	Hexachloroethane	50.000	47.444	5.1	90	0.00	4.85
20	P	N-Nitroso-di-n-propylamin	50.000	48.203	3.6	93	0.00	4.79
21	P	3&4-Methylphenol	100.000	87.340	12.7	100	0.00	4.82
22	I	Naphthalene-d8	40.000	40.000	0.0	93	0.00	5.47
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene	50.000	47.985	4.0	92	-0.01	4.91
25	P	Isophorone		----------NA----------				
26	P	2-Nitrophenol	50.000	47.185	5.6	88	0.00	5.17
27	P	2,4-Dimethylphenol	50.000	41.393	17.2	78	0.00	5.24
28	P	bis(2-Chloroethoxy)methan	50.000	49.217	1.6	93	0.00	5.30
		----------	Amount	Calc.	%Drift		----------	
29		Benzoic Acid	100.000	91.282	8.7	91	0.03	5.41
		----------	Amount	Calc.	%Drift		----------	
30	P	2,4-Dichlorophenol	50.000	47.264	5.5	89	0.00	5.38
31		1,2,4-Trichlorobenzene	50.000	46.648	6.7	88	0.00	5.43
32		alpha-Terpineol		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	

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Initial Calibration Verification

Job Number: JB40127 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064273.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

			Amount	Calc.	%Drift			
33	P	Naphthalene	50.000	49.474	1.1	92	0.00	5.49
34	P	4-Chloroaniline		NA				
35		2,6-Dichlorophenol	50.000	45.632	8.7	86	0.00	5.55
36	P	Hexachlorobutadiene	50.000	48.593	2.8	91	0.00	5.60
37	P	Caprolactam	50.000	46.281	7.4	87	0.00	5.86
38	P	4-Chloro-3-methylphenol	50.000	47.115	5.8	89	0.00	5.97
39	P	2-Methylnaphthalene		NA				
40		1-Methylnaphthalene	50.000	46.943	6.1	90	0.00	6.13
41	P	1,2,4,5-Tetrachlorobenzen	50.000	45.274	9.5	89	0.00	6.19
42	I	Acenaphthene-d10	40.000	40.000	0.0	90	0.00	6.89
43	P	Hexachlorocyclopentadiene	50.000	47.684	4.6	82	0.00	6.19
44	P	2,4,6-Trichlorophenol	50.000	47.146	5.7	88	0.00	6.30
45	P	2,4,5-Trichlorophenol	50.000	47.997	4.0	89	0.00	6.33
46	S	2-Fluorobiphenyl		NA				
			Amount	Calc.	%Drift			
47	P	1,1'-Biphenyl	50.000	49.329	1.3	92	0.00	6.43
			Amount	Calc.	%Drift			
48	P	2-Chloronaphthalene	50.000	46.970	6.1	90	0.00	6.45
49	P	2-Nitroaniline		NA				
50		p-Dinitrobenzene		NA				
			Amount	Calc.	%Drift			
51	P	Acenaphthylene	50.000	49.806	0.4	91	0.00	6.78
			Amount	Calc.	%Drift			
52	P	Dimethylphthalate	50.000	48.135	3.7	93	-0.01	6.70
53		m-Dinitrobenzene		NA				
54	P	2,6-Dinitrotoluene	50.000	46.229	7.5	84	0.00	6.74
55		o-Dinitrobenzene		NA				
56	P	Acenaphthene	50.000	47.422	5.2	90	0.00	6.92
57	P	3-Nitroaniline		NA				
			Amount	Calc.	%Drift			
58	P	2,4-Dinitrophenol	100.000	89.231	10.8	89	0.00	6.97
59	P	Dibenzofuran		NA				
			Amount	Calc.	%Drift			
60	P	2,4-Dinitrotoluene	50.000	47.551	4.9	87	0.00	7.07
61	P	4-Nitrophenol	100.000	93.509	6.5	98	0.00	7.06
62		2,3,5,6-Tetrachlorophenol		NA				
63	P	2,3,4,6-Tetrachlorophenol	50.000	47.811	4.4	85	0.00	7.18
			Amount	Calc.	%Drift			
64	P	Fluorene	50.000	47.591	4.8	88	0.00	7.34
			Amount	Calc.	%Drift			
65	P	4-Chlorophenyl-phenylethe	50.000	48.859	2.3	94	0.00	7.35
			Amount	Calc.	%Drift			
66	P	Diethylphthalate	50.000	50.456	-0.9	92	0.00	7.27
			Amount	Calc.	%Drift			
67	P	4-Nitroaniline		NA				
68	I	Phenanthrene-d10	40.000	40.000	0.0	88	0.00	8.10

Initial Calibration Verification

Job Number: JB40127 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064273.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

69	P	4,6-Dinitro-2-methylpheno	100.000	109.969	-10.0	98	0.00	7.41
70	P	n-Nitrosodiphenylamine	50.000	48.002	4.0	73	0.00	7.45
71		1,2-Diphenylhydrazine	50.000	46.335	7.3	80	0.00	7.48
72	S	2,4,6-Tribromophenol		----------NA----------				
73	P	4-Bromophenyl-phenylether	50.000	51.885	-3.8	91	0.00	7.74
74	P	Hexachlorobenzene	50.000	49.762	0.5	88	0.00	7.79
75		Simazine		----------NA----------				
76	P	Atrazine	50.000	44.657	10.7	79	0.00	7.90
		----------	Amount	Calc.	%Drift		----------	
77	P	Pentachlorophenol	100.000	97.127	2.9	91	0.00	7.96
78	P	Phenanthrene	50.000	51.694	-3.4	91	0.00	8.12
79	P	Anthracene	50.000	51.438	-2.9	89	0.00	8.16
		----------	Amount	Calc.	%Drift		----------	
80	P	Carbazole		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
81	P	Di-n-butylphthalate	50.000	51.669	-3.3	89	0.00	8.60
82	P	Fluoranthene	50.000	49.590	0.8	86	0.00	9.11
		----------	Amount	Calc.	%Drift		----------	
83	I	Chrysene-d12	40.000	40.000	0.0	85	0.00	10.56
84		Benzidine		----------NA----------				
85	P	Pyrene	50.000	50.681	-1.4	89	0.00	9.32
86	S	Terphenyl-d14		----------NA----------				
87	P	Butylbenzylphthalate	50.000	53.193	-6.4	90	0.00	10.00
88	P	3,3'-Dichlorobenzidine		----------NA----------				
89	P	Benzo[a]anthracene	50.000	50.115	-0.2	86	0.00	10.55
90	P	Chrysene	50.000	48.879	2.2	83	0.00	10.60
91	P	bis(2-Ethylhexyl)phthalat	50.000	52.182	-4.4	87	0.00	10.68
92	I	Perylene-d12	40.000	40.000	0.0	81	-0.01	12.40
93	P	Di-n-octylphthalate	50.000	52.287	-4.6	86	-0.01	11.53
94	P	Benzo[b]fluoranthene	50.000	48.053	3.9	81	0.00	11.90
95	P	Benzo[k]fluoranthene	50.000	49.539	0.9	83	-0.01	11.94
96	P	Benzo[a]pyrene	50.000	46.034	7.9	77	-0.01	12.33
97	P	Indeno[1,2,3-cd]pyrene	50.000	49.447	1.1	82	0.00	13.79
98	P	Dibenz[a,h]anthracene	50.000	48.982	2.0	81	-0.01	13.83
99	P	Benzo[g,h,i]perylene	50.000	49.222	1.6	82	0.00	14.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L064269.D 8270da.m Thu Jun 27 09:10:00 2013

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Initial Calibration Verification

Job Number: JB40127 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064274.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\sl3245\L064274.D          Vial: 10
Acq On    : 26 Jun 2013   1:19 pm                   Operator: nancyf
Sample    : icv3245-50                              Inst    : MSBNA02
Misc      : op47159,sl3245,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270da.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Jun 26 12:53:03 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	92	0.00	4.45
2		1,4-Dioxane		NA				
3		N-nitrosodimethylamine		NA				
4		Pyridine	50.000	51.258	-2.5	95	0.00	2.05
		----------	Amount	Calc.	%Drift			
5	P	Benzaldehyde	25.000	21.032	15.9	87	0.00	4.09
		----------	Amount	Calc.	%Drift			
6		Aniline	50.000	43.333	13.3	81	0.00	4.19
7	S	2-Fluorophenol		NA				
8	P	bis(2-Chloroethyl)ether		NA				
9	S	Phenol-d5		NA				
10	P	Phenol		NA				
11	P	2-Chlorophenol		NA				
12		1,3-Dichlorobenzene		NA				
13		1,4-Dichlorobenzene		NA				
14		1,2-Dichlorobenzene		NA				
15		Benzyl alcohol	50.000	50.444	-0.9	94	0.00	4.58
16	P	bis(2-chloroisopropyl)eth		NA				
17	P	2-Methylphenol		NA				
18	P	Acetophenone		NA				
19	P	Hexachloroethane		NA				
20	P	N-Nitroso-di-n-propylamin		NA				
21	P	3&4-Methylphenol		NA				
22	I	Naphthalene-d8	40.000	40.000	0.0	90	0.00	5.47
23	S	Nitrobenzene-d5		NA				
24	P	Nitrobenzene		NA				
25	P	Isophorone	50.000	47.067	5.9	86	-0.02	5.11
26	P	2-Nitrophenol		NA				
27	P	2,4-Dimethylphenol		NA				
28	P	bis(2-Chloroethoxy)methan		NA				
		----------	Amount	Calc.	%Drift			
29		Benzoic Acid		NA				
		----------	Amount	Calc.	%Drift			
30	P	2,4-Dichlorophenol		NA				
31		1,2,4-Trichlorobenzene		NA				
32		alpha-Terpineol		NA				

15.7.3

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Initial Calibration Verification

Job Number: JB40127 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064274.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

			Amount	Calc.	%Drift			
33	P	Naphthalene		NA				
			Amount	Calc.	%Drift			
34	P	4-Chloroaniline	50.000	44.606	10.8	82	0.00	5.55
35		2,6-Dichlorophenol		NA				
36	P	Hexachlorobutadiene		NA				
37	P	Caprolactam		NA				
38	P	4-Chloro-3-methylphenol		NA				
39	P	2-Methylnaphthalene	50.000	49.316	1.4	92	0.00	6.05
40		1-Methylnaphthalene		NA				
41	P	1,2,4,5-Tetrachlorobenzen		NA				
42	I	Acenaphthene-d10	40.000	40.000	0.0	87	0.00	6.89
43	P	Hexachlorocyclopentadiene		NA				
44	P	2,4,6-Trichlorophenol		NA				
45	P	2,4,5-Trichlorophenol		NA				
46	S	2-Fluorobiphenyl		NA				
			Amount	Calc.	%Drift			
47	P	1,1'-Biphenyl		NA				
			Amount	Calc.	%Drift			
48	P	2-Chloronaphthalene		NA				
49	P	2-Nitroaniline	50.000	59.261	-18.5	106	0.00	6.54
50		p-Dinitrobenzene		NA				
			Amount	Calc.	%Drift			
51	P	Acenaphthylene		NA				
			Amount	Calc.	%Drift			
52	P	Dimethylphthalate		NA				
53		m-Dinitrobenzene	50.000	44.432	11.1	78	-0.01	6.72
54	P	2,6-Dinitrotoluene		NA				
55		o-Dinitrobenzene		NA				
56	P	Acenaphthene		NA				
57	P	3-Nitroaniline	50.000	48.959	2.1	86	0.00	6.88
			Amount	Calc.	%Drift			
58	P	2,4-Dinitrophenol		NA				
59	P	Dibenzofuran	50.000	52.847	-5.7	92	0.00	7.06
			Amount	Calc.	%Drift			
60	P	2,4-Dinitrotoluene		NA				
61	P	4-Nitrophenol		NA				
62		2,3,5,6-Tetrachlorophenol		NA				
63	P	2,3,4,6-Tetrachlorophenol		NA				
			Amount	Calc.	%Drift			
64	P	Fluorene		NA				
			Amount	Calc.	%Drift			
65	P	4-Chlorophenyl-phenylethe		NA				
			Amount	Calc.	%Drift			
66	P	Diethylphthalate		NA				
			Amount	Calc.	%Drift			
67	P	4-Nitroaniline	50.000	52.297	-4.6	94	-0.02	7.38

Initial Calibration Verification

Job Number: JB40127 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064274.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

68	I	Phenanthrene-d10	40.000	40.000	0.0	86	0.00	8.10
69	P	4,6-Dinitro-2-methylpheno		----------NA----------				
70	P	n-Nitrosodiphenylamine		----------NA----------				
71		1,2-Diphenylhydrazine		----------NA----------				
72	S	2,4,6-Tribromophenol		----------NA----------				
73	P	4-Bromophenyl-phenylether		----------NA----------				
74	P	Hexachlorobenzene		----------NA----------				
75		Simazine	50.000	59.029	-18.1	94	0.00	7.88
76	P	Atrazine		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
77	P	Pentachlorophenol		----------NA----------				
78	P	Phenanthrene		----------NA----------				
79	P	Anthracene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
80	P	Carbazole	50.000	50.779	-1.6	90	0.00	8.30
		----------	Amount	Calc.	%Drift	----------		
81	P	Di-n-butylphthalate		----------NA----------				
82	P	Fluoranthene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
83	I	Chrysene-d12	40.000	40.000	0.0	91	-0.01	10.56
84		Benzidine	50.000	49.007	2.0	84	0.00	9.25
85	P	Pyrene		----------NA----------				
86	S	Terphenyl-d14		----------NA----------				
87	P	Butylbenzylphthalate		----------NA----------				
88	P	3,3'-Dichlorobenzidine	50.000	46.520	7.0	82	0.00	10.55
89	P	Benzo[a]anthracene		----------NA----------				
90	P	Chrysene		----------NA----------				
91	P	bis(2-Ethylhexyl)phthalat		----------NA----------				
92	I	Perylene-d12	40.000	40.000	0.0	88	-0.02	12.40
93	P	Di-n-octylphthalate		----------NA----------				
94	P	Benzo[b]fluoranthene		----------NA----------				
95	P	Benzo[k]fluoranthene		----------NA----------				
96	P	Benzo[a]pyrene		----------NA----------				
97	P	Indeno[1,2,3-cd]pyrene		----------NA----------				
98	P	Dibenz[a,h]anthracene		----------NA----------				
99	P	Benzo[g,h,i]perylene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L064269.D 8270da.m Thu Jun 27 09:10:01 2013

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Continuing Calibration Summary

Job Number: JB40127 **Sample:** SL3253-CC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064498.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\sl3253\L064498.D          Vial: 2
Acq On    :  3 Jul 2013  12:39 pm                   Operator: nancyf
Sample    : cc3245-50                               Inst    : MSBNA02
Misc      : op47159,sl3253,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270da.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Thu Jul 04 07:20:07 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	80	0.00	4.34
2		1,4-Dioxane	0.750	0.710	5.3	75	-0.03	1.55
3		N-nitrosodimethylamine	1.051	0.710	32.4#	54	-0.02	1.87
4		Pyridine	2.529	1.781	29.6#	56	-0.03	1.88
		----------	Amount	Calc.	%Drift		----------	
5	P	Benzaldehyde	50.000	48.416	3.2	77	-0.01	3.99
		----------	AvgRF	CCRF	%Dev		----------	
6		Aniline	2.231	2.078	6.9	76	0.00	4.09
7	S	2-Fluorophenol	1.382	1.304	5.6	76	-0.04	3.29
8	P	bis(2-Chloroethyl)ether	1.315	1.209	8.1	74	0.00	4.15
9	S	Phenol-d5	1.628	1.513	7.1	77	0.00	4.11
10	P	Phenol	1.718	1.654	3.7	78	0.00	4.13
11	P	2-Chlorophenol	1.439	1.384	3.8	78	0.00	4.18
12		1,3-Dichlorobenzene	1.579	1.513	4.2	77	0.00	4.30
13		1,4-Dichlorobenzene	1.557	1.503	3.5	79	0.00	4.36
14		1,2-Dichlorobenzene	1.465	1.429	2.5	79	0.00	4.48
15		Benzyl alcohol	0.930	0.901	3.1	79	0.00	4.48
16	P	bis(2-chloroisopropyl)eth	1.815	1.707	6.0	77	0.00	4.58
17	P	2-Methylphenol	1.291	1.234	4.4	77	0.01	4.60
18	P	Acetophenone	1.815	1.719	5.3	78	0.01	4.69
19	P	Hexachloroethane	0.633	0.619	2.2	78	0.00	4.75
20	P	N-Nitroso-di-n-propylamin	0.965	0.929	3.7	78	0.00	4.70
21	P	3&4-Methylphenol	1.365	1.261	7.6	75	0.01	4.72
22	I	Naphthalene-d8	1.000	1.000	0.0	82	0.00	5.37
23	S	Nitrobenzene-d5	0.464	0.416	10.3	74	-0.01	4.80
24	P	Nitrobenzene	0.442	0.398	10.0	76	-0.01	4.81
25	P	Isophorone	0.775	0.705	9.0	75	0.00	5.02
26	P	2-Nitrophenol	0.242	0.230	5.0	78	0.00	5.07
27	P	2,4-Dimethylphenol	0.422	0.393	6.9	77	0.00	5.14
28	P	bis(2-Chloroethoxy)methan	0.479	0.425	11.3	74	0.00	5.20
		----------	Amount	Calc.	%Drift		----------	
29		Benzoic Acid	50.000	51.199	-2.4	81	0.00	5.28
		----------	AvgRF	CCRF	%Dev		----------	
30	P	2,4-Dichlorophenol	0.363	0.346	4.7	78	0.00	5.28
31		1,2,4-Trichlorobenzene	0.386	0.356	7.8	76	0.00	5.33
32		alpha-Terpineol		----------NA----------				

Continuing Calibration Summary

Job Number: JB40127 **Sample:** SL3253-CC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064498.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

			Amount	Calc.	%Drift			
33	P	Naphthalene	50.000	47.301	5.4	77	0.00	5.39
			AvgRF	CCRF	%Dev			
34	P	4-Chloroaniline	0.507	0.466	8.1	76	0.00	5.45
35		2,6-Dichlorophenol	0.358	0.323	9.8	75	0.00	5.46
36	P	Hexachlorobutadiene	0.212	0.199	6.1	77	0.00	5.50
37	P	Caprolactam	0.132	0.119	9.8	74	0.00	5.77
38	P	4-Chloro-3-methylphenol	0.360	0.314	12.8	73	0.02	5.88
39	P	2-Methylnaphthalene	0.737	0.661	10.3	75	0.02	5.95
40		1-Methylnaphthalene	0.730	0.687	5.9	79	0.01	6.03
41	P	1,2,4,5-Tetrachlorobenzen	0.371	0.340	8.4	79	0.01	6.09
42	I	Acenaphthene-d10	1.000	1.000	0.0	74	0.00	6.79
43	P	Hexachlorocyclopentadiene	0.341	0.314	7.9	65	0.00	6.09
44	P	2,4,6-Trichlorophenol	0.432	0.425	1.6	76	0.00	6.20
45	P	2,4,5-Trichlorophenol	0.445	0.443	0.4	76	0.00	6.24
46	S	2-Fluorobiphenyl	1.380	1.344	2.6	78	0.00	6.26
			Amount	Calc.	%Drift			
47	P	1,1'-Biphenyl	50.000	52.626	-5.3	80	0.00	6.33
			AvgRF	CCRF	%Dev			
48	P	2-Chloronaphthalene	1.164	1.148	1.4	78	0.00	6.34
49	P	2-Nitroaniline	0.387	0.368	4.9	72	0.00	6.44
50		p-Dinitrobenzene	0.275	0.286	-4.0	78	0.00	6.56
			Amount	Calc.	%Drift			
51	P	Acenaphthylene	50.000	52.414	-4.8	79	0.00	6.67
			AvgRF	CCRF	%Dev			
52	P	Dimethylphthalate	1.335	1.308	2.0	78	0.00	6.60
53		m-Dinitrobenzene	0.257	0.246	4.3	71	0.00	6.63
54	P	2,6-Dinitrotoluene	0.342	0.339	0.9	74	0.00	6.65
55		o-Dinitrobenzene	0.224	0.210	6.3	71	0.00	6.69
56	P	Acenaphthene	1.164	1.150	1.2	77	0.00	6.82
57	P	3-Nitroaniline	0.386	0.371	3.9	72	0.00	6.78
			Amount	Calc.	%Drift			
58	P	2,4-Dinitrophenol	50.000	49.631	0.7	70	0.00	6.87
59	P	Dibenzofuran	50.000	53.066	-6.1	78	0.00	6.96
			AvgRF	CCRF	%Dev			
60	P	2,4-Dinitrotoluene	0.435	0.427	1.8	74	0.00	6.98
61	P	4-Nitrophenol	0.171	0.175	-2.3	74	0.00	6.96
62		2,3,5,6-Tetrachlorophenol	0.333	0.358	-7.5	78	0.00	7.04
63	P	2,3,4,6-Tetrachlorophenol	0.339	0.343	-1.2	74	0.00	7.07
			Amount	Calc.	%Drift			
64	P	Fluorene	50.000	53.914	-7.8	81	0.00	7.23
			AvgRF	CCRF	%Dev			
65	P	4-Chlorophenyl-phenylethe	0.622	0.620	0.3	79	0.00	7.24
			Amount	Calc.	%Drift			
66	P	Diethylphthalate	50.000	52.209	-4.4	78	0.01	7.18
			AvgRF	CCRF	%Dev			
67	P	4-Nitroaniline	0.367	0.348	5.2	72	0.00	7.28

Continuing Calibration Summary

Job Number: JB40127 **Sample:** SL3253-CC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064498.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

68	I	Phenanthrene-d10	1.000	1.000	0.0	77	0.00	7.99
69	P	4,6-Dinitro-2-methylpheno	0.161	0.169	-5.0	73	0.00	7.31
70	P	n-Nitrosodiphenylamine	0.597	0.588	1.5	78	0.00	7.35
71		1,2-Diphenylhydrazine	0.880	0.824	6.4	71	0.00	7.37
72	S	2,4,6-Tribromophenol	0.106	0.111	-4.7	80	-0.01	7.44
73	P	4-Bromophenyl-phenylether	0.232	0.224	3.4	74	0.00	7.63
74	P	Hexachlorobenzene	0.234	0.241	-3.0	79	0.00	7.69
75		Simazine	0.155	0.131	15.5	60	0.00	7.78
76	P	Atrazine	0.259	0.262	-1.2	78	0.00	7.80
		----------	Amount	Calc.	%Drift	----------		
77	P	Pentachlorophenol	50.000	51.314	-2.6	75	0.00	7.86
78	P	Phenanthrene	50.000	50.730	-1.5	78	0.00	8.01
79	P	Anthracene	50.000	52.843	-5.7	80	0.00	8.05
		----------	AvgRF	CCRF	%Dev	----------		
80	P	Carbazole	1.120	1.042	7.0	74	0.00	8.20
		----------	Amount	Calc.	%Drift	----------		
81	P	Di-n-butylphthalate	50.000	49.196	1.6	75	0.00	8.50
82	P	Fluoranthene	50.000	50.056	-0.1	76	0.00	8.99
		----------	AvgRF	CCRF	%Dev	----------		
83	I	Chrysene-d12	1.000	1.000	0.0	79	0.00	10.43
84		Benzidine	0.938	0.920	1.9	72	0.00	9.14
85	P	Pyrene	1.552	1.499	3.4	79	0.00	9.20
86	S	Terphenyl-d14	1.001	0.949	5.2	76	0.00	9.37
87	P	Butylbenzylphthalate	0.647	0.638	1.4	77	0.00	9.87
88	P	3,3'-Dichlorobenzidine	0.416	0.424	-1.9	77	0.00	10.42
89	P	Benzo[a]anthracene	1.143	1.096	4.1	76	0.00	10.41
90	P	Chrysene	1.040	0.980	5.8	74	0.00	10.45
91	P	bis(2-Ethylhexyl)phthalat	0.828	0.806	2.7	75	0.00	10.54
92	I	Perylene-d12	1.000	1.000	0.0	76	0.00	12.23
93	P	Di-n-octylphthalate	1.459	1.447	0.8	76	0.00	11.38
94	P	Benzo[b]fluoranthene	1.172	1.139	2.8	76	0.00	11.74
95	P	Benzo[k]fluoranthene	1.083	0.997	7.9	72	0.00	11.78
96	P	Benzo[a]pyrene	1.102	1.077	2.3	76	0.00	12.15
97	P	Indeno[1,2,3-cd]pyrene	0.952	0.915	3.9	74	0.00	13.61
98	P	Dibenz[a,h]anthracene	0.946	0.913	3.5	75	0.00	13.65
99	P	Benzo[g,h,i]perylene	0.985	0.955	3.0	76	0.00	13.93

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L064269.D 8270da.m Thu Jul 04 07:21:53 2013

15.7.4 15

Initial Calibration Summary

Job Number: JB40127 **Sample:** SX1399-ICC1399
Account: ALNJ Accutest New Jersey **Lab FileID:** X029282.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Response Factor Report MSBNA05

Method : C:\msdchem\1\METHODS\8270d.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Mon Jul 08 07:59:30 2013
Response via : Initial Calibration

Calibration Files
5 =X029277.D 10 =X029278.D 25 =X029279.D 50 =X029280.D
60 =X029281.D 75 =X029282.D 100 =X029283.D

Compound	5	10	25	50	60	75	100	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------								
2) 1,4-Dioxane	0.762	0.759	0.748	0.694	0.682	0.672	0.664	0.712	6.05
3) N-nitrosodimethyl	1.016	1.005	0.992	0.928	0.903	0.871	0.863	0.940	6.87
4) Pyridine	2.047	2.009	1.986	1.864	1.783	1.802	1.783	1.896	6.05
5)S 2-Fluorophenol	1.736	1.675	1.634	1.463	1.413	1.354	1.304	1.511	11.22
6)P Benzaldehyde	1.378	1.313	1.277	1.163	1.099	0.960	0.809	1.143	17.86
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990									
Response Ratio = 0.00000 + 1.48315 *A + -0.27016 *A^2									
7) Aniline	2.816	2.724	2.673	2.553	2.484	2.427	2.447	2.589	5.80
8)P bis(2-Chloroethyl	1.703	1.670	1.618	1.543	1.498	1.486	1.466	1.569	6.04
9)S Phenol-d5	2.227	2.134	1.982	1.845	1.790	1.729	1.679	1.912	10.91
10)P Phenol	2.303	2.218	2.084	1.945	1.886	1.829	1.797	2.009	9.79
11)P 2-Chlorophenol	1.774	1.772	1.704	1.636	1.600	1.562	1.556	1.657	5.62
12) 1,3-Dichlorobenze	1.815	1.757	1.741	1.617	1.577	1.540	1.504	1.650	7.29
13) 1,4-Dichlorobenze	1.836	1.815	1.706	1.599	1.570	1.525	1.477	1.647	8.57
14) 1,2-Dichlorobenze	1.692	1.704	1.626	1.522	1.495	1.458	1.429	1.561	7.20
15) Benzyl alcohol	1.155	1.150	1.100	1.073	1.042	1.022	1.017	1.080	5.32
16)P 2-Methylphenol	1.636	1.584	1.524	1.454	1.429	1.394	1.386	1.487	6.51
17)P bis(2-chloroisopr	2.850	2.741	2.633	2.444	2.363	2.297	2.168	2.500	9.95
18)P Acetophenone	2.296	2.175	2.172	1.999	1.941	1.858	1.779	2.031	9.29
19)P N-Nitroso-di-n-pr	1.219	1.170	1.126	1.087	1.062	1.075	1.053	1.113	5.56
20)P 3&4-Methylphenol	1.660	1.640	1.566	1.465	1.411	1.369	1.289	1.486	9.48
21)P Hexachloroethane	0.722	0.741	0.703	0.668	0.648	0.645	0.623	0.679	6.48
22) I Naphthalene-d8	----------ISTD----------								
23)S Nitrobenzene-d5	0.512	0.492	0.474	0.450	0.435	0.437	0.427	0.461	7.02
24)P Nitrobenzene	0.505	0.481	0.463	0.440	0.422	0.421	0.407	0.448	7.98
25)P Isophorone	0.862	0.825	0.794	0.764	0.740	0.748	0.742	0.782	5.99
26)P 2-Nitrophenol	0.235	0.238	0.232	0.224	0.215	0.215	0.210	0.224	5.03
27)P 2,4-Dimethylpheno	0.440	0.429	0.409	0.384	0.375	0.373	0.366	0.397	7.42
28)P bis(2-Chloroethox	0.515	0.497	0.474	0.449	0.435	0.435	0.427	0.462	7.37
29) Benzoic Acid	0.290	0.328	0.343	0.363	0.358	0.364	0.374	0.346	8.34
30)P 2,4-Dichloropheno	0.329	0.329	0.322	0.308	0.298	0.291	0.290	0.310	5.55
31) 1,2,4-Trichlorobe	0.341	0.335	0.321	0.306	0.293	0.289	0.290	0.310	7.03
32)P Naphthalene	1.218	1.178	1.143	1.064	1.014	0.998	0.959	1.082	9.13
33)P 4-Chloroaniline	0.537	0.531	0.509	0.480	0.457	0.449	0.429	0.485	8.73
34) 2,6-Dichloropheno	0.334	0.328	0.313	0.297	0.280	0.275	0.267	0.299	8.93
35)P Hexachlorobutadie	0.170	0.167	0.159	0.146	0.141	0.140	0.137	0.151	8.96
36)P Caprolactam	0.126	0.118	0.117	0.116	0.115	0.110	0.114	0.116	4.14
37)P 4-Chloro-3-methyl	0.332	0.322	0.306	0.302	0.294	0.285	0.287	0.304	5.84
38)P 2-Methylnaphthale	0.688	0.678	0.652	0.616	0.599	0.576	0.577	0.627	7.43
39) 1-Methylnaphthale	0.680	0.667	0.646	0.605	0.587	0.569	0.566	0.617	7.63
40)P 1,2,4,5-Tetrachlo	0.278	0.276	0.265	0.252	0.243	0.240	0.242	0.257	6.31
41) I Acenaphthene-d10	----------ISTD----------								

15.7.5

15

Initial Calibration Summary

Job Number: JB40127 **Sample:** SX1399-ICC1399
Account: ALNJ Accutest New Jersey **Lab FileID:** X029282.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

42)P Hexachlorocyclope	0.381	0.376	0.390	0.382	0.368	0.382	0.393	0.382	2.18
43)P 2,4,6-Trichloroph	0.499	0.460	0.454	0.444	0.423	0.436	0.451	0.452	5.28
44)P 2,4,5-Trichloroph	0.490	0.471	0.454	0.448	0.440	0.443	0.460	0.458	3.81
45)S 2-Fluorobiphenyl	1.696	1.592	1.539	1.485	1.427	1.468	1.483	1.527	5.99
46)P 1,1'-Biphenyl	1.867	1.715	1.655	1.533	1.478	1.445	1.423	1.588	10.32
47)P 2-Chloronaphthale	1.483	1.370	1.309	1.242	1.181	1.176	1.166	1.275	9.35
48)P 2-Nitroaniline	0.475	0.455	0.439	0.434	0.425	0.432	0.439	0.443	3.83
49) p-Dinitrobenzene	0.289	0.294	0.288	0.293	0.290	0.295	0.304	0.293	1.84
50)P Dimethylphthalate	1.509	1.430	1.351	1.285	1.250	1.239	1.273	1.334	7.63
51) m-Dinitrobenzene	0.244	0.246	0.231	0.229	0.222	0.224	0.233	0.233	3.95
52)P 2,6-Dinitrotoluen	0.324	0.333	0.318	0.318	0.307	0.311	0.322	0.319	2.70
53) o-Dinitrobenzene	0.227	0.235	0.218	0.223	0.216	0.221	0.226	0.223	2.82
54)P Acenaphthylene	2.163	2.086	2.004	1.952	1.887	1.911	1.949	1.993	4.99
55)P 3-Nitroaniline	0.409	0.420	0.392	0.401	0.385	0.381	0.394	0.397	3.45
56)P Acenaphthene	1.315	1.231	1.195	1.152	1.119	1.151	1.164	1.190	5.52
57)P 2,4-Dinitrophenol	0.117	0.147	0.172	0.198	0.196	0.203	0.216	0.178	19.82

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9995
Response Ratio = 0.00000 + 0.16629 *A + 0.02005 *A^2

58)P 4-Nitrophenol	0.194	0.202	0.195	0.184	0.181	0.186	0.192	0.191	3.76
59)P Dibenzofuran	1.799	1.694	1.595	1.523	1.474	1.501	1.523	1.587	7.48
60)P 2,4-Dinitrotoluen	0.388	0.391	0.385	0.403	0.386	0.390	0.405	0.393	1.99
61)P 2,3,5,6-Tetrachlo	0.281	0.292	0.285	0.292	0.282	0.288	0.297	0.288	2.05
62)P 2,3,4,6-Tetrachlo	0.283	0.287	0.276	0.275	0.270	0.274	0.285	0.278	2.34
63)P Diethylphthalate	1.285	1.229	1.145	1.093	1.047	1.036	1.032	1.124	8.94
64)P Fluorene	1.317	1.298	1.221	1.158	1.114	1.107	1.109	1.189	7.58
65)P 4-Chlorophenyl-ph	0.566	0.563	0.533	0.529	0.506	0.516	0.530	0.535	4.19
66)P 4-Nitroaniline	0.343	0.344	0.333	0.339	0.328	0.334	0.344	0.338	1.87
67) I Phenanthrene-d10	----------ISTD----------								
68)P 4,6-Dinitro-2-met	0.137	0.163	0.177	0.190	0.186	0.188	0.191	0.176	11.25
69)P n-Nitrosodiphenyl	0.804	0.771	0.768	0.730	0.703	0.714	0.698	0.741	5.44
70) 1,2-Diphenylhydra	1.282	1.224	1.198	1.139	1.107	1.109	1.181	1.177	5.46
71)S 2,4,6-Tribromophe	0.128	0.125	0.123	0.122	0.118	0.119	0.121	0.122	2.85
72)P 4-Bromophenyl-phe	0.233	0.235	0.234	0.223	0.215	0.217	0.215	0.225	4.13
73)P Hexachlorobenzene	0.239	0.234	0.226	0.220	0.217	0.216	0.217	0.224	4.19
74) Simazine	0.115	0.114	0.111	0.108	0.104	0.105	0.105	0.109	4.04
75)P Atrazine	0.246	0.229	0.221	0.220	0.214	0.213	0.212	0.222	5.49
76)P Pentachlorophenol	0.146	0.155	0.162	0.162	0.159	0.163	0.165	0.159	4.06
77)P Phenanthrene	1.305	1.285	1.245	1.204	1.144	1.167	1.142	1.213	5.50
78)P Anthracene	1.338	1.322	1.272	1.238	1.197	1.205	1.176	1.250	5.04
79)P Carbazole	1.338	1.340	1.256	1.238	1.185	1.201	1.176	1.248	5.49
80)P Di-n-butylphthala	1.678	1.694	1.610	1.581	1.518	1.534	1.488	1.586	4.99
81)P Fluoranthene	1.472	1.524	1.462	1.433	1.380	1.399	1.385	1.436	3.69
82) I Chrysene-d12	----------ISTD----------								
83) Benzidine	0.662	0.699	0.731	0.720	0.714	0.662	0.597	0.684	6.85
84)P Pyrene	1.330	1.280	1.298	1.251	1.225	1.216	1.227	1.261	3.40
85)S Terphenyl-d14	0.819	0.803	0.799	0.772	0.758	0.755	0.766	0.782	3.18
86)P Butylbenzylphthal	0.711	0.716	0.704	0.684	0.671	0.667	0.668	0.689	3.10
87)P 3,3'-Dichlorobenz	0.451	0.449	0.433	0.411	0.395	0.394	0.367	0.414	7.59
88)P Benzo[a]anthracen	1.259	1.213	1.202	1.179	1.155	1.167	1.168	1.192	3.01
89)P Chrysene	1.131	1.132	1.083	1.049	1.015	1.029	1.009	1.064	4.91
90)P bis(2-Ethylhexyl)	1.049	1.041	1.024	1.011	0.972	0.987	0.978	1.009	3.04
91) I Perylene-d12	----------ISTD----------								
92)P Di-n-octylphthala	1.959	1.903	1.864	1.799	1.740	1.748	1.769	1.826	4.61
93)P Benzo[b]fluoranth	1.289	1.179	1.187	1.167	1.153	1.197	1.272	1.206	4.38
94)P Benzo[k]fluoranth	1.196	1.197	1.151	1.111	1.092	1.045	0.986	1.111	7.00
95)P Benzo[a]pyrene	1.207	1.195	1.198	1.154	1.148	1.165	1.176	1.178	1.94

Initial Calibration Summary

Job Number: JB40127 **Sample:** SX1399-ICC1399
Account: ALNJ Accutest New Jersey **Lab FileID:** X029282.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

```
96)P Indeno[1,2,3-cd]p 1.112 1.079 1.083 1.088 1.085 1.101 1.091 1.091   1.05
97)P Dibenz[a,h]anthra 1.118 1.050 1.048 1.102 1.097 1.092 1.099 1.087   2.48
98)P Benzo[g,h,i]peryl 1.211 1.150 1.137 1.152 1.133 1.118 1.121 1.146   2.74
---------------------------------------------------------------------------
(#) = Out of Range

          8270d.m           Mon Jul 08 08:42:47 2013
```

Initial Calibration Verification

Job Number: JB40127 **Sample:** SX1399-ICV1399
Account: ALNJ Accutest New Jersey **Lab FileID:** X029284.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx1399\X029284.D Vial: 9
Acq On : 5 Jul 2013 3:17 pm Operator: nancyf
Sample : icv1399-50 Inst : MSBNA05
Misc : op46768,sx1399,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Mon Jul 08 07:59:30 2013
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	108	0.00	3.31
2		1,4-Dioxane	50.000	48.690	2.6	108	0.03	1.82
3		N-nitrosodimethylamine	50.000	48.087	3.8	105	0.02	1.97
4		Pyridine		----------NA----------				
5	S	2-Fluorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
6	P	Benzaldehyde	50.000	49.470	1.1	106	0.00	3.06
		----------	Amount	Calc.	%Drift	----------		
7		Aniline		----------NA----------				
8	P	bis(2-Chloroethyl)ether	50.000	47.421	5.2	104	0.00	3.16
9	S	Phenol-d5		----------NA----------				
10	P	Phenol	50.000	47.508	5.0	106	-0.01	3.11
11	P	2-Chlorophenol	50.000	46.171	7.7	101	0.00	3.20
12		1,3-Dichlorobenzene	50.000	47.450	5.1	105	0.00	3.29
13		1,4-Dichlorobenzene	50.000	47.099	5.8	105	0.00	3.33
14		1,2-Dichlorobenzene	50.000	47.370	5.3	105	0.00	3.45
15		Benzyl alcohol		----------NA----------				
16	P	2-Methylphenol	50.000	42.802	14.4	95	0.00	3.49
17	P	bis(2-chloroisopropyl)eth	50.000	47.514	5.0	105	0.00	3.51
18	P	Acetophenone	50.000	42.200	15.6	93	0.00	3.60
19	P	N-Nitroso-di-n-propylamin	50.000	44.311	11.4	98	0.00	3.62
20	P	3&4-Methylphenol	100.000	81.186	18.8	108	0.00	3.60
21	P	Hexachloroethane	50.000	48.041	3.9	105	0.00	3.67
22	I	Naphthalene-d8	40.000	40.000	0.0	105	0.00	4.29
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene	50.000	46.335	7.3	99	0.00	3.73
25	P	Isophorone	50.000	47.487	5.0	102	0.00	3.90
26	P	2-Nitrophenol	50.000	45.907	8.2	96	0.00	3.98
27	P	2,4-Dimethylphenol	50.000	40.636	18.7	88	0.00	4.00
28	P	bis(2-Chloroethoxy)methan	50.000	47.950	4.1	103	0.00	4.08
29		Benzoic Acid	100.000	88.271	11.7	90	0.00	4.15
30	P	2,4-Dichlorophenol	50.000	46.947	6.1	99	0.00	4.17
31		1,2,4-Trichlorobenzene	50.000	47.365	5.3	101	0.00	4.25
32	P	Naphthalene	50.000	47.010	6.0	100	0.00	4.31
33	P	4-Chloroaniline		----------NA----------				
34		2,6-Dichlorophenol	50.000	45.828	8.3	97	0.00	4.38
35	P	Hexachlorobutadiene	50.000	48.625	2.8	105	0.00	4.48
36	P	Caprolactam	50.000	43.192	13.6	91	-0.03	4.71
37	P	4-Chloro-3-methylphenol	50.000	43.914	12.2	92	0.00	4.87

Initial Calibration Verification

Job Number: JB40127 **Sample:** SX1399-ICV1399
Account: ALNJ Accutest New Jersey **Lab FileID:** X029284.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

38	P	2-Methylnaphthalene		----------NA----------				
39		1-Methylnaphthalene	50.000	45.726	8.5	98	0.00	5.13
40	P	1,2,4,5-Tetrachlorobenzen	50.000	44.168	11.7	94	0.00	5.25
41	I	Acenaphthene-d10	40.000	40.000	0.0	101	0.00	6.35
42	P	Hexachlorocyclopentadiene	50.000	47.385	5.2	95	0.00	5.27
43	P	2,4,6-Trichlorophenol	50.000	46.217	7.6	95	0.00	5.37
44	P	2,4,5-Trichlorophenol	50.000	46.253	7.5	95	0.00	5.42
45	S	2-Fluorobiphenyl		----------NA----------				
46	P	1,1'-Biphenyl	50.000	46.220	7.6	96	0.00	5.58
47	P	2-Chloronaphthalene	50.000	46.589	6.8	96	0.00	5.59
48	P	2-Nitroaniline		----------NA----------				
49		p-Dinitrobenzene		----------NA----------				
50	P	Dimethylphthalate	50.000	48.459	3.1	101	-0.02	6.07
51		m-Dinitrobenzene		----------NA----------				
52	P	2,6-Dinitrotoluene	50.000	44.806	10.4	90	-0.01	6.16
53		o-Dinitrobenzene		----------NA----------				
54	P	Acenaphthylene	50.000	46.006	8.0	95	0.00	6.14
55	P	3-Nitroaniline		----------NA----------				
56	P	Acenaphthene	50.000	46.077	7.8	96	0.00	6.40
		----------	Amount	Calc.	%Drift		----------	
57	P	2,4-Dinitrophenol	100.000	82.194	17.8	88	-0.01	6.49
		----------	Amount	Calc.	%Drift		----------	
58	P	4-Nitrophenol	100.000	86.485	13.5	96	0.00	6.64
59	P	Dibenzofuran		----------NA----------				
60	P	2,4-Dinitrotoluene	50.000	43.272	13.5	85	-0.02	6.72
61	P	2,3,5,6-Tetrachlorophenol		----------NA----------				
62	P	2,3,4,6-Tetrachlorophenol	50.000	45.107	9.8	92	0.00	6.89
63	P	Diethylphthalate	50.000	45.639	8.7	94	-0.01	7.14
64	P	Fluorene	50.000	44.651	10.7	92	0.00	7.15
65	P	4-Chlorophenyl-phenylethe	50.000	47.801	4.4	97	0.00	7.18
66	P	4-Nitroaniline		----------NA----------				
67	I	Phenanthrene-d10	40.000	40.000	0.0	93	0.00	8.63
68	P	4,6-Dinitro-2-methylpheno	100.000	107.222	-7.2	96	-0.02	7.34
69	P	n-Nitrosodiphenylamine	50.000	45.801	8.4	72	-0.02	7.39
70		1,2-Diphenylhydrazine	50.000	47.255	5.5	91	0.00	7.42
71	S	2,4,6-Tribromophenol		----------NA----------				
72	P	4-Bromophenyl-phenylether	50.000	51.102	-2.2	95	0.00	7.94
73	P	Hexachlorobenzene	50.000	48.556	2.9	92	0.00	8.15
74		Simazine		----------NA----------				
75	P	Atrazine	50.000	45.052	9.9	85	-0.02	8.37
76	P	Pentachlorophenol	100.000	94.825	5.2	89	0.00	8.46
77	P	Phenanthrene	50.000	47.185	5.6	88	0.00	8.67
78	P	Anthracene	50.000	46.615	6.8	87	0.00	8.74
79	P	Carbazole		----------NA----------				
80	P	Di-n-butylphthalate	50.000	47.385	5.2	88	0.00	9.95
81	P	Fluoranthene	50.000	44.354	11.3	83	-0.01	10.83
82	I	Chrysene-d12	40.000	40.000	0.0	83	0.00	13.71
83		Benzidine		----------NA----------				
84	P	Pyrene	50.000	49.257	1.5	82	0.00	11.24
85	S	Terphenyl-d14		----------NA----------				
86	P	Butylbenzylphthalate	50.000	51.029	-2.1	85	0.00	12.88
87	P	3,3'-Dichlorobenzidine		----------NA----------				
88	P	Benzo[a]anthracene	50.000	47.889	4.2	80	-0.01	13.68
89	P	Chrysene	50.000	48.694	2.6	82	-0.02	13.76
90	P	bis(2-Ethylhexyl)phthalat	50.000	51.038	-2.1	84	0.00	14.20

Initial Calibration Verification

Job Number: JB40127 **Sample:** SX1399-ICV1399
Account: ALNJ Accutest New Jersey **Lab FileID:** X029284.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

91	I	Perylene-d12	40.000	40.000	0.0	77	0.00	16.44
92	P	Di-n-octylphthalate	50.000	51.918	-3.8	81	0.00	15.40
93	P	Benzo[b]fluoranthene	50.000	47.258	5.5	75	-0.02	15.77
94	P	Benzo[k]fluoranthene	50.000	50.192	-0.4	77	-0.02	15.82
95	P	Benzo[a]pyrene	50.000	44.657	10.7	70	-0.02	16.33
96	P	Indeno[1,2,3-cd]pyrene	50.000	46.968	6.1	73	-0.02	18.17
97	P	Dibenz[a,h]anthracene	50.000	46.323	7.4	70	-0.02	18.22
98	P	Benzo[g,h,i]perylene	50.000	46.776	6.4	72	-0.03	18.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X029280.D 8270d.m Mon Jul 08 08:37:31 2013

15.7.6
15

Initial Calibration Verification

Job Number: JB40127 **Sample:** SX1399-ICV1399
Account: ALNJ Accutest New Jersey **Lab FileID:** X029285.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sx1399\X029285.D          Vial: 10
Acq On    :  5 Jul 2013   3:44 pm                   Operator: nancyf
Sample    : icv1399-50                              Inst    : MSBNA05
Misc      : op46768,sx1399,1000,,,1,1,water         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270d.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Mon Jul 08 07:59:30 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	90	0.00	3.31
2		1,4-Dioxane		----------NA----------				
3		N-nitrosodimethylamine		----------NA----------				
4		Pyridine	50.000	49.357	1.3	90	0.00	1.95
5	S	2-Fluorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
6	P	Benzaldehyde		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
7		Aniline	50.000	50.282	-0.6	92	0.00	3.13
8	P	bis(2-Chloroethyl)ether		----------NA----------				
9	S	Phenol-d5		----------NA----------				
10	P	Phenol		----------NA----------				
11	P	2-Chlorophenol		----------NA----------				
12		1,3-Dichlorobenzene		----------NA----------				
13		1,4-Dichlorobenzene		----------NA----------				
14		1,2-Dichlorobenzene		----------NA----------				
15		Benzyl alcohol	50.000	50.028	-0.1	90	0.00	3.41
16	P	2-Methylphenol		----------NA----------				
17	P	bis(2-chloroisopropyl)eth		----------NA----------				
18	P	Acetophenone		----------NA----------				
19	P	N-Nitroso-di-n-propylamin		----------NA----------				
20	P	3&4-Methylphenol		----------NA----------				
21	P	Hexachloroethane		----------NA----------				
22	I	Naphthalene-d8	40.000	40.000	0.0	97	0.00	4.29
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene		----------NA----------				
25	P	Isophorone	50.000	43.612	12.8	87	-0.02	3.90
26	P	2-Nitrophenol		----------NA----------				
27	P	2,4-Dimethylphenol		----------NA----------				
28	P	bis(2-Chloroethoxy)methan		----------NA----------				
29		Benzoic Acid		----------NA----------				
30	P	2,4-Dichlorophenol		----------NA----------				
31		1,2,4-Trichlorobenzene		----------NA----------				
32	P	Naphthalene		----------NA----------				
33	P	4-Chloroaniline	50.000	47.881	4.2	94	0.00	4.37
34		2,6-Dichlorophenol		----------NA----------				
35	P	Hexachlorobutadiene		----------NA----------				
36	P	Caprolactam		----------NA----------				
37	P	4-Chloro-3-methylphenol		----------NA----------				

15.7.7

15

Initial Calibration Verification

Job Number: JB40127 **Sample:** SX1399-ICV1399
Account: ALNJ Accutest New Jersey **Lab FileID:** X029285.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

38	P	2-Methylnaphthalene	50.000	48.644	2.7	96	0.00	5.01
39		1-Methylnaphthalene		----------NA----------				
40	P	1,2,4,5-Tetrachlorobenzen		----------NA----------				
41	I	Acenaphthene-d10	40.000	40.000	0.0	92	0.00	6.35
42	P	Hexachlorocyclopentadiene		----------NA----------				
43	P	2,4,6-Trichlorophenol		----------NA----------				
44	P	2,4,5-Trichlorophenol		----------NA----------				
45	S	2-Fluorobiphenyl		----------NA----------				
46	P	1,1'-Biphenyl		----------NA----------				
47	P	2-Chloronaphthalene		----------NA----------				
48	P	2-Nitroaniline	50.000	51.409	-2.8	97	0.00	5.76
49		p-Dinitrobenzene		----------NA----------				
50	P	Dimethylphthalate		----------NA----------				
51		m-Dinitrobenzene	50.000	46.440	7.1	87	-0.02	6.07
52	P	2,6-Dinitrotoluene		----------NA----------				
53		o-Dinitrobenzene		----------NA----------				
54	P	Acenaphthylene		----------NA----------				
55	P	3-Nitroaniline	50.000	51.040	-2.1	93	-0.02	6.34
56	P	Acenaphthene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
57	P	2,4-Dinitrophenol		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
58	P	4-Nitrophenol		----------NA----------				
59	P	Dibenzofuran	50.000	50.692	-1.4	98	-0.01	6.63
60	P	2,4-Dinitrotoluene		----------NA----------				
61	P	2,3,5,6-Tetrachlorophenol		----------NA----------				
62	P	2,3,4,6-Tetrachlorophenol		----------NA----------				
63	P	Diethylphthalate		----------NA----------				
64	P	Fluorene		----------NA----------				
65	P	4-Chlorophenyl-phenylethe		----------NA----------				
66	P	4-Nitroaniline	50.000	53.247	-6.5	98	-0.03	7.26
67	I	Phenanthrene-d10	40.000	40.000	0.0	94	0.00	8.62
68	P	4,6-Dinitro-2-methylpheno		----------NA----------				
69	P	n-Nitrosodiphenylamine		----------NA----------				
70		1,2-Diphenylhydrazine		----------NA----------				
71	S	2,4,6-Tribromophenol		----------NA----------				
72	P	4-Bromophenyl-phenylether		----------NA----------				
73	P	Hexachlorobenzene		----------NA----------				
74		Simazine		----------NA----------				
75	P	Atrazine		----------NA----------				
76	P	Pentachlorophenol		----------NA----------				
77	P	Phenanthrene		----------NA----------				
78	P	Anthracene		----------NA----------				
79	P	Carbazole	50.000	51.135	-2.3	97	-0.01	9.06
80	P	Di-n-butylphthalate		----------NA----------				
81	P	Fluoranthene		----------NA----------				
82	I	Chrysene-d12	40.000	40.000	0.0	100	-0.02	13.70
83		Benzidine	50.000	61.016	-22.0#	116	0.00	11.19
84	P	Pyrene		----------NA----------				
85	S	Terphenyl-d14		----------NA----------				
86	P	Butylbenzylphthalate		----------NA----------				
87	P	3,3'-Dichlorobenzidine	50.000	53.121	-6.2	107	-0.01	13.77
88	P	Benzo[a]anthracene		----------NA----------				
89	P	Chrysene		----------NA----------				
90	P	bis(2-Ethylhexyl)phthalat		----------NA----------				

Initial Calibration Verification

Job Number: JB40127 **Sample:** SX1399-ICV1399
Account: ALNJ Accutest New Jersey **Lab FileID:** X029285.D
Project: ENVNJSP: Hess #30505, 701 Route 440, Jersey City, NJ

91	I	Perylene-d12	40.000	40.000	0.0	99	-0.02	16.43
92	P	Di-n-octylphthalate		----------NA----------				
93	P	Benzo[b]fluoranthene		----------NA----------				
94	P	Benzo[k]fluoranthene		----------NA----------				
95	P	Benzo[a]pyrene		----------NA----------				
96	P	Indeno[1,2,3-cd]pyrene		----------NA----------				
97	P	Dibenz[a,h]anthracene		----------NA----------				
98	P	Benzo[g,h,i]perylene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X029280.D 8270d.m Mon Jul 08 08:41:00 2013

15.7.7

15

New Jersey

ACCUTEST LABORATORIES

GC/MS Semi-volatiles

Raw Data

(Accutest Laboratories Southeast, Inc.)

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064522.D
Acq On : 3 Jul 2013 11:14 pm
Operator : nancyf
Sample : jb40127-1
Misc : op47508,sl3253,30.2,,,1,1,soil
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jul 04 13:17:15 2013
Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Thu Jul 04 07:20:07 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	4.338	152	91406	40.00 ppm	0.00
22) Naphthalene-d8	5.364	136	303097	40.00 ppm	0.00
42) Acenaphthene-d10	6.784	164	179045	40.00 ppm	0.00
68) Phenanthrene-d10	7.981	188	263916	40.00 ppm	-0.01
83) Chrysene-d12	10.411	240	209758	40.00 ppm	-0.02
92) Perylene-d12	12.216	264	189115	40.00 ppm	-0.02

System Monitoring Compounds					
7) 2-Fluorophenol	3.291	112	182191	57.68 ppm	-0.04
Spiked Amount 100.000	Range 40 - 102		Recovery = 57.68%		
9) Phenol-d5	4.103	99	237445	63.82 ppm	-0.01
Spiked Amount 100.000	Range 41 - 100		Recovery = 63.82%		
23) Nitrobenzene-d5	4.792	82	102190	29.08 ppm	-0.02
Spiked Amount 50.000	Range 40 - 105		Recovery = 58.16%		
46) 2-Fluorobiphenyl	6.250	172	197640	31.99 ppm	-0.01
Spiked Amount 50.000	Range 43 - 107		Recovery = 63.98%		
72) 2,4,6-Tribromophenol	7.425	330	51436	73.46 ppm	-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery = 73.46%		
86) Terphenyl-d14	9.359	244	205430	39.15 ppm	0.00
Spiked Amount 50.000	Range 45 - 119		Recovery = 78.30%		

Target Compounds Qvalue

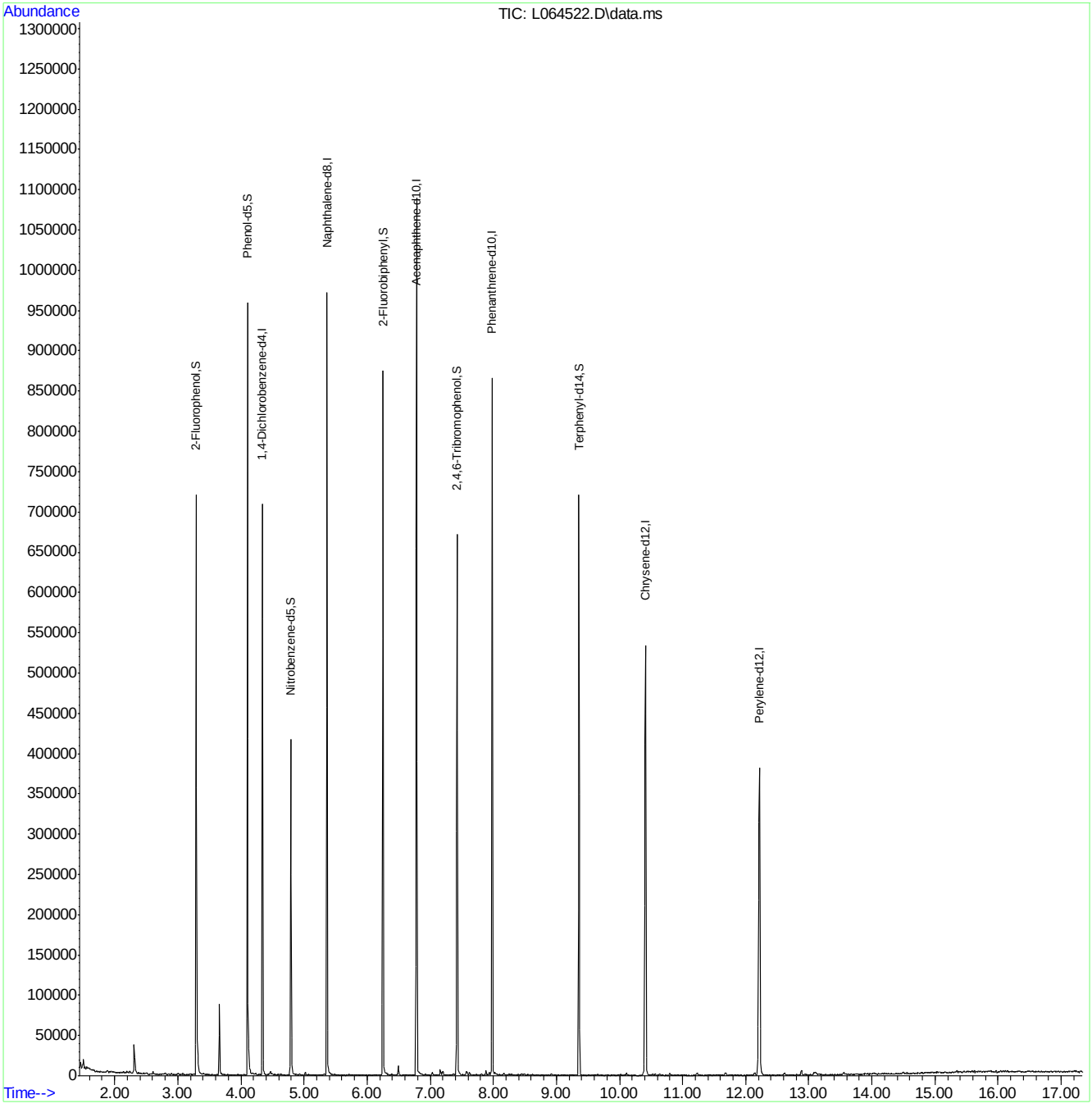
(#) = qualifier out of range (m) = manual integration (+) = signals summed

16.1.1
16

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064522.D
Acq On : 3 Jul 2013 11:14 pm
Operator : nancyf
Sample : jb40127-1
Misc : op47508,sl3253,30.2,,,1,1,soil
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jul 04 13:17:15 2013
Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Thu Jul 04 07:20:07 2013
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064522.D
Acq On : 3 Jul 2013 11:14 pm
Operator : nancyf
Sample : jb40127-1
Misc : op47508,sl3253,30.1,,,1,1,soil
ALS Vial : 26 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\METHODS\8270da.m
Title : SW846 8270D OR EPA 625

Signal : TIC: L064522.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.502	7	12	20	rVB5	12621	16412	2.18%	0.218%
2	1.887	80	84	87	rVB4	2626	3458	0.46%	0.046%
3	2.191	139	141	143	rBV3	2424	1991	0.26%	0.026%
4	2.239	147	150	156	rVB8	2296	3424	0.45%	0.046%
5	2.309	158	163	174	rVB	35609	45576	6.05%	0.606%
6	2.608	215	219	224	rBV4	3037	2433	0.32%	0.032%
7	2.795	251	254	262	rVB5	2345	3631	0.48%	0.048%
8	2.901	270	274	280	rVB7	2045	3506	0.47%	0.047%
9	3.003	285	293	299	rVV4	2250	4769	0.63%	0.063%
10	3.078	302	307	310	rVB5	2061	3214	0.43%	0.043%
11	3.291	338	347	365	rBV	720068	632355	83.96%	8.410%
12	3.404	365	368	374	rVB7	1702	2229	0.30%	0.030%
13	3.660	410	416	429	rBV	88284	71408	9.48%	0.950%
14	4.103	495	499	512	rBV	958895	704326	93.52%	9.367%
15	4.237	521	524	528	rVB4	1582	1723	0.23%	0.023%
16	4.338	539	543	556	rVB	708320	528905	70.23%	7.034%
17	4.466	562	567	570	rBV	4761	5086	0.68%	0.068%
18	4.584	584	589	593	rBV5	1112	1556	0.21%	0.021%
19	4.632	595	598	605	rVB4	1769	1909	0.25%	0.025%
20	4.792	624	628	642	rBV	416517	293283	38.94%	3.900%
21	4.883	642	645	650	rVV4	1420	1978	0.26%	0.026%
22	4.926	650	653	659	rVB2	1337	1735	0.23%	0.023%
23	5.022	668	671	675	rBV	3866	3099	0.41%	0.041%
24	5.225	700	709	711	rBV3	923	1860	0.25%	0.025%
25	5.321	724	727	730	rVB2	1302	1566	0.21%	0.021%
26	5.364	730	735	754	rBV	971934	663404	88.09%	8.822%
27	5.716	798	801	806	rBV4	1071	1567	0.21%	0.021%
28	6.250	896	901	920	rBV	874301	595946	79.13%	7.925%
29	6.384	920	926	934	rVB4	1978	4074	0.54%	0.054%
30	6.496	940	947	957	rVB2	12367	12610	1.67%	0.168%
31	6.571	957	961	962	rBV3	1291	1643	0.22%	0.022%
32	6.784	993	1001	1015	rBV	1089430	753140	100.00%	10.016%
33	7.030	1042	1047	1052	rBV3	4521	5371	0.71%	0.071%
34	7.158	1068	1071	1074	rVB	7247	5921	0.79%	0.079%

LSC Area Percent Report

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064522.D
Acq On : 3 Jul 2013 11:14 pm
Operator : nancyf
Sample : jb40127-1
Misc : op47508,sl3253,30.1,,,1,1,soil
ALS Vial : 26 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\METHODS\8270da.m
Title : SW846 8270D OR EPA 625

35	7.201	1074	1079	1085	rBV3	4830	6817	0.91%	0.091%
36	7.367	1107	1110	1114	rBV4	1900	2556	0.34%	0.034%
37	7.425	1114	1121	1135	rVB	671157	494979	65.72%	6.583%
38	7.575	1146	1149	1154	rVB3	4507	6053	0.80%	0.080%
39	7.623	1154	1158	1165	rBV7	3212	3391	0.45%	0.045%
40	7.805	1190	1192	1199	rVB3	1709	1987	0.26%	0.026%
41	7.885	1199	1207	1210	rBV	6073	5563	0.74%	0.074%
42	7.938	1214	1217	1219	rVV	3402	2265	0.30%	0.030%
43	7.981	1219	1225	1232	rVV	865079	713521	94.74%	9.489%
44	8.024	1232	1233	1238	rVB2	2361	2039	0.27%	0.027%
45	8.168	1254	1260	1268	rVB2	2767	3208	0.43%	0.043%
46	8.285	1279	1282	1285	rBV2	1773	1783	0.24%	0.024%
47	8.440	1310	1311	1316	rBV2	1195	1594	0.21%	0.021%
48	8.494	1318	1321	1324	rVB2	1663	1945	0.26%	0.026%
49	8.697	1352	1359	1361	rBV2	1133	1881	0.25%	0.025%
50	8.910	1396	1399	1405	rBV4	1937	3287	0.44%	0.044%
51	9.359	1477	1483	1494	rVB	720585	607532	80.67%	8.079%
52	9.653	1536	1538	1543	rVB3	1453	1528	0.20%	0.020%
53	9.914	1580	1587	1591	rVB4	1403	2012	0.27%	0.027%
54	10.016	1600	1606	1609	rVB2	1772	2373	0.32%	0.032%
55	10.107	1619	1623	1627	rBV2	3318	2849	0.38%	0.038%
56	10.411	1668	1680	1693	rBV	533961	602824	80.04%	8.017%
57	10.534	1699	1703	1706	rVB3	1605	2128	0.28%	0.028%
58	10.566	1706	1709	1712	rBV3	1994	2461	0.33%	0.033%
59	10.635	1718	1722	1726	rVB2	1816	2272	0.30%	0.030%
60	10.796	1747	1752	1758	rBV4	2875	4105	0.55%	0.055%
61	11.009	1789	1792	1798	rVB2	1006	1560	0.21%	0.021%
62	11.228	1825	1833	1843	rVB6	3495	6428	0.85%	0.085%
63	11.677	1913	1917	1926	rBV6	3603	5954	0.79%	0.079%
64	12.142	1995	2004	2010	rBV3	3333	6422	0.85%	0.085%
65	12.216	2010	2018	2037	rVB	381744	561273	74.52%	7.464%
66	12.612	2086	2092	2098	rBV7	3038	5850	0.78%	0.078%
67	12.884	2136	2143	2149	rVB8	5811	8670	1.15%	0.115%
68	12.943	2149	2154	2157	rBV3	1405	2069	0.27%	0.028%
69	13.082	2174	2180	2183	rBV5	2801	4405	0.58%	0.059%
70	13.557	2263	2269	2274	rBV5	2513	4490	0.60%	0.060%
71	13.733	2298	2302	2307	rBV4	1517	2598	0.34%	0.035%

LSC Area Percent Report

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064522.D
Acq On    :  3 Jul 2013  11:14 pm
Operator  : nancyf
Sample    : jb40127-1
Misc      : op47508,sl3253,30.1,,,1,1,soil
ALS Vial  : 26   Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON                          Filtering: 5
Sampling  : 1                            Min Area: 1500 Area counts
Start Thrs: 0.2                         Max Peaks: 100
Stop Thrs : 0                       Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method    : C:\msdchem\2\METHODS\8270da.m
Title     : SW846 8270D OR EPA 625
```

72	13.888	2330	2331	2337	rBV3	2146	2075	0.28%	0.028%
73	13.968	2344	2346	2350	rBV4	1894	2065	0.27%	0.027%
74	14.038	2352	2359	2361	rVV5	1521	3019	0.40%	0.040%
75	14.379	2421	2423	2428	rBV2	1026	1534	0.20%	0.020%
76	14.497	2436	2445	2450	rBV7	2204	4995	0.66%	0.066%
77	14.780	2494	2498	2500	rBV4	1382	1662	0.22%	0.022%
78	15.346	2600	2604	2608	rVB6	2687	3457	0.46%	0.046%
79	15.373	2608	2609	2612	rBV3	1928	1758	0.23%	0.023%
80	15.464	2619	2626	2631	rBV6	1815	4313	0.57%	0.057%
81	15.586	2646	2649	2651	rBV3	2313	2094	0.28%	0.028%
82	15.854	2695	2699	2702	rBV6	2130	3514	0.47%	0.047%
83	15.966	2718	2720	2723	rVB4	3095	2858	0.38%	0.038%
84	16.943	2902	2903	2909	rBV5	1378	1684	0.22%	0.022%
85	16.986	2910	2911	2916	rVB3	1860	1947	0.26%	0.026%
86	17.045	2919	2922	2925	rBV5	1923	2209	0.29%	0.029%
87	17.301	2967	2970	2972	rBV3	2065	2530	0.34%	0.034%

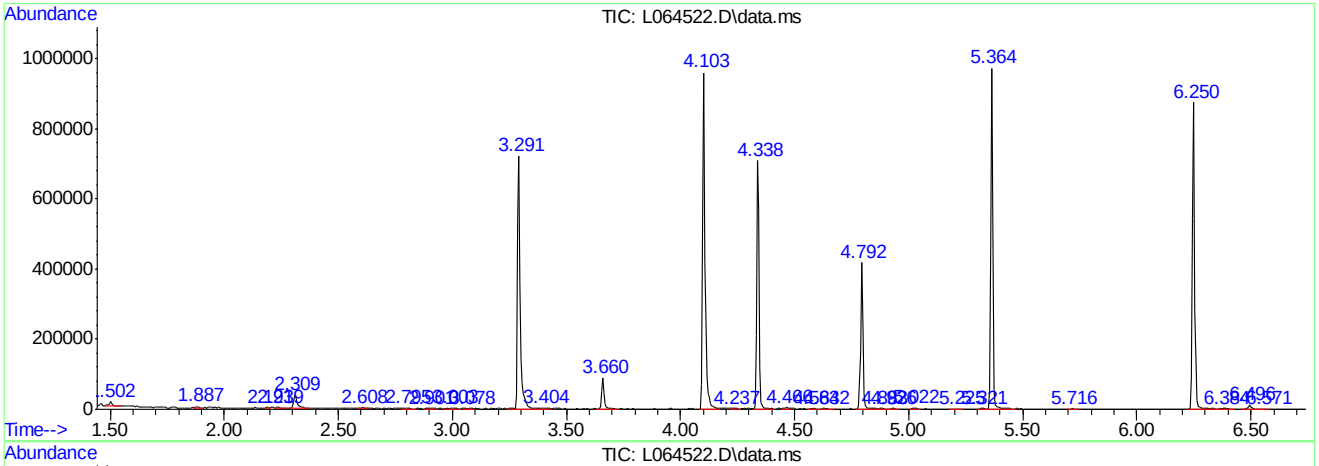
Sum of corrected areas: 7519494

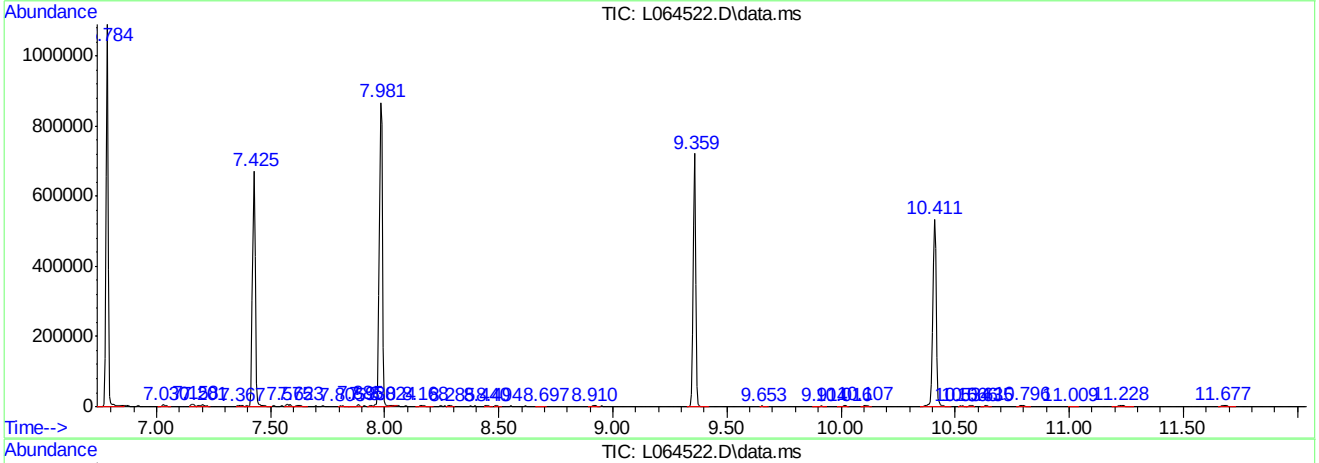
LSC Report - Integrated Chromatogram

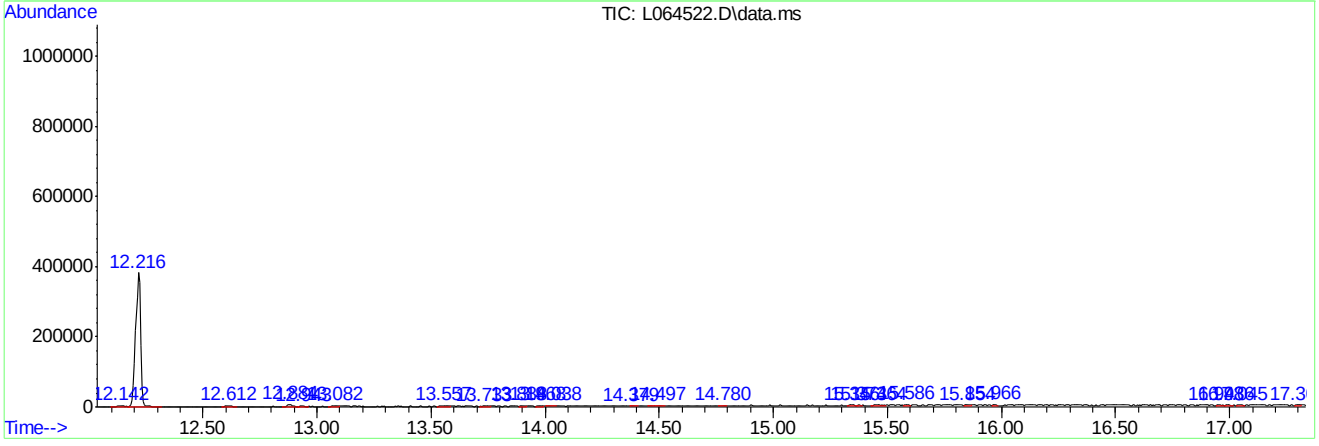
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064522.D
Acq On : 3 Jul 2013 11:14 pm
Operator : nancyf
Sample : jb40127-1
Misc : op47508,sl3253,30.1,,,1,1,soil
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: lscint.p







8270da.m Thu Jul 04 13:20:57 2013 Page: 4

Tentatively Identified Compound (TIC) Library Search Report summary

```
  DataPath  :: C:\msdchem\2\DATA\132253\
  DataFile  :: L064522.D
  Acq On    :: 3 Jul 2013 11:14 pm
  Operator  :: nancyf
  Sample    :: jb40127-1
  Misc      :: op4708,ss132533,0011,,,,1111,soil
  ALS Vial  :: 26  Sample Multiplier: 1

  QuantMethod :: C:\msdchem\2\METHODS\8270da.m
  QuantFile   :: SW846 8270 DOREPA 6025

  TIC Library   :: C:\DATABASE\NIST98.L
  TIC Integration Parameters: lsci.intpp

                                                  |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-----------------------------------------------------------------------------
```

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064523.D
Acq On : 3 Jul 2013 11:38 pm
Operator : nancyf
Sample : jb40127-2
Misc : op47508,sl3253,30.3,,,1,1,soil
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jul 04 13:17:35 2013
Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Thu Jul 04 07:20:07 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	4.343	152	88752	40.00 ppm	0.00
22) Naphthalene-d8	5.363	136	281306	40.00 ppm	0.00
42) Acenaphthene-d10	6.784	164	172929	40.00 ppm	0.00
68) Phenanthrene-d10	7.986	188	261709	40.00 ppm	0.00
83) Chrysene-d12	10.416	240	207970	40.00 ppm	-0.01
92) Perylene-d12	12.216	264	186735	40.00 ppm	-0.02

System Monitoring Compounds

7) 2-Fluorophenol	3.291	112	207714	67.73 ppm	-0.04
Spiked Amount 100.000	Range 40 - 102		Recovery = 67.73%		
9) Phenol-d5	4.103	99	267144	73.94 ppm	-0.01
Spiked Amount 100.000	Range 41 - 100		Recovery = 73.94%		
23) Nitrobenzene-d5	4.792	82	115869	35.52 ppm	-0.02
Spiked Amount 50.000	Range 40 - 105		Recovery = 71.04%		
46) 2-Fluorobiphenyl	6.250	172	234010	39.22 ppm	-0.01
Spiked Amount 50.000	Range 43 - 107		Recovery = 78.44%		
72) 2,4,6-Tribromophenol	7.430	330	57050	82.16 ppm	-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery = 82.16%		
86) Terphenyl-d14	9.359	244	227626	43.76 ppm	0.00
Spiked Amount 50.000	Range 45 - 119		Recovery = 87.52%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

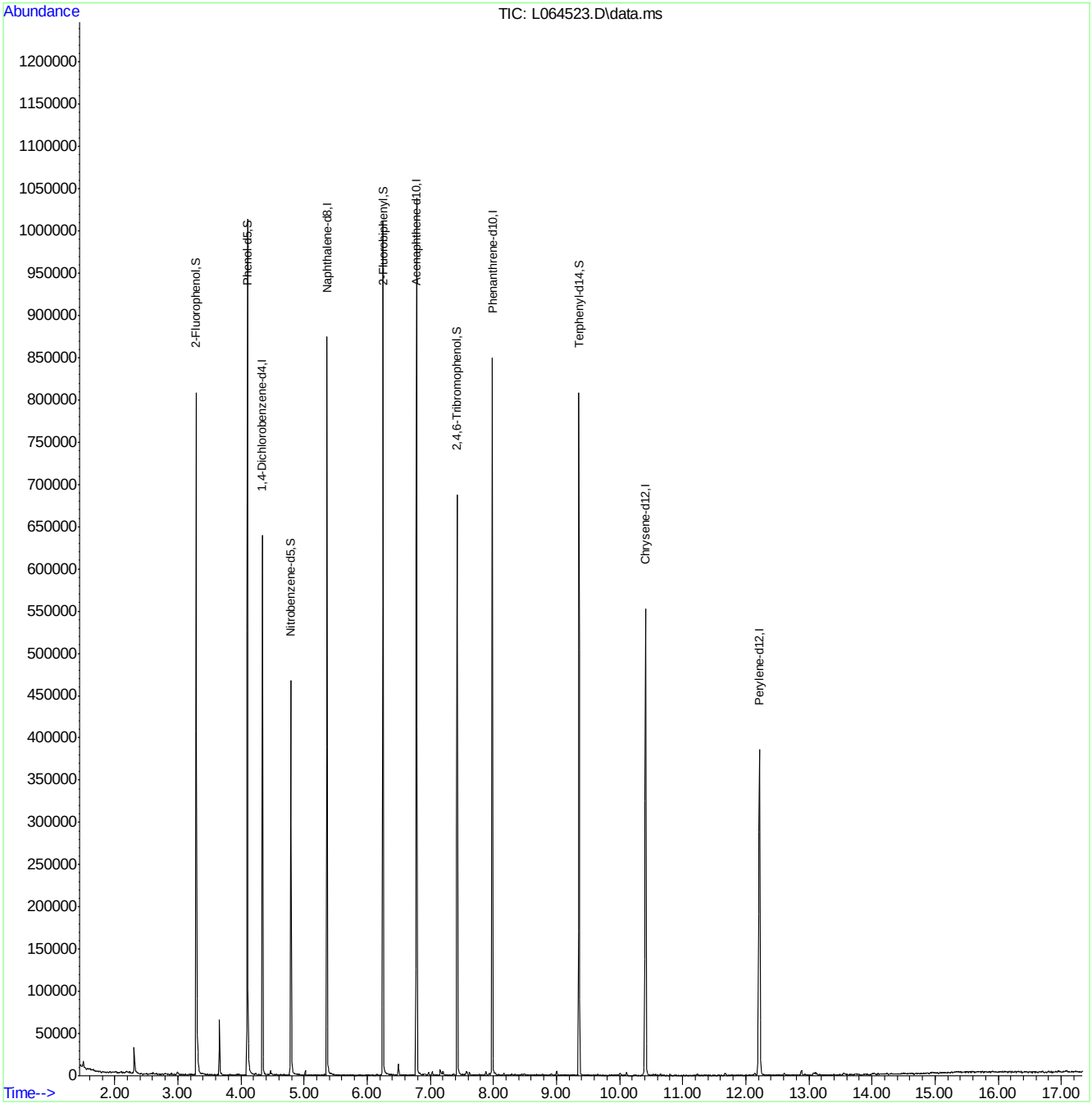
16.1.3

16

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064523.D
Acq On : 3 Jul 2013 11:38 pm
Operator : nancyf
Sample : jb40127-2
Misc : op47508,sl3253,30.3,,,1,1,soil
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jul 04 13:17:35 2013
Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Thu Jul 04 07:20:07 2013
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064523.D
Acq On : 3 Jul 2013 11:38 pm
Operator : nancyf
Sample : jb40127-2
Misc : op47508,sl3253,30.1,,,1,1,soil
ALS Vial : 27 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\METHODS\8270da.m
Title : SW846 8270D OR EPA 625

Signal : TIC: L064523.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.502	9	12	16	rVB	7674	6942	0.91%	0.090%
2	1.929	87	92	95	rBV5	1632	2518	0.33%	0.033%
3	1.956	95	97	101	rBV4	1272	1635	0.21%	0.021%
4	2.185	136	140	143	rBV5	1449	1911	0.25%	0.025%
5	2.234	147	149	154	rVB5	2308	2525	0.33%	0.033%
6	2.308	158	163	173	rVB	31144	35409	4.63%	0.458%
7	2.607	217	219	224	rVB2	2002	1532	0.20%	0.020%
8	2.800	250	255	263	rBV5	1354	2538	0.33%	0.033%
9	2.896	269	273	276	rBV3	1574	1814	0.24%	0.023%
10	2.997	287	292	299	rVB	2728	3731	0.49%	0.048%
11	3.291	340	347	361	rBV	807724	719995	94.12%	9.310%
12	3.660	407	416	425	rBV	65280	52469	6.86%	0.678%
13	4.103	494	499	514	rBV	1013726	765002	100.00%	9.892%
14	4.236	520	524	527	rBV4	1622	1906	0.25%	0.025%
15	4.338	538	543	561	rVB	638453	510233	66.70%	6.597%
16	4.466	561	567	577	rVB6	5454	7175	0.94%	0.093%
17	4.632	589	598	603	rBV4	961	2707	0.35%	0.035%
18	4.792	624	628	638	rBV	466380	335673	43.88%	4.340%
19	5.022	668	671	676	rVB	5883	4822	0.63%	0.062%
20	5.315	725	726	730	rBV3	1766	1725	0.23%	0.022%
21	5.363	730	735	745	rVV	873869	605989	79.21%	7.835%
22	6.159	880	884	890	rVB3	1369	1566	0.20%	0.020%
23	6.250	894	901	922	rBV	1010921	704750	92.12%	9.112%
24	6.496	942	947	952	rVB2	13698	10986	1.44%	0.142%
25	6.784	995	1001	1017	rBV	1038589	725903	94.89%	9.386%
26	6.912	1022	1025	1030	rVB5	1396	1799	0.24%	0.023%
27	6.971	1030	1036	1042	rBV3	4247	4706	0.62%	0.061%
28	7.030	1043	1047	1052	rVB2	4020	3943	0.52%	0.051%
29	7.158	1066	1071	1075	rBV	6942	6406	0.84%	0.083%
30	7.201	1075	1079	1085	rVB2	4522	5384	0.70%	0.070%
31	7.366	1104	1110	1115	rBV3	2006	3429	0.45%	0.044%
32	7.425	1115	1121	1136	rVV	687419	539126	70.47%	6.971%
33	7.575	1142	1149	1155	rVB6	5209	7971	1.04%	0.103%
34	7.623	1155	1158	1165	rBV4	3822	3787	0.50%	0.049%

LSC Area Percent Report

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064523.D
Acq On : 3 Jul 2013 11:38 pm
Operator : nancyf
Sample : jb40127-2
Misc : op47508,sl3253,30.1,,,1,1,soil
ALS Vial : 27 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\METHODS\8270da.m
Title : SW846 8270D OR EPA 625

35	7.884	1202	1207	1212	rVB	4902	4456	0.58%	0.058%
36	7.938	1212	1217	1219	rBV2	3202	3297	0.43%	0.043%
37	7.986	1219	1226	1238	rVB	848667	706565	92.36%	9.136%
38	8.167	1251	1260	1262	rBV3	2789	3224	0.42%	0.042%
39	8.451	1309	1313	1316	rVB2	1611	1967	0.26%	0.025%
40	8.493	1316	1321	1327	rBV3	1822	2909	0.38%	0.038%
41	8.776	1370	1374	1379	rBV3	1573	1712	0.22%	0.022%
42	8.915	1393	1400	1404	rBV4	1318	2411	0.32%	0.031%
43	9.001	1410	1416	1421	rVB	5196	5647	0.74%	0.073%
44	9.182	1447	1450	1456	rBV5	979	1643	0.21%	0.021%
45	9.359	1474	1483	1492	rBV	808136	677826	88.60%	8.764%
46	10.005	1601	1604	1612	rVB3	3541	4632	0.61%	0.060%
47	10.112	1620	1624	1630	rVB2	3707	3283	0.43%	0.042%
48	10.411	1670	1680	1695	rBV	551830	597513	78.11%	7.726%
49	10.534	1700	1703	1706	rBV2	1714	1926	0.25%	0.025%
50	10.571	1706	1710	1713	rVB	1967	1726	0.23%	0.022%
51	10.640	1719	1723	1728	rVB2	2080	2611	0.34%	0.034%
52	10.795	1746	1752	1756	rBV4	2036	2581	0.34%	0.033%
53	11.228	1829	1833	1843	rVB4	2367	3897	0.51%	0.050%
54	11.671	1911	1916	1924	rBV3	2388	3904	0.51%	0.050%
55	12.141	1999	2004	2010	rBV5	2688	3856	0.50%	0.050%
56	12.216	2010	2018	2032	rVB	385460	547096	71.52%	7.074%
57	12.611	2086	2092	2099	rBV5	2227	4381	0.57%	0.057%
58	12.884	2135	2143	2148	rBV3	6171	8326	1.09%	0.108%
59	12.937	2148	2153	2159	rVV3	1225	1811	0.24%	0.023%
60	13.081	2172	2180	2183	rBV4	3097	5531	0.72%	0.072%
61	13.551	2263	2268	2275	rBV6	2564	4056	0.53%	0.052%
62	13.733	2297	2302	2308	rBV5	1488	2678	0.35%	0.035%
63	14.011	2347	2354	2355	rBV3	1580	2238	0.29%	0.029%
64	14.310	2403	2410	2418	rVV5	1079	2924	0.38%	0.038%
65	14.422	2425	2431	2436	rVB5	1057	1969	0.26%	0.025%
66	14.481	2436	2442	2443	rBV5	1442	1924	0.25%	0.025%
67	14.630	2467	2470	2476	rVB6	1777	2917	0.38%	0.038%
68	15.079	2549	2554	2558	rBV7	1707	2718	0.36%	0.035%
69	15.511	2631	2635	2639	rVB5	1888	2269	0.30%	0.029%
70	15.741	2675	2678	2683	rBV4	2230	3495	0.46%	0.045%
71	15.907	2705	2709	2712	rVB4	1717	2028	0.27%	0.026%

LSC Area Percent Report

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064523.D
Acq On    :  3 Jul 2013  11:38 pm
Operator  : nancyf
Sample    : jb40127-2
Misc      : op47508,sl3253,30.1,,,1,1,soil
ALS Vial  : 27   Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON                          Filtering: 5
Sampling  : 1                            Min Area: 1500 Area counts
Start Thrs: 0.2                         Max Peaks: 100
Stop Thrs : 0                       Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method    : C:\msdchem\2\METHODS\8270da.m
Title     : SW846 8270D OR EPA 625
```

72	16.211	2765	2766	2772	rBV6	2051	2193	0.29%	0.028%
73	16.494	2816	2819	2822	rBV5	1460	1847	0.24%	0.024%
74	16.548	2827	2829	2832	rBV2	2455	2243	0.29%	0.029%
75	16.596	2836	2838	2840	rBV2	1762	1606	0.21%	0.021%
76	16.868	2888	2889	2894	rBV5	1457	1679	0.22%	0.022%
77	16.905	2894	2896	2901	rBV5	1659	2393	0.31%	0.031%

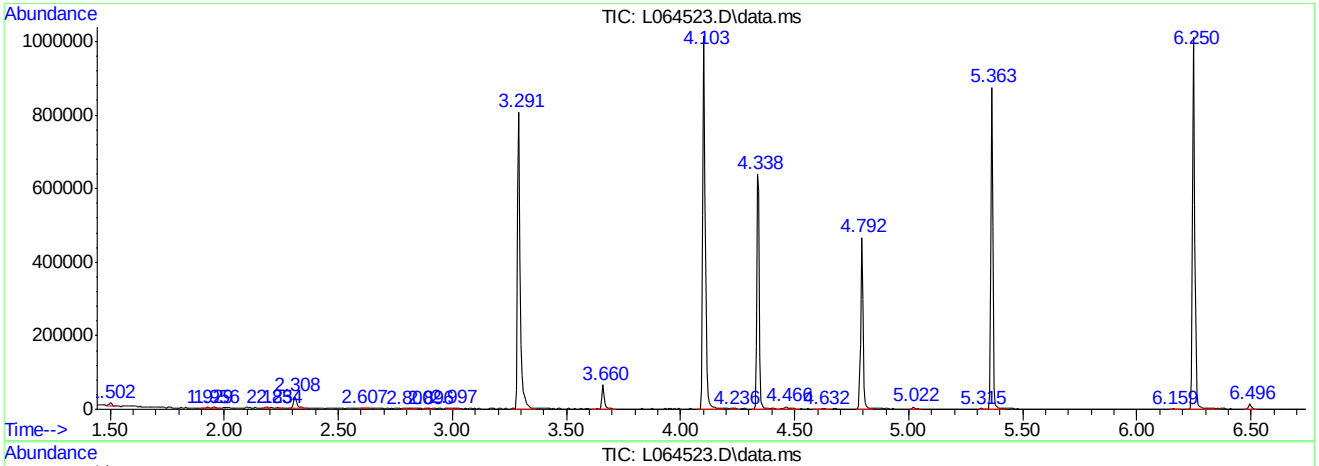
Sum of corrected areas: 7733915

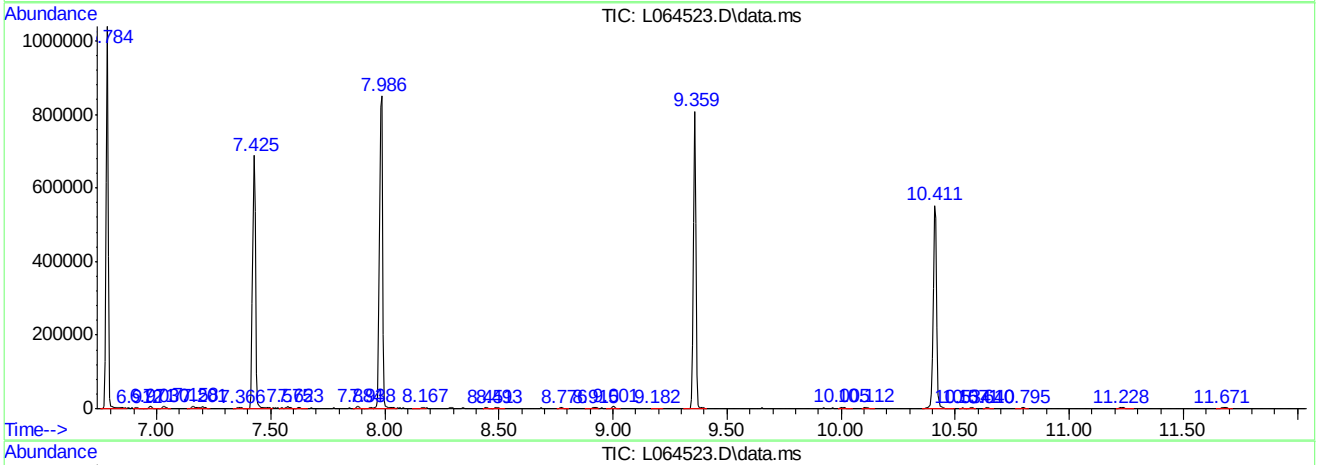
LSC Report - Integrated Chromatogram

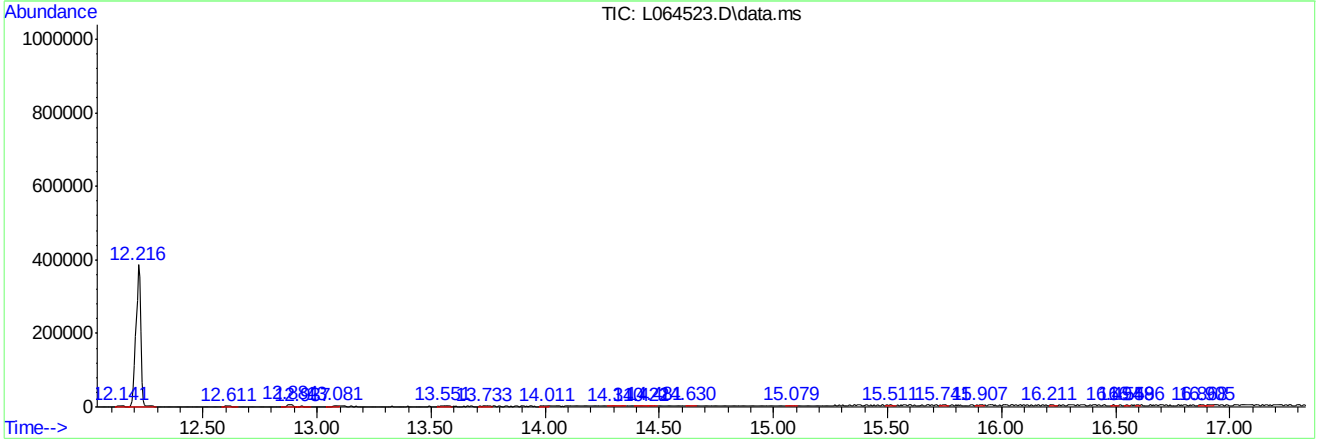
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064523.D
Acq On : 3 Jul 2013 11:38 pm
Operator : nancyf
Sample : jb40127-2
Misc : op47508,sl3253,30.1,,,1,1,soil
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: lscint.p







8270da.m Thu Jul 04 13:21:08 2013 Page: 4

Library Search Compound Report

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064523.D
Acq On    :  3 Jul 2013  11:38 pm
Operator  : nancyf
Sample    : jb40127-2
Misc      : op47508,sl3253,30.1,,,1,1,soil
ALS Vial  : 27   Sample Multiplier: 1

Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library   : C:\DATABASE\NIST98.L
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected
```

****

Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\2\DATA\sl3253\
  Data File : L064523.D
  Acq On    :  3 Jul 2013  11:38 pm
  Operator  : nancyf
  Sample    : jb40127-2
  Misc      : op47508,sl3253,30.1,,,1,1,soil
  ALS Vial  : 27   Sample Multiplier: 1

  Quant Method : C:\msdchem\2\METHODS\8270da.m
  Quant Title  : SW846 8270D OR EPA 625

  TIC Library   : C:\DATABASE\NIST98.L
  TIC Integration Parameters: lscint.p

                                                      |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-----------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064524.D
Acq On : 4 Jul 2013 12:01 am
Operator : nancyf
Sample : jb40127-3
Misc : op47508,sl3253,30.5,,,1,1,soil
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jul 04 13:17:59 2013
Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Thu Jul 04 07:20:07 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	4.335	152	88942	40.00 ppm	0.00
22) Naphthalene-d8	5.360	136	296864	40.00 ppm	0.00
42) Acenaphthene-d10	6.781	164	175466	40.00 ppm	0.00
68) Phenanthrene-d10	7.983	188	260249	40.00 ppm	0.00
83) Chrysene-d12	10.413	240	207022	40.00 ppm	-0.01
92) Perylene-d12	12.218	264	182704	40.00 ppm	-0.01

System Monitoring Compounds

7) 2-Fluorophenol	3.277	112	163542	53.21 ppm	-0.05
Spiked Amount 100.000	Range 40 - 102		Recovery = 53.21%		
9) Phenol-d5	4.100	99	227698	62.89 ppm	-0.02
Spiked Amount 100.000	Range 41 - 100		Recovery = 62.89%		
23) Nitrobenzene-d5	4.789	82	95115	27.63 ppm	-0.02
Spiked Amount 50.000	Range 40 - 105		Recovery = 55.26%		
46) 2-Fluorobiphenyl	6.247	172	190498	31.46 ppm	-0.02
Spiked Amount 50.000	Range 43 - 107		Recovery = 62.92%		
72) 2,4,6-Tribromophenol	7.427	330	55787	80.79 ppm	-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery = 80.79%		
86) Terphenyl-d14	9.356	244	219103	42.31 ppm	0.00
Spiked Amount 50.000	Range 45 - 119		Recovery = 84.62%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

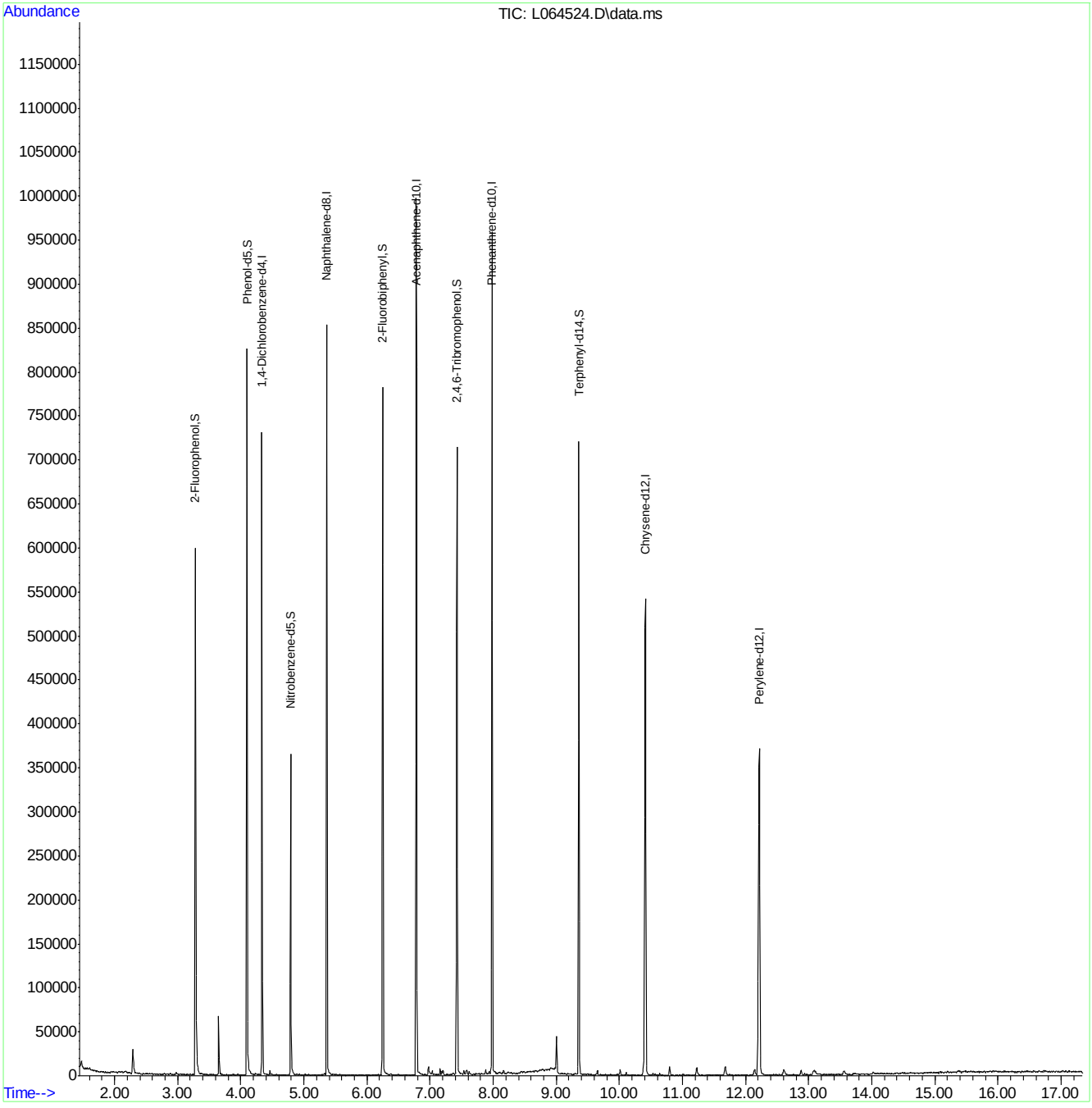
16.1.5

16

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064524.D
Acq On : 4 Jul 2013 12:01 am
Operator : nancyf
Sample : jb40127-3
Misc : op47508,sl3253,30.5,,,1,1,soil
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jul 04 13:17:59 2013
Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Thu Jul 04 07:20:07 2013
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064524.D
Acq On : 4 Jul 2013 12:01 am
Operator : nancyf
Sample : jb40127-3
Misc : op47508,sl3253,30.1,,,1,1,soil
ALS Vial : 28 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\METHODS\8270da.m
Title : SW846 8270D OR EPA 625

Signal : TIC: L064524.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.472	3	6	12	rVB5	8865	12153	1.63%	0.162%
2	1.942	92	94	97	rBV4	2247	2197	0.29%	0.029%
3	1.969	98	99	106	rVV5	1703	2485	0.33%	0.033%
4	2.065	113	117	118	rBV4	1822	1894	0.25%	0.025%
5	2.172	133	137	143	rVB5	2493	4533	0.61%	0.061%
6	2.225	144	147	153	rVB4	2527	4262	0.57%	0.057%
7	2.289	153	159	175	rBV	28018	37994	5.10%	0.507%
8	2.380	175	176	187	rVB4	2010	3380	0.45%	0.045%
9	2.588	211	215	219	rVB4	1946	1993	0.27%	0.027%
10	2.786	248	252	257	rVB5	1490	2089	0.28%	0.028%
11	2.882	266	270	276	rBV7	1385	2183	0.29%	0.029%
12	2.978	285	288	296	rVB5	2365	3039	0.41%	0.041%
13	3.197	325	329	332	rBV3	1433	1683	0.23%	0.022%
14	3.277	339	344	361	rBV	598839	564194	75.70%	7.533%
15	3.651	408	414	423	rBV	67449	54797	7.35%	0.732%
16	4.100	492	498	513	rBV	825454	648862	87.06%	8.663%
17	4.234	520	523	529	rVB5	1897	2016	0.27%	0.027%
18	4.335	538	542	552	rBV	730963	518415	69.56%	6.922%
19	4.463	561	566	568	rBV2	5073	3720	0.50%	0.050%
20	4.789	622	627	642	rBV	365481	272283	36.53%	3.635%
21	4.885	642	645	650	rVV5	1323	2034	0.27%	0.027%
22	4.928	650	653	660	rVB5	1072	1836	0.25%	0.025%
23	5.019	668	670	676	rVB4	1820	1624	0.22%	0.022%
24	5.328	722	728	730	rBV2	2766	3276	0.44%	0.044%
25	5.360	730	734	747	rVB	852998	639319	85.78%	8.536%
26	6.146	874	881	886	rBV4	985	1833	0.25%	0.024%
27	6.247	892	900	920	rBV	781924	565902	75.93%	7.556%
28	6.493	942	946	952	rVB5	1259	2162	0.29%	0.029%
29	6.781	996	1000	1013	rBV	997320	745297	100.00%	9.951%
30	6.872	1013	1017	1023	rVB4	1320	2279	0.31%	0.030%
31	6.973	1031	1036	1043	rBV	10309	15671	2.10%	0.209%
32	7.032	1043	1047	1051	rVB3	4276	5065	0.68%	0.068%
33	7.160	1067	1071	1073	rVB3	7366	6016	0.81%	0.080%
34	7.203	1073	1079	1084	rBV4	5213	7455	1.00%	0.100%

LSC Area Percent Report

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064524.D
Acq On : 4 Jul 2013 12:01 am
Operator : nancyf
Sample : jb40127-3
Misc : op47508,sl3253,30.1,,,1,1,soil
ALS Vial : 28 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\METHODS\8270da.m
Title : SW846 8270D OR EPA 625

35	7.363	1105	1109	1114	rBV3	1928	2609	0.35%	0.035%
36	7.427	1114	1121	1131	rVV	713785	527459	70.77%	7.042%
37	7.492	1131	1133	1138	rVB2	1837	2487	0.33%	0.033%
38	7.534	1138	1141	1145	rBV2	4647	4499	0.60%	0.060%
39	7.582	1145	1150	1155	rVB4	5020	7991	1.07%	0.107%
40	7.620	1155	1157	1164	rBV6	4123	3892	0.52%	0.052%
41	7.881	1204	1206	1209	rBV	5271	3658	0.49%	0.049%
42	7.940	1214	1217	1219	rBV3	3617	3055	0.41%	0.041%
43	7.983	1219	1225	1232	rBV	957642	714038	95.81%	9.533%
44	8.165	1257	1259	1263	rVB	3613	2646	0.36%	0.035%
45	8.234	1270	1272	1278	rBV6	1706	2377	0.32%	0.032%
46	8.287	1279	1282	1286	rVB4	2114	2042	0.27%	0.027%
47	8.341	1286	1292	1295	rVB6	1151	1869	0.25%	0.025%
48	8.400	1299	1303	1305	rBV4	1450	1857	0.25%	0.025%
49	8.453	1308	1313	1316	rVB6	1947	2217	0.30%	0.030%
50	8.517	1323	1325	1329	rBV3	1712	2638	0.35%	0.035%
51	8.725	1361	1364	1365	rBV2	2180	1888	0.25%	0.025%
52	8.773	1371	1373	1380	rVB7	1767	2590	0.35%	0.035%
53	8.912	1395	1399	1403	rBV7	3045	5647	0.76%	0.075%
54	9.003	1413	1416	1426	rVB	42709	41779	5.61%	0.558%
55	9.179	1447	1449	1455	rBV2	1576	1824	0.24%	0.024%
56	9.297	1468	1471	1475	rBV2	1893	2088	0.28%	0.028%
57	9.356	1477	1482	1493	rVB	720251	650487	87.28%	8.685%
58	9.500	1504	1509	1512	rVB4	1250	1739	0.23%	0.023%
59	9.655	1524	1538	1543	rBV3	5126	7480	1.00%	0.100%
60	9.863	1572	1577	1583	rBV3	1104	1985	0.27%	0.027%
61	9.964	1593	1596	1600	rBV3	1334	1723	0.23%	0.023%
62	10.013	1600	1605	1610	rVB4	7077	8252	1.11%	0.110%
63	10.109	1620	1623	1627	rBV	3985	3034	0.41%	0.041%
64	10.413	1665	1680	1691	rBV	541809	612477	82.18%	8.177%
65	10.531	1696	1702	1705	rVV3	2377	2491	0.33%	0.033%
66	10.563	1705	1708	1712	rVV2	1591	1825	0.24%	0.024%
67	10.637	1719	1722	1727	rVB2	2493	2261	0.30%	0.030%
68	10.792	1744	1751	1757	rBV2	9785	12164	1.63%	0.162%
69	11.006	1786	1791	1796	rVB4	1511	2680	0.36%	0.036%
70	11.230	1826	1833	1843	rVB2	8600	14254	1.91%	0.190%
71	11.679	1908	1917	1924	rBV2	9739	15603	2.09%	0.208%

LSC Area Percent Report

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064524.D
Acq On : 4 Jul 2013 12:01 am
Operator : nancyf
Sample : jb40127-3
Misc : op47508,sl3253,30.1,,,1,1,soil
ALS Vial : 28 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\METHODS\8270da.m
Title : SW846 8270D OR EPA 625

72	11.748	1927	1930	1939	rVB3	1340	2219	0.30%	0.030%
73	12.144	1996	2004	2010	rVV4	6886	13840	1.86%	0.185%
74	12.218	2010	2018	2037	rVB	371566	548354	73.58%	7.321%
75	12.443	2051	2060	2062	rBV3	1094	1942	0.26%	0.026%
76	12.608	2083	2091	2104	rBV4	6572	14504	1.95%	0.194%
77	12.881	2134	2142	2149	rBV7	5794	10647	1.43%	0.142%
78	12.934	2149	2152	2156	rVV3	1616	1765	0.24%	0.024%
79	13.094	2173	2182	2190	rBV6	4998	15301	2.05%	0.204%
80	13.169	2193	2196	2204	rVB4	1485	2241	0.30%	0.030%
81	13.559	2260	2269	2276	rBV4	4213	9938	1.33%	0.133%
82	13.634	2280	2283	2292	rVB5	1291	1731	0.23%	0.023%
83	13.842	2314	2322	2323	rBV3	1247	2254	0.30%	0.030%
84	14.024	2344	2356	2363	rBV6	3002	8012	1.08%	0.107%
85	14.312	2405	2410	2415	rVB6	1299	2029	0.27%	0.027%
86	14.366	2415	2420	2421	rBV2	1471	1859	0.25%	0.025%
87	15.065	2550	2551	2553	rBV	1876	1690	0.23%	0.023%
88	15.113	2559	2560	2565	rVB4	1533	1653	0.22%	0.022%
89	15.370	2603	2608	2609	rBV4	2306	3065	0.41%	0.041%
90	15.444	2618	2622	2623	rBV3	2253	2074	0.28%	0.028%
91	15.487	2629	2630	2634	rVB3	3066	1931	0.26%	0.026%
92	15.695	2666	2669	2671	rVB4	1926	1804	0.24%	0.024%
93	15.866	2699	2701	2707	rVB7	1989	2964	0.40%	0.040%
94	16.096	2741	2744	2745	rVB3	2603	1802	0.24%	0.024%
95	16.310	2781	2784	2786	rBV4	2321	2632	0.35%	0.035%
96	16.374	2793	2796	2799	rBV3	1379	2004	0.27%	0.027%
97	16.507	2818	2821	2825	rBV4	1779	2609	0.35%	0.035%
98	16.732	2859	2863	2865	rVB4	1716	1759	0.24%	0.023%
99	16.748	2865	2866	2872	rVB6	1770	1938	0.26%	0.026%
100	17.025	2916	2918	2922	rBV4	1791	1763	0.24%	0.024%

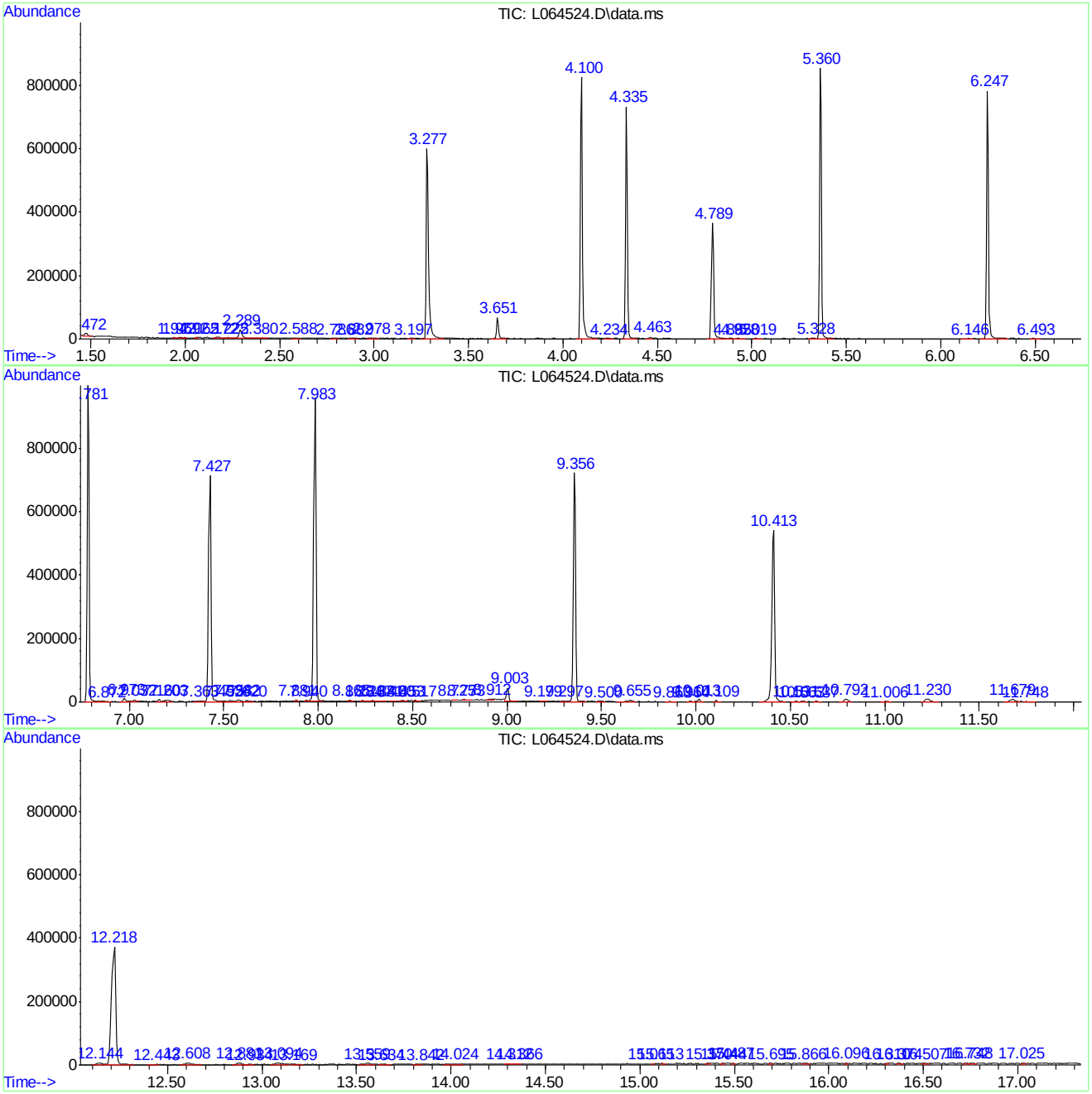
Sum of corrected areas: 7489870

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064524.D
Acq On    :  4 Jul 2013  12:01 am
Operator  : nancyf
Sample    : jb40127-3
Misc      : op47508,sl3253,30.1,,,1,1,soil
ALS Vial  : 28   Sample Multiplier: 1

Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library    : C:\DATABASE\NIST98.L
TIC Integration Parameters: lscint.p
```



Library Search Compound Report

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064524.D
Acq On    :  4 Jul 2013  12:01 am
Operator  : nancyf
Sample    : jb40127-3
Misc      : op47508,sl3253,30.1,,,1,1,soil
ALS Vial  : 28   Sample Multiplier: 1

Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library   : C:\DATABASE\NIST98.L
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected
```

****

Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\2\DATA\sl3253\
  Data File : L064524.D
  Acq On    :  4 Jul 2013  12:01 am
  Operator  : nancyf
  Sample    : jb40127-3
  Misc      : op47508,sl3253,30.1,,,1,1,soil
  ALS Vial  : 28   Sample Multiplier: 1

  Quant Method : C:\msdchem\2\METHODS\8270da.m
  Quant Title  : SW846 8270D OR EPA 625

  TIC Library   : C:\DATABASE\NIST98.L
  TIC Integration Parameters: lscint.p

                                                    |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On : 5 Jul 2013 5:06 pm
Operator : nancyf
Sample : jb40127-4
Misc : op46508,sx1399,30.0,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 08 08:09:54 2013
Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Jul 08 07:59:30 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.317	152	160937	40.00	ppm	0.00
22) Naphthalene-d8	4.291	136	581196	40.00	ppm	0.00
41) Acenaphthene-d10	6.354	164	250325	40.00	ppm	0.00
67) Phenanthrene-d10	8.624	188	283555	40.00	ppm	0.00
82) Chrysene-d12	13.708	240	360367	40.00	ppm	-0.02
91) Perylene-d12	16.435	264	367176	40.00	ppm	0.00

System Monitoring Compounds

5) 2-Fluorophenol	2.595	112	308822	50.79	ppm	0.00
Spiked Amount 100.000	Range 40 - 102		Recovery = 50.79%			
9) Phenol-d5	3.101	99	433014	56.28	ppm	0.00
Spiked Amount 100.000	Range 41 - 100		Recovery = 56.28%			
23) Nitrobenzene-d5	3.712	82	173603	25.92	ppm	0.00
Spiked Amount 50.000	Range 40 - 105		Recovery = 51.84%			
45) 2-Fluorobiphenyl	5.468	172	256225	26.81	ppm	0.00
Spiked Amount 50.000	Range 43 - 107		Recovery = 53.62%			
71) 2,4,6-Tribromophenol	7.547	330	54408	62.83	ppm	-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery = 62.83%			
85) Terphenyl-d14	11.710	244	263938	37.48	ppm	0.00
Spiked Amount 50.000	Range 45 - 119		Recovery = 74.96%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

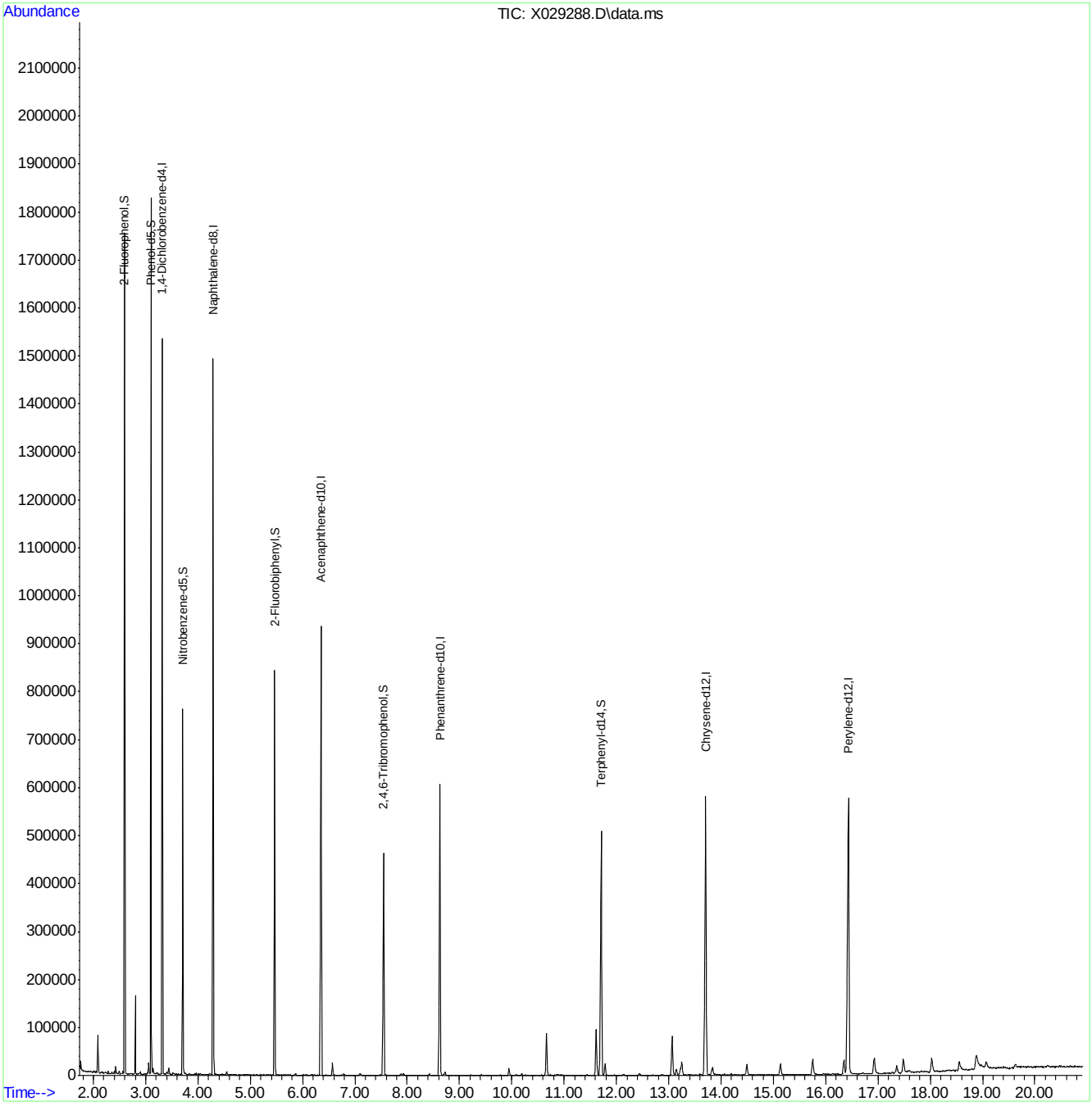
16.1.7

16

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On : 5 Jul 2013 5:06 pm
Operator : nancyf
Sample : jb40127-4
Misc : op46508,sx1399,30.0,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 08 08:09:54 2013
Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Jul 08 07:59:30 2013
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On : 5 Jul 2013 5:06 pm
Operator : nancyf
Sample : jb40127-4
Misc : op47508,sx1399,30.0,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

Signal : TIC: X029288.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.762	6	10	18	rVB2	21361	13621	1.13%	0.109%
2	1.938	68	72	76	rBV5	3041	1875	0.16%	0.015%
3	2.052	108	112	117	rVV6	3702	2382	0.20%	0.019%
4	2.086	117	124	135	rVB	80110	52806	4.39%	0.422%
5	2.157	146	149	155	rVV7	2477	1814	0.15%	0.014%
6	2.183	155	158	162	rVB5	2949	1833	0.15%	0.015%
7	2.234	172	176	186	rVB3	4314	3394	0.28%	0.027%
8	2.288	192	195	200	rVB5	5277	3104	0.26%	0.025%
9	2.353	212	218	223	rBV6	3202	2659	0.22%	0.021%
10	2.399	229	234	241	rVB4	5604	4493	0.37%	0.036%
11	2.430	241	245	252	rBV	15475	10287	0.85%	0.082%
12	2.493	262	267	274	rVB9	6079	5281	0.44%	0.042%
13	2.566	288	293	297	rVV3	7199	4171	0.35%	0.033%
14	2.595	297	303	316	rVV	1753258	1070893	88.93%	8.557%
15	2.663	324	327	332	rBV6	1657	1208	0.10%	0.010%
16	2.799	369	375	383	rVB	164251	101160	8.40%	0.808%
17	2.859	392	396	400	rBV5	2017	1705	0.14%	0.014%
18	2.885	400	405	407	rVV2	4953	3553	0.30%	0.028%
19	2.896	407	409	413	rVB2	5217	2957	0.25%	0.024%
20	3.030	452	456	457	rBV2	2273	1210	0.10%	0.010%
21	3.058	460	466	471	rVV	24137	15561	1.29%	0.124%
22	3.101	474	481	491	rVV	1826460	1204168	100.00%	9.622%
23	3.140	491	495	501	rVB4	11661	7797	0.65%	0.062%
24	3.209	515	519	522	rVV3	3682	2304	0.19%	0.018%
25	3.223	522	524	531	rVV6	2107	1751	0.15%	0.014%
26	3.251	531	534	538	rVB4	1861	1178	0.10%	0.009%
27	3.294	543	549	550	rBV5	1874	1483	0.12%	0.012%
28	3.317	550	557	566	rBV	1533159	987894	82.04%	7.894%
29	3.405	582	588	594	rBV8	4213	4528	0.38%	0.036%
30	3.439	595	600	612	rVB3	12931	12054	1.00%	0.096%
31	3.513	623	626	629	rBV3	2617	1664	0.14%	0.013%
32	3.581	648	650	656	rVV7	1618	1298	0.11%	0.010%
33	3.712	687	696	706	rBV	761338	519767	43.16%	4.153%
34	3.939	771	776	779	rBV5	1776	1209	0.10%	0.010%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On : 5 Jul 2013 5:06 pm
Operator : nancyf
Sample : jb40127-4
Misc : op47508,sx1399,30.0,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

35	3.962	779	784	788	rVB	4062	2760	0.23%	0.022%
36	3.998	789	797	803	rBV5	2053	2690	0.22%	0.021%
37	4.030	805	808	812	rBV5	1965	1623	0.13%	0.013%
38	4.223	871	876	880	rBV4	2642	2500	0.21%	0.020%
39	4.291	891	900	908	rBV	1493234	1182363	98.19%	9.448%
40	4.345	916	919	931	rVB8	2108	3172	0.26%	0.025%
41	4.467	957	962	967	rVB5	2936	2202	0.18%	0.018%
42	4.547	983	990	995	rVV	6525	5471	0.45%	0.044%
43	5.468	1304	1314	1326	rBV	844263	763685	63.42%	6.102%
44	5.718	1392	1402	1407	rVB4	1285	1515	0.13%	0.012%
45	5.757	1410	1416	1424	rBV4	1623	1785	0.15%	0.014%
46	5.845	1443	1447	1449	rBV2	1986	1193	0.10%	0.010%
47	5.862	1449	1453	1462	rVB5	3428	3414	0.28%	0.027%
48	6.178	1557	1564	1568	rBV5	1201	1426	0.12%	0.011%
49	6.354	1613	1626	1636	rVB	936928	1019349	84.65%	8.145%
50	6.573	1692	1703	1713	rBV	26067	28385	2.36%	0.227%
51	6.786	1770	1778	1785	rBV4	4258	4557	0.38%	0.036%
52	7.096	1879	1887	1898	rBV8	4018	6654	0.55%	0.053%
53	7.547	2035	2046	2060	rBV	463294	545759	45.32%	4.361%
54	7.880	2156	2163	2170	rVB3	3060	3371	0.28%	0.027%
55	7.925	2170	2179	2190	rVB6	3697	5197	0.43%	0.042%
56	8.423	2345	2354	2360	rBB3	3386	3682	0.31%	0.029%
57	8.624	2409	2425	2444	rBV2	607627	761813	63.26%	6.087%
58	8.721	2444	2459	2470	rVB5	8338	12114	1.01%	0.097%
59	9.213	2625	2632	2639	rBV3	1722	2120	0.18%	0.017%
60	9.411	2695	2702	2704	rBV2	1470	1306	0.11%	0.010%
61	9.943	2881	2889	2902	rVV4	14971	19423	1.61%	0.155%
62	10.082	2930	2938	2946	rVB4	1290	1780	0.15%	0.014%
63	10.190	2964	2976	2988	rBV4	2836	4215	0.35%	0.034%
64	10.665	3129	3143	3158	rVB	88372	125311	10.41%	1.001%
65	10.730	3158	3166	3175	rVB5	1532	1832	0.15%	0.015%
66	11.437	3410	3415	3423	rVB3	1502	1881	0.16%	0.015%
67	11.614	3461	3477	3491	rBV2	95956	150130	12.47%	1.200%
68	11.710	3494	3511	3523	rVV	509069	793453	65.89%	6.340%
69	11.781	3525	3536	3558	rVB4	24938	36983	3.07%	0.296%
70	12.134	3647	3660	3667	rBV5	1483	2560	0.21%	0.020%
71	12.432	3757	3765	3767	rBV3	2832	2442	0.20%	0.020%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On : 5 Jul 2013 5:06 pm
Operator : nancyf
Sample : jb40127-4
Misc : op47508,sx1399,30.0,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

72	12.517	3784	3795	3797	rBV2	873	1255	0.10%	0.010%
73	13.066	3973	3988	4004	rBV3	81953	130004	10.80%	1.039%
74	13.145	4004	4016	4031	rVB7	13424	24330	2.02%	0.194%
75	13.225	4031	4044	4047	rBV5	13764	19313	1.60%	0.154%
76	13.253	4047	4054	4067	rVB	27827	41695	3.46%	0.333%
77	13.367	4089	4094	4102	rBV5	1805	1985	0.16%	0.016%
78	13.594	4163	4174	4182	rBV4	2504	3895	0.32%	0.031%
79	13.708	4192	4214	4230	rBV2	581317	1026474	85.24%	8.202%
80	13.833	4244	4258	4275	rBV4	15451	31473	2.61%	0.251%
81	13.912	4283	4286	4294	rVB6	1302	1280	0.11%	0.010%
82	14.063	4328	4339	4349	rVB8	2648	4613	0.38%	0.037%
83	14.191	4377	4384	4395	rVB5	3459	5120	0.43%	0.041%
84	14.492	4474	4490	4507	rBV5	22886	43769	3.63%	0.350%
85	15.134	4701	4716	4732	rBV5	23105	43507	3.61%	0.348%
86	15.583	4869	4874	4876	rBV4	1484	1186	0.10%	0.009%
87	15.754	4919	4934	4948	rBV3	31854	59067	4.91%	0.472%
88	15.958	4999	5006	5008	rBV6	2174	1967	0.16%	0.016%
89	16.131	5054	5067	5069	rBV8	2458	3294	0.27%	0.026%
90	16.174	5079	5082	5086	rBV4	1420	1234	0.10%	0.010%
91	16.347	5132	5143	5154	rBV5	29809	51955	4.31%	0.415%
92	16.435	5154	5174	5197	rVB	574991	1098913	91.26%	8.781%
93	16.927	5330	5347	5364	rBV4	33692	70847	5.88%	0.566%
94	17.274	5465	5469	5472	rBV5	2762	2110	0.18%	0.017%
95	17.359	5487	5499	5511	rBV9	15731	29037	2.41%	0.232%
96	17.487	5533	5544	5560	rBV5	28937	57075	4.74%	0.456%
97	17.592	5578	5581	5590	rVB9	5260	5690	0.47%	0.045%
98	18.030	5723	5735	5749	rBV4	27460	53550	4.45%	0.428%
99	18.549	5910	5918	5942	rBV5	18128	44326	3.68%	0.354%
100	18.882	6023	6035	6055	rBV5	27840	92304	7.67%	0.738%

Sum of corrected areas: 12514446

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On    :  5 Jul 2013   5:06 pm
Operator  : nancyf
Sample    : jb40127-4
Misc      : op47508,sx1399,30.0,,,1,1,soil
ALS Vial  : 13   Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library    : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P
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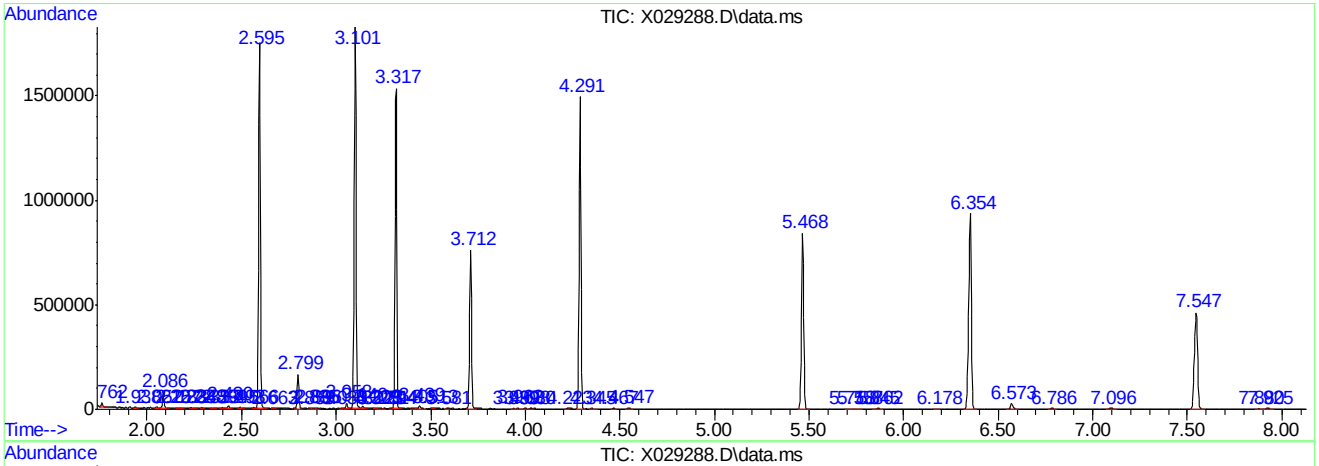
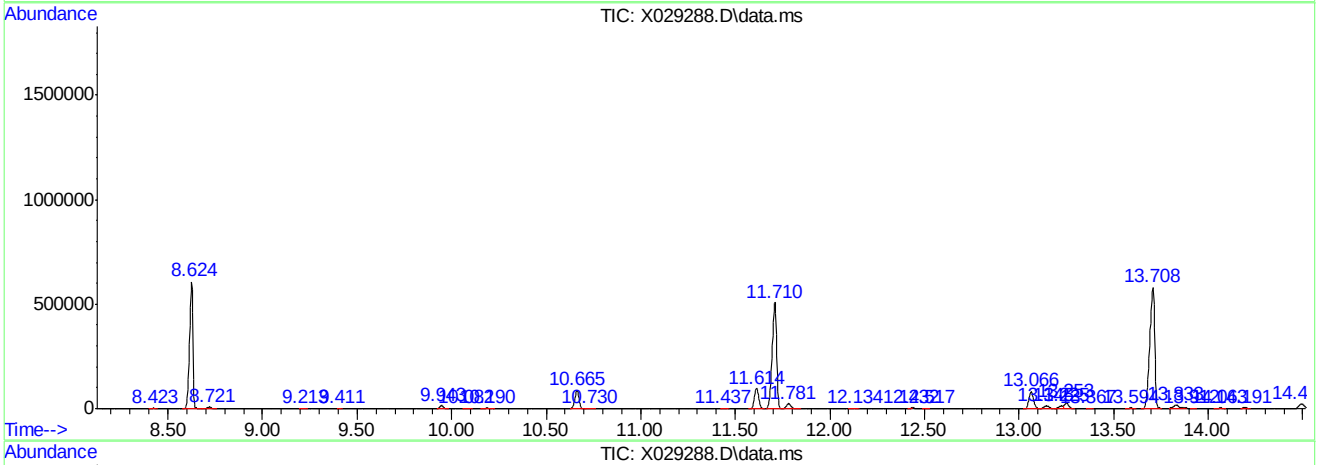
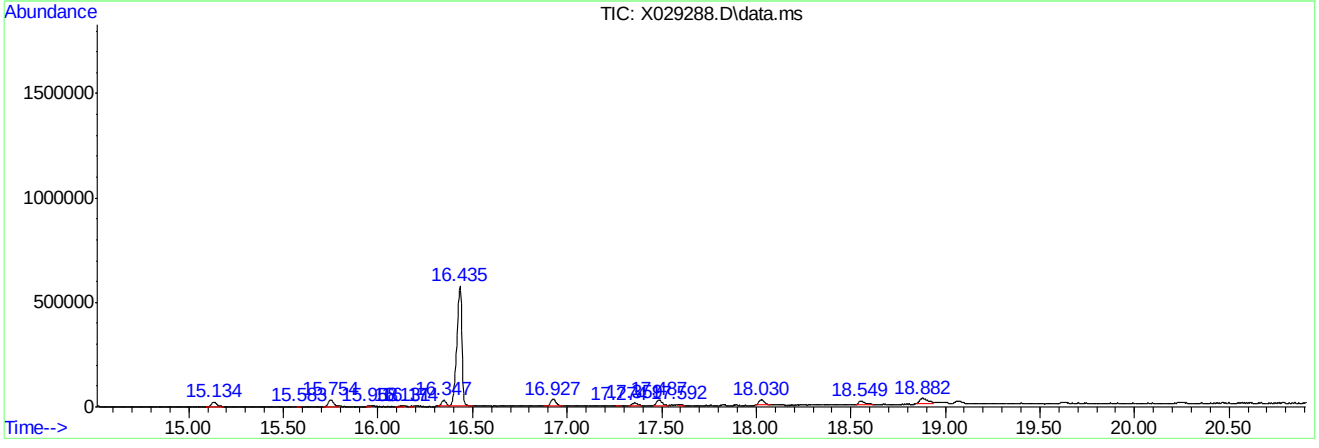






Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On    :  5 Jul 2013   5:06 pm
Operator  : nancyf
Sample    : jb40127-4
Misc      : op47508,sx1399,30.0,,,1,1,soil
ALS Vial  : 13   Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title  : SW846 8270D OR EPA 625

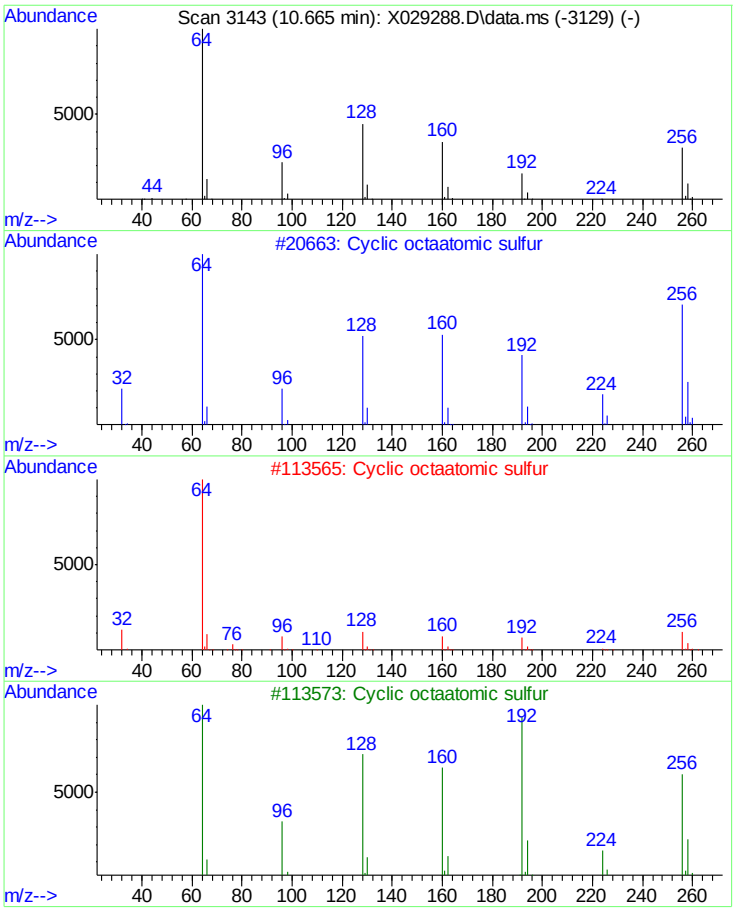
TIC Library    : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P
```

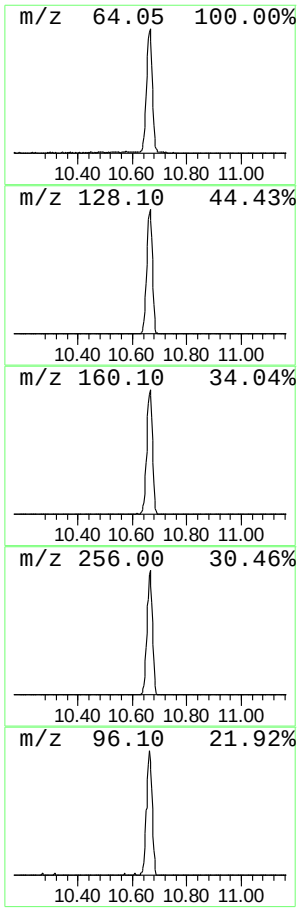
****

Peak Number 1 Cyclic octaatomic sulfur Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.665	6.58 ppm	125311	Phenanthrene-d10	8.624

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclic octaatomic sulfur	256	S8	010544-50-0	97
2	Cyclic octaatomic sulfur	256	S8	010544-50-0	94
3	Cyclic octaatomic sulfur	256	S8	010544-50-0	91
4	Sulfur dioxide	64	O2S	007446-09-5	7
5	Ethene, 1,1-difluoro-	64	C2H2F2	000075-38-7	4





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On : 5 Jul 2013 5:06 pm
Operator : nancyf
Sample : jb40127-4
Misc : op47508,sx1399,30.0,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

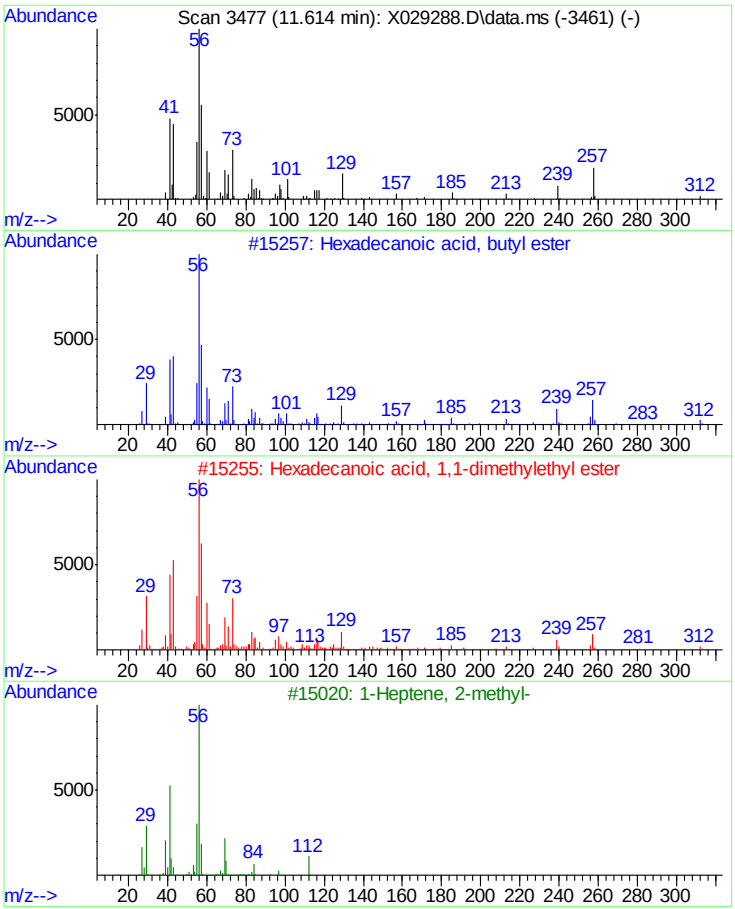
Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625

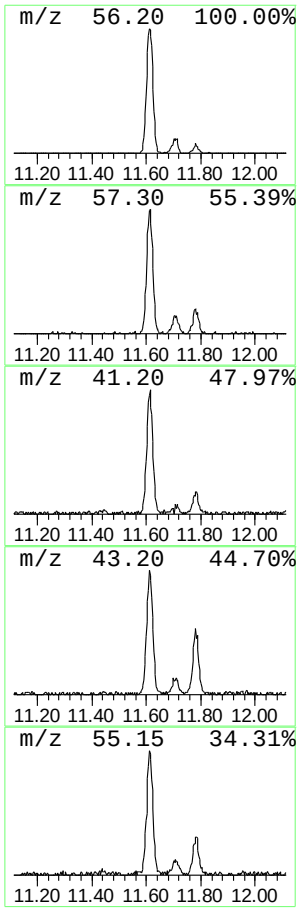
TIC Library : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

****
Peak Number 2 Hexadecanoic acid, butyl ester Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.614	5.85 ppm	150130	Chrysene-d12	13.708

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	93
2	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	91
3	1-Heptene, 2-methyl-	112	C8H16	015870-10-7	35
4	Cyclobutane, 1,1-dimethyl-2-octyl-	196	C14H28	062338-30-1	35
5	Cyclobutane, 1-hexyl-2,3-dimethyl-	168	C12H24	055170-84-8	35





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On : 5 Jul 2013 5:06 pm
Operator : nancyf
Sample : jb40127-4
Misc : op47508,sx1399,30.0,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625

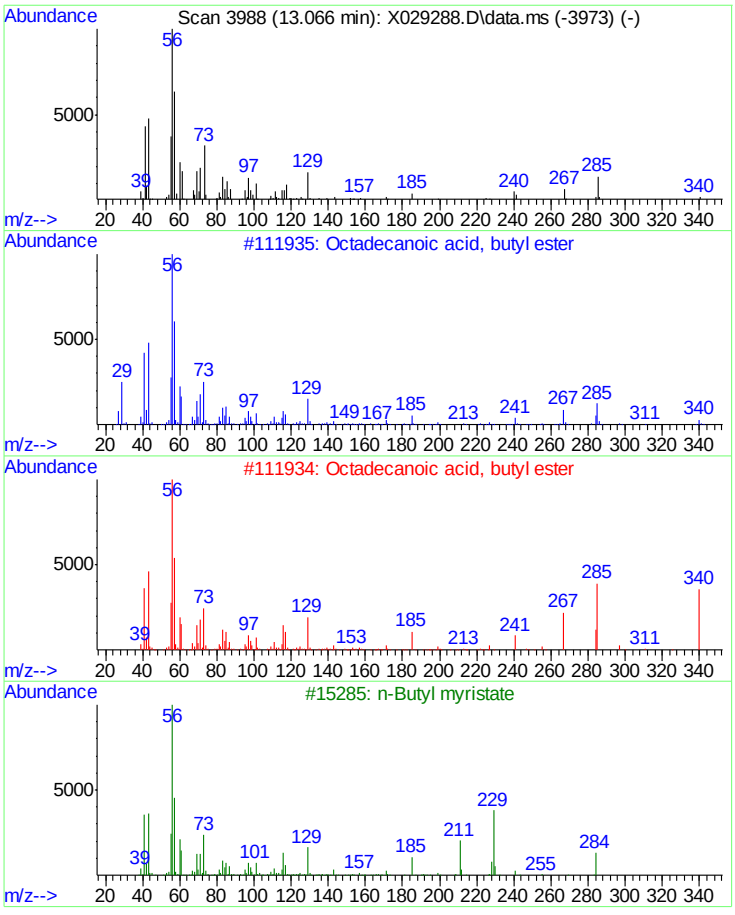
TIC Library : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

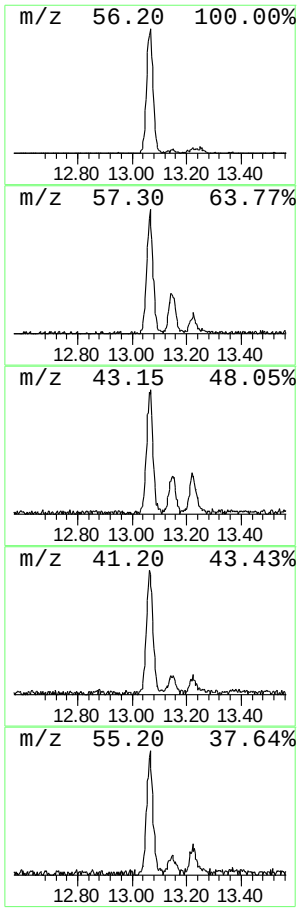
****

Peak Number 3 Octadecanoic acid, butyl ester Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.066	5.07 ppm	130004	Chrysene-d12	13.708

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	96
2	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	95
3	n-Butyl myristate	284	C18H36O2	000110-36-1	86
4	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	64
5	1-Undecene, 2-methyl-	168	C12H24	018516-37-5	38





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029288.D
Acq On : 5 Jul 2013 5:06 pm
Operator : nancyf
Sample : jb40127-4
Misc : op47508,sx1399,30.0,,,1,1,soil
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625

TIC Library : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
Cyclic octaatom...	10.665	6.6	ppm	125311	4	8.624	761813	40.0
Hexadecanoic ac...	11.614	5.8	ppm	150130	5	13.708	1026470	40.0
Octadecanoic ac...	13.066	5.1	ppm	130004	5	13.708	1026470	40.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On : 5 Jul 2013 5:33 pm
Operator : nancyf
Sample : jb40127-5
Misc : op46508,sx1399,29.9,,,1,1,soil
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 08 08:10:45 2013
Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Jul 08 07:59:30 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.314	152	127917	40.00 ppm	0.00
22) Naphthalene-d8	4.289	136	467226	40.00 ppm	0.00
41) Acenaphthene-d10	6.349	164	204478	40.00 ppm	-0.01
67) Phenanthrene-d10	8.622	188	228395	40.00 ppm	0.00
82) Chrysene-d12	13.705	240	300230	40.00 ppm	-0.02
91) Perylene-d12	16.433	264	309518	40.00 ppm	-0.01

System Monitoring Compounds

5) 2-Fluorophenol	2.595	112	317021	65.60 ppm	0.00
Spiked Amount 100.000	Range 40 - 102		Recovery = 65.60%		
9) Phenol-d5	3.101	99	442062	72.28 ppm	0.00
Spiked Amount 100.000	Range 41 - 100		Recovery = 72.28%		
23) Nitrobenzene-d5	3.709	82	182530	33.89 ppm	-0.01
Spiked Amount 50.000	Range 40 - 105		Recovery = 67.78%		
45) 2-Fluorobiphenyl	5.468	172	264309	33.85 ppm	0.00
Spiked Amount 50.000	Range 43 - 107		Recovery = 67.70%		
71) 2,4,6-Tribromophenol	7.548	330	51721	74.15 ppm	-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery = 74.15%		
85) Terphenyl-d14	11.708	244	237350	40.45 ppm	0.00
Spiked Amount 50.000	Range 45 - 119		Recovery = 80.90%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

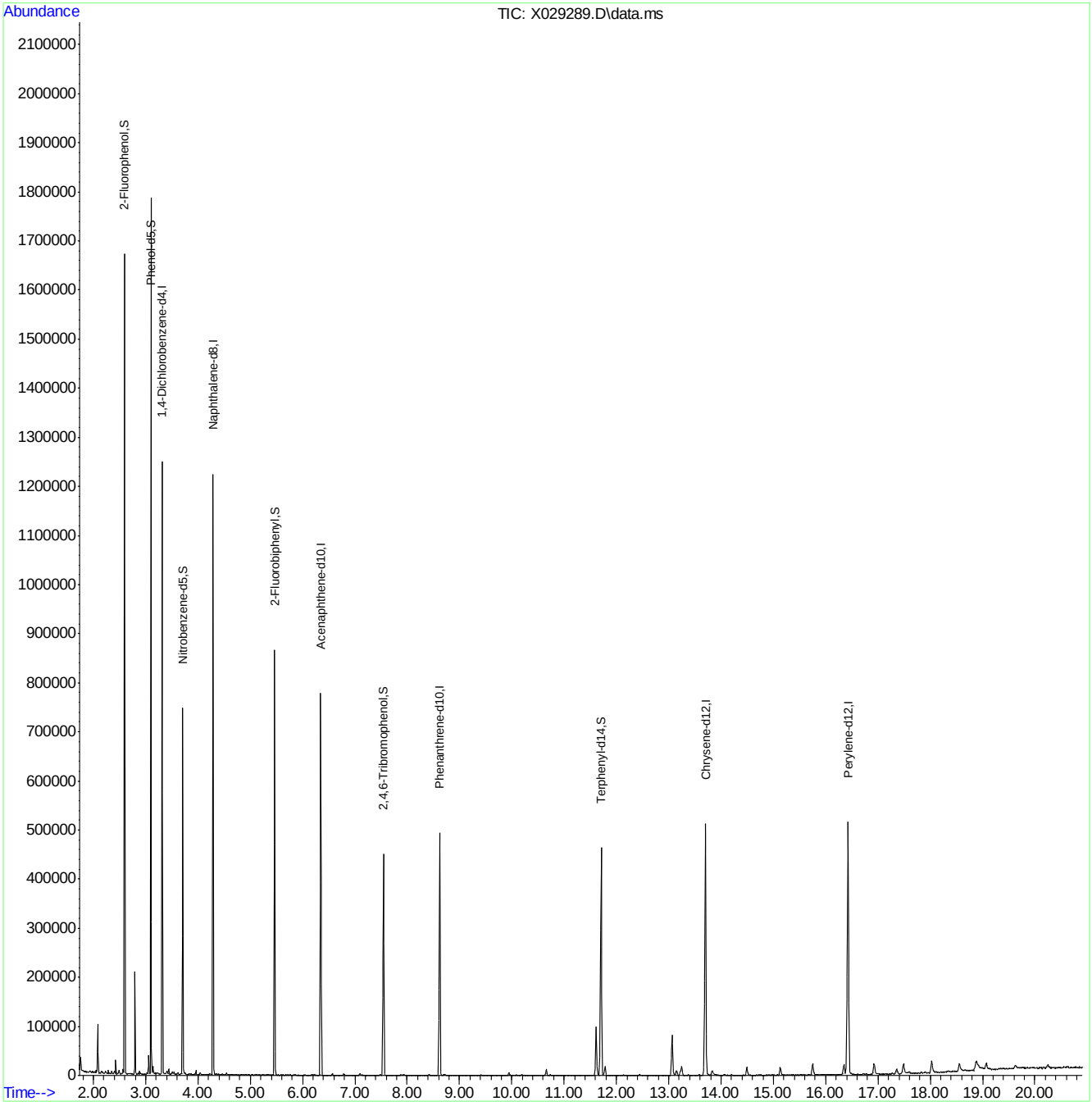
16.1.9

16

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On : 5 Jul 2013 5:33 pm
Operator : nancyf
Sample : jb40127-5
Misc : op46508,sx1399,29.9,,,1,1,soil
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 08 08:10:45 2013
Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Jul 08 07:59:30 2013
Response via : Initial Calibration



8270d.m Mon Jul 08 13:41:56 2013 Page: 2

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On : 5 Jul 2013 5:33 pm
Operator : nancyf
Sample : jb40127-5
Misc : op47508,sx1399,29.9,,,1,1,soil
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

Signal : TIC: X029289.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.760	5	9	17	rVB	28201	18390	1.49%	0.166%
2	1.933	67	70	77	rVB9	2519	1958	0.16%	0.018%
3	1.987	86	89	92	rBV3	2701	1380	0.11%	0.012%
4	2.049	107	111	115	rVB4	4644	2901	0.24%	0.026%
5	2.084	115	123	133	rVB2	99778	66247	5.37%	0.599%
6	2.157	145	149	155	rVB4	3337	2142	0.17%	0.019%
7	2.211	165	168	172	rBV4	1716	1428	0.12%	0.013%
8	2.231	172	175	179	rVB	4373	2250	0.18%	0.020%
9	2.288	191	195	200	rBV4	7392	5333	0.43%	0.048%
10	2.351	210	217	222	rBV4	5159	4050	0.33%	0.037%
11	2.399	229	234	239	rBV3	6242	4949	0.40%	0.045%
12	2.427	239	244	251	rVB	28191	18483	1.50%	0.167%
13	2.490	260	266	275	rVB7	7313	6131	0.50%	0.055%
14	2.567	287	293	296	rBV3	9791	6130	0.50%	0.055%
15	2.595	297	303	315	rVB	1670835	1100624	89.29%	9.945%
16	2.660	323	326	335	rBV7	1826	1502	0.12%	0.014%
17	2.797	368	374	383	rBV	209327	126332	10.25%	1.142%
18	2.856	392	395	400	rVB5	2874	1732	0.14%	0.016%
19	2.882	400	404	407	rBV3	6359	4281	0.35%	0.039%
20	2.896	407	409	412	rVB3	3356	1848	0.15%	0.017%
21	3.027	451	455	458	rBV2	2204	1763	0.14%	0.016%
22	3.058	459	466	473	rVV	37363	27220	2.21%	0.246%
23	3.101	473	481	491	rVV	1785205	1232572	100.00%	11.137%
24	3.138	491	494	505	rVV2	15135	12238	0.99%	0.111%
25	3.180	505	509	514	rVV7	2578	2145	0.17%	0.019%
26	3.206	514	518	522	rVV4	3705	2384	0.19%	0.022%
27	3.226	522	525	530	rVV5	2791	2011	0.16%	0.018%
28	3.251	530	534	538	rVB5	2165	1561	0.13%	0.014%
29	3.291	543	548	550	rVV5	2345	1886	0.15%	0.017%
30	3.314	550	556	567	rVV	1247469	797951	64.74%	7.210%
31	3.357	569	571	575	rVV5	2318	1890	0.15%	0.017%
32	3.408	581	589	595	rVV8	7147	9117	0.74%	0.082%
33	3.439	595	600	607	rVB3	10863	9094	0.74%	0.082%
34	3.513	616	626	629	rBV5	5478	5796	0.47%	0.052%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On : 5 Jul 2013 5:33 pm
Operator : nancyf
Sample : jb40127-5
Misc : op47508,sx1399,29.9,,,1,1,soil
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

35	3.541	633	636	642	rVV3	4645	3115	0.25%	0.028%
36	3.570	643	646	653	rVV6	1641	1361	0.11%	0.012%
37	3.618	655	663	668	rVB7	3242	3429	0.28%	0.031%
38	3.675	678	683	685	rBV4	1884	1330	0.11%	0.012%
39	3.709	687	695	706	rVV	746363	541937	43.97%	4.897%
40	3.751	706	710	714	rVB6	2681	1745	0.14%	0.016%
41	3.820	732	734	738	rVB5	2399	1417	0.11%	0.013%
42	3.842	738	742	747	rBV5	1690	1670	0.14%	0.015%
43	3.865	747	750	755	rVB5	2689	1692	0.14%	0.015%
44	3.936	769	775	778	rBV4	2637	1964	0.16%	0.018%
45	3.962	778	784	790	rVB	8818	6933	0.56%	0.063%
46	4.030	804	808	812	rBV	2709	1692	0.14%	0.015%
47	4.220	872	875	879	rBV4	1795	1536	0.12%	0.014%
48	4.240	879	882	887	rVV3	2216	1481	0.12%	0.013%
49	4.289	888	899	908	rVV	1223430	951103	77.16%	8.594%
50	4.323	908	911	916	rVV5	2478	1521	0.12%	0.014%
51	4.357	916	923	930	rVB6	3018	2838	0.23%	0.026%
52	4.468	958	962	968	rVB7	3603	3001	0.24%	0.027%
53	4.547	984	990	994	rVV3	3698	2422	0.20%	0.022%
54	4.729	1048	1054	1062	rVV7	1563	2007	0.16%	0.018%
55	5.328	1260	1265	1271	rBV6	1696	1533	0.12%	0.014%
56	5.468	1304	1314	1324	rVB	866083	784223	63.62%	7.086%
57	5.712	1396	1400	1408	rVV5	1448	1425	0.12%	0.013%
58	6.349	1610	1624	1634	rBV	778018	824858	66.92%	7.453%
59	6.570	1693	1702	1709	rVB2	4223	4699	0.38%	0.042%
60	6.783	1771	1777	1785	rBV4	4621	4470	0.36%	0.040%
61	7.090	1875	1885	1896	rBV6	3291	5094	0.41%	0.046%
62	7.548	2033	2046	2060	rBV	451419	519806	42.17%	4.697%
63	7.877	2153	2162	2170	rVV6	1988	2747	0.22%	0.025%
64	7.920	2170	2177	2189	rVB6	2443	3720	0.30%	0.034%
65	8.423	2343	2354	2363	rBV3	2240	2632	0.21%	0.024%
66	8.622	2409	2424	2442	rBV2	494175	612293	49.68%	5.533%
67	8.718	2452	2458	2469	rVB5	1685	2760	0.22%	0.025%
68	9.943	2880	2889	2902	rBV3	6091	7157	0.58%	0.065%
69	10.187	2965	2975	2991	rVB7	2180	3575	0.29%	0.032%
70	10.659	3130	3141	3150	rBV3	12693	16572	1.34%	0.150%
71	10.724	3158	3164	3173	rVB6	1656	1928	0.16%	0.017%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On : 5 Jul 2013 5:33 pm
Operator : nancyf
Sample : jb40127-5
Misc : op47508,sx1399,29.9,,,1,1,soil
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

72	11.611	3460	3476	3493	rBV3	98617	151576	12.30%	1.370%
73	11.708	3493	3510	3523	rVV	464245	706933	57.35%	6.388%
74	11.781	3523	3536	3548	rVB4	18759	28629	2.32%	0.259%
75	12.438	3757	3767	3778	rVB4	2389	3909	0.32%	0.035%
76	13.066	3969	3988	4003	rBV3	82104	129976	10.55%	1.174%
77	13.148	4003	4017	4030	rVV6	9801	17868	1.45%	0.161%
78	13.222	4030	4043	4044	rVV3	9121	9191	0.75%	0.083%
79	13.248	4047	4052	4066	rVB	19118	26709	2.17%	0.241%
80	13.705	4192	4213	4234	rBV	512138	841230	68.25%	7.601%
81	13.836	4243	4259	4269	rBV6	9215	18362	1.49%	0.166%
82	14.069	4331	4341	4347	rBV5	1681	2146	0.17%	0.019%
83	14.185	4378	4382	4393	rBV5	1465	2268	0.18%	0.020%
84	14.492	4474	4490	4508	rBV4	16759	29481	2.39%	0.266%
85	15.129	4702	4714	4736	rVB3	15543	28508	2.31%	0.258%
86	15.754	4919	4934	4949	rBV4	23453	43826	3.56%	0.396%
87	16.348	5131	5143	5153	rBV4	20466	35782	2.90%	0.323%
88	16.433	5153	5173	5195	rVB	513533	913671	74.13%	8.256%
89	16.924	5332	5346	5364	rBV4	23300	50181	4.07%	0.453%
90	17.353	5486	5497	5512	rVV4	10518	22459	1.82%	0.203%
91	17.490	5532	5545	5562	rBV6	20076	42089	3.41%	0.380%
92	17.589	5577	5580	5589	rVB10	4312	5201	0.42%	0.047%
93	17.774	5643	5645	5650	rVB6	2006	1571	0.13%	0.014%
94	17.814	5651	5659	5660	rBV8	2219	1541	0.13%	0.014%
95	17.942	5701	5704	5708	rBV6	1975	1430	0.12%	0.013%
96	18.030	5722	5735	5750	rBV5	24118	50315	4.08%	0.455%
97	18.214	5798	5800	5803	rBV4	2221	1452	0.12%	0.013%
98	18.553	5910	5919	5936	rBV7	15134	34925	2.83%	0.316%
99	18.874	6023	6032	6035	rBV9	17240	24569	1.99%	0.222%
100	19.070	6093	6101	6116	rVB5	12109	21690	1.76%	0.196%

Sum of corrected areas: 11066893

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On    :  5 Jul 2013   5:33 pm
Operator  : nancyf
Sample    : jb40127-5
Misc      : op47508,sx1399,29.9,,,1,1,soil
ALS Vial  : 14   Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library    : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P
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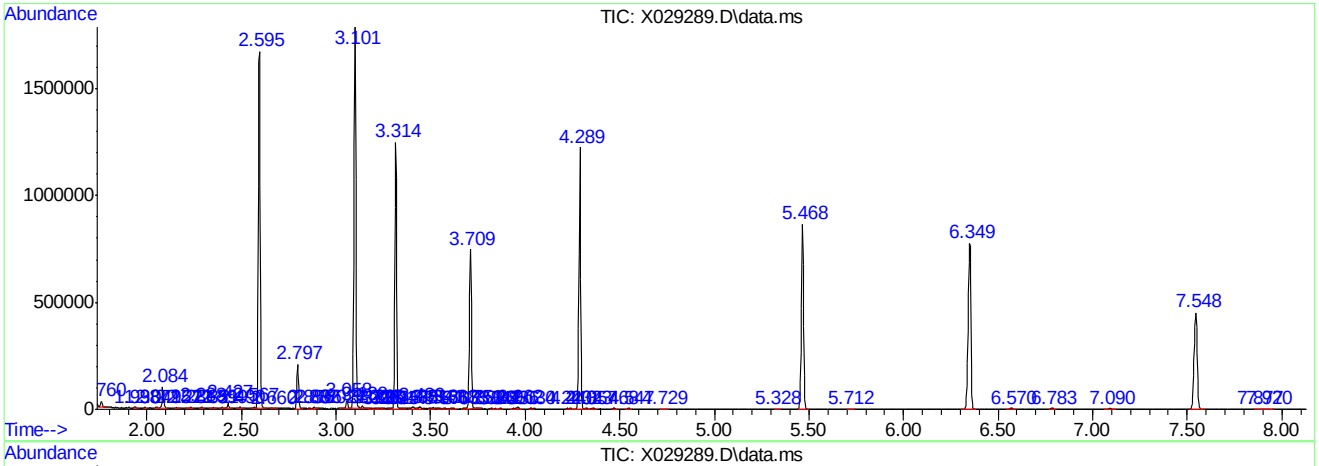
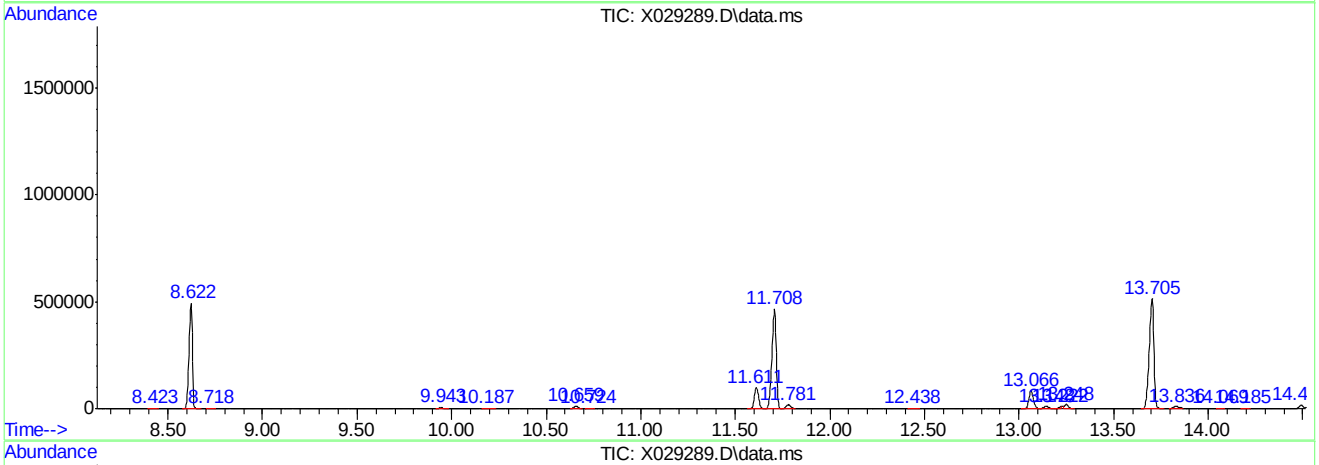
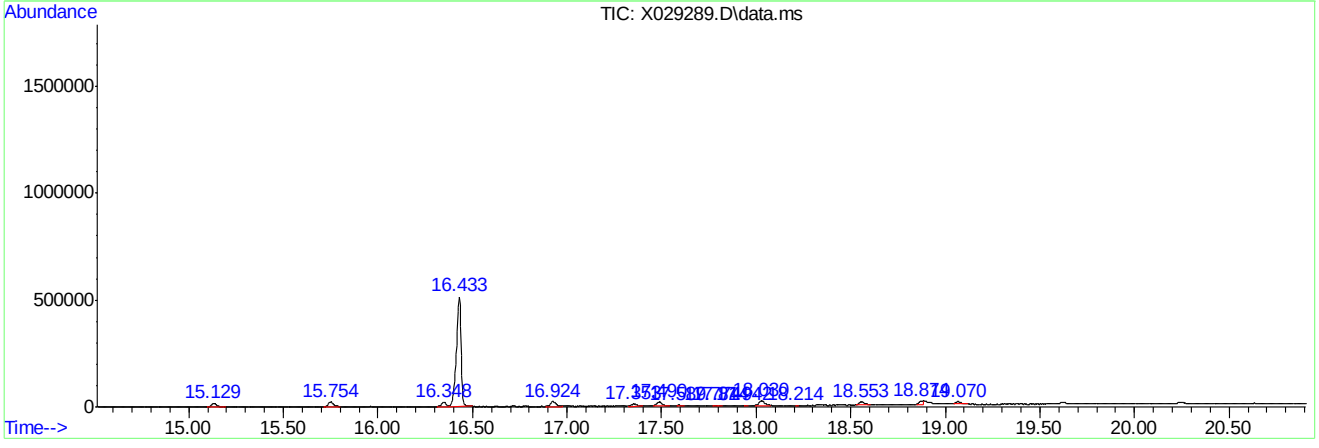






Library Search Compound Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On : 5 Jul 2013 5:33 pm
Operator : nancyf
Sample : jb40127-5
Misc : op47508,sx1399,29.9,,,1,1,soil
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625

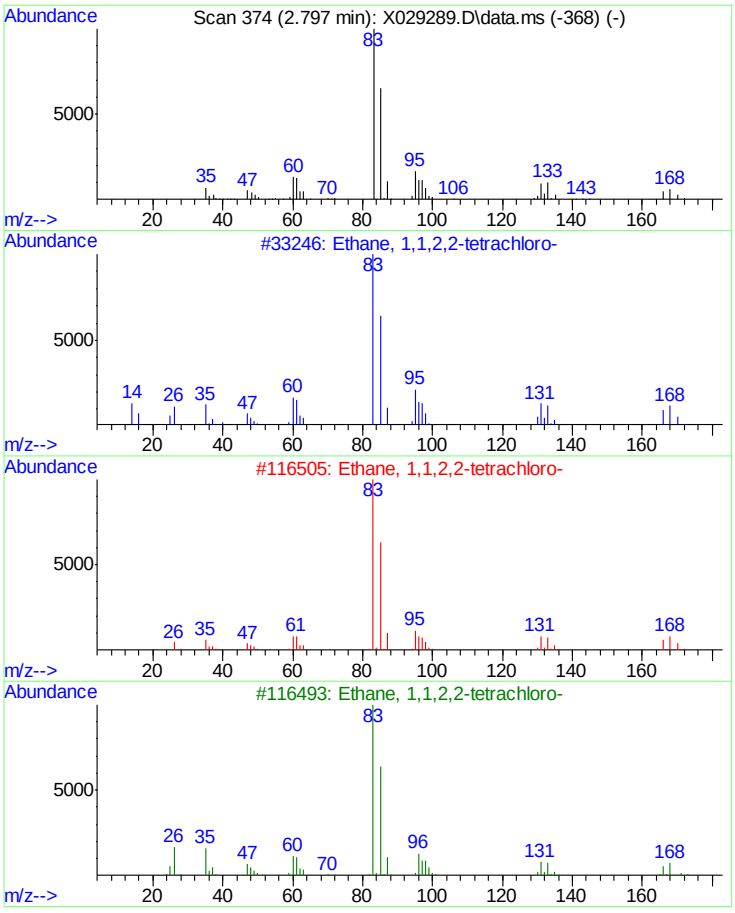
TIC Library : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

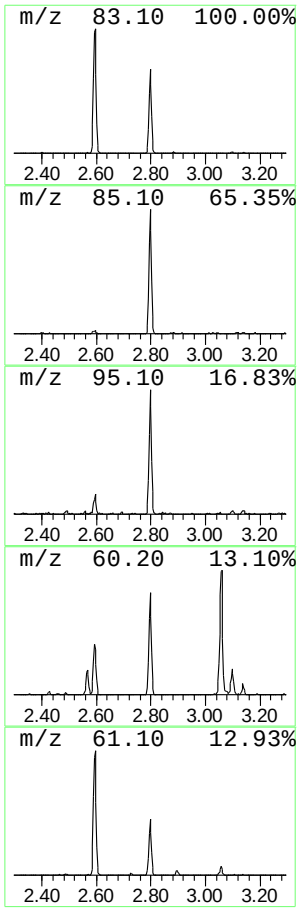
****

Peak Number 1 Ethane, 1,1,2,2-tetrachloro- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.797	6.33 ppm	126332	1,4-Dichlorobenzene-d4	3.314

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethane, 1,1,2,2-tetrachloro-	166	C2H2Cl4	000079-34-5	96
2	Ethane, 1,1,2,2-tetrachloro-	166	C2H2Cl4	000079-34-5	96
3	Ethane, 1,1,2,2-tetrachloro-	166	C2H2Cl4	000079-34-5	91
4	Ethane, 1,1,2,2-tetrachloro-	166	C2H2Cl4	000079-34-5	90
5	Ethane, 1,1,2,2-tetrachloro-	166	C2H2Cl4	000079-34-5	64





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On : 5 Jul 2013 5:33 pm
Operator : nancyf
Sample : jb40127-5
Misc : op47508,sx1399,29.9,,,1,1,soil
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625

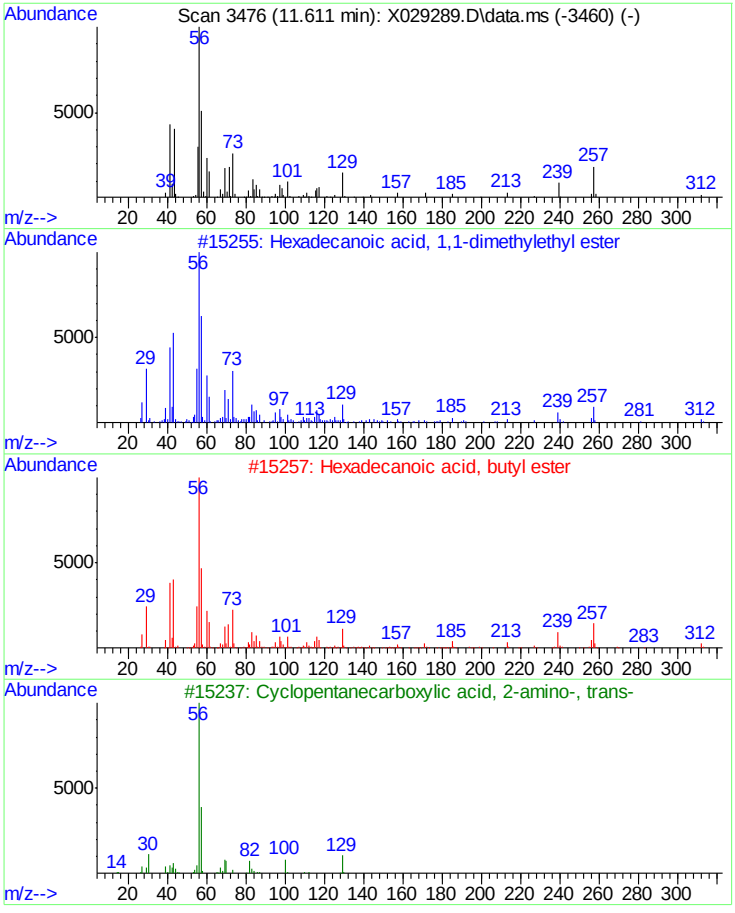
TIC Library : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

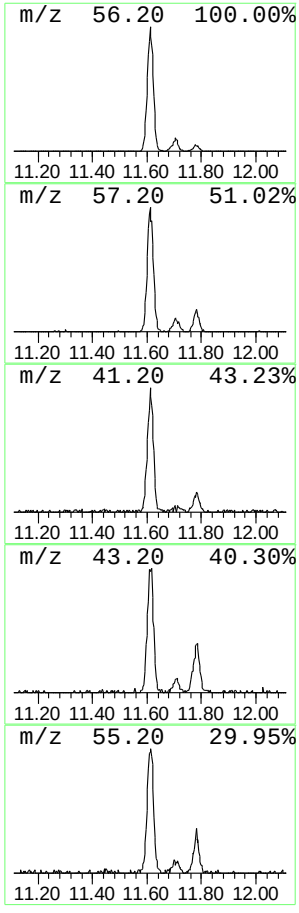
****

Peak Number 2 Hexadecanoic acid, 1,1-dime... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.611	7.21 ppm	151576	Chrysene-d12	13.705

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	95
2	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	90
3	Cyclopentanecarboxylic acid, 2-a...	129	C6H11NO2	040482-05-1	46
4	Cyclopentanecarboxylic acid, 2-a...	129	C6H11NO2	037910-65-9	43
5	1-Hexene, 2,5-dimethyl-	112	C8H16	006975-92-4	38





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On : 5 Jul 2013 5:33 pm
Operator : nancyf
Sample : jb40127-5
Misc : op47508,sx1399,29.9,,,1,1,soil
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625

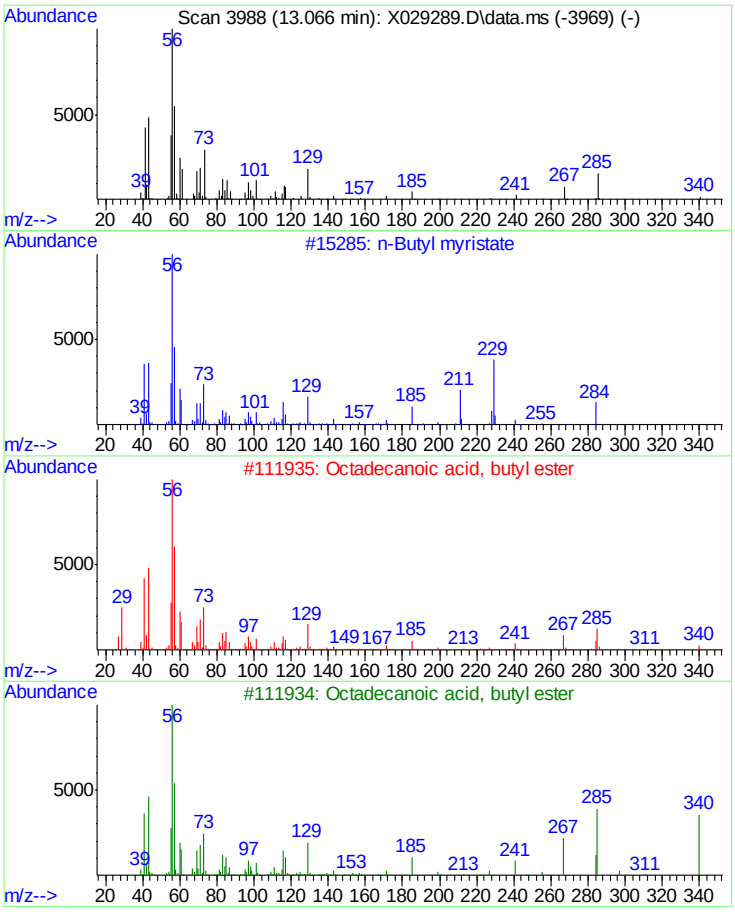
TIC Library : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

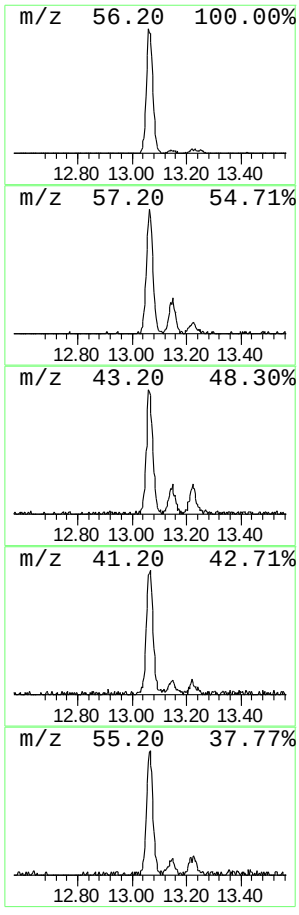
****

Peak Number 3 n-Butyl myristate Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.066	6.18 ppm	129976	Chrysene-d12	13.705

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Butyl myristate	284	C18H36O2	000110-36-1	80
2	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	70
3	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	70
4	Decane, 2,2,3-trimethyl-	184	C13H28	062338-09-4	43
5	1-Hexanol, 3,5,5-trimethyl-	144	C9H20O	003452-97-9	38





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029289.D
Acq On : 5 Jul 2013 5:33 pm
Operator : nancyf
Sample : jb40127-5
Misc : op47508,sx1399,29.9,,,1,1,soil
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625

TIC Library : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
Ethane, 1,1,2,2...	2.797	6.3	ppm	126332	1	3.314	797951	40.0
Hexadecanoic ac...	11.611	7.2	ppm	151576	5	13.705	841230	40.0
n-Butyl myristate	13.066	6.2	ppm	129976	5	13.705	841230	40.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029290.D
Acq On : 5 Jul 2013 6:00 pm
Operator : nancyf
Sample : jb40127-6
Misc : op46508,sx1399,30.1,,,1,1,soil
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 08 08:11:35 2013
Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Jul 08 07:59:30 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.314	152	119063	40.00	ppm	0.00
22) Naphthalene-d8	4.288	136	434154	40.00	ppm	0.00
41) Acenaphthene-d10	6.348	164	189883	40.00	ppm	-0.01
67) Phenanthrene-d10	8.619	188	217929	40.00	ppm	-0.01
82) Chrysene-d12	13.702	240	280557	40.00	ppm	-0.02
91) Perylene-d12	16.430	264	291127	40.00	ppm	-0.02

System Monitoring Compounds

5) 2-Fluorophenol	2.592	112	283220	62.97	ppm	0.00
Spiked Amount 100.000	Range 40 - 102		Recovery = 62.97%			
9) Phenol-d5	3.098	99	391568	68.79	ppm	-0.01
Spiked Amount 100.000	Range 41 - 100		Recovery = 68.79%			
23) Nitrobenzene-d5	3.709	82	161440	32.26	ppm	-0.01
Spiked Amount 50.000	Range 40 - 105		Recovery = 64.52%			
45) 2-Fluorobiphenyl	5.465	172	237807	32.80	ppm	-0.01
Spiked Amount 50.000	Range 43 - 107		Recovery = 65.60%			
71) 2,4,6-Tribromophenol	7.545	330	44815	67.34	ppm	-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery = 67.34%			
85) Terphenyl-d14	11.705	244	197863	36.09	ppm	-0.01
Spiked Amount 50.000	Range 45 - 119		Recovery = 72.18%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

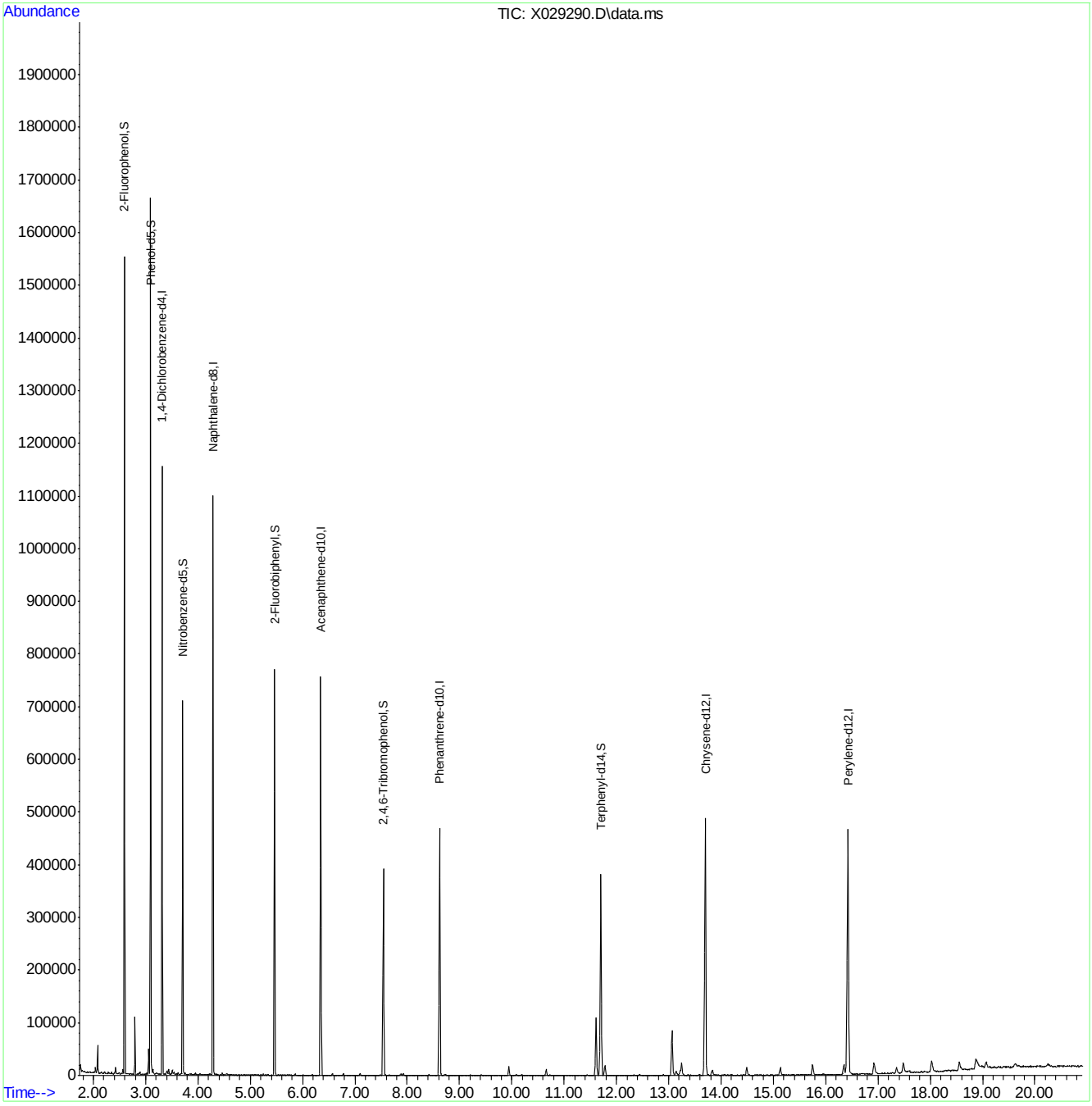
16.1.11

16

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029290.D
Acq On : 5 Jul 2013 6:00 pm
Operator : nancyf
Sample : jb40127-6
Misc : op46508,sx1399,30.1,,,1,1,soil
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 08 08:11:35 2013
Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Jul 08 07:59:30 2013
Response via : Initial Calibration



8270d.m Mon Jul 08 13:41:57 2013 Page: 2

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029290.D
Acq On : 5 Jul 2013 6:00 pm
Operator : nancyf
Sample : jb40127-6
Misc : op47508,sx1399,30.1,,,1,1,soil
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

Signal : TIC: X029290.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.754	4	7	16	rVB3	13924	10160	0.93%	0.100%
2	1.788	16	19	24	rVB5	2957	1994	0.18%	0.020%
3	2.041	103	108	113	rBV4	10181	7265	0.67%	0.072%
4	2.081	114	122	131	rVB2	52761	38865	3.57%	0.384%
5	2.152	141	147	155	rBV4	2754	2597	0.24%	0.026%
6	2.209	163	167	172	rBV5	2273	2059	0.19%	0.020%
7	2.226	172	173	182	rVB6	2436	1739	0.16%	0.017%
8	2.285	189	194	198	rBV4	3570	2976	0.27%	0.029%
9	2.348	213	216	225	rVB6	3553	2235	0.21%	0.022%
10	2.396	229	233	238	rVV5	3273	2764	0.25%	0.027%
11	2.424	239	243	252	rVB	12710	8741	0.80%	0.086%
12	2.487	261	265	275	rVB6	3864	4871	0.45%	0.048%
13	2.567	287	293	296	rVV	9448	7028	0.65%	0.069%
14	2.592	296	302	316	rVB	1552634	986261	90.59%	9.750%
15	2.700	336	340	343	rBV5	1126	1040	0.10%	0.010%
16	2.797	368	374	381	rVB	109815	70261	6.45%	0.695%
17	2.882	399	404	405	rVV5	3206	1834	0.17%	0.018%
18	2.893	406	408	419	rVB6	4177	2905	0.27%	0.029%
19	3.024	451	454	459	rBV6	2605	1783	0.16%	0.018%
20	3.061	459	467	473	rVV	48849	39793	3.66%	0.393%
21	3.098	473	480	490	rVV	1663865	1088660	100.00%	10.762%
22	3.138	492	494	502	rVV5	9202	6538	0.60%	0.065%
23	3.186	506	511	514	rVV5	1512	1258	0.12%	0.012%
24	3.206	514	518	521	rVV3	2581	1628	0.15%	0.016%
25	3.223	521	524	530	rVB5	1978	1321	0.12%	0.013%
26	3.283	539	545	549	rBV6	1937	1859	0.17%	0.018%
27	3.314	549	556	567	rVV	1154544	745955	68.52%	7.374%
28	3.356	568	571	575	rVV5	2166	1432	0.13%	0.014%
29	3.408	581	589	594	rVV9	7070	7545	0.69%	0.075%
30	3.439	594	600	606	rVB4	10387	8018	0.74%	0.079%
31	3.493	615	619	620	rBV4	1875	979	0.09%	0.010%
32	3.513	621	626	628	rVV	7992	6171	0.57%	0.061%
33	3.521	628	629	633	rVV2	6731	3718	0.34%	0.037%
34	3.541	633	636	642	rVB	4692	2903	0.27%	0.029%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029290.D
Acq On : 5 Jul 2013 6:00 pm
Operator : nancyf
Sample : jb40127-6
Misc : op47508,sx1399,30.1,,,1,1,soil
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

35	3.581	648	650	656	rVB6	1488	1237	0.11%	0.012%
36	3.615	657	662	671	rVB6	4160	3460	0.32%	0.034%
37	3.709	686	695	706	rVB	709135	482707	44.34%	4.772%
38	3.749	706	709	712	rBV3	2273	1261	0.12%	0.012%
39	3.959	779	783	789	rVV2	4823	3316	0.30%	0.033%
40	4.030	804	808	812	rVV3	2343	1893	0.17%	0.019%
41	4.220	870	875	878	rBV4	1563	1259	0.12%	0.012%
42	4.237	878	881	888	rVV6	2243	1605	0.15%	0.016%
43	4.288	888	899	907	rVV	1099568	887598	81.53%	8.775%
44	4.320	907	910	915	rVB4	1369	1024	0.09%	0.010%
45	4.467	956	962	970	rBV7	3716	3029	0.28%	0.030%
46	4.547	982	990	994	rBV2	2355	2051	0.19%	0.020%
47	4.644	1018	1024	1028	rVB7	1505	992	0.09%	0.010%
48	4.882	1104	1108	1114	rVB5	1105	962	0.09%	0.010%
49	5.107	1182	1187	1192	rBV4	1420	1240	0.11%	0.012%
50	5.246	1228	1236	1241	rBV3	2584	1962	0.18%	0.019%
51	5.326	1261	1264	1273	rBV6	1376	1587	0.15%	0.016%
52	5.465	1302	1313	1325	rVB	771055	704844	64.74%	6.968%
53	5.846	1441	1447	1449	rBV4	1417	1181	0.11%	0.012%
54	5.863	1449	1453	1459	rVB2	3661	2225	0.20%	0.022%
55	6.348	1610	1624	1635	rVB	756200	771138	70.83%	7.623%
56	6.567	1693	1701	1709	rBV3	3614	3784	0.35%	0.037%
57	6.786	1771	1778	1786	rBV2	3499	3923	0.36%	0.039%
58	7.096	1875	1887	1898	rBV7	3072	5354	0.49%	0.053%
59	7.485	2016	2024	2028	rVV3	1056	1315	0.12%	0.013%
60	7.545	2032	2045	2059	rVB	391512	449411	41.28%	4.443%
61	7.883	2154	2164	2171	rBV5	2591	3322	0.31%	0.033%
62	7.923	2171	2178	2189	rVB8	2766	3982	0.37%	0.039%
63	8.414	2344	2351	2359	rVB2	1957	2375	0.22%	0.023%
64	8.619	2409	2423	2440	rBV2	468673	574517	52.77%	5.680%
65	8.721	2451	2459	2467	rVB3	1814	2657	0.24%	0.026%
66	9.210	2623	2631	2638	rVB	878	1230	0.11%	0.012%
67	9.414	2691	2703	2707	rBV2	1001	1295	0.12%	0.013%
68	9.943	2874	2889	2903	rBV3	18332	22353	2.05%	0.221%
69	10.082	2930	2938	2945	rBV4	1481	1820	0.17%	0.018%
70	10.184	2963	2974	2983	rVB4	1788	2549	0.23%	0.025%
71	10.656	3130	3140	3155	rVB3	11930	16113	1.48%	0.159%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029290.D
Acq On : 5 Jul 2013 6:00 pm
Operator : nancyf
Sample : jb40127-6
Misc : op47508,sx1399,30.1,,,1,1,soil
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

72	10.724	3155	3164	3173	rBV3	1421	1630	0.15%	0.016%
73	11.611	3462	3476	3492	rBV2	110200	172983	15.89%	1.710%
74	11.705	3492	3509	3522	rVV	382034	588235	54.03%	5.815%
75	11.778	3523	3535	3549	rVB4	19895	31632	2.91%	0.313%
76	12.429	3755	3764	3778	rBV7	2267	4194	0.39%	0.041%
77	13.063	3974	3987	4004	rBV4	85623	141631	13.01%	1.400%
78	13.140	4004	4014	4030	rVV8	8243	15747	1.45%	0.156%
79	13.222	4031	4043	4045	rBV5	10241	12977	1.19%	0.128%
80	13.250	4047	4053	4064	rVB	23021	29842	2.74%	0.295%
81	13.586	4163	4171	4181	rVB7	1858	2637	0.24%	0.026%
82	13.702	4192	4212	4229	rBV	488130	788028	72.39%	7.790%
83	13.833	4242	4258	4273	rBV6	9324	19511	1.79%	0.193%
84	14.063	4331	4339	4348	rVB4	1670	2549	0.23%	0.025%
85	14.492	4477	4490	4507	rVB3	14971	26232	2.41%	0.259%
86	15.134	4701	4716	4730	rBV5	14405	26426	2.43%	0.261%
87	15.748	4917	4932	4947	rBV4	20564	38504	3.54%	0.381%
88	15.964	4999	5008	5016	rBV8	1882	2691	0.25%	0.027%
89	16.350	5125	5144	5153	rBV3	18820	35262	3.24%	0.349%
90	16.430	5153	5172	5194	rVB2	464204	852953	78.35%	8.432%
91	16.606	5232	5234	5240	rBV5	1227	1231	0.11%	0.012%
92	16.703	5266	5268	5276	rVB5	1313	1285	0.12%	0.013%
93	16.924	5334	5346	5364	rBV4	21758	44973	4.13%	0.445%
94	17.186	5435	5438	5443	rBV4	1073	1037	0.10%	0.010%
95	17.353	5488	5497	5516	rVB4	10381	19557	1.80%	0.193%
96	17.487	5530	5544	5561	rBV4	20443	42626	3.92%	0.421%
97	18.027	5721	5734	5756	rBV7	20102	48283	4.44%	0.477%
98	18.555	5909	5920	5930	rBV6	16859	33158	3.05%	0.328%
99	18.874	6020	6032	6051	rBV6	18808	62497	5.74%	0.618%
100	19.070	6094	6101	6118	rVB9	11196	19432	1.78%	0.192%

Sum of corrected areas: 10115470

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029290.D
Acq On    :  5 Jul 2013   6:00 pm
Operator  : nancyf
Sample    : jb40127-6
Misc      : op47508,sx1399,30.1,,,1,1,soil
ALS Vial  : 15   Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library    : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P
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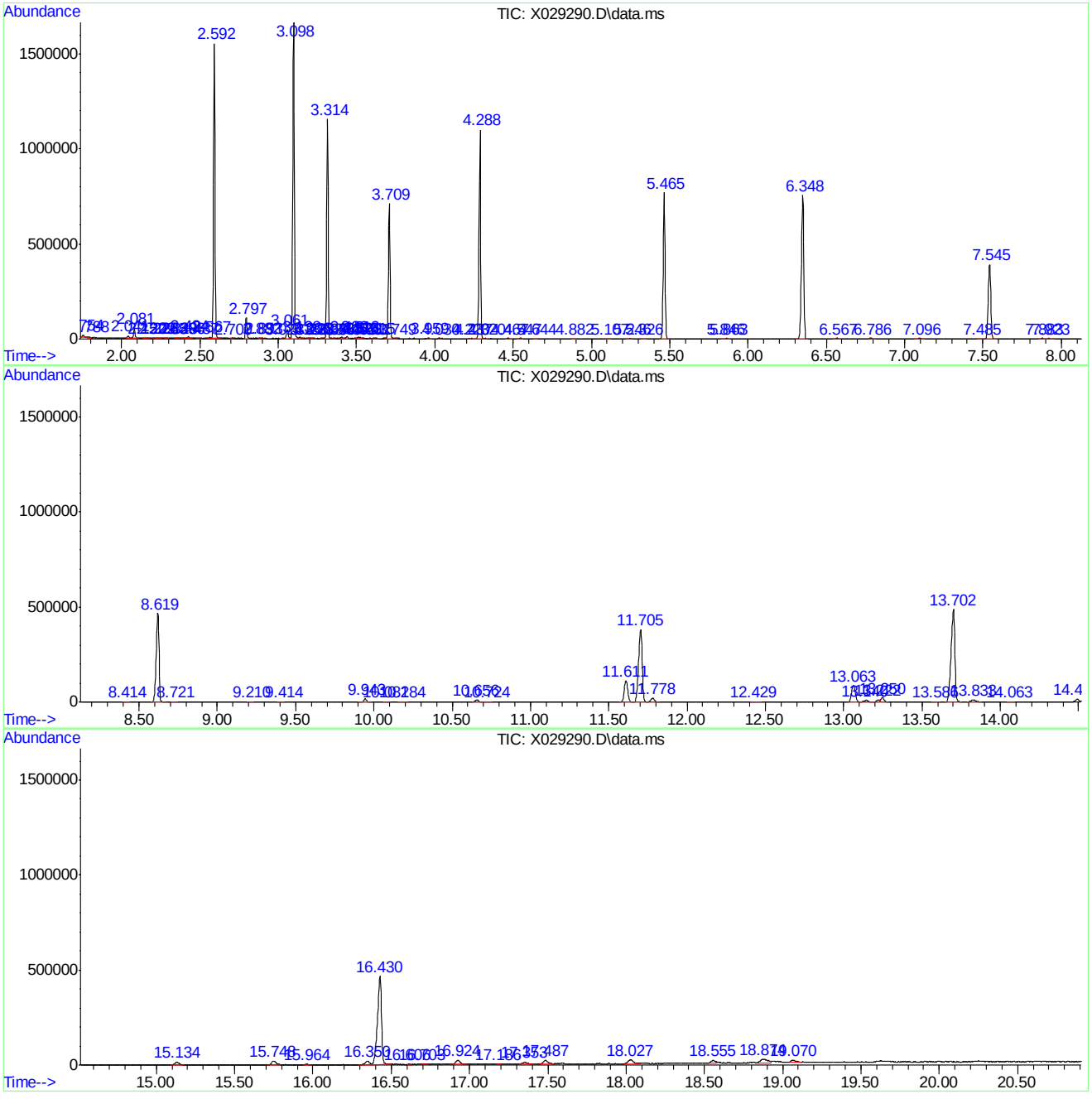


8270d.m Mon Jul 08 14:01:01 2013 Page: 4

Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029290.D
Acq On    :  5 Jul 2013   6:00 pm
Operator  : nancyf
Sample    : jb40127-6
Misc      : op47508,sx1399,30.1,,,1,1,soil
ALS Vial  : 15   Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title  : SW846 8270D OR EPA 625

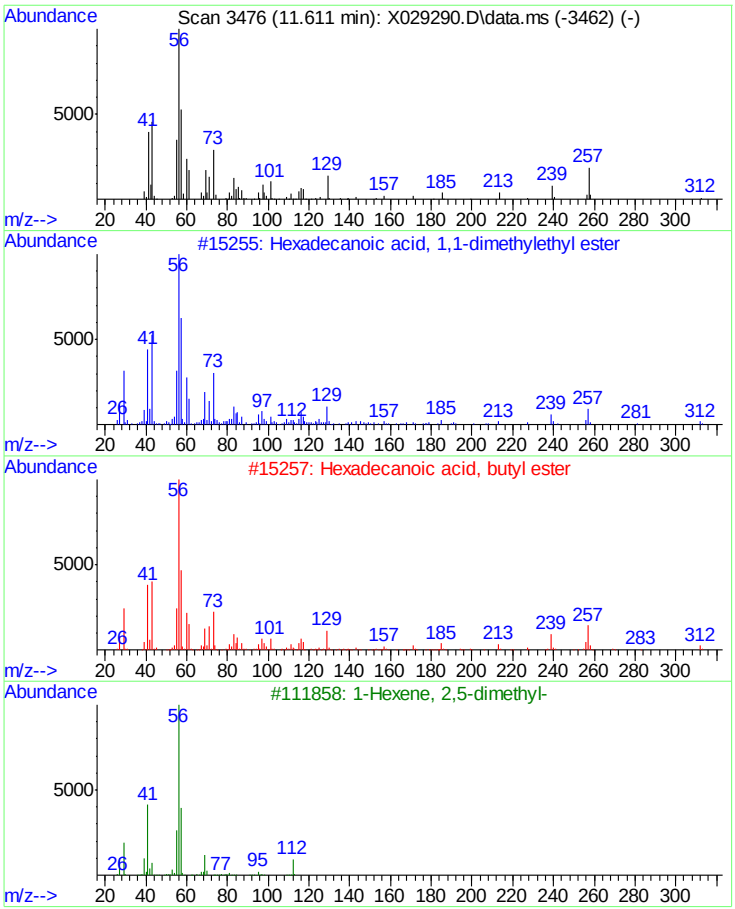
TIC Library    : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P
```

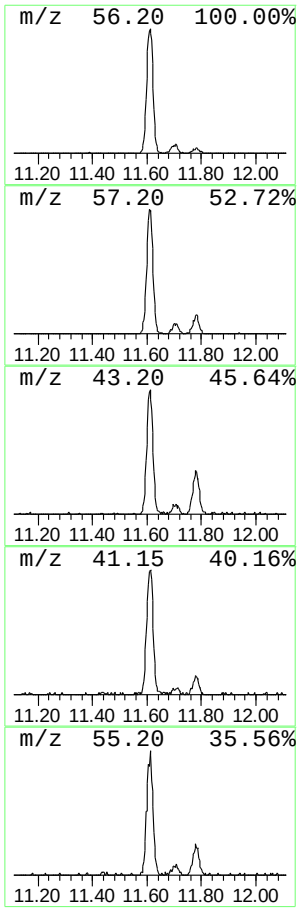
****

Peak Number 1 Hexadecanoic acid, 1,1-dime... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.611	8.78 ppm	172983	Chrysene-d12	13.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	91
2	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	90
3	1-Hexene, 2,5-dimethyl-	112	C8H16	006975-92-4	35
4	1-Hexene, 2,5-dimethyl-	112	C8H16	006975-92-4	35
5	Cyclobutane, 1,1-dimethyl-2-octyl-	196	C14H28	062338-30-1	35





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029290.D
Acq On : 5 Jul 2013 6:00 pm
Operator : nancyf
Sample : jb40127-6
Misc : op47508,sx1399,30.1,,,1,1,soil
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625

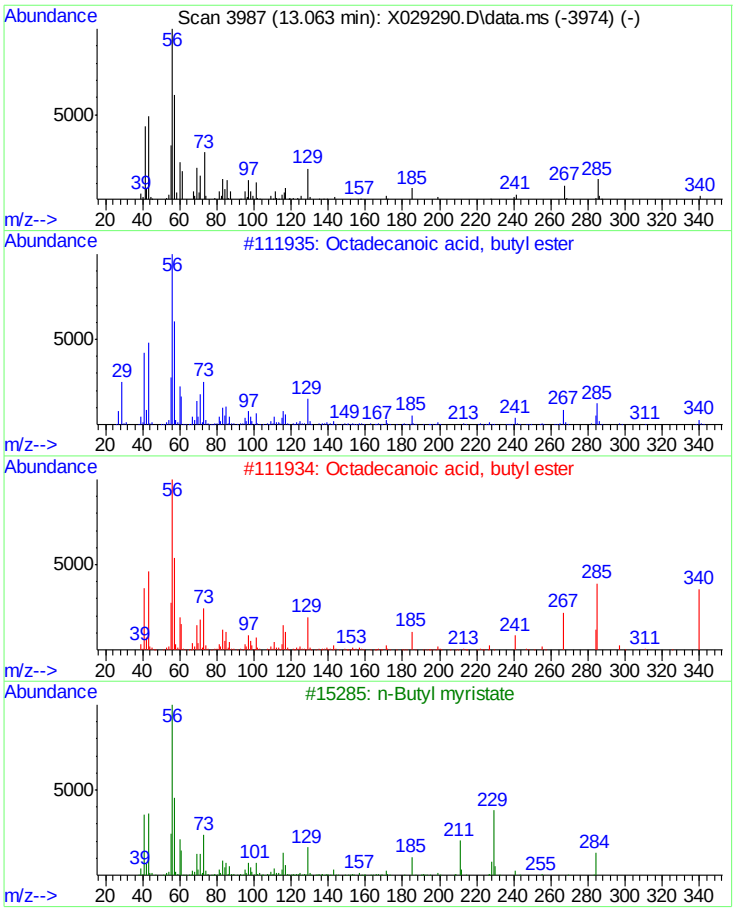
TIC Library : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

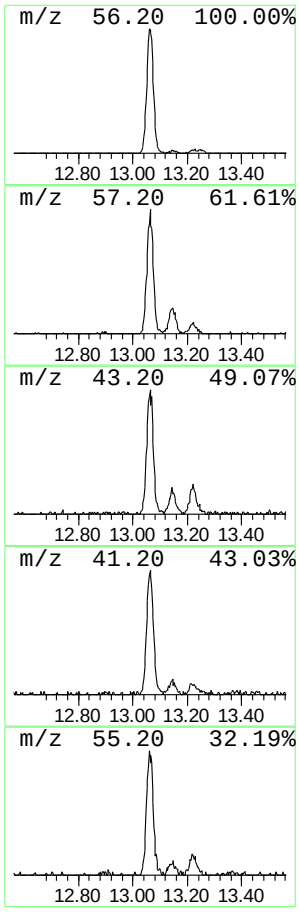
****

Peak Number 2 Octadecanoic acid, butyl ester Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.063	7.19 ppm	141631	Chrysene-d12	13.702

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	96
2	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	96
3	n-Butyl myristate	284	C18H36O2	000110-36-1	78
4	Cyclobutane, 1,1-dimethyl-2-octyl-	196	C14H28	062338-30-1	38
5	Urea, N,N'-di-2-propenyl-	140	C7H12N2O	001801-72-5	38





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029290.D
Acq On : 5 Jul 2013 6:00 pm
Operator : nancyf
Sample : jb40127-6
Misc : op47508,sx1399,30.1,,,1,1,soil
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625

TIC Library : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
Hexadecanoic ac...	11.611	8.8	ppm	172983	5	13.702	788028	40.0
Octadecanoic ac...	13.063	7.2	ppm	141631	5	13.702	788028	40.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064515.D
Acq On : 3 Jul 2013 8:25 pm
Operator : nancyf
Sample : op47508-mb
Misc : op47508,sl3253,30.0,,,1,1,soil
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 04 12:49:11 2013
Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Thu Jul 04 07:20:07 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	4.343	152	87927	40.00	ppm	0.00
22) Naphthalene-d8	5.363	136	272540	40.00	ppm	0.00
42) Acenaphthene-d10	6.784	164	166556	40.00	ppm	0.00
68) Phenanthrene-d10	7.985	188	260207	40.00	ppm	0.00
83) Chrysene-d12	10.416	240	215741	40.00	ppm	-0.01
92) Perylene-d12	12.221	264	189291	40.00	ppm	-0.01
System Monitoring Compounds						
7) 2-Fluorophenol	3.291	112	186213	61.29	ppm	-0.04
Spiked Amount 100.000	Range 40 - 102		Recovery = 61.29%			
9) Phenol-d5	4.103	99	250257	69.92	ppm	-0.01
Spiked Amount 100.000	Range 41 - 100		Recovery = 69.92%			
23) Nitrobenzene-d5	4.792	82	109202	34.56	ppm	-0.02
Spiked Amount 50.000	Range 40 - 105		Recovery = 69.12%			
46) 2-Fluorobiphenyl	6.250	172	197443	34.35	ppm	-0.01
Spiked Amount 50.000	Range 43 - 107		Recovery = 68.70%			
72) 2,4,6-Tribromophenol	7.430	330	55741	80.74	ppm	-0.02
Spiked Amount 100.000	Range 42 - 108		Recovery = 80.74%			
86) Terphenyl-d14	9.363	244	228351	42.32	ppm	0.00
Spiked Amount 50.000	Range 45 - 119		Recovery = 84.64%			
Target Compounds						Qvalue
66) Diethylphthalate	7.158	149	3638	0.64	ppm	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

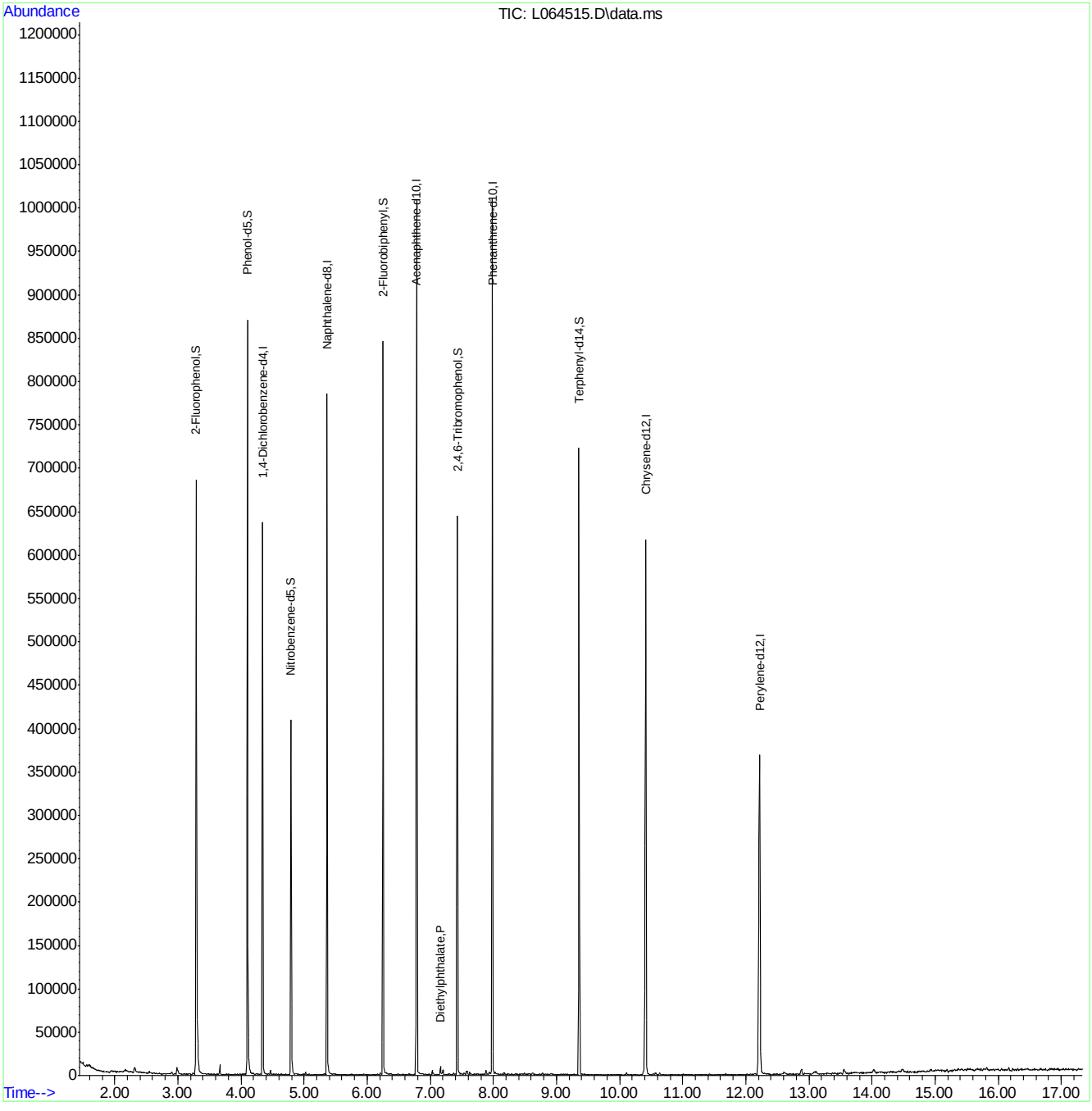
16.2.1

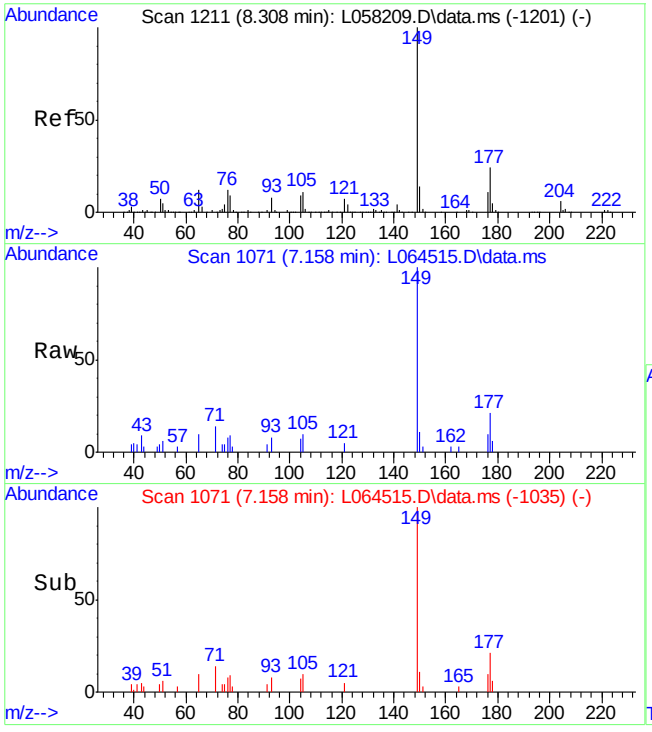
16

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064515.D
Acq On : 3 Jul 2013 8:25 pm
Operator : nancyf
Sample : op47508-mb
Misc : op47508,sl3253,30.0,,,1,1,soil
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 04 12:49:11 2013
Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Thu Jul 04 07:20:07 2013
Response via : Initial Calibration

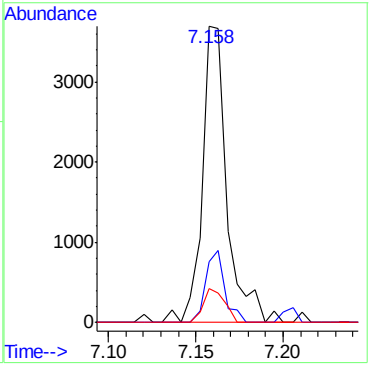




#66
Diethylphthalate
Concen: 0.64 ppm
RT: 7.158 min Scan# 1071
Delta R.T. -0.007 min
Lab File: L064515.D
Acq: 3 Jul 2013 8:25 pm

Tgt Ion:149 Resp: 3638

Ion	Ratio	Lower	Upper
149	100		
177	18.1	0.0	54.2
150	11.5	0.0	43.4



16.2.1

16

LSC Area Percent Report

Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064515.D
Acq On : 3 Jul 2013 8:25 pm
Operator : nancyf
Sample : op47508-mb
Misc : op47508,sl3253,30.0,,,1,1,soil
ALS Vial : 19 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\METHODS\8270da.m
Title : SW846 8270D OR EPA 625

Signal : TIC: L064515.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.934	90	93	95	rBV3	2230	2579	0.36%	0.035%
2	2.313	160	164	172	rBV7	6510	11317	1.59%	0.152%
3	2.388	177	178	184	rBV4	1339	1777	0.25%	0.024%
4	2.543	203	207	217	rVB7	3121	4258	0.60%	0.057%
5	2.837	257	262	265	rBV4	992	1557	0.22%	0.021%
6	2.906	272	275	280	rVB4	2614	2857	0.40%	0.038%
7	2.938	280	281	287	rBV	1244	1599	0.23%	0.022%
8	2.986	287	290	300	rBV	8451	10550	1.49%	0.142%
9	3.237	332	337	342	rVB5	1840	3280	0.46%	0.044%
10	3.291	342	347	366	rBV	685950	649993	91.51%	8.749%
11	3.665	412	417	421	rVB	11893	10631	1.50%	0.143%
12	4.103	495	499	512	rBV	870630	710329	100.00%	9.561%
13	4.236	521	524	530	rBV2	1522	1968	0.28%	0.026%
14	4.343	539	544	556	rVB	636380	510747	71.90%	6.874%
15	4.466	564	567	570	rVB3	5051	4412	0.62%	0.059%
16	4.530	574	579	581	rBV2	1054	1517	0.21%	0.020%
17	4.637	592	599	604	rBV3	1469	2230	0.31%	0.030%
18	4.792	621	628	638	rBV	408890	315718	44.45%	4.249%
19	5.021	668	671	677	rVV3	3462	2862	0.40%	0.039%
20	5.080	677	682	686	rVB2	1267	1529	0.22%	0.021%
21	5.320	724	727	731	rVB5	1668	1915	0.27%	0.026%
22	5.363	731	735	752	rBV	785339	585100	82.37%	7.875%
23	5.459	752	753	759	rVB3	1491	1847	0.26%	0.025%
24	6.164	877	885	889	rBV3	1476	2551	0.36%	0.034%
25	6.212	889	894	897	rVV3	2130	2576	0.36%	0.035%
26	6.250	897	901	917	rVB	845442	594189	83.65%	7.997%
27	6.367	922	923	931	rVB4	1408	2453	0.35%	0.033%
28	6.490	938	946	950	rVB2	1698	2156	0.30%	0.029%
29	6.784	993	1001	1015	rBV	1008664	703014	98.97%	9.462%
30	7.029	1044	1047	1054	rVB2	5837	6512	0.92%	0.088%
31	7.163	1068	1072	1074	rBV2	9757	9147	1.29%	0.123%
32	7.200	1074	1079	1085	rVB3	4976	6792	0.96%	0.091%
33	7.371	1102	1111	1114	rBV3	2313	3384	0.48%	0.046%
34	7.430	1114	1122	1130	rBV	644097	535952	75.45%	7.214%

LSC Area Percent Report

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064515.D
Acq On    :  3 Jul 2013   8:25 pm
Operator  : nancyf
Sample    : op47508-mb
Misc      : op47508,sl3253,30.0,,,1,1,soil
ALS Vial  : 19   Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON                          Filtering: 5
Sampling  : 1                            Min Area: 1500 Area counts
Start Thrs: 0.2                         Max Peaks: 100
Stop Thrs : 0                       Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method    : C:\msdchem\2\METHODS\8270da.m
Title     : SW846 8270D OR EPA 625
```

35	7.537	1138	1142	1146	rVB2	2873	2887	0.41%	0.039%
36	7.574	1146	1149	1156	rBV3	4429	6258	0.88%	0.084%
37	7.622	1156	1158	1162	rBV2	2986	2278	0.32%	0.031%
38	7.884	1204	1207	1210	rBV	5944	4326	0.61%	0.058%
39	7.937	1214	1217	1220	rVV4	3118	3067	0.43%	0.041%
40	7.985	1220	1226	1232	rVV	1010894	703436	99.03%	9.468%
41	8.028	1232	1234	1242	rVB5	3288	3820	0.54%	0.051%
42	8.167	1257	1260	1268	rVB3	2040	2770	0.39%	0.037%
43	8.290	1279	1283	1286	rVB3	1693	1596	0.22%	0.021%
44	8.450	1311	1313	1317	rBV2	1571	1844	0.26%	0.025%
45	8.493	1319	1321	1325	rVB2	2078	1553	0.22%	0.021%
46	8.621	1338	1345	1351	rBV6	1803	2920	0.41%	0.039%
47	8.776	1370	1374	1381	rVB	2609	3022	0.43%	0.041%
48	8.915	1395	1400	1403	rBV4	1892	2903	0.41%	0.039%
49	9.171	1444	1448	1454	rVB2	1102	1780	0.25%	0.024%
50	9.358	1478	1483	1495	rVB	722831	671578	94.54%	9.039%
51	9.866	1573	1578	1580	rBV2	1148	1670	0.24%	0.022%
52	10.111	1614	1624	1629	rBV	3300	4586	0.65%	0.062%
53	10.416	1669	1681	1692	rBV	617602	617920	86.99%	8.317%
54	10.528	1699	1702	1707	rBV4	2101	2849	0.40%	0.038%
55	10.565	1707	1709	1714	rVV2	3025	3374	0.47%	0.045%
56	10.640	1718	1723	1726	rBV2	2437	3045	0.43%	0.041%
57	11.009	1782	1792	1794	rBV3	1601	2538	0.36%	0.034%
58	11.425	1865	1870	1877	rVB3	1575	3180	0.45%	0.043%
59	11.681	1914	1918	1926	rBV2	1951	2599	0.37%	0.035%
60	11.810	1941	1942	1948	rVB	932	1565	0.22%	0.021%
61	12.141	2000	2004	2009	rBV4	1574	2999	0.42%	0.040%
62	12.221	2009	2019	2032	rVV	368858	554836	78.11%	7.468%
63	12.360	2040	2045	2046	rBV2	1165	1554	0.22%	0.021%
64	12.605	2087	2091	2101	rVB6	2678	5406	0.76%	0.073%
65	12.883	2138	2143	2147	rVB3	6490	9292	1.31%	0.125%
66	12.931	2148	2152	2155	rBV3	1929	1538	0.22%	0.021%
67	13.097	2172	2183	2184	rBV6	3512	7848	1.10%	0.106%
68	13.364	2232	2233	2240	rBV7	1561	2653	0.37%	0.036%
69	13.503	2252	2259	2261	rBV4	1335	1686	0.24%	0.023%
70	13.556	2265	2269	2281	rBV9	5868	12621	1.78%	0.170%
71	13.647	2284	2286	2288	rBV2	2517	2301	0.32%	0.031%

LSC Area Percent Report

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064515.D
Acq On    :  3 Jul 2013   8:25 pm
Operator  : nancyf
Sample    : op47508-mb
Misc      : op47508,sl3253,30.0,,,1,1,soil
ALS Vial  : 19   Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON                          Filtering: 5
Sampling  : 1                            Min Area: 1500 Area counts
Start Thrs: 0.2                         Max Peaks: 100
Stop Thrs : 0                       Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method    : C:\msdchem\2\METHODS\8270da.m
Title     : SW846 8270D OR EPA 625
```

72	14.032	2352	2358	2365	rVB10	4860	10655	1.50%	0.143%
73	14.486	2438	2443	2449	rVB7	2825	4452	0.63%	0.060%
74	14.566	2455	2458	2460	rBV2	1805	1791	0.25%	0.024%
75	14.635	2468	2471	2476	rVB4	1359	2516	0.35%	0.034%
76	14.721	2482	2487	2488	rBV4	1592	1554	0.22%	0.021%
77	14.737	2488	2490	2495	rBV5	1943	2610	0.37%	0.035%
78	14.929	2523	2526	2528	rBV3	3799	3863	0.54%	0.052%
79	15.175	2570	2572	2573	rBV2	2177	1576	0.22%	0.021%
80	15.244	2579	2585	2590	rBV8	3167	7580	1.07%	0.102%
81	15.372	2605	2609	2613	rBV7	3074	5263	0.74%	0.071%
82	15.773	2681	2684	2686	rBV4	1990	1961	0.28%	0.026%
83	16.056	2732	2737	2740	rBV7	2667	3691	0.52%	0.050%
84	16.173	2754	2759	2764	rVB6	3917	5797	0.82%	0.078%
85	16.227	2766	2769	2771	rBV3	2332	1731	0.24%	0.023%
86	16.392	2799	2800	2803	rBV3	1470	1609	0.23%	0.022%
87	17.076	2926	2928	2930	rBV3	2224	1658	0.23%	0.022%

Sum of corrected areas: 7429703

16.2.2

16

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064515.D
Acq On    :  3 Jul 2013   8:25 pm
Operator  : nancyf
Sample    : op47508-mb
Misc      : op47508,sl3253,30.0,,,1,1,soil
ALS Vial  : 19   Sample Multiplier: 1

Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library    : C:\DATABASE\NIST98.L
TIC Integration Parameters: lscint.p
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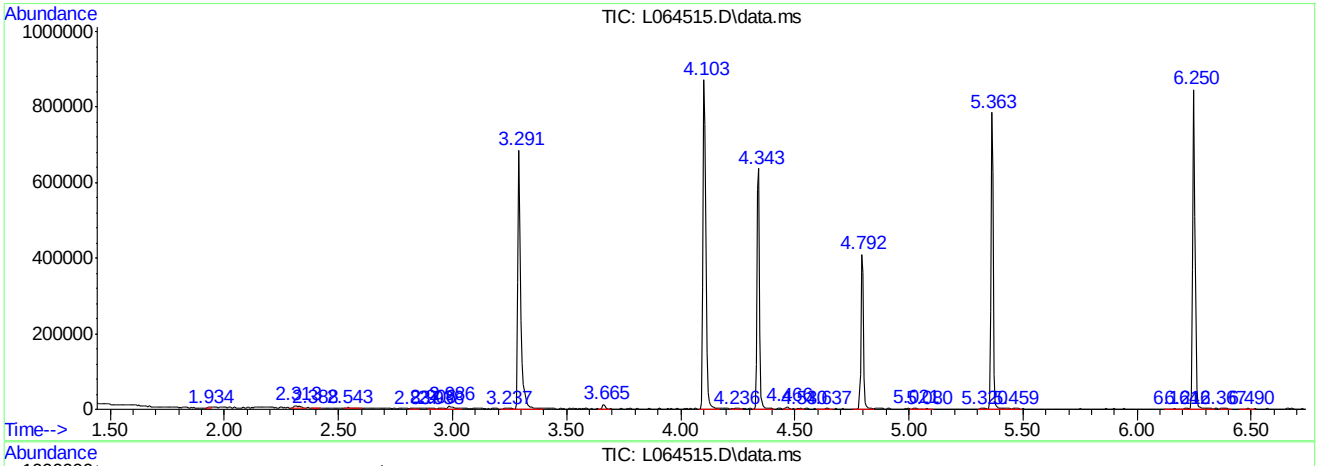
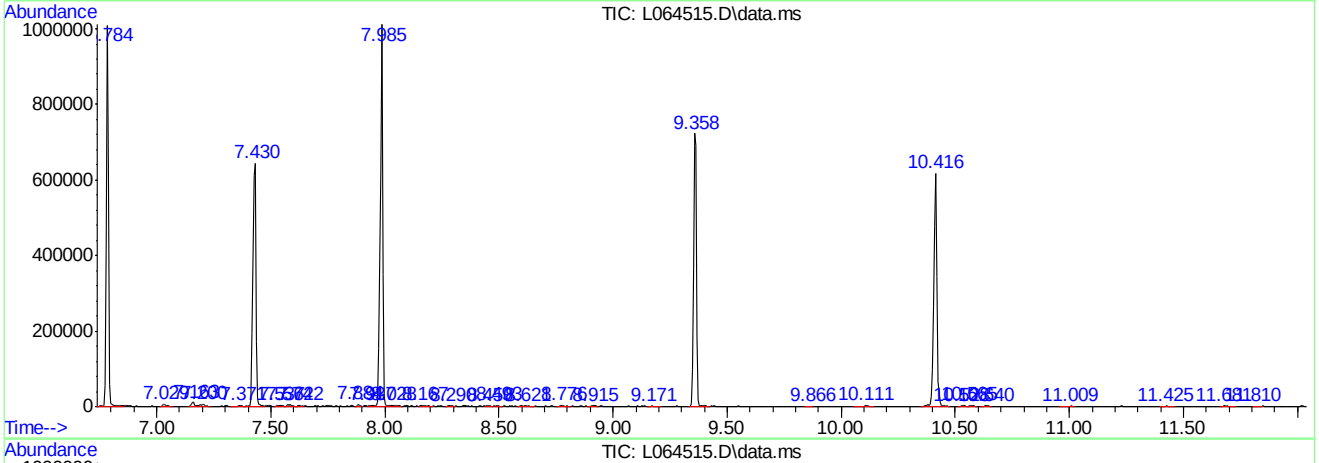
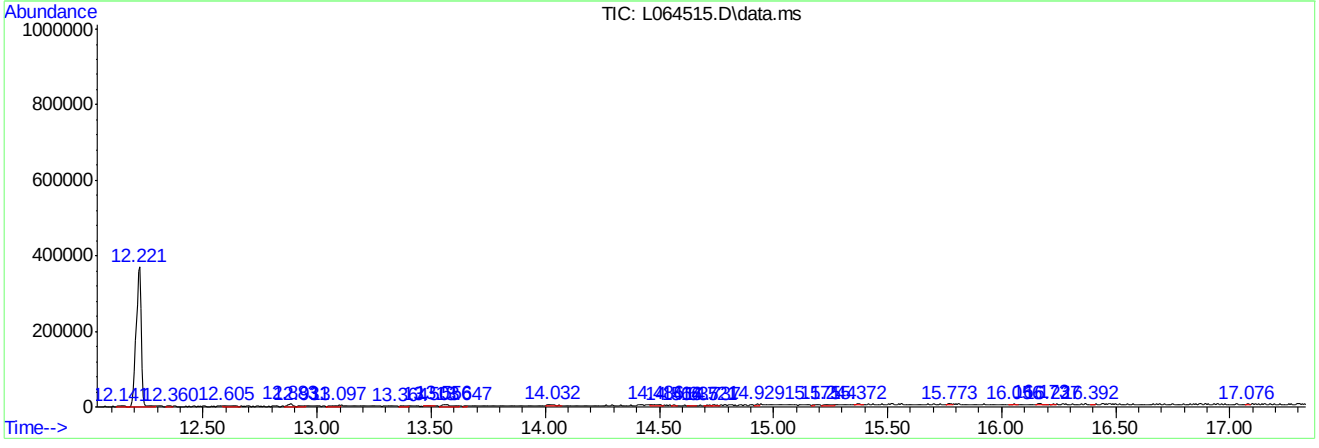






Library Search Compound Report

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064515.D
Acq On    :  3 Jul 2013   8:25 pm
Operator  : nancyf
Sample    : op47508-mb
Misc      : op47508,sl3253,30.0,,,1,1,soil
ALS Vial  : 19   Sample Multiplier: 1

Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library   : C:\DATABASE\NIST98.L
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected
```

****

Tentatively Identified Compound (LSC) summary

```
Data Path : C:\msdchem\2\DATA\sl3253\
Data File : L064515.D
Acq On    :  3 Jul 2013   8:25 pm
Operator  : nancyf
Sample    : op47508-mb
Misc      : op47508,sl3253,30.0,,,1,1,soil
ALS Vial  : 19   Sample Multiplier: 1

Quant Method : C:\msdchem\2\METHODS\8270da.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library   : C:\DATABASE\NIST98.L
TIC Integration Parameters: lscint.p

                                                  |--Internal Standard---|
TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------
```

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029286.D
Acq On : 5 Jul 2013 4:11 pm
Operator : nancyf
Sample : op47508-mb
Misc : op46508,sx1399,30.0,,,1,1,soil
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 08 08:07:45 2013
Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Jul 08 07:59:30 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.314	152	158887	40.00 ppm	0.00
22) Naphthalene-d8	4.288	136	576612	40.00 ppm	0.00
41) Acenaphthene-d10	6.351	164	253574	40.00 ppm	0.00
67) Phenanthrene-d10	8.624	188	289763	40.00 ppm	0.00
82) Chrysene-d12	13.705	240	371104	40.00 ppm	-0.02
91) Perylene-d12	16.436	264	385132	40.00 ppm	0.00

System Monitoring Compounds

5) 2-Fluorophenol	2.595	112	384253	64.02 ppm	0.00
Spiked Amount 100.000	Range 40 - 102		Recovery = 64.02%		
9) Phenol-d5	3.101	99	536403	70.61 ppm	0.00
Spiked Amount 100.000	Range 41 - 100		Recovery = 70.61%		
23) Nitrobenzene-d5	3.712	82	225533	33.94 ppm	0.00
Spiked Amount 50.000	Range 40 - 105		Recovery = 67.88%		
45) 2-Fluorobiphenyl	5.468	172	333092	34.40 ppm	0.00
Spiked Amount 50.000	Range 43 - 107		Recovery = 68.80%		
71) 2,4,6-Tribromophenol	7.550	330	67378	76.14 ppm	-0.01
Spiked Amount 100.000	Range 42 - 108		Recovery = 76.14%		
85) Terphenyl-d14	11.707	244	308217	42.50 ppm	0.00
Spiked Amount 50.000	Range 45 - 119		Recovery = 85.00%		

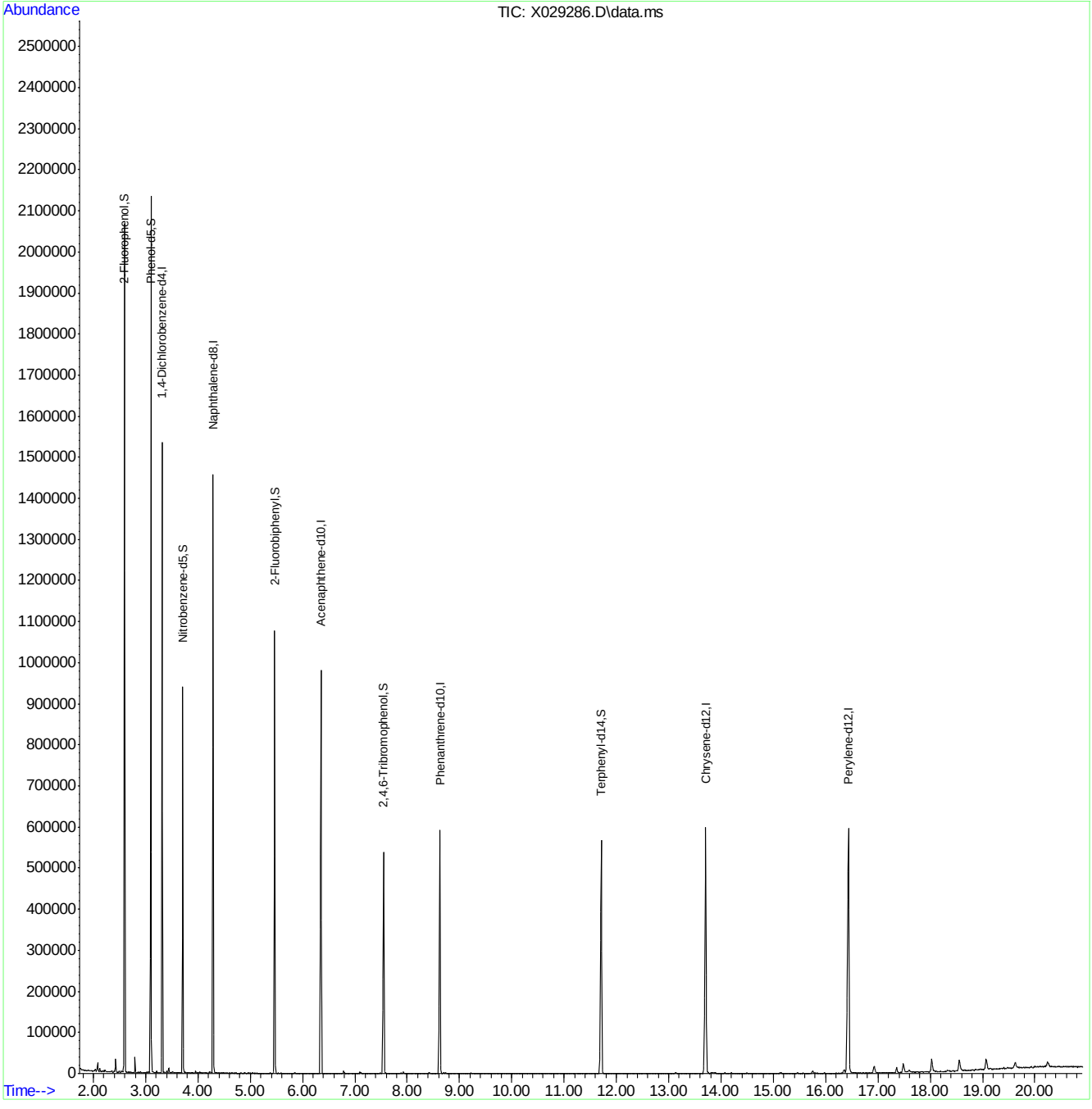
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029286.D
Acq On : 5 Jul 2013 4:11 pm
Operator : nancyf
Sample : op47508-mb
Misc : op46508,sx1399,30.0,,,1,1,soil
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 08 08:07:45 2013
Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title : SW846 8270D OR EPA 625
QLast Update : Mon Jul 08 07:59:30 2013
Response via : Initial Calibration



8270d.m Mon Jul 08 13:41:53 2013 Page: 2

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029286.D
Acq On : 5 Jul 2013 4:11 pm
Operator : nancyf
Sample : op47508-mb
Misc : op47508,sx1399,30.0,,,1,1,soil
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

Signal : TIC: X029286.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.041	104	108	115	rVB5	6413	6387	0.43%	0.050%
2	2.081	115	122	132	rVB4	22018	19510	1.31%	0.154%
3	2.123	132	137	145	rVB3	9734	8627	0.58%	0.068%
4	2.166	149	152	154	rBV3	1653	858	0.06%	0.007%
5	2.206	162	166	170	rBV3	5536	3839	0.26%	0.030%
6	2.228	170	174	181	rVB5	5340	4082	0.27%	0.032%
7	2.260	181	185	191	rBV7	2052	1631	0.11%	0.013%
8	2.305	199	201	204	rVB4	1762	689	0.05%	0.005%
9	2.348	214	216	222	rVB7	3482	2295	0.15%	0.018%
10	2.387	226	230	232	rBV4	3191	2141	0.14%	0.017%
11	2.405	233	236	239	rVV3	5540	3556	0.24%	0.028%
12	2.427	239	244	255	rVB	32663	22642	1.52%	0.179%
13	2.498	265	269	274	rVB4	3103	1680	0.11%	0.013%
14	2.532	278	281	284	rBV3	2638	1375	0.09%	0.011%
15	2.595	296	303	317	rVB	2064788	1325673	89.28%	10.481%
16	2.797	368	374	382	rVB	38421	22455	1.51%	0.178%
17	3.027	448	455	458	rBV5	2054	1980	0.13%	0.016%
18	3.052	461	464	472	rVB5	1965	1305	0.09%	0.010%
19	3.101	472	481	492	rBV	2133576	1484817	100.00%	11.739%
20	3.206	514	518	522	rBV6	3883	2821	0.19%	0.022%
21	3.283	541	545	549	rBV5	1036	975	0.07%	0.008%
22	3.314	550	556	565	rBV	1534316	975616	65.71%	7.713%
23	3.405	583	588	595	rBV6	4227	4584	0.31%	0.036%
24	3.439	595	600	605	rVB	12525	9182	0.62%	0.073%
25	3.496	615	620	622	rBV3	1650	1168	0.08%	0.009%
26	3.615	657	662	667	rVB5	1409	1429	0.10%	0.011%
27	3.643	670	672	678	rVB5	1038	876	0.06%	0.007%
28	3.675	678	683	686	rBV5	1172	932	0.06%	0.007%
29	3.712	686	696	705	rVV	939926	668458	45.02%	5.285%
30	3.751	706	710	722	rVB7	2584	2622	0.18%	0.021%
31	3.865	747	750	753	rBV3	1039	753	0.05%	0.006%
32	3.930	770	773	776	rBV3	865	621	0.04%	0.005%
33	3.959	778	783	790	rVB2	5758	4728	0.32%	0.037%
34	3.993	790	795	800	rBV6	1241	1270	0.09%	0.010%

LSC Area Percent Report

```
Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029286.D
Acq On    :  5 Jul 2013   4:11 pm
Operator  : nancyf
Sample    : op47508-mb
Misc      : op47508,sx1399,30.0,,,1,1,soil
ALS Vial  : 11   Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON                          Filtering: 5
Sampling  : 1                            Min Area: 500 Area counts
Start Thrs: 0.2                         Max Peaks: 100
Stop Thrs : 0                       Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method    : C:\msdchem\1\METHODS\8270d.m
Title     : SW846 8270D OR EPA 625
```

35	4.030	803	808	812	rBV4	2260	1734	0.12%	0.014%
36	4.223	871	876	878	rBV2	3070	1923	0.13%	0.015%
37	4.237	880	881	887	rVB3	2637	1492	0.10%	0.012%
38	4.288	889	899	907	rVV	1457572	1166772	78.58%	9.225%
39	4.473	961	964	967	rVB2	1098	634	0.04%	0.005%
40	4.638	1015	1022	1023	rBV5	1240	1096	0.07%	0.009%
41	4.902	1110	1115	1120	rVB3	931	788	0.05%	0.006%
42	4.962	1134	1136	1141	rVB4	953	564	0.04%	0.004%
43	5.380	1281	1283	1290	rBV5	1304	1363	0.09%	0.011%
44	5.468	1304	1314	1324	rVB	1078192	984586	66.31%	7.784%
45	5.533	1333	1337	1344	rBV3	797	704	0.05%	0.006%
46	5.593	1354	1358	1365	rVB3	1199	1194	0.08%	0.009%
47	5.669	1380	1385	1390	rVB4	781	794	0.05%	0.006%
48	5.843	1441	1446	1454	rBV3	1586	1352	0.09%	0.011%
49	5.880	1454	1459	1464	rBV3	697	603	0.04%	0.005%
50	6.155	1548	1556	1557	rBV2	655	548	0.04%	0.004%
51	6.189	1557	1568	1571	rBV2	1041	1422	0.10%	0.011%
52	6.351	1611	1625	1634	rVB	980763	1027079	69.17%	8.120%
53	6.786	1771	1778	1787	rBV2	6365	6225	0.42%	0.049%
54	7.090	1877	1885	1896	rBV4	3867	5931	0.40%	0.047%
55	7.144	1898	1904	1908	rVB2	900	724	0.05%	0.006%
56	7.488	2018	2025	2033	rVB3	1557	1683	0.11%	0.013%
57	7.550	2033	2047	2059	rBV	540001	655002	44.11%	5.179%
58	7.621	2068	2072	2078	rBV	515	588	0.04%	0.005%
59	7.656	2080	2084	2091	rBV	769	683	0.05%	0.005%
60	7.883	2153	2164	2172	rBV3	2276	2778	0.19%	0.022%
61	7.925	2172	2179	2188	rVB4	3642	4268	0.29%	0.034%
62	8.414	2345	2351	2361	rBV2	2662	3336	0.22%	0.026%
63	8.624	2410	2425	2440	rBV2	593588	769632	51.83%	6.085%
64	8.693	2444	2449	2453	rVV	1331	1514	0.10%	0.012%
65	8.721	2453	2459	2471	rVB5	1869	2669	0.18%	0.021%
66	9.218	2625	2634	2640	rVB3	1346	1600	0.11%	0.013%
67	9.409	2697	2701	2703	rBV2	793	623	0.04%	0.005%
68	9.934	2879	2886	2896	rVB2	739	1309	0.09%	0.010%
69	10.505	3081	3087	3092	rBB3	621	627	0.04%	0.005%
70	10.653	3135	3139	3148	rBV2	510	662	0.04%	0.005%
71	11.710	3491	3511	3526	rBV	568020	898194	60.49%	7.101%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029286.D
Acq On : 5 Jul 2013 4:11 pm
Operator : nancyf
Sample : op47508-mb
Misc : op47508,sx1399,30.0,,,1,1,soil
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 500 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\8270d.m
Title : SW846 8270D OR EPA 625

72	12.139	3658	3662	3667	rVB2	601	574	0.04%	0.005%
73	12.864	3908	3917	3921	rBV2	638	565	0.04%	0.004%
74	13.128	4001	4010	4021	rVB3	3059	3972	0.27%	0.031%
75	13.708	4192	4214	4236	rBV2	598403	1038715	69.96%	8.212%
76	13.816	4244	4252	4255	rBV6	1485	1775	0.12%	0.014%
77	14.063	4332	4339	4350	rVB5	2207	3228	0.22%	0.026%
78	14.197	4370	4386	4396	rBV5	1532	2572	0.17%	0.020%
79	14.461	4472	4479	4481	rBV2	511	574	0.04%	0.005%
80	14.492	4481	4490	4492	rBV3	1025	1099	0.07%	0.009%
81	14.719	4563	4570	4571	rBV2	972	813	0.05%	0.006%
82	15.128	4707	4714	4715	rBV3	1134	1046	0.07%	0.008%
83	15.461	4829	4831	4841	rVB5	1658	1302	0.09%	0.010%
84	15.751	4918	4933	4944	rBV6	5424	10436	0.70%	0.083%
85	16.293	5120	5124	5127	rBV4	788	649	0.04%	0.005%
86	16.347	5132	5143	5153	rBV5	8135	15564	1.05%	0.123%
87	16.436	5153	5174	5196	rVV2	595461	1122497	75.60%	8.875%
88	16.586	5224	5227	5230	rBV4	1160	551	0.04%	0.004%
89	16.615	5234	5237	5239	rVB3	1133	545	0.04%	0.004%
90	16.927	5335	5347	5367	rBV4	17433	33963	2.29%	0.269%
91	17.069	5396	5397	5401	rVB2	1182	585	0.04%	0.005%
92	17.311	5479	5482	5483	rVB2	1425	582	0.04%	0.005%
93	17.316	5483	5484	5487	rBV2	1760	727	0.05%	0.006%
94	17.359	5487	5499	5513	rVB10	13668	23623	1.59%	0.187%
95	17.487	5530	5544	5561	rVV4	22495	45963	3.10%	0.363%
96	17.595	5573	5582	5595	rVB4	4493	7142	0.48%	0.056%
97	18.030	5722	5735	5750	rBV4	31785	64356	4.33%	0.509%
98	18.555	5908	5920	5942	rBV5	27283	53244	3.59%	0.421%
99	19.067	6090	6100	6115	rVB4	24420	45452	3.06%	0.359%
100	19.618	6290	6294	6310	rVB6	12289	21820	1.47%	0.173%

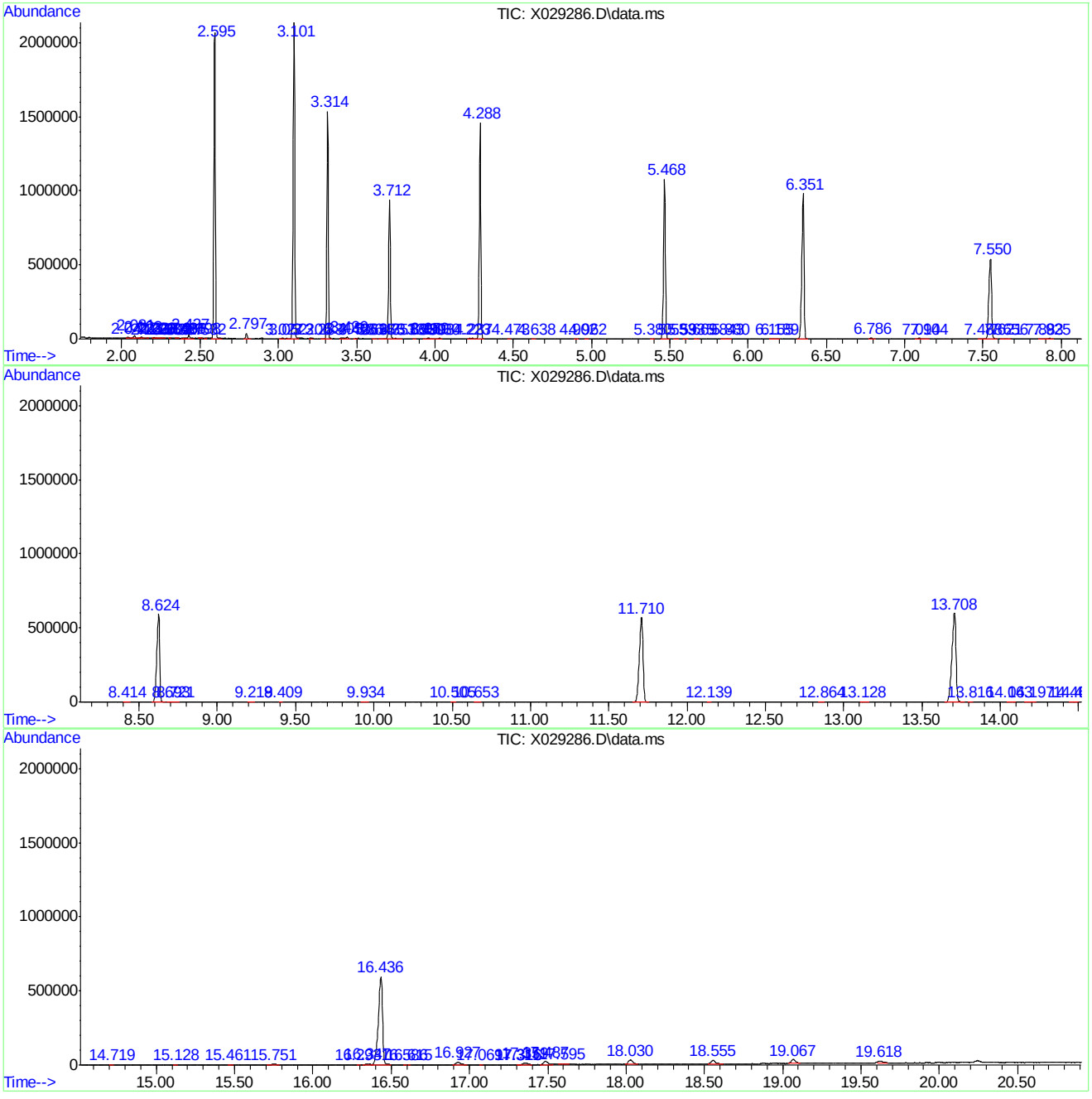
Sum of corrected areas: 12648207

LSC Report - Integrated Chromatogram

```
Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029286.D
Acq On    :  5 Jul 2013   4:11 pm
Operator  : nancyf
Sample    : op47508-mb
Misc      : op47508,sx1399,30.0,,,1,1,soil
ALS Vial  : 11   Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library    : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P
```



8270d.m Mon Jul 08 13:59:17 2013 Page: 4

Library Search Compound Report

```
Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029286.D
Acq On    :  5 Jul 2013   4:11 pm
Operator  : nancyf
Sample    : op47508-mb
Misc      : op47508,sx1399,30.0,,,1,1,soil
ALS Vial  : 11   Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library   : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
```

****

Tentatively Identified Compound (LSC) summary

```
Data Path : C:\msdchem\1\DATA\sx1399\
Data File : X029286.D
Acq On    :  5 Jul 2013   4:11 pm
Operator  : nancyf
Sample    : op47508-mb
Misc      : op47508,sx1399,30.0,,,1,1,soil
ALS Vial  : 11   Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\8270d.m
Quant Title  : SW846 8270D OR EPA 625

TIC Library   : C:\Database\nist98.l
TIC Integration Parameters: LSCINT.P

                                                    |--Internal Standard---|
TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-----------------------------------------------------------------------------
```

New Jersey
ACCUTEST LABORATORIES

08/02/13

Technical Report for

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Accutest Job Number: JB40351R

Sampling Date: 06/20/13

Report to:

EnviroTrac, Ltd

justinp@envirotrac.com

ATTN: Justin Piegaro

Total number of pages in report: **40**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kevin Dovedytis 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV

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Sample Summary

EnviroTrac, Ltd.

Job No: JB40351R

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB40351-2R	06/20/13	13:44	JP	06/21/13	SO	Soil	P-7

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	EnviroTrac, Ltd.	**Job No**	JB40351R
Site:	Hess QC Lab, 835 West Avenue, Port Reading, NJ	**Report Date**	7/30/2013 1:54:22 PM

On 06/21/2013, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 4 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB40351R was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Extractables by GC By Method NJDEP EPH

Matrix: SO **Batch ID:** OP67011A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- OP67011A-BSD for Total EPH: Outside the QC limits.
- OP67011A-BSD for Total Aliphatics: Outside the QC limits.
- OP67011A-BSD for C9-C12 Aliphatics: Outside the QC limits.
- OP67011A-BSD for C21-C40 Aliphatics: Outside the QC limits.
- OP67011A-BSD for C16-C21 Aromatics: Outside the QC limits.
- OP67011A-BSD for C16-C21 Aliphatics: Outside the QC limits.
- OP67011A-BSD for C12-C16 Aromatics: Outside the QC limits.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB40351R
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/20/13

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB40351-2R	**P-7**					
C10-C12 Aromatics		152	11	0.33	mg/kg	NJDEP EPH
C12-C16 Aromatics		209	11	0.47	mg/kg	NJDEP EPH
C16-C21 Aromatics		112	11	0.69	mg/kg	NJDEP EPH
Total Aromatics		473	11	0.33	mg/kg	NJDEP EPH
C9-C12 Aliphatics		670	11	0.30	mg/kg	NJDEP EPH
C12-C16 Aliphatics		808	11	0.47	mg/kg	NJDEP EPH
C16-C21 Aliphatics		87.7	11	0.41	mg/kg	NJDEP EPH
Total Aliphatics		1570	11	0.30	mg/kg	NJDEP EPH
Total EPH		2040	11	0.30	mg/kg	NJDEP EPH

New Jersey

ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest LabLink@745274 12:29 02-Aug-2013

Report of Analysis

Client Sample ID:	P-7		
Lab Sample ID:	JB40351-2R	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	92.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Y9736.D	1	07/29/13	LC	06/26/13	OP67011A	G6Y390
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	4.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C10-C12 Aromatics	152	11	0.33	mg/kg	
	C12-C16 Aromatics	209	11	0.47	mg/kg	
	C16-C21 Aromatics	112	11	0.69	mg/kg	
	C21-C36 Aromatics	ND	11	1.1	mg/kg	
	Total Aromatics	473	11	0.33	mg/kg	
	C9-C12 Aliphatics	670	11	0.30	mg/kg	
	C12-C16 Aliphatics	808	11	0.47	mg/kg	
	C16-C21 Aliphatics	87.7	11	0.41	mg/kg	
	C21-C40 Aliphatics	ND	11	1.2	mg/kg	
	Total Aliphatics	1570	11	0.30	mg/kg	
	Total EPH	2040	11	0.30	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	58%		40-140%
321-60-8	2-Fluorobiphenyl	85%		40-140%
3386-33-2	1-Chlorooctadecane	47%		40-140%
580-13-2	2-Bromonaphthalene	101%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST LABORATORIES

SCL

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

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FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JB40351

Client / Reporting Information

Company Name: Envirotrac
Street Address: 400 Corporate Court, Suite E
City / State / Zip: South Plainfield NJ 07080
Project Contact: Dave Daly — dave@envirotrac.com
Phone #: 908-757-1900 Fax #: 908-757-0017
Sampler(s) Name(s): Justin P + Mike B. Phone #: 908-757-1900

Project Information

Project Name: Hess QC Lab
Street: 835 West Avenue
City / State: Port Reading NJ
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name: Hess Corporation
Street Address: One Hess Plaza
City / State / Zip: Woodbridge NJ
Attention: Mike Matri

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	EPH Cat 2 (No Fractionation)	VOTIS	SVOTICS	TAL Metals			*3 Samples received per sample 6/24/13					LAB USE ONLY
-1	P-6		6/20/13	15:25	JP	SO	5					2			3	X	X	X	X			*					D24
-2	P-7		6/20/13	13:44	JP	SO	5					2			3	X	X	X	X								M35T2
-3	P-8		6/20/13	12:22	JP	SO	5					2			3	X	X	X	X								14E3
-4	P-9		6/20/13	10:40	JP	SO	5					2			3	X	X	X	X								4992
-5	P-10		6/20/13	11:44	JP	SO	5					2			3	X	X	X	X								

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] other _____

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [X] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format _____
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Hold EPH Samples after analysis for Fractionization pending results

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/20/13 17:00	1	2	6/21/13 11:00	2
Relinquished by Sampler: 3	Date Time: 6/21/13 1645	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Intact / Not intact	Preserved where applicable

On Ice: ☑ Cooler Temp: 4.0°C

RUSH

JB40351R: Chain of Custody
Page 1 of 4

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB40351 **Client:** **Project:**

Date / Time Received: 6/21/2013 **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (4/4); 0

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB40351R: Chain of Custody
Page 2 of 4

ACCUTEST LABORATORIES

Job Change Order: JB40351

Requested Date:	7/9/2013	**Received Date:**	6/21/2013
Account Name:	EnviroTrac, Ltd.	**Due Date:**	7/5/2013
Project Description:	Hess QC Lab, 835 West Avenue, Port Reading, NJ	**Deliverable:**	REDT2
CSR:	KevinD	**TAT (Days):**	14

Sample #: JB40351-ALL

Dept:

Change:
Cancel B8270TCL11+ due to subcontarcting error.

Above Changes Per:

Date: 7/9/2013

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

5.1 5

JB40351R: Chain of Custody
Page 3 of 4

ACCUTEST LABORATORIES

Job Change Order: JB40351

Requested Date:	7/11/2013	**Received Date:**	6/21/2013
Account Name:	EnviroTrac, Ltd.	**Due Date:**	7/5/2013
Project Description:	Hess QC Lab, 835 West Avenue, Port Reading, NJ	**Deliverable:**	REDT2
CSR:	KevinD	**TAT (Days):**	14

Sample #: JB40351-2

Dept:

Change:
Log in BNJEPHCAT2FO.

P-7

Above Changes Per: Justin Piegaro

Date: 7/11/2013

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Job No: JB40351R

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40351-2R	Collected: 20-JUN-13 13:44 By: JP		Received: 21-JUN-13 By: AS			
P-7						
JB40351-2R	NJDEP EPH	29-JUL-13 11:03	LC	26-JUN-13	MP	BNJEPHCAT2FO

Accutest Internal Chain of Custody

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40351-2.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40351-2.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40351-2.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40351-2.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40351-2.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40351-2.1
JB40351-2.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40351-2.1
JB40351-2.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40351-2.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40351-2.1
JB40351-2.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40351-2.1
JB40351-2.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40351-2.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40351-2.1.2	Gwendolyn Dymowski	GC5Z	06/26/13 18:23	Load on Instrument
JB40351-2.1.2	GC5Z	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40351-2.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40351-2.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40351-2.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40351-2.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40351-2.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40351-2.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40351-2.2
JB40351-2.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40351-2.2
JB40351-2.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40351-2.4	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-2.4	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-2.4	Secured Storage	Oksana Treglazova	07/01/13 15:52	Retrieve from Storage
JB40351-2.4	Oksana Treglazova	Secured Storage	07/01/13 15:52	Return to Storage
JB40351-2.4	Secured Storage	Oksana Treglazova	07/02/13 15:45	Retrieve from Storage
JB40351-2.4	Oksana Treglazova	Secured Storage	07/02/13 16:02	Return to Storage
JB40351-2.4	Secured Storage	Oksana Treglazova	07/03/13 15:52	Retrieve from Storage
JB40351-2.4	Oksana Treglazova	Secured Storage	07/03/13 15:52	Return to Storage
JB40351-2.5	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-2.5	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-2.6	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-2.6	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage

New Jersey
ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011A-MB1	6Y9733.D	1	07/29/13	LC	06/26/13	OP67011A	G6Y390

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40351-2R

CAS No.	Compound	Result	RL	MDL	Units	Q
	C10-C12 Aromatics	ND	11	0.32	mg/kg	
	C12-C16 Aromatics	ND	11	0.45	mg/kg	
	C16-C21 Aromatics	ND	11	0.67	mg/kg	
	C21-C36 Aromatics	ND	11	1.1	mg/kg	
	Total Aromatics	ND	11	0.32	mg/kg	
	C9-C12 Aliphatics	ND	11	0.29	mg/kg	
	C12-C16 Aliphatics	ND	11	0.45	mg/kg	
	C16-C21 Aliphatics	ND	11	0.40	mg/kg	
	C21-C40 Aliphatics	ND	11	1.2	mg/kg	
	Total Aliphatics	ND	11	0.29	mg/kg	
	Total EPH	ND	11	0.29	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	75%	40-140%
321-60-8	2-Fluorobiphenyl	50%	40-140%
3386-33-2	1-Chlorooctadecane	69%	40-140%
580-13-2	2-Bromonaphthalene	56%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011A-BS1	6Y9734.D	1	07/29/13	LC	06/26/13	OP67011A	G6Y390
OP67011A-BSD	6Y9735.D	1	07/29/13	LC	06/26/13	OP67011A	G6Y390

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40351-2R

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	C10-C12 Aromatics	13.3	6.99	52	5.81	44	18	40-140/25
	C12-C16 Aromatics	20	15.0	75	11.0	55	31* [a]	40-140/25
	C16-C21 Aromatics	33.3	31.7	95	22.0	66	36* [a]	40-140/25
	C21-C36 Aromatics	53.3	74.2	139	62.7	118	17	40-140/25
	Total Aromatics	120	128	107	101	84	24	40-140/25
	C9-C12 Aliphatics	20	11.9	59	8.54	43	33* [a]	40-140/25
	C12-C16 Aliphatics	13.3	15.6	117	12.5	94	22	40-140/25
	C16-C21 Aliphatics	20	21.5	107	13.6	68	45* [a]	40-140/25
	C21-C40 Aliphatics	66.7	57.9	87	41.0	61	34* [a]	40-140/25
	Total Aliphatics	120	107	89	75.7	63	34* [a]	40-140/25
	Total EPH	240	235	98	177	74	28* [a]	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	106%	68%	40-140%
321-60-8	2-Fluorobiphenyl	88%	97%	40-140%
3386-33-2	1-Chlorooctadecane	81%	75%	40-140%
580-13-2	2-Bromonaphthalene	110%	76%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP67011A-BS1	2-Methylnaphthalene	3.67	ND	0.0%	5.0
OP67011A-BS1	Naphthalene	3.03	ND	0.0%	5.0
OP67011A-BSD	2-Methylnaphthalene	2.67	ND	0.0%	5.0
OP67011A-BSD	Naphthalene	2.27	ND	0.0%	5.0

(a) Outside the QC limits.

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: NJDEP EPH **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]	S3 [b]	S4 [a]
JB40351-2R	6Y9736.D	58.0	85.0	47.0	101.0
OP67011A-BS1	6Y9734.D	106.0	88.0	81.0	110.0
OP67011A-BSD	6Y9735.D	68.0	97.0	75.0	76.0
OP67011A-MB1	6Y9733.D	75.0	50.0	69.0	56.0

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 2-Fluorobiphenyl	40-140%
S3 = 1-Chlorooctadecane	40-140%
S4 = 2-Bromonaphthalene	40-140%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

GC Surrogate Retention Time Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G6Y340-CC386	**Injection Date:**	07/29/13
Lab File ID:	6Y9732.D	**Injection Time:**	08:46
Instrument ID:	GC6Y	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT	S3 [b] RT	S4 [a] RT
Check Std	10.27	7.04	10.98	7.83

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT	S3 [b] RT	S4 [a] RT
OP67011A-MB1	6Y9733.D	07/29/13	09:33	10.28	7.04	10.99	7.84
OP67011A-BS1	6Y9734.D	07/29/13	10:03	10.27	7.04	10.98	7.84
OP67011A-BSD	6Y9735.D	07/29/13	10:33	10.27	7.04	11.03	7.84
JB40351-2R	6Y9736.D	07/29/13	11:03	10.27	7.04	10.98	7.84
JB41315-1R	6Y9737.D	07/29/13	11:32	10.28	7.04	10.98	7.84
ZZZZZZ	6Y9738.D	07/29/13	12:02	10.27	7.04	10.98	7.87
ZZZZZZ	6Y9739.D	07/29/13	12:32	10.27	7.04	10.99	7.83
OP67716-MB1	6Y9740.D	07/29/13	13:02	10.28	7.04	10.98	7.83
OP67716-BS1	6Y9741.D	07/29/13	13:32	10.28	7.04	10.99	7.84
OP67716-BSD	6Y9742.D	07/29/13	14:01	10.28	7.04	10.99	7.84
ZZZZZZ	6Y9743.D	07/29/13	14:31	10.28	7.04	10.98	7.83
ZZZZZZ	6Y9744.D	07/29/13	15:01	10.28	7.04	10.98	7.83

Surrogate Compounds

S1 = o-Terphenyl
S2 = 2-Fluorobiphenyl
S3 = 1-Chlorooctadecane
S4 = 2-Bromonaphthalene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G6Y390-CC386	**Injection Date:**	07/29/13
Lab File ID:	6Y9732.D	**Injection Time:**	08:46
Instrument ID:	GC6Y	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT	S3 [b] RT	S4 [a] RT
Check Std	10.27	7.04	10.98	7.83

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT	S3 [b] RT	S4 [a] RT
OP67011A-MB1	6Y9733.D	07/29/13	09:33	10.28	7.04	10.99	7.84
OP67011A-BS1	6Y9734.D	07/29/13	10:03	10.27	7.04	10.98	7.84
OP67011A-BSD	6Y9735.D	07/29/13	10:33	10.27	7.04	11.03	7.84
JB40351-2R	6Y9736.D	07/29/13	11:03	10.27	7.04	10.98	7.84
JB41315-1R	6Y9737.D	07/29/13	11:32	10.28	7.04	10.98	7.84
ZZZZZZ	6Y9738.D	07/29/13	12:02	10.27	7.04	10.98	7.87
ZZZZZZ	6Y9739.D	07/29/13	12:32	10.27	7.04	10.99	7.83
OP67716-MB1	6Y9740.D	07/29/13	13:02	10.28	7.04	10.98	7.83
OP67716-BS1	6Y9741.D	07/29/13	13:32	10.28	7.04	10.99	7.84
OP67716-BSD	6Y9742.D	07/29/13	14:01	10.28	7.04	10.99	7.84
ZZZZZZ	6Y9743.D	07/29/13	14:31	10.28	7.04	10.98	7.83
ZZZZZZ	6Y9744.D	07/29/13	15:01	10.28	7.04	10.98	7.83

Surrogate Compounds

S1 = o-Terphenyl
S2 = 2-Fluorobiphenyl
S3 = 1-Chlorooctadecane
S4 = 2-Bromonaphthalene

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

Initial Calibration Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y386-ICC386
Lab FileID: 6Y9620.D

Response Factor Report GC6Y6Z

Method : C:\MSDCHEM\1\METHODS\EPH6Y386.M (ChemStation Integrator)
Title : NJDEP Extractable Petroleum Hydrocarbons
Last Update : Thu Jul 25 09:13:20 2013
Response via : Initial Calibration

Calibration Files
100 =6y9622.D 50 =6y9621.D 20 =6y9620.D 10 =6y9619.D
2 =6y9617a.D 5 =6y9618.D =

Compound	100	50	20	10	2	5	Avg	%RSD
1)T 1,2,3-Trimethylbe	2.752	3.767	3.446	3.066	3.569	2.627	3.205 E5	14.40
2)T Naphthalene	2.812	3.847	3.461	3.173	3.576	2.674	3.257 E5	13.98
3)H C10-C12 Aromatics	2.782	3.807	3.454	3.120	3.572	2.651	3.231 E5	14.18
4)T 2-Methylnaphthale	2.615	3.575	3.245	2.956	3.286	2.484	3.027 E5	13.89
5)T Acenaphthylene	2.651	3.613	3.312	3.008	3.173	2.594	3.058 E5	12.82
6)T Acenaphthene	2.731	3.715	3.441	3.165	3.351	2.778	3.197 E5	12.07
7)H C12-C16 Aromatics	2.666	3.634	3.332	3.043	3.270	2.619	3.094 E5	12.86
8)T Fluorene	2.689	3.639	3.353	3.129	3.167	2.776	3.126 E5	11.35
9)T Phenanthrene	2.612	3.511	3.262	2.839	3.011	2.442	2.946 E5	13.58
10)T Anthracene	2.550	3.436	3.238	3.004	3.100	2.741	3.012 E5	10.76
11)T Fluoranthene	2.525	3.366	3.173	2.809	3.072	2.514	2.910 E5	12.08
12)T Pyrene	2.509	3.346	3.147	2.764	3.043	2.388	2.866 E5	13.11
13)H C16-C21 Aromatics	2.577	3.460	3.235	2.909	3.079	2.572	2.972 E5	12.02
14)T Benzo(a)Anthracen	2.342	3.080	2.893	2.419	2.566	2.186	2.581 E5	13.27
15)T Chrysene	2.346	3.082	2.935	2.612	2.863	2.686	2.754 E5	9.52
16)T Benzo(b)Fluoranth	2.283	2.940	2.707	2.216	2.246	1.835	2.371 E5	16.56
17)T Benzo(k)Fluoranth	2.273	2.936	2.842	2.419	2.717	2.179	2.561 E5	12.26
18)T Benzo(a)Pyrene	2.222	2.872	2.800	2.226	2.234	2.014	2.394 E5	14.73
19)T Indeno(1,2,3-cd)P	1.277	1.478	1.242	1.022	1.011	0.870	1.150 E5	19.32
20)T Dibenzo(ah)Anthra	0.963	1.323	1.333	1.193	1.121	1.035	1.161 E5	12.98
21)T Benzo(ghi)Perylen	2.214	2.795	2.540	2.226	2.183	1.964	2.320 E5	12.77
22)H C21-C36 Aromatics	2.270	2.914	2.733	2.318	2.384	2.084	2.451 E5	12.68
23)S 2-Fluorobiphenyl	2.451	3.348	3.042	2.636	2.732	2.283	2.749 E5	14.22
24)S 2-Bromonaphthalen	1.653	2.239	2.001	1.750	1.900	1.494	1.840 E5	14.41
25)S o-Terphenyl (S)	2.634	3.527	3.329	2.692	2.784	2.286	2.875 E5	16.15

Signal #2

27)T C9	1.170	1.233	1.209	1.009	0.891	1.015	1.088 E6	12.52
28)T C10	1.210	1.269	1.293	1.017	0.937	1.045	1.129 E6	13.12
29)T C12	1.221	1.293	1.242	1.002	0.935	1.019	1.119 E6	13.45
30)H C9-C12 Aliphatics	1.200	1.265	1.248	1.009	0.921	1.026	1.112 E6	12.97
31)T C14	1.242	1.346	1.291	1.031	0.985	1.045	1.157 E6	13.34
32)T C16	1.267	1.368	1.319	1.034	0.964	1.041	1.165 E6	14.78
33)H C12-C16 Aliphatic	1.255	1.357	1.305	1.032	0.975	1.043	1.161 E6	14.06
34)T C18	1.287	1.386	1.336	1.049	0.973	1.057	1.181 E6	14.83
35)T C20	1.297	1.394	1.345	1.060	0.989	1.070	1.192 E6	14.45
36)T C21	1.332	1.427	1.378	1.091	1.030	1.105	1.227 E6	13.92
37)H C16-C21 Aliphatic	1.305	1.402	1.353	1.067	0.997	1.078	1.200 E6	14.39
38)T C22	1.418	1.521	1.467	1.156	1.085	1.168	1.303 E6	14.37
39)T C24	1.300	1.395	1.341	1.056	0.995	1.070	1.193 E6	14.38
40)T C26	1.314	1.413	1.358	1.070	1.013	1.087	1.209 E6	14.19
41)T C28	1.307	1.407	1.351	1.062	1.012	1.075	1.202 E6	14.26
42)T C30	1.300	1.403	1.347	1.060	1.016	1.077	1.200 E6	13.99
43)T C32	1.266	1.365	1.302	1.025	0.979	1.055	1.165 E6	14.12
44)T C34	1.277	1.385	1.327	1.046	1.005	1.071	1.185 E6	13.79
45)T C36	1.159	1.268	1.203	0.949	0.904	0.974	1.076 E6	14.14

Initial Calibration Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y386-ICC386
Lab FileID: 6Y9620.D

46)T C38	1.042	1.131	1.070	0.852	0.803	0.872	0.962 E6	14.12
47)T C40	0.980	1.048	0.995	0.773	0.715	0.793	0.884 E6	15.82
48)H C21-C40 Aliphatic	1.236	1.333	1.276	1.005	0.953	1.024	1.138 E6	14.28
49)S Naphthalene (S)	1.295	1.391	1.431	1.160	1.094	1.141	1.252 E6	11.24
50)S 2-Methylnaphthale	1.493	1.619	1.426	1.159	1.093	1.214	1.334 E6	15.67
51)S 1-Chlorooctadecan	1.162	1.240	1.191	0.937	0.875	0.943	1.058 E6	14.81

(#) = Out of Range

EPH6Y386.M Thu Jul 25 09:42:11 2013 RPT1

Initial Calibration Verification

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y386-ICV386
Lab FileID: 6Y9623.D

Evaluate Continuing Calibration Report

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Signal #1 : C:\msdchem\1\DATA\6Y386\6y9623.D\FID1B.ch    Vial: 15
Signal #2 : C:\msdchem\1\DATA\6Y386\6y9623.D\FID2A.ch
Acq On    : 24 Jul 2013   6:10 pm                    Operator: laurenc
Sample    : icv386-50                                Inst    : GC6Y6Z
Misc      : OP67482,G6y386,15.0,,,2,1                Multiplr: 1.00
IntFile Signal #1: autoint1.e   IntFile Signal #2: EVENTS.E

Method       : C:\MSDCHEM\1\METHODS\EPH6Y386.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jul 25 09:13:20 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	1,2,3-Trimethylbenzene	320.464	250.611 E3	21.8	67	0.00	4.48- 4.54
2	T	Naphthalene	325.724	257.497 E3	20.9	67	0.00	5.80- 5.86
3	H	C10-C12 Aromatics	323.094	254.054 E3	21.4	67	0.00	4.44- 5.94
4	T	2-Methylnaphthalene	302.674	247.379 E3	18.3	69	0.00	6.59- 6.65
5	T	Acenaphthylene	305.835	244.678 E3	20.0	68	0.00	7.65- 7.71
6	T	Acenaphthene	319.667	250.679 E3	21.6	67	0.00	7.86- 7.92
7	H	C12-C16 Aromatics	309.392	247.579 E3	20.0	68	0.00	6.51- 7.97
8	T	Fluorene	312.568	244.476 E3	21.8	67	0.00	8.47- 8.53
9	T	Phenanthrene	294.601	237.414 E3	19.4	68	0.00	9.72- 9.79
10	T	Anthracene	301.157	237.164 E3	21.2	69	0.00	9.79- 9.85
11	T	Fluoranthene	290.975	229.516 E3	21.1	68	0.00	11.53-11.59
12	T	Pyrene	286.625	227.266 E3	20.7	68	0.00	11.91-11.97
13	H	C16-C21 Aromatics	297.185	235.167 E3	20.9	68	0.00	8.39-12.05
14	T	Benzo(a)Anthracene	258.103	221.069 E3	14.3	72	0.00	14.03-14.09
15	T	Chrysene	275.397	218.454 E3	20.7	71	0.00	14.10-14.16
16	T	Benzo(b)Fluoranthene	237.133	208.183 E3	12.2	71	0.00	15.94-16.00
17	T	Benzo(k)Fluoranthene	256.098	210.403 E3	17.8	72	0.00	15.99-16.05
18	T	Benzo(a)Pyrene	239.450	192.403 E3	19.6	67	0.00	16.47-16.53
19	T	Indeno(1,2,3-cd)Pyrene	115.003	101.769 E3	11.5	69	0.00	18.23-18.29
20	T	Dibenzo(ah)Anthracene	116.135	99.114 E3	14.7	75	0.00	18.27-18.33
21	T	Benzo(ghi)Perylene	232.022	200.023 E3	13.8	72	0.00	18.68-18.74
22	H	C21-C36 Aromatics	245.060	206.538 E3	15.7	72	0.00	13.94-19.92

***** Signal #2 *****

27	T	C9	1.088	0.684 E6	37.1#	55	0.00	3.20- 3.26
28	T	C10	1.129	0.965 E6	14.5	76	0.00	3.95- 4.01
29	T	C12	1.119	0.972 E6	13.1	75	0.00	5.45- 5.51
30	H	C9-C12 Aliphatics	1.112	0.874 E6	21.4	75	0.00	3.13- 5.61
31	T	C14	1.157	0.985 E6	14.9	73	0.00	6.81- 6.87
32	T	C16	1.165	1.010 E6	13.3	74	0.00	8.04- 8.10
33	H	C12-C16 Aliphatics	1.161	0.997 E6	14.1	74	0.00	6.75- 8.19
34	T	C18	1.181	1.013 E6	14.2	73	0.00	9.19- 9.25
35	T	C20	1.192	1.020 E6	14.4	73	0.00	10.41-10.47
36	T	C21	1.227	0.753 E6	38.6#	53	0.00	11.03-11.09
37	H	C16-C21 Aliphatics	1.200	0.929 E6	22.6	73	0.00	9.02-11.16
38	T	C22	1.303	1.018 E6	21.9	67	0.00	11.65-11.72
39	T	C24	1.193	1.043 E6	12.6	75	0.00	12.90-12.97
40	T	C26	1.209	1.049 E6	13.2	74	0.00	14.12-14.18
41	T	C28	1.202	1.019 E6	15.2	72	0.00	15.27-15.36
42	T	C30	1.200	1.014 E6	15.5	72	0.00	16.38-16.45

Initial Calibration Verification

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y386-ICV386
Lab FileID: 6Y9623.D

43	T	C32	1.165	0.972 E6	16.6	71	0.00	17.42-17.49
44	T	C34	1.185	0.930 E6	21.5	67	0.00	18.56-18.63
45	T	C36	1.076	0.852 E6	20.8	67	0.00	20.03-20.09
46	T	C38	0.962	0.773 E6	19.6	68	-0.01	21.97-22.07
47	T	C40	883.999	700.976 E3	20.7	67	-0.03	24.67-24.78
48	H	C21-C40 Aliphatics	1.138	0.937 E6	17.6	72	0.00	11.60-24.96

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6y9621.D EPH6Y386.M Thu Jul 25 09:24:06 2013 RPT1

6.5.2

6

Continuing Calibration Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y340-CC386
Lab FileID: 6Y9732.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\DATA\6Y390\6y9732.D\FID1B.ch    Vial: 2
Signal #2 : C:\msdchem\1\DATA\6Y390\6y9732.D\FID2A.ch
Acq On    : 29 Jul 2013   8:46 am                    Operator: laurenc
Sample    : cc386-20                                 Inst    : GC6Y6Z
Misc      : OP67684,G6y340,16.4,,,2,1                Multiplr: 1.00
IntFile Signal #1: autoint1.e   IntFile Signal #2: EVENTS.E

Method       : C:\MSDCHEM\1\METHODS\EPH6Y386.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Jul 27 08:10:18 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	1,2,3-Trimethylbenzene	320.464	300.577 E3	6.2	87	0.00	4.48- 4.54
2	T	Naphthalene	325.724	333.541 E3	-2.4	96	0.00	5.79- 5.85
3	H	C10-C12 Aromatics	323.094	317.059 E3	1.9	90	0.00	4.41- 5.95
4	T	2-Methylnaphthalene	302.674	302.651 E3	0.0	93	0.00	6.58- 6.64
5	T	Acenaphthylene	305.835	322.448 E3	-5.4	97	0.00	7.64- 7.70
6	T	Acenaphthene	319.667	326.187 E3	-2.0	95	0.00	7.85- 7.91
7	H	C12-C16 Aromatics	309.392	317.095 E3	-2.5	95	0.00	5.94- 7.98
8	T	Fluorene	312.568	317.750 E3	-1.7	95	0.00	8.47- 8.53
9	T	Phenanthrene	294.601	309.252 E3	-5.0	95	0.00	9.71- 9.78
10	T	Anthracene	301.157	302.572 E3	-0.5	93	0.00	9.79- 9.85
11	T	Fluoranthene	290.975	296.785 E3	-2.0	94	0.00	11.53-11.59
12	T	Pyrene	286.625	295.248 E3	-3.0	94	0.00	11.90-11.96
13	H	C16-C21 Aromatics	297.185	304.321 E3	-2.4	94	0.00	7.98-12.06
14	T	Benzo(a)Anthracene	258.103	272.561 E3	-5.6	94	0.00	14.03-14.09
15	T	Chrysene	275.397	273.792 E3	0.6	93	-0.01	14.09-14.15
16	T	Benzo(b)Fluoranthene	237.133	262.402 E3	-10.7	97	0.00	15.93-15.99
17	T	Benzo(k)Fluoranthene	256.098	265.625 E3	-3.7	93	-0.01	15.98-16.04
18	T	Benzo(a)Pyrene	239.450	261.053 E3	-9.0	93	0.00	16.47-16.53
19	T	Indeno(1,2,3-cd)Pyrene	115.003	122.632 E3	-6.6	99	-0.01	18.23-18.29
20	T	Dibenzo(ah)Anthracene	116.135	122.136 E3	-5.2	92	-0.01	18.26-18.32
21	T	Benzo(ghi)Perylene	232.022	246.637 E3	-6.3	97	-0.02	18.67-18.73
22	H	C21-C36 Aromatics	245.060	258.951 E3	-5.7	167	0.00	12.06-18.90
23	S	2-Fluorobiphenyl (S)	274.864	290.259 E3	-5.6	95	0.00	7.01- 7.07
24	S	2-Bromonaphthalene (S)	183.955	197.685 E3	-7.5	99	0.00	7.80- 7.86
25	S	o-Terphenyl (S)	287.526	314.923 E3	-9.5	95	0.00	10.24-10.30
*****		Signal #2 *****						
27	T	C9	1.088	1.022 E6	6.1	85	-0.01	3.18- 3.24
28	T	C10	1.129	1.066 E6	5.6	82	-0.02	3.93- 3.99
29	T	C12	1.119	1.077 E6	3.8	87	-0.02	5.43- 5.49
30	H	C9-C12 Aliphatics	1.112	1.055 E6	5.1	85	0.00	3.12- 5.60
31	T	C14	1.157	1.127 E6	2.6	87	-0.02	6.79- 6.85
32	T	C16	1.165	1.147 E6	1.5	87	-0.02	8.02- 8.08
33	H	C12-C16 Aliphatics	1.161	1.137 E6	2.0	87	0.00	5.60- 8.18
34	T	C18	1.181	1.170 E6	0.9	88	-0.02	9.18- 9.24
35	T	C20	1.192	1.184 E6	0.7	88	-0.03	10.38-10.44
36	T	C21	1.227	1.214 E6	1.1	88	-0.03	11.01-11.07
37	H	C16-C21 Aliphatics	1.200	1.190 E6	0.9	88	0.00	8.18-11.14
38	T	C22	1.303	1.297 E6	0.5	88	-0.03	11.63-11.70
39	T	C24	1.193	1.190 E6	0.3	89	-0.03	12.88-12.95

Continuing Calibration Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y340-CC386
Lab FileID: 6Y9732.D

40	T	C26	1.209	1.206 E6	0.2	89	-0.03	14.10-14.16
41	T	C28	1.202	1.200 E6	0.2	89	-0.03	15.24-15.33
42	T	C30	1.200	1.199 E6	0.1	89	-0.03	16.35-16.42
43	T	C32	1.165	1.169 E6	-0.3	90	-0.03	17.39-17.46
44	T	C34	1.185	1.219 E6	-2.9	92	-0.04	18.53-18.60
45	T	C36	1.076	1.146 E6	-6.5	95	-0.05	19.99-20.05
46	T	C38	0.962	1.090 E6	-13.3	102	-0.06	21.92-22.02
47	T	C40	883.999	1060.201 E3	-19.9	107	-0.09	24.60-24.71
48	H	C21-C40 Aliphatics	1.138	1.178 E6	-3.5	90	0.00	11.14-24.96
49	S	Naphthalene (S)	1.252	1.218 E6	2.7	85	-0.01	5.47- 5.53
50	S	2-Methylnaphthalene (S	1.334	1.267 E6	5.0	89	-0.01	6.25- 6.31
51	S	1-Chlorooctadecane (S)	1.058	1.049 E6	0.9	88	-0.02	10.95-11.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6y9620.D EPH6Y386.M Mon Jul 29 09:16:44 2013 RPT1

6.5.3 6

Continuing Calibration Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y390-CC386
Lab FileID: 6Y9732.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\DATA\6Y390\6y9732.D\FID1B.ch    Vial: 2
Signal #2 : C:\msdchem\1\DATA\6Y390\6y9732.D\FID2A.ch
Acq On    : 29 Jul 2013   8:46 am                    Operator: laurenc
Sample    : cc386-20                                 Inst    : GC6Y6Z
Misc      : OP67684,G6y340,16.4,,,2,1                Multiplr: 1.00
IntFile Signal #1: autoint1.e   IntFile Signal #2: EVENTS.E

Method       : C:\MSDCHEM\1\METHODS\EPH6Y386.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Jul 27 08:10:18 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	1,2,3-Trimethylbenzene	320.464	300.577 E3	6.2	87	0.00	4.48- 4.54
2	T	Naphthalene	325.724	333.541 E3	-2.4	96	0.00	5.79- 5.85
3	H	C10-C12 Aromatics	323.094	317.059 E3	1.9	90	0.00	4.41- 5.95
4	T	2-Methylnaphthalene	302.674	302.651 E3	0.0	93	0.00	6.58- 6.64
5	T	Acenaphthylene	305.835	322.448 E3	-5.4	97	0.00	7.64- 7.70
6	T	Acenaphthene	319.667	326.187 E3	-2.0	95	0.00	7.85- 7.91
7	H	C12-C16 Aromatics	309.392	317.095 E3	-2.5	95	0.00	5.94- 7.98
8	T	Fluorene	312.568	317.750 E3	-1.7	95	0.00	8.47- 8.53
9	T	Phenanthrene	294.601	309.252 E3	-5.0	95	0.00	9.71- 9.78
10	T	Anthracene	301.157	302.572 E3	-0.5	93	0.00	9.79- 9.85
11	T	Fluoranthene	290.975	296.785 E3	-2.0	94	0.00	11.53-11.59
12	T	Pyrene	286.625	295.248 E3	-3.0	94	0.00	11.90-11.96
13	H	C16-C21 Aromatics	297.185	304.321 E3	-2.4	94	0.00	7.98-12.06
14	T	Benzo(a)Anthracene	258.103	272.561 E3	-5.6	94	0.00	14.03-14.09
15	T	Chrysene	275.397	273.792 E3	0.6	93	-0.01	14.09-14.15
16	T	Benzo(b)Fluoranthene	237.133	262.402 E3	-10.7	97	0.00	15.93-15.99
17	T	Benzo(k)Fluoranthene	256.098	265.625 E3	-3.7	93	-0.01	15.98-16.04
18	T	Benzo(a)Pyrene	239.450	261.053 E3	-9.0	93	0.00	16.47-16.53
19	T	Indeno(1,2,3-cd)Pyrene	115.003	122.632 E3	-6.6	99	-0.01	18.23-18.29
20	T	Dibenzo(ah)Anthracene	116.135	122.136 E3	-5.2	92	-0.01	18.26-18.32
21	T	Benzo(ghi)Perylene	232.022	246.637 E3	-6.3	97	-0.02	18.67-18.73
22	H	C21-C36 Aromatics	245.060	258.951 E3	-5.7	167	0.00	12.06-18.90
23	S	2-Fluorobiphenyl (S)	274.864	290.259 E3	-5.6	95	0.00	7.01- 7.07
24	S	2-Bromonaphthalene (S)	183.955	197.685 E3	-7.5	99	0.00	7.80- 7.86
25	S	o-Terphenyl (S)	287.526	314.923 E3	-9.5	95	0.00	10.24-10.30
*****		Signal #2 *****						
27	T	C9	1.088	1.022 E6	6.1	85	-0.01	3.18- 3.24
28	T	C10	1.129	1.066 E6	5.6	82	-0.02	3.93- 3.99
29	T	C12	1.119	1.077 E6	3.8	87	-0.02	5.43- 5.49
30	H	C9-C12 Aliphatics	1.112	1.055 E6	5.1	85	0.00	3.12- 5.60
31	T	C14	1.157	1.127 E6	2.6	87	-0.02	6.79- 6.85
32	T	C16	1.165	1.147 E6	1.5	87	-0.02	8.02- 8.08
33	H	C12-C16 Aliphatics	1.161	1.137 E6	2.0	87	0.00	5.60- 8.18
34	T	C18	1.181	1.170 E6	0.9	88	-0.02	9.18- 9.24
35	T	C20	1.192	1.184 E6	0.7	88	-0.03	10.38-10.44
36	T	C21	1.227	1.214 E6	1.1	88	-0.03	11.01-11.07
37	H	C16-C21 Aliphatics	1.200	1.190 E6	0.9	88	0.00	8.18-11.14
38	T	C22	1.303	1.297 E6	0.5	88	-0.03	11.63-11.70
39	T	C24	1.193	1.190 E6	0.3	89	-0.03	12.88-12.95

Continuing Calibration Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y390-CC386
Lab FileID: 6Y9732.D

40	T	C26	1.209	1.206 E6	0.2	89	-0.03	14.10-14.16
41	T	C28	1.202	1.200 E6	0.2	89	-0.03	15.24-15.33
42	T	C30	1.200	1.199 E6	0.1	89	-0.03	16.35-16.42
43	T	C32	1.165	1.169 E6	-0.3	90	-0.03	17.39-17.46
44	T	C34	1.185	1.219 E6	-2.9	92	-0.04	18.53-18.60
45	T	C36	1.076	1.146 E6	-6.5	95	-0.05	19.99-20.05
46	T	C38	0.962	1.090 E6	-13.3	102	-0.06	21.92-22.02
47	T	C40	883.999	1060.201 E3	-19.9	107	-0.09	24.60-24.71
48	H	C21-C40 Aliphatics	1.138	1.178 E6	-3.5	90	0.00	11.14-24.96
49	S	Naphthalene (S)	1.252	1.218 E6	2.7	85	-0.01	5.47- 5.53
50	S	2-Methylnaphthalene (S	1.334	1.267 E6	5.0	89	-0.01	6.25- 6.31
51	S	1-Chlorooctadecane (S)	1.058	1.049 E6	0.9	88	-0.02	10.95-11.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6y9620.D EPH6Y386.M Mon Jul 29 09:16:44 2013 RPT1

6.5.4

6

Continuing Calibration Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y390-CC386
Lab FileID: 6Y9745.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\DATA\6Y390\6y9745.D\FID1B.ch    Vial: 3
Signal #2 : C:\msdchem\1\DATA\6Y390\6y9745.D\FID2A.ch
Acq On    : 29 Jul 2013   4:17 pm                    Operator: laurenc
Sample    : cc386-50                                 Inst    : GC6Y6Z
Misc      : OP67716,G6y340,16.6,,,2,1                Multiplr: 1.00
IntFile Signal #1: autoint1.e   IntFile Signal #2: EVENTS.E

Method       : C:\MSDCHEM\1\METHODS\EPH6Y386.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Jul 27 08:10:18 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	1,2,3-Trimethylbenzene	320.464	267.306 E3	16.6	71	-0.01	4.48- 4.54
2	T	Naphthalene	325.724	282.310 E3	13.3	73	0.00	5.79- 5.85
3	H	C10-C12 Aromatics	323.094	274.808 E3	14.9	72	0.00	4.41- 5.95
4	T	2-Methylnaphthalene	302.674	264.937 E3	12.5	74	0.00	6.58- 6.64
5	T	Acenaphthylene	305.835	275.257 E3	10.0	76	0.00	7.64- 7.70
6	T	Acenaphthene	319.667	284.281 E3	11.1	77	0.00	7.85- 7.91
7	H	C12-C16 Aromatics	309.392	274.825 E3	11.2	77	0.00	5.94- 7.98
8	T	Fluorene	312.568	279.547 E3	10.6	77	0.00	8.47- 8.53
9	T	Phenanthrene	294.601	272.156 E3	7.6	78	0.00	9.71- 9.78
10	T	Anthracene	301.157	265.813 E3	11.7	77	0.00	9.79- 9.85
11	T	Fluoranthene	290.975	260.330 E3	10.5	77	0.00	11.53-11.59
12	T	Pyrene	286.625	259.123 E3	9.6	77	0.00	11.91-11.97
13	H	C16-C21 Aromatics	297.185	267.394 E3	10.0	77	0.00	7.98-12.06
14	T	Benzo(a)Anthracene	258.103	238.001 E3	7.8	77	0.00	14.04-14.10
15	T	Chrysene	275.397	237.849 E3	13.6	77	0.00	14.10-14.16
16	T	Benzo(b)Fluoranthene	237.133	226.683 E3	4.4	77	0.00	15.94-16.00
17	T	Benzo(k)Fluoranthene	256.098	226.844 E3	11.4	77	0.00	15.99-16.05
18	T	Benzo(a)Pyrene	239.450	219.784 E3	8.2	77	0.00	16.47-16.53
19	T	Indeno(1,2,3-cd)Pyrene	115.003	110.733 E3	3.7	75	0.00	18.24-18.30
20	T	Dibenzo(ah)Anthracene	116.135	98.699 E3	15.0	75	0.00	18.27-18.33
21	T	Benzo(ghi)Perylene	232.022	210.367 E3	9.3	75	0.00	18.68-18.74
22	H	C21-C36 Aromatics	245.060	222.299 E3	9.3	77	0.00	12.06-18.90
23	S	2-Fluorobiphenyl (S)	274.864	249.795 E3	9.1	75	0.00	7.01- 7.07
24	S	2-Bromonaphthalene (S)	183.955	171.845 E3	6.6	77	0.00	7.80- 7.86
25	S	o-Terphenyl (S)	287.526	275.588 E3	4.2	78	0.00	10.25-10.31
*****		Signal #2 *****						
27	T	C9	1.088	0.950 E6	12.7	77	-0.01	3.18- 3.24
28	T	C10	1.129	0.994 E6	12.0	78	-0.02	3.93- 3.99
29	T	C12	1.119	1.025 E6	8.4	79	-0.02	5.43- 5.49
30	H	C9-C12 Aliphatics	1.112	0.990 E6	11.0	78	0.00	3.12- 5.60
31	T	C14	1.157	1.070 E6	7.5	80	-0.02	6.80- 6.86
32	T	C16	1.165	1.099 E6	5.7	80	-0.02	8.02- 8.08
33	H	C12-C16 Aliphatics	1.161	1.085 E6	6.6	80	0.00	5.60- 8.18
34	T	C18	1.181	1.129 E6	4.4	81	-0.02	9.18- 9.24
35	T	C20	1.192	1.142 E6	4.2	82	-0.02	10.39-10.45
36	T	C21	1.227	1.171 E6	4.6	82	-0.02	11.02-11.08
37	H	C16-C21 Aliphatics	1.200	1.147 E6	4.4	99	0.00	8.18-11.14
38	T	C22	1.303	1.252 E6	3.9	82	-0.02	11.64-11.71
39	T	C24	1.193	1.153 E6	3.4	83	-0.02	12.89-12.96

Continuing Calibration Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G6Y390-CC386
Lab FileID: 6Y9745.D

40	T	C26	1.209	1.171 E6	3.1	83	-0.02	14.11-14.17
41	T	C28	1.202	1.171 E6	2.6	83	-0.02	15.25-15.35
42	T	C30	1.200	1.181 E6	1.6	84	-0.02	16.37-16.44
43	T	C32	1.165	1.167 E6	-0.2	85	-0.02	17.41-17.48
44	T	C34	1.185	1.228 E6	-3.6	89	-0.02	18.55-18.62
45	T	C36	1.076	1.172 E6	-8.9	92	-0.02	20.01-20.07
46	T	C38	0.962	1.137 E6	-18.2	101	-0.04	21.94-22.05
47	T	C40	883.999	1156.385 E3	-30.8#	110	-0.05	24.65-24.75
48	H	C21-C40 Aliphatics	1.138	1.179 E6	-3.6	85	0.00	11.14-24.96
49	S	Naphthalene (S)	1.252	1.115 E6	10.9	80	-0.02	5.46- 5.52
50	S	2-Methylnaphthalene (S	1.334	1.381 E6	-3.5	85	-0.02	6.25- 6.31
51	S	1-Chlorooctadecane (S)	1.058	1.022 E6	3.4	82	-0.02	10.96-11.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6y9621.D EPH6Y386.M Mon Jul 29 16:44:36 2013 RPT1

6.5.5

6

New Jersey

ACCUTEST LABORATORIES

GC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Owen McKenna 07/30/13 10:13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\6Y390\
Data File : 6y9736.D
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Jul 2013 11:03 am
Operator : laurenc
Sample : jb40351-2r
Misc : OP67011a,G6y390,15.7,,,4,1
ALS Vial : 35 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: EVENTS.E
Quant Time: Jul 30 08:36:56 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH6Y386.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jul 24 18:43:27 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul/col
Signal #1 Phase : HP5 Signal #2 Phase: HP5
Signal #1 Info : 30mx.25mm.x.25um Signal #2 Info : 30mx.32mm.x25um

	Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds						
23) S	2-Fluorobiphenyl (S)	7.041	11677105	42.483	ug/L	m
24) S	2-Bromonaphthalene (S)	7.835	9294101	50.524	ug/L	m
25) S	o-Terphenyl (S)	10.273	4152052	14.441	ug/L	m
51) S	1-Chlorooctadecane (S)	10.981f	12553932	11.865	ug/L	m
Target Compounds						
1) T	1,2,3-Trimethylbenzene	4.507	11741985	36.641	ug/l	
2) T	Naphthalene	5.821	13121622	40.284	ug/L	m
3) H	C10-C12 Aromatics	5.180	177783275	550.252	ug/L	
4) T	2-Methylnaphthalene	6.614	14259557	47.112	ug/L	m
5) T	Acenaphthylene	7.675	1057807	3.459	ug/l	m
6) T	Acenaphthene	7.890	1094044	3.422	ug/l	m
7) H	C12-C16 Aromatics	6.960	235283284	760.470	ug/L	
8) T	Fluorene	8.493	1100731	3.522	ug/l	m
13) H	C16-C21 Aromatics	10.020	120598324	405.802	ug/L	
30) H	C9-C12 Aliphatics	4.360	2703245987	2431.796	ug/L	
33) H	C12-C16 Aliphatics	6.890	3404233219	2931.809	ug/L	
37) H	C16-C21 Aliphatics	9.660	382173076	318.381	ug/L	

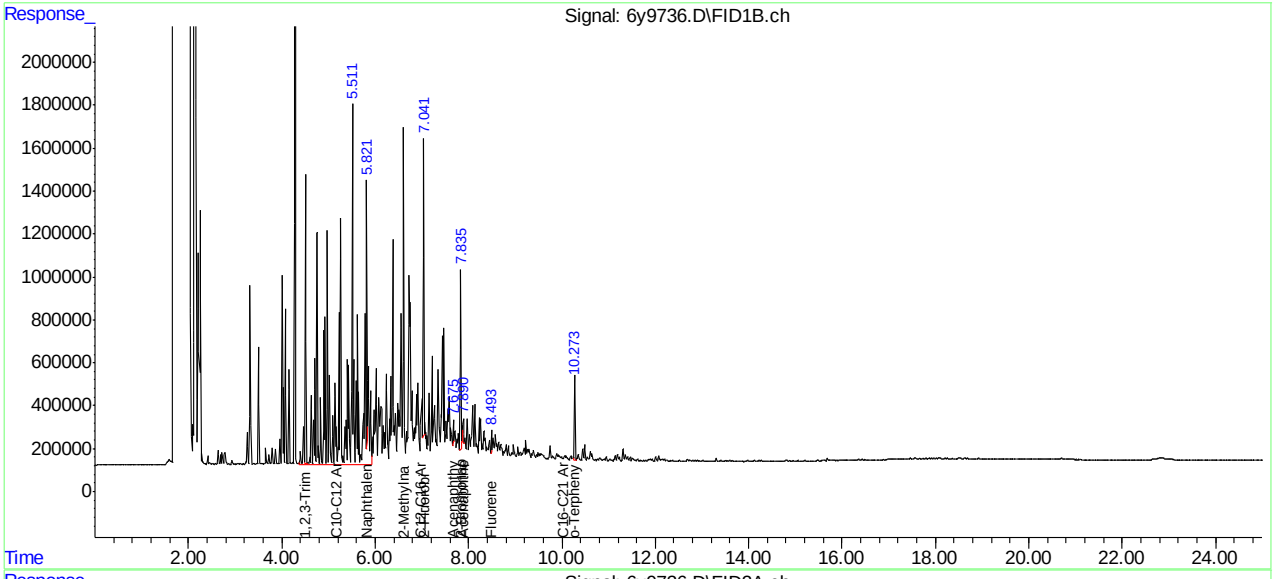
(f)=RT Delta > 1/2 Window (m)=manual int.

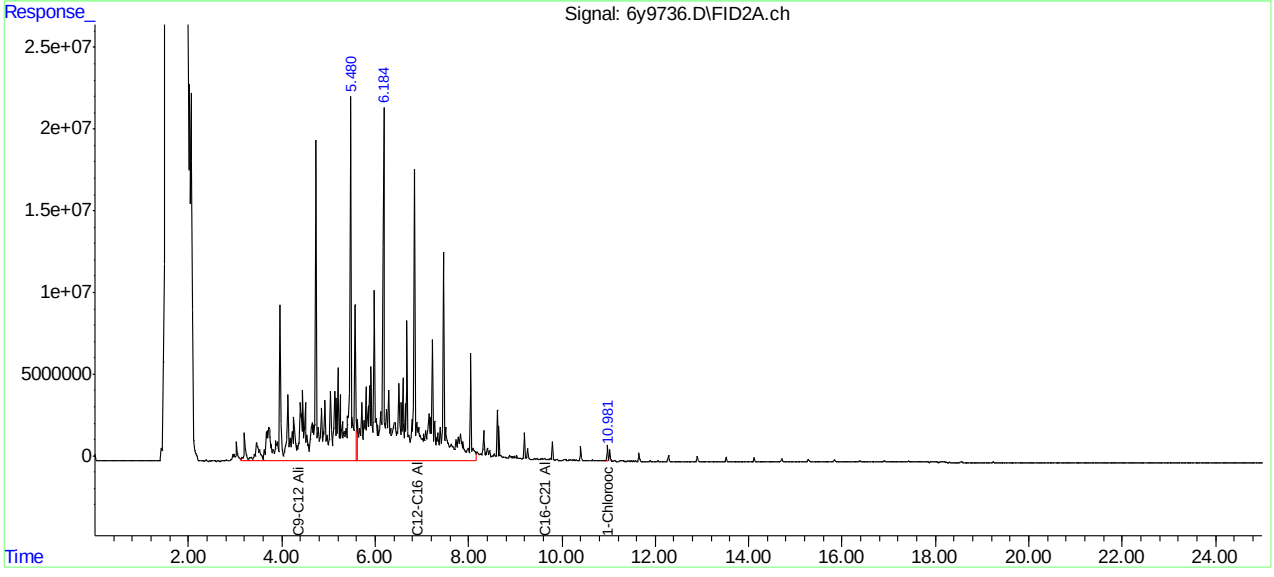
Quantitation Report (QT Reviewed)

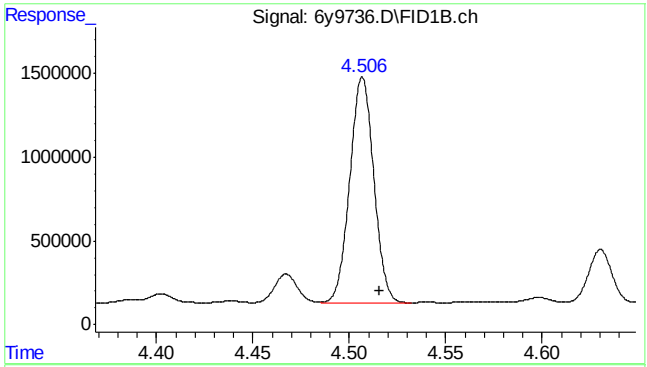
Data Path : C:\msdchem\1\DATA\6Y390\
Data File : 6y9736.D
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Jul 2013 11:03 am
Operator : laurenc
Sample : jb40351-2r
Misc : OP67011a,G6y390,15.7,,,4,1
ALS Vial : 35 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: EVENTS.E
Quant Time: Jul 30 08:36:56 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH6Y386.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jul 24 18:43:27 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul/col
Signal #1 Phase : HP5 Signal #2 Phase: HP5
Signal #1 Info : 30mx.25mm.x.25um Signal #2 Info : 30mx.32mm.x25um

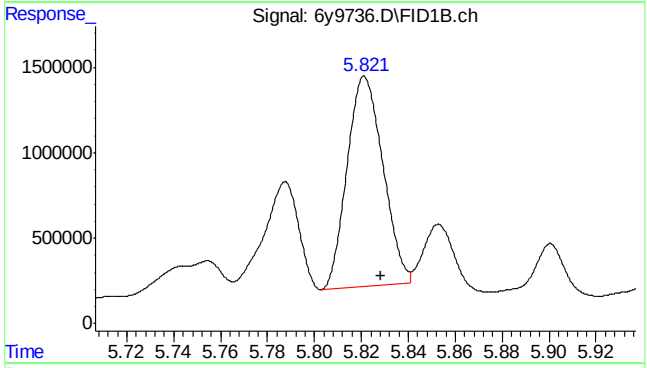






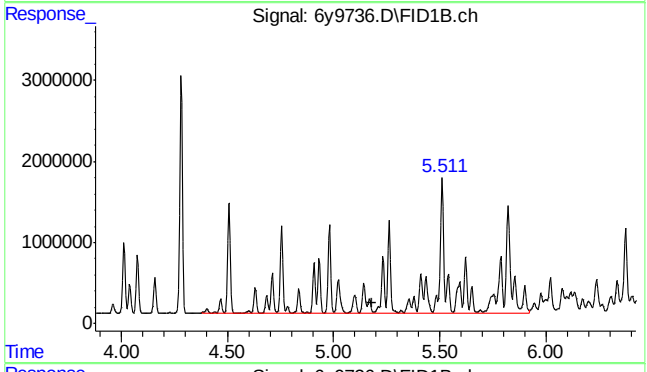
#1 1,2,3-Trimethylbenzene

R.T.: 4.507 min
Delta R.T.: -0.009 min
Response: 11741985
Conc: 36.64 ug/l



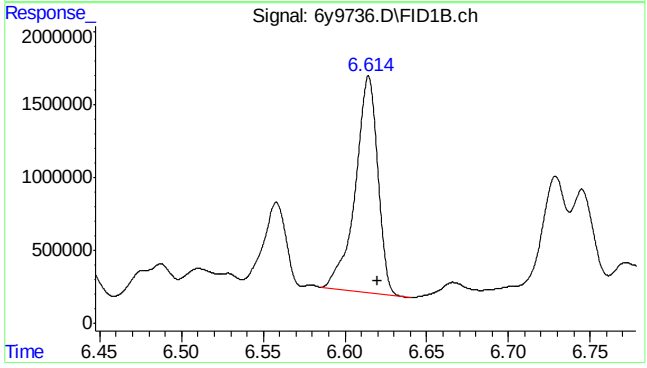
#2 Naphthalene

R.T.: 5.821 min
Delta R.T.: -0.008 min
Response: 13121622
Conc: 40.28 ug/L m



#3 C10-C12 Aromatics

R.T.: 5.180 min
Delta R.T.: 0.000 min
Response: 177783275
Conc: 550.25 ug/L m

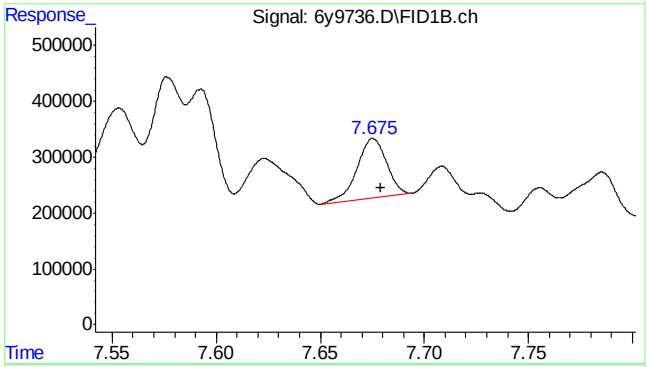


#4 2-Methylnaphthalene

R.T.: 6.614 min
Delta R.T.: -0.006 min
Response: 14259557
Conc: 47.11 ug/L m

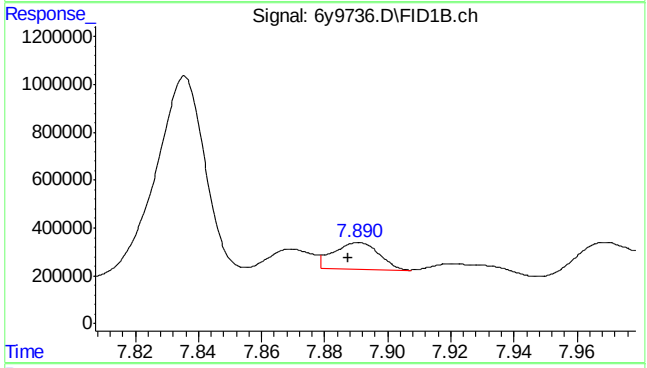
7.1.1

7



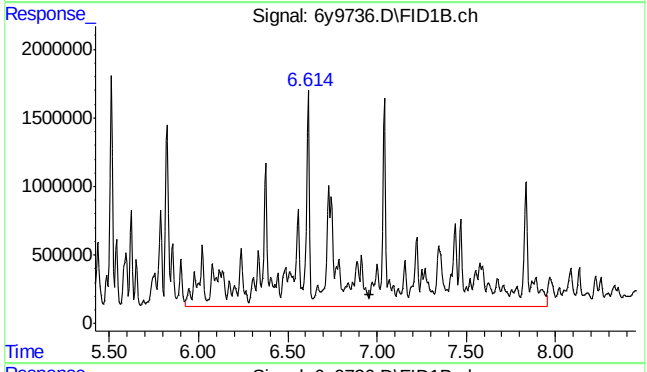
#5 Acenaphthylene

R.T.: 7.675 min
Delta R.T.: -0.005 min
Response: 1057807
Conc: 3.46 ug/l m



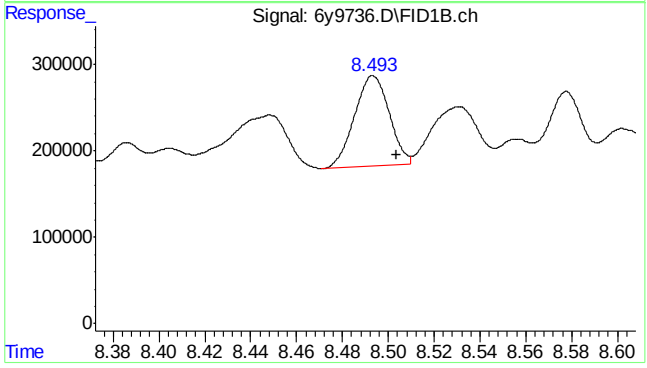
#6 Acenaphthene

R.T.: 7.890 min
Delta R.T.: 0.003 min
Response: 1094044
Conc: 3.42 ug/l m



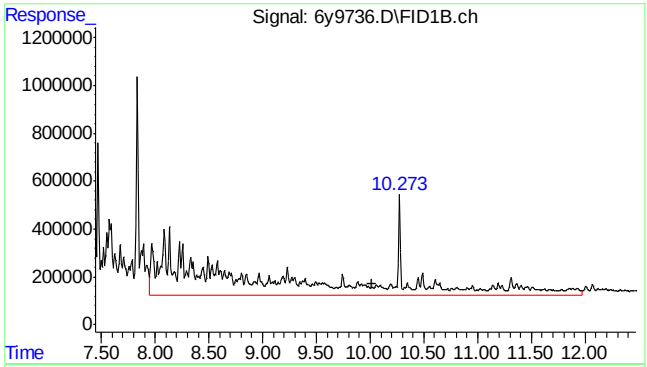
#7 C12-C16 Aromatics

R.T.: 6.960 min
Delta R.T.: 0.000 min
Response: 235283284
Conc: 760.47 ug/L m



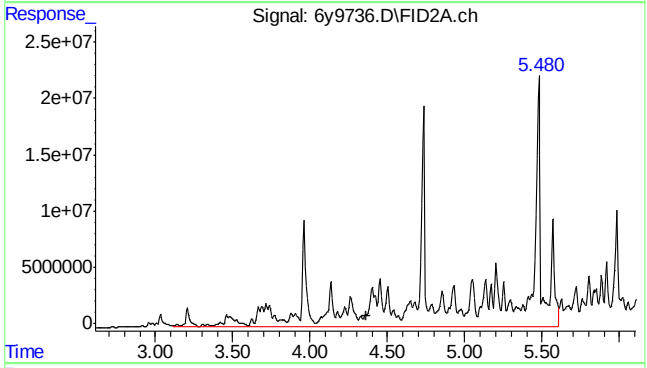
#8 Fluorene

R.T.: 8.493 min
Delta R.T.: -0.011 min
Response: 1100731
Conc: 3.52 ug/l m



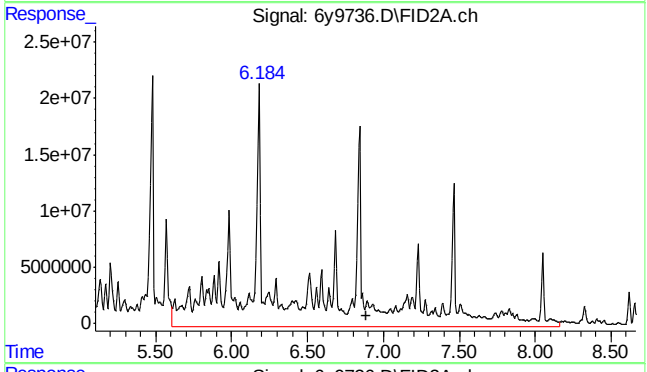
#13 C16-C21 Aromatics

R.T.: 10.020 min
Delta R.T.: 0.000 min
Response: 120598324
Conc: 405.80 ug/L m



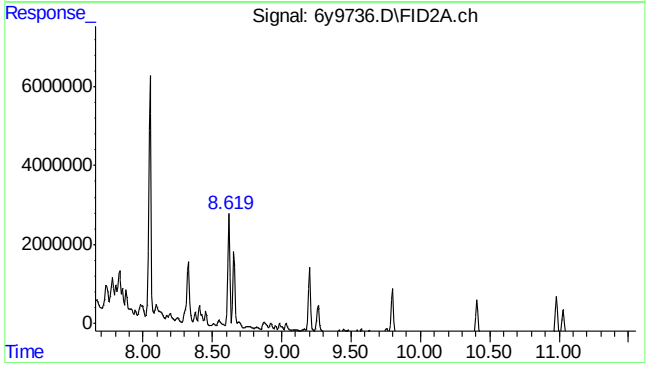
#30 C9-C12 Aliphatics

R.T.: 4.360 min
Delta R.T.: 0.000 min
Response: 2703245987
Conc: 2431.80 ug/L m



#33 C12-C16 Aliphatics

R.T.: 6.890 min
Delta R.T.: 0.000 min
Response: 3404233219
Conc: 2931.81 ug/L m



#37 C16-C21 Aliphatics

R.T.: 9.660 min
Delta R.T.: 0.000 min
Response: 382173076
Conc: 318.38 ug/L m

Manual Integrations APPROVED (compounds with "m" flag)
Cheng-Hwan Ao
07/30/13 12:06

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\6Y390\
Data File : 6y9733.D
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Jul 2013 9:33 am
Operator : laurenc
Sample : op67011a-mb1
Misc : OP67011a,G6y390,15.0,,,4,1
ALS Vial : 32 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: EVENTS.E
Quant Time: Jul 29 17:30:49 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH6Y386.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jul 24 18:43:27 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul/col
Signal #1 Phase : HP5 Signal #2 Phase: HP5
Signal #1 Info : 30mx.25mm.x.25um Signal #2 Info : 30mx.32mm.x25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
23) S 2-Fluorobiphenyl (S)	7.041	13798380	50.201 ug/L
24) S 2-Bromonaphthalene (S)	7.837	10312532	56.060 ug/L
25) S o-Terphenyl (S)	10.276	5410106	18.816 ug/L m
51) S 1-Chlorooctadecane (S)	10.991f	18271875	17.270 ug/L
Target Compounds			

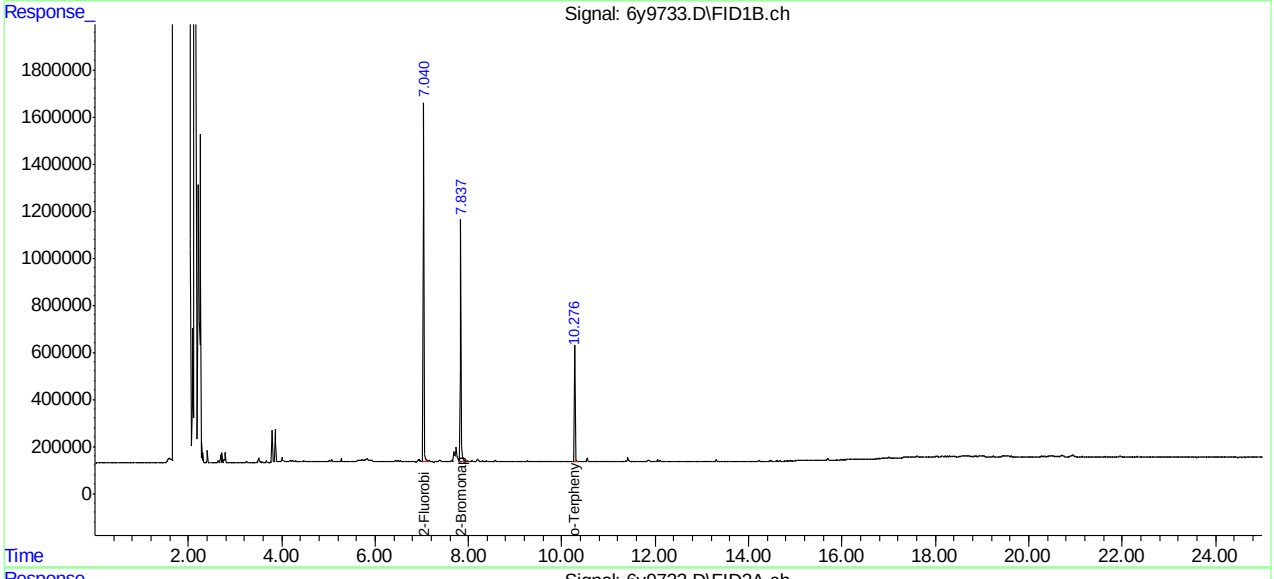
(f)=RT Delta > 1/2 Window (m)=manual int.

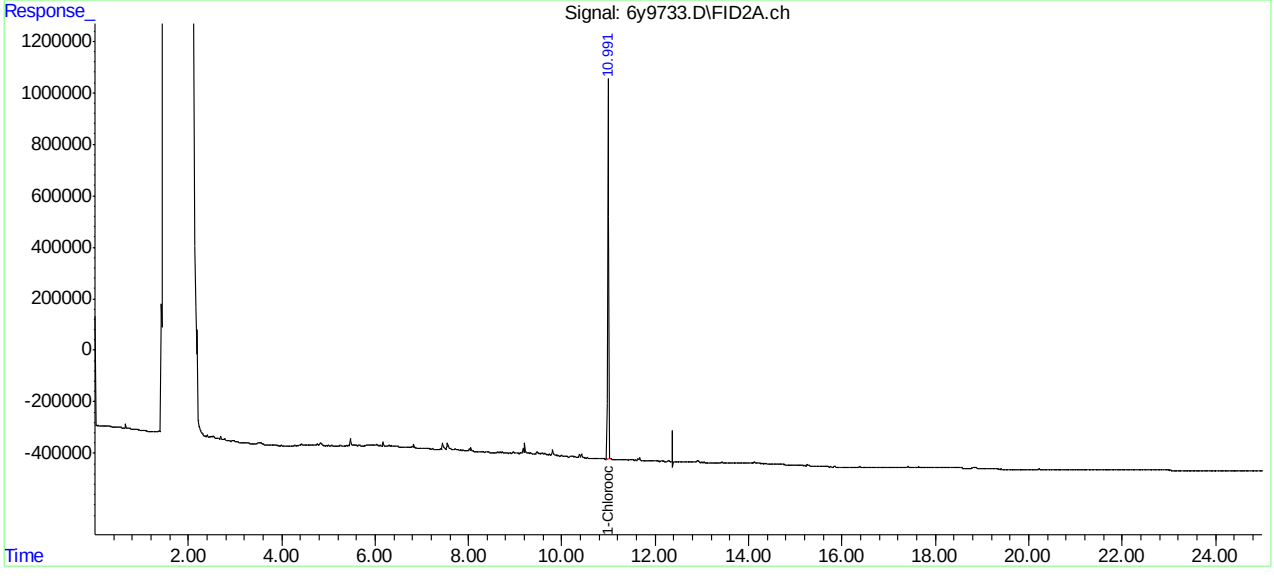
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\6Y390\
Data File : 6y9733.D
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Jul 2013 9:33 am
Operator : laurenc
Sample : op67011a-mb1
Misc : OP67011a,G6y390,15.0,,,4,1
ALS Vial : 32 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: EVENTS.E
Quant Time: Jul 29 17:30:49 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH6Y386.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jul 24 18:43:27 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1ul/col
Signal #1 Phase : HP5 Signal #2 Phase: HP5
Signal #1 Info : 30mx.25mm.x.25um Signal #2 Info : 30mx.32mm.x25um





New Jersey

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General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: JB40351R
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: JB40351-2 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P-7

Wet Weight (Total)	36.05	g
Tare Weight	27.92	g
Dry Weight (Total)	35.44	g
Solids, Percent	92.5	%

New Jersey
ACCUTEST LABORATORIES

08/02/13

Technical Report for

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Accutest Job Number: JB40351

Sampling Date: 06/20/13

Report to:

EnviroTrac, Ltd

justinp@envirotrac.com

ATTN: Justin Piegaro

Total number of pages in report: **329**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kevin Dovedytis 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV

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Accutest LabLink@745274 12:29 02-Aug-2013

Sample Summary

EnviroTrac, Ltd.

Job No: JB40351

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB40351-1	06/20/13	15:25	JP	06/21/13	SO	Soil	P-6
JB40351-2	06/20/13	13:44	JP	06/21/13	SO	Soil	P-7
JB40351-3	06/20/13	12:22	JP	06/21/13	SO	Soil	P-8
JB40351-4	06/20/13	10:40	JP	06/21/13	SO	Soil	P-9
JB40351-5	06/20/13	11:44	JP	06/21/13	SO	Soil	P-10

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	EnviroTrac, Ltd.	**Job No**	JB40351
Site:	Hess QC Lab, 835 West Avenue, Port Reading, NJ	**Report Date**	7/10/2013 11:55:35 A

On 06/21/2013, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 4 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB40351 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** VE9003

- All samples were analyzed within the recommended method holding time.
- Sample(s) JB40918-4MS, JB40918-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: SO **Batch ID:** VX5957

- All samples were analyzed within the recommended method holding time.
- Sample(s) JB40552-12MS, JB40552-14DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for Methyl Acetate are outside control limits. Outside control limits due to matrix interference.

Extractables by GC By Method NJDEP EPH

Matrix: SO **Batch ID:** OP67011

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40294-1MS, JB40294-1MSD, JB40350-2DUP were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP72853

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40350-4MS, JB40350-4MSD, JB40350-4SDL were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Aluminum, Antimony, Lead are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Antimony, Iron, Lead, Zinc are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- RPD(s) for Serial Dilution for Antimony, Arsenic, Cadmium, Silver, Sodium, Thallium, Cobalt, Copper, Zinc are outside control limits for sample MP72853-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP72853-SD1 for Copper: Serial dilution indicates possible matrix interference.
- JB40351-1 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JB40351-1 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JB40351-1 for Copper: Elevated detection limit due to dilution required for high interfering element.
- MP72853-SD1 for Cobalt: Serial dilution indicates possible matrix interference.
- MP72853-SD1 for Zinc: Serial dilution indicates possible matrix interference.
- JB40351-1 for Cadmium: Elevated detection limit due to dilution required for high interfering element.
- JB40351-1 for Beryllium: Elevated detection limit due to dilution required for high interfering element.
- JB40351-1 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JB40351-1 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JB40351-1 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JB40351-1 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JB40351-1 for Antimony: Elevated detection limit due to dilution required for high interfering element.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP73021

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40350-5MS, JB40350-5MSD were used as the QC samples for metals.

Wet Chemistry By Method SM2540 G-97

Matrix: SO **Batch ID:** GN87312

- The data for SM2540 G-97 meets quality control requirements.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB40351
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/20/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB40351-1	**P-6**					
Chloroform		0.00038 J	0.0054	0.000089	mg/kg	SW846 8260B
Aluminum		5200	55		mg/kg	SW846 6010C
Arsenic [a]		15.9	6.6		mg/kg	SW846 6010C
Barium		22.7	22		mg/kg	SW846 6010C
Beryllium [a]		0.99	0.66		mg/kg	SW846 6010C
Calcium		679	550		mg/kg	SW846 6010C
Chromium		17.1	1.1		mg/kg	SW846 6010C
Cobalt		7.2	5.5		mg/kg	SW846 6010C
Copper [a]		12.7	8.2		mg/kg	SW846 6010C
Iron		53800	160		mg/kg	SW846 6010C
Lead [a]		9.0	6.6		mg/kg	SW846 6010C
Magnesium		1880	550		mg/kg	SW846 6010C
Manganese [a]		431	4.9		mg/kg	SW846 6010C
Nickel		14.3	4.4		mg/kg	SW846 6010C
Potassium		1140	1100		mg/kg	SW846 6010C
Vanadium		43.4	5.5		mg/kg	SW846 6010C
Zinc		66.4	2.2		mg/kg	SW846 6010C
JB40351-2	**P-7**					
Acetone		39.4	3.2	0.54	mg/kg	SW846 8260B
Benzene		0.384	0.32	0.038	mg/kg	SW846 8260B
Cyclohexane		0.621 J	1.6	0.040	mg/kg	SW846 8260B
Ethylbenzene		10.1	0.32	0.084	mg/kg	SW846 8260B
Isopropylbenzene		1.38 J	1.6	0.024	mg/kg	SW846 8260B
Methylcyclohexane		4.12	1.6	0.054	mg/kg	SW846 8260B
Methyl Tert Butyl Ether		0.694	0.32	0.075	mg/kg	SW846 8260B
Toluene		17.5	0.32	0.034	mg/kg	SW846 8260B
m,p-Xylene		40.8	0.32	0.056	mg/kg	SW846 8260B
o-Xylene		13.9	0.32	0.045	mg/kg	SW846 8260B
Xylene (total)		54.7	0.32	0.045	mg/kg	SW846 8260B
Total TIC, Volatile		239 J			mg/kg	
Total Alkanes		162 J			mg/kg	
EPH (C9-C28)		3400	69	25	mg/kg	NJDEP EPH
EPH (> C28-C40)		1110	69	30	mg/kg	NJDEP EPH
Total EPH (C9-C40)		4510	69	25	mg/kg	NJDEP EPH
Aluminum		7440	52		mg/kg	SW846 6010C
Arsenic		5.8	2.1		mg/kg	SW846 6010C
Barium		32.8	21		mg/kg	SW846 6010C
Beryllium		0.58	0.21		mg/kg	SW846 6010C
Calcium		908	520		mg/kg	SW846 6010C
Chromium		26.0	1.0		mg/kg	SW846 6010C
Copper		13.0	2.6		mg/kg	SW846 6010C

Summary of Hits

Job Number: JB40351
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/20/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Iron		20900	52		mg/kg	SW846 6010C
Lead		13.8	2.1		mg/kg	SW846 6010C
Magnesium		1770	520		mg/kg	SW846 6010C
Manganese		170	1.6		mg/kg	SW846 6010C
Nickel		13.9	4.2		mg/kg	SW846 6010C
Potassium		1040	1000		mg/kg	SW846 6010C
Silver		0.84	0.52		mg/kg	SW846 6010C
Vanadium		20.6	5.2		mg/kg	SW846 6010C
Zinc		29.5	2.1		mg/kg	SW846 6010C
JB40351-3	**P-8**					
Methylene chloride		0.0020 J	0.0052	0.0013	mg/kg	SW846 8260B
EPH (C9-C28)		17.1	7.3	2.6	mg/kg	NJDEP EPH
Total EPH (C9-C40)		17.1	7.3	2.6	mg/kg	NJDEP EPH
Aluminum		5650	54		mg/kg	SW846 6010C
Arsenic		7.6	2.2		mg/kg	SW846 6010C
Barium		28.9	22		mg/kg	SW846 6010C
Beryllium		0.58	0.22		mg/kg	SW846 6010C
Chromium		24.4	1.1		mg/kg	SW846 6010C
Copper		14.4	2.7		mg/kg	SW846 6010C
Iron		20100	54		mg/kg	SW846 6010C
Lead		17.2	2.2		mg/kg	SW846 6010C
Magnesium		1850	540		mg/kg	SW846 6010C
Manganese		179	1.6		mg/kg	SW846 6010C
Nickel		18.9	4.4		mg/kg	SW846 6010C
Silver		0.83	0.54		mg/kg	SW846 6010C
Vanadium		20.5	5.4		mg/kg	SW846 6010C
Zinc		37.7	2.2		mg/kg	SW846 6010C
JB40351-4	**P-9**					
Acetone		0.0087 J	0.010	0.0017	mg/kg	SW846 8260B
Methylene chloride		0.0050 J	0.0051	0.0013	mg/kg	SW846 8260B
Toluene		0.00065 J	0.0010	0.00011	mg/kg	SW846 8260B
EPH (C9-C28)		123	7.3	2.6	mg/kg	NJDEP EPH
EPH (> C28-C40)		84.8	7.3	3.2	mg/kg	NJDEP EPH
Total EPH (C9-C40)		208	7.3	2.6	mg/kg	NJDEP EPH
Aluminum		4560	55		mg/kg	SW846 6010C
Arsenic		4.0	2.2		mg/kg	SW846 6010C
Beryllium		0.34	0.22		mg/kg	SW846 6010C
Cadmium		0.61	0.55		mg/kg	SW846 6010C
Chromium		19.7	1.1		mg/kg	SW846 6010C
Copper		5.7	2.7		mg/kg	SW846 6010C
Iron		14600	55		mg/kg	SW846 6010C

Summary of Hits

Job Number: JB40351
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/20/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Lead		4.7	2.2		mg/kg	SW846 6010C
Magnesium		1170	550		mg/kg	SW846 6010C
Manganese		99.3	1.6		mg/kg	SW846 6010C
Mercury		0.095	0.036		mg/kg	SW846 7471B
Nickel		10.2	4.4		mg/kg	SW846 6010C
Vanadium		15.2	5.5		mg/kg	SW846 6010C
Zinc		25.4	2.2		mg/kg	SW846 6010C
JB40351-5	**P-10**					
Acetone		0.0116	0.011	0.0019	mg/kg	SW846 8260B
Methylene chloride		0.0062	0.0057	0.0014	mg/kg	SW846 8260B
Toluene		0.00035 J	0.0011	0.00012	mg/kg	SW846 8260B
m,p-Xylene		0.00039 J	0.0011	0.00020	mg/kg	SW846 8260B
Xylene (total)		0.00039 J	0.0011	0.00016	mg/kg	SW846 8260B
Total TIC, Volatile		0.0268 J			mg/kg	
Aluminum		5190	51		mg/kg	SW846 6010C
Arsenic		7.7	2.0		mg/kg	SW846 6010C
Beryllium		0.46	0.20		mg/kg	SW846 6010C
Calcium		2720	510		mg/kg	SW846 6010C
Chromium		29.2	1.0		mg/kg	SW846 6010C
Copper		12.0	2.5		mg/kg	SW846 6010C
Iron		23600	51		mg/kg	SW846 6010C
Lead		10.3	2.0		mg/kg	SW846 6010C
Magnesium		1890	510		mg/kg	SW846 6010C
Manganese		149	1.5		mg/kg	SW846 6010C
Nickel		17.8	4.1		mg/kg	SW846 6010C
Potassium		1020	1000		mg/kg	SW846 6010C
Silver		0.88	0.51		mg/kg	SW846 6010C
Vanadium		20.9	5.1		mg/kg	SW846 6010C
Zinc		35.1	2.0		mg/kg	SW846 6010C

(a) Elevated detection limit due to dilution required for high interfering element.

New Jersey

ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest LabLink@745274 12:29 02-Aug-2013

Report of Analysis

Client Sample ID:	P-6		
Lab Sample ID:	JB40351-1	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	92.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X137482.D	1	06/26/13	NT	06/22/13 10:00	n/a	VX5957
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.011	0.0018	mg/kg	
71-43-2	Benzene	ND	0.0011	0.00013	mg/kg	
74-97-5	Bromochloromethane	ND	0.0054	0.00029	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0054	0.00011	mg/kg	
75-25-2	Bromoform	ND	0.0054	0.00016	mg/kg	
74-83-9	Bromomethane	ND	0.0054	0.00030	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0026	mg/kg	
75-15-0	Carbon disulfide	ND	0.0054	0.00013	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0054	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0054	0.00012	mg/kg	
75-00-3	Chloroethane	ND	0.0054	0.00025	mg/kg	
67-66-3	Chloroform	0.00038	0.0054	0.000089	mg/kg	J
74-87-3	Chloromethane	ND	0.0054	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0054	0.00013	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0054	0.00018	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0054	0.00020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0054	0.00020	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0054	0.00019	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0054	0.00025	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0054	0.00015	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00015	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0054	0.00028	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0054	0.00020	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0054	0.00026	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0054	0.00017	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0054	0.00015	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0054	0.00017	mg/kg	
100-41-4	Ethylbenzene	ND	0.0011	0.00028	mg/kg	
76-13-1	Freon 113	ND	0.0054	0.00046	mg/kg	
591-78-6	2-Hexanone	ND	0.0054	0.00067	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0054	0.000080	mg/kg	
79-20-9	Methyl Acetate	ND	0.0054	0.0028	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-6		
Lab Sample ID:	JB40351-1	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	92.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0054	0.00018	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0011	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0054	0.00081	mg/kg	
75-09-2	Methylene chloride	ND	0.0054	0.0014	mg/kg	
100-42-5	Styrene	ND	0.0054	0.000099	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0054	0.00014	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0054	0.00019	mg/kg	
108-88-3	Toluene	ND	0.0011	0.00011	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0054	0.00018	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0054	0.00015	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0054	0.00011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0054	0.00019	mg/kg	
79-01-6	Trichloroethene	ND	0.0054	0.00019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0054	0.00032	mg/kg	
75-01-4	Vinyl chloride	ND	0.0054	0.00016	mg/kg	
	m,p-Xylene	ND	0.0011	0.00019	mg/kg	
95-47-6	o-Xylene	ND	0.0011	0.00015	mg/kg	
1330-20-7	Xylene (total)	ND	0.0011	0.00015	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		65-131%
17060-07-0	1,2-Dichloroethane-D4	109%		70-121%
2037-26-5	Toluene-D8	100%		80-128%
460-00-4	4-Bromofluorobenzene	104%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	P-6		
Lab Sample ID:	JB40351-1	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	92.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y12921.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	7.1	2.6	mg/kg	
	EPH (> C28-C40)	ND	7.1	3.1	mg/kg	
	Total EPH (C9-C40)	ND	7.1	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	64%		40-140%
3386-33-2	1-Chlorooctadecane	72%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-6		
Lab Sample ID:	JB40351-1	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	92.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5200	55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Antimony [a]	< 6.6	6.6	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Arsenic [a]	15.9	6.6	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Barium	22.7	22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Beryllium [a]	0.99	0.66	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Cadmium [a]	< 1.6	1.6	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Calcium	679	550	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Chromium	17.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Cobalt	7.2	5.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Copper [a]	12.7	8.2	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Iron	53800	160	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Lead [a]	9.0	6.6	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Magnesium	1880	550	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Manganese [a]	431	4.9	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Mercury	< 0.032	0.032	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [5]
Nickel	14.3	4.4	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Potassium	1140	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Selenium [a]	< 6.6	6.6	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Silver [a]	< 1.6	1.6	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Sodium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Thallium [a]	< 3.3	3.3	mg/kg	3	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Vanadium	43.4	5.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Zinc	66.4	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Instrument QC Batch: MA31602
(4) Prep QC Batch: MP72853
(5) Prep QC Batch: MP73021

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	P-7		
Lab Sample ID:	JB40351-2	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	92.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E204874.D	1	07/03/13	OTR	06/22/13 10:00	n/a	VE9003
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.5 g	5.0 ml	20.0 ul
Run #2			

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	39.4	3.2	0.54	mg/kg	
71-43-2	Benzene	0.384	0.32	0.038	mg/kg	
74-97-5	Bromochloromethane	ND	1.6	0.085	mg/kg	
75-27-4	Bromodichloromethane	ND	1.6	0.034	mg/kg	
75-25-2	Bromoform	ND	1.6	0.048	mg/kg	
74-83-9	Bromomethane	ND	1.6	0.088	mg/kg	
78-93-3	2-Butanone (MEK)	ND	3.2	0.77	mg/kg	
75-15-0	Carbon disulfide	ND	1.6	0.038	mg/kg	
56-23-5	Carbon tetrachloride	ND	1.6	0.043	mg/kg	
108-90-7	Chlorobenzene	ND	1.6	0.035	mg/kg	
75-00-3	Chloroethane	ND	1.6	0.073	mg/kg	
67-66-3	Chloroform	ND	1.6	0.026	mg/kg	
74-87-3	Chloromethane	ND	1.6	0.060	mg/kg	
110-82-7	Cyclohexane	0.621	1.6	0.040	mg/kg	J
124-48-1	Dibromochloromethane	ND	1.6	0.053	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.6	0.061	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.6	0.060	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.6	0.056	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	1.6	0.073	mg/kg	
75-34-3	1,1-Dichloroethane	ND	1.6	0.044	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.32	0.043	mg/kg	
75-35-4	1,1-Dichloroethene	ND	1.6	0.082	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.6	0.059	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.6	0.076	mg/kg	
78-87-5	1,2-Dichloropropane	ND	1.6	0.049	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	0.045	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	0.050	mg/kg	
100-41-4	Ethylbenzene	10.1	0.32	0.084	mg/kg	
76-13-1	Freon 113	ND	1.6	0.14	mg/kg	
591-78-6	2-Hexanone	ND	1.6	0.20	mg/kg	
98-82-8	Isopropylbenzene	1.38	1.6	0.024	mg/kg	J
79-20-9	Methyl Acetate	ND	1.6	0.83	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-7		
Lab Sample ID:	JB40351-2	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	92.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	4.12	1.6	0.054	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	0.694	0.32	0.075	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	1.6	0.24	mg/kg	
75-09-2	Methylene chloride	ND	1.6	0.41	mg/kg	
100-42-5	Styrene	ND	1.6	0.029	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.6	0.042	mg/kg	
127-18-4	Tetrachloroethene	ND	1.6	0.055	mg/kg	
108-88-3	Toluene	17.5	0.32	0.034	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	1.6	0.053	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1.6	0.045	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	1.6	0.034	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	1.6	0.056	mg/kg	
79-01-6	Trichloroethene	ND	1.6	0.056	mg/kg	
75-69-4	Trichlorofluoromethane	ND	1.6	0.096	mg/kg	
75-01-4	Vinyl chloride	ND	1.6	0.046	mg/kg	
	m,p-Xylene	40.8	0.32	0.056	mg/kg	
95-47-6	o-Xylene	13.9	0.32	0.045	mg/kg	
1330-20-7	Xylene (total)	54.7	0.32	0.045	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		65-131%
17060-07-0	1,2-Dichloroethane-D4	88%		70-121%
2037-26-5	Toluene-D8	98%		80-128%
460-00-4	4-Bromofluorobenzene	91%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
108-67-8	Benzene, 1,3,5-trimethyl-	15.78	21	mg/kg	JN
95-63-6	Benzene, 1,2,4-trimethyl-	16.22	46	mg/kg	JN
	cyclohexane alkyl	16.48	28	mg/kg	J
	C4 alkyl benzene	17.38	19	mg/kg	J
	cyclohexane alkyl	17.75	23	mg/kg	J
	Naphthalene decahydro-methyl	17.81	20	mg/kg	J
	Naphthalene tetrahydro	18.65	22	mg/kg	J
	unknown	18.74	18	mg/kg	J
	Naphthalene tetrahydro-methyl	19.27	21	mg/kg	J
	1H-Indene-dihydro-dimethyl	19.39	21	mg/kg	J
	Total TIC, Volatile		239	mg/kg	J
	Total Alkanes		162	mg/kg	J

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	P-7		
Lab Sample ID:	JB40351-2	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	92.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Z9292.D	1	06/27/13	KD	06/26/13	OP67011	G5Z312
Run #2	5Z9308.D	10	06/27/13	KD	06/26/13	OP67011	G5Z312

	Initial Weight	Final Volume
Run #1	15.7 g	2.0 ml
Run #2	15.7 g	2.0 ml

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	3400 [a]	69	25	mg/kg	
	EPH (> C28-C40)	1110 [a]	69	30	mg/kg	
	Total EPH (C9-C40)	4510 [a]	69	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%	62%	40-140%
3386-33-2	1-Chlorooctadecane	88%	98%	40-140%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-7		
Lab Sample ID:	JB40351-2	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	92.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	7440	52	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.1	2.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	5.8	2.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	32.8	21	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.58	0.21	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.52	0.52	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	908	520	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	26.0	1.0	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.2	5.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	13.0	2.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	20900	52	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	13.8	2.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1770	520	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	170	1.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.034	0.034	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [4]
Nickel	13.9	4.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	1040	1000	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.1	2.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	0.84	0.52	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1000	1000	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.0	1.0	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	20.6	5.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	29.5	2.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Prep QC Batch: MP72853
(4) Prep QC Batch: MP73021

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	P-8		
Lab Sample ID:	JB40351-3	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	90.9
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X137483.D	1	06/26/13	NT	06/22/13 10:00	n/a	VX5957
Run #2							

	Initial Weight
Run #1	5.3 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.010	0.0018	mg/kg	
71-43-2	Benzene	ND	0.0010	0.00012	mg/kg	
74-97-5	Bromochloromethane	ND	0.0052	0.00028	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0052	0.00011	mg/kg	
75-25-2	Bromoform	ND	0.0052	0.00016	mg/kg	
74-83-9	Bromomethane	ND	0.0052	0.00028	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.010	0.0025	mg/kg	
75-15-0	Carbon disulfide	ND	0.0052	0.00012	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0052	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0052	0.00011	mg/kg	
75-00-3	Chloroethane	ND	0.0052	0.00024	mg/kg	
67-66-3	Chloroform	ND	0.0052	0.000086	mg/kg	
74-87-3	Chloromethane	ND	0.0052	0.00019	mg/kg	
110-82-7	Cyclohexane	ND	0.0052	0.00013	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0052	0.00017	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0052	0.00020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0052	0.00019	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0052	0.00018	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0052	0.00024	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0052	0.00014	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00014	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0052	0.00027	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0052	0.00019	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0052	0.00025	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0052	0.00016	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0052	0.00014	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0052	0.00016	mg/kg	
100-41-4	Ethylbenzene	ND	0.0010	0.00027	mg/kg	
76-13-1	Freon 113	ND	0.0052	0.00045	mg/kg	
591-78-6	2-Hexanone	ND	0.0052	0.00065	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0052	0.000077	mg/kg	
79-20-9	Methyl Acetate	ND	0.0052	0.0027	mg/kg	

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-8		
Lab Sample ID:	JB40351-3	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	90.9
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0052	0.00018	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00024	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0052	0.00078	mg/kg	
75-09-2	Methylene chloride	0.0020	0.0052	0.0013	mg/kg	J
100-42-5	Styrene	ND	0.0052	0.000095	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0052	0.00014	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0052	0.00018	mg/kg	
108-88-3	Toluene	ND	0.0010	0.00011	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0052	0.00017	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0052	0.00014	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0052	0.00011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0052	0.00018	mg/kg	
79-01-6	Trichloroethene	ND	0.0052	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0052	0.00031	mg/kg	
75-01-4	Vinyl chloride	ND	0.0052	0.00015	mg/kg	
	m,p-Xylene	ND	0.0010	0.00018	mg/kg	
95-47-6	o-Xylene	ND	0.0010	0.00014	mg/kg	
1330-20-7	Xylene (total)	ND	0.0010	0.00014	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		65-131%
17060-07-0	1,2-Dichloroethane-D4	108%		70-121%
2037-26-5	Toluene-D8	100%		80-128%
460-00-4	4-Bromofluorobenzene	104%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	P-8		
Lab Sample ID:	JB40351-3	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	90.9
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y12922.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	17.1	7.3	2.6	mg/kg	
	EPH (> C28-C40)	ND	7.3	3.2	mg/kg	
	Total EPH (C9-C40)	17.1	7.3	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		40-140%
3386-33-2	1-Chlorooctadecane	83%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-8		
Lab Sample ID:	JB40351-3	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	90.9
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5650	54	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	7.6	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	28.9	22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.58	0.22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.54	0.54	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	< 540	540	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	24.4	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.4	5.4	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	14.4	2.7	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	20100	54	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	17.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1850	540	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	179	1.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [4]
Nickel	18.9	4.4	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	0.83	0.54	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	20.5	5.4	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	37.7	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Prep QC Batch: MP72853
(4) Prep QC Batch: MP73021

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	P-9		
Lab Sample ID:	JB40351-4	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	89.9
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X137484.D	1	06/26/13	NT	06/22/13 10:00	n/a	VX5957
Run #2							

	Initial Weight
Run #1	5.5 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0087	0.010	0.0017	mg/kg	J
71-43-2	Benzene	ND	0.0010	0.00012	mg/kg	
74-97-5	Bromochloromethane	ND	0.0051	0.00027	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0051	0.00011	mg/kg	
75-25-2	Bromoform	ND	0.0051	0.00015	mg/kg	
74-83-9	Bromomethane	ND	0.0051	0.00028	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.010	0.0024	mg/kg	
75-15-0	Carbon disulfide	ND	0.0051	0.00012	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0051	0.00013	mg/kg	
108-90-7	Chlorobenzene	ND	0.0051	0.00011	mg/kg	
75-00-3	Chloroethane	ND	0.0051	0.00023	mg/kg	
67-66-3	Chloroform	ND	0.0051	0.000084	mg/kg	
74-87-3	Chloromethane	ND	0.0051	0.00019	mg/kg	
110-82-7	Cyclohexane	ND	0.0051	0.00013	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0051	0.00017	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0051	0.00019	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0051	0.00019	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0051	0.00018	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0051	0.00023	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0051	0.00014	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00014	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0051	0.00026	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0051	0.00019	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0051	0.00024	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0051	0.00016	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0051	0.00014	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0051	0.00016	mg/kg	
100-41-4	Ethylbenzene	ND	0.0010	0.00027	mg/kg	
76-13-1	Freon 113	ND	0.0051	0.00043	mg/kg	
591-78-6	2-Hexanone	ND	0.0051	0.00063	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0051	0.000075	mg/kg	
79-20-9	Methyl Acetate	ND	0.0051	0.0026	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-9		
Lab Sample ID:	JB40351-4	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	89.9
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0051	0.00017	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00024	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0051	0.00076	mg/kg	
75-09-2	Methylene chloride	0.0050	0.0051	0.0013	mg/kg	J
100-42-5	Styrene	ND	0.0051	0.000093	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0051	0.00013	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0051	0.00017	mg/kg	
108-88-3	Toluene	0.00065	0.0010	0.00011	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0051	0.00017	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0051	0.00014	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0051	0.00011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0051	0.00018	mg/kg	
79-01-6	Trichloroethene	ND	0.0051	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0051	0.00030	mg/kg	
75-01-4	Vinyl chloride	ND	0.0051	0.00015	mg/kg	
	m,p-Xylene	ND	0.0010	0.00018	mg/kg	
95-47-6	o-Xylene	ND	0.0010	0.00014	mg/kg	
1330-20-7	Xylene (total)	ND	0.0010	0.00014	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		65-131%
17060-07-0	1,2-Dichloroethane-D4	111%		70-121%
2037-26-5	Toluene-D8	100%		80-128%
460-00-4	4-Bromofluorobenzene	103%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	P-9		
Lab Sample ID:	JB40351-4	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	89.9
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y12923.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	123	7.3	2.6	mg/kg	
	EPH (> C28-C40)	84.8	7.3	3.2	mg/kg	
	Total EPH (C9-C40)	208	7.3	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		40-140%
3386-33-2	1-Chlorooctadecane	78%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-9		
Lab Sample ID:	JB40351-4	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	89.9
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4560	55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	4.0	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	< 22	22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.34	0.22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	0.61	0.55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	< 550	550	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	19.7	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.5	5.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	5.7	2.7	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	14600	55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	4.7	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1170	550	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	99.3	1.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.095	0.036	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.2	4.4	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.55	0.55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	15.2	5.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	25.4	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Prep QC Batch: MP72853
(4) Prep QC Batch: MP73021

RL = Reporting Limit

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Report of Analysis

Client Sample ID:	P-10		
Lab Sample ID:	JB40351-5	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	95.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X137485.D	1	06/26/13	NT	06/22/13 10:00	n/a	VX5957
Run #2							

	Initial Weight
Run #1	4.6 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0116	0.011	0.0019	mg/kg	
71-43-2	Benzene	ND	0.0011	0.00014	mg/kg	
74-97-5	Bromochloromethane	ND	0.0057	0.00030	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0057	0.00012	mg/kg	
75-25-2	Bromoform	ND	0.0057	0.00017	mg/kg	
74-83-9	Bromomethane	ND	0.0057	0.00031	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0027	mg/kg	
75-15-0	Carbon disulfide	ND	0.0057	0.00013	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0057	0.00015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0057	0.00012	mg/kg	
75-00-3	Chloroethane	ND	0.0057	0.00026	mg/kg	
67-66-3	Chloroform	ND	0.0057	0.000094	mg/kg	
74-87-3	Chloromethane	ND	0.0057	0.00021	mg/kg	
110-82-7	Cyclohexane	ND	0.0057	0.00014	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0057	0.00019	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0057	0.00022	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0057	0.00021	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0057	0.00020	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0057	0.00026	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0057	0.00016	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00015	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0057	0.00029	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0057	0.00021	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0057	0.00027	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0057	0.00018	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0057	0.00016	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0057	0.00018	mg/kg	
100-41-4	Ethylbenzene	ND	0.0011	0.00030	mg/kg	
76-13-1	Freon 113	ND	0.0057	0.00049	mg/kg	
591-78-6	2-Hexanone	ND	0.0057	0.00071	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0057	0.000085	mg/kg	
79-20-9	Methyl Acetate	ND	0.0057	0.0030	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-10		
Lab Sample ID:	JB40351-5	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	95.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0057	0.00019	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0011	0.00027	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0057	0.00086	mg/kg	
75-09-2	Methylene chloride	0.0062	0.0057	0.0014	mg/kg	
100-42-5	Styrene	ND	0.0057	0.00010	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0057	0.00015	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0057	0.00020	mg/kg	
108-88-3	Toluene	0.00035	0.0011	0.00012	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0057	0.00019	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0057	0.00016	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0057	0.00012	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0057	0.00020	mg/kg	
79-01-6	Trichloroethene	ND	0.0057	0.00020	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0057	0.00034	mg/kg	
75-01-4	Vinyl chloride	ND	0.0057	0.00016	mg/kg	
	m,p-Xylene	0.00039	0.0011	0.00020	mg/kg	J
95-47-6	o-Xylene	ND	0.0011	0.00016	mg/kg	
1330-20-7	Xylene (total)	0.00039	0.0011	0.00016	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		65-131%
17060-07-0	1,2-Dichloroethane-D4	108%		70-121%
2037-26-5	Toluene-D8	100%		80-128%
460-00-4	4-Bromofluorobenzene	103%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	7.50	.0098	mg/kg	J
	unknown	8.58	.017	mg/kg	J
	Total TIC, Volatile		.0268	mg/kg	J
	Total Alkanes		0	mg/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@745274 12:29 02-Aug-2013

Report of Analysis

Client Sample ID:	P-10		
Lab Sample ID:	JB40351-5	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	95.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y12924.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	6.9	2.5	mg/kg	
	EPH (> C28-C40)	ND	6.9	3.0	mg/kg	
	Total EPH (C9-C40)	ND	6.9	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	61%		40-140%
3386-33-2	1-Chlorooctadecane	70%		40-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-10		
Lab Sample ID:	JB40351-5	**Date Sampled:**	06/20/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	95.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5190	51	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.0	2.0	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	7.7	2.0	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	< 20	20	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.46	0.20	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.51	0.51	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	2720	510	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	29.2	1.0	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.1	5.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	12.0	2.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	23600	51	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	10.3	2.0	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1890	510	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	149	1.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [4]
Nickel	17.8	4.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	1020	1000	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.0	2.0	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	0.88	0.51	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1000	1000	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.0	1.0	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	20.9	5.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	35.1	2.0	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Prep QC Batch: MP72853
(4) Prep QC Batch: MP73021

RL = Reporting Limit

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST LABORATORIES

SCL

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JB40351

Client / Reporting Information

Company Name: Envirotrac
Street Address: 400 Corporate Court, Suite E
City / State / Zip: South Plainfield NJ 07080
Project Contact: Dave Daly — dave@envirotrac.com
Phone #: 908-757-1900 Fax #: 908-757-0017
Sampler(s) Name(s): Justin P + Mike B. Phone #: 908-757-1900

Project Information

Project Name: Hess QC Lab
Street: 835 West Avenue
City / State: Port Reading NJ
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name: Hess Corporation
Street Address: One Hess Plaza
City / State / Zip: Woodbridge NJ
Attention: Mike Matri

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	EPH Cat 2 (No Fractionation)	VOTIS	SVOTICS	TAL Metals			*3 Samples received per sample 6/24/13					LAB USE ONLY
-1	P-6		6/20/13	15:25	JP	SO	5					2			3	X	X	X	X			*					D24
-2	P-7		6/20/13	13:44	JP	SO	5					2			3	X	X	X	X								M35T2
-3	P-8		6/20/13	12:22	JP	SO	5					2			3	X	X	X	X								14E3
-4	P-9		6/20/13	10:40	JP	SO	5					2			3	X	X	X	X								4992
-5	P-10		6/20/13	11:44	JP	SO	5					2			3	X	X	X	X								

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] other _____

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [X] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format _____
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Hold EPH Samples after analysis for Fractionization pending results

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/20/13 17:00	1	2	6/21/13 11:00	2
Relinquished by Sampler: 3	Date Time: 6/21/13 1645	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Intact / Not intact	Preserved where applicable

On Ice: ☑ Cooler Temp: 4.0°C

RUSH

JB40351: Chain of Custody
Page 1 of 4

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB40351 **Client:** **Project:**

Date / Time Received: 6/21/2013 **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (4/4); 0

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB40351: Chain of Custody
Page 2 of 4

ACCUTEST LABORATORIES

Job Change Order: JB40351

Requested Date:	7/9/2013	**Received Date:**	6/21/2013
Account Name:	EnviroTrac, Ltd.	**Due Date:**	7/5/2013
Project Description:	Hess QC Lab, 835 West Avenue, Port Reading, NJ	**Deliverable:**	REDT2
CSR:	KevinD	**TAT (Days):**	14

Sample #: JB40351-ALL

Dept:

Change:
Cancel B8270TCL11+ due to subcontarcting error.

Above Changes Per:

Date: 7/9/2013

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

ACCUTEST LABORATORIES

Job Change Order: JB40351

Requested Date:	7/11/2013	**Received Date:**	6/21/2013
Account Name:	EnviroTrac, Ltd.	**Due Date:**	7/5/2013
Project Description:	Hess QC Lab, 835 West Avenue, Port Reading, NJ	**Deliverable:**	REDT2
CSR:	KevinD	**TAT (Days):**	14

Sample #: JB40351-2

Dept:

P-7

Change:
Log in BNJEPHCAT2FO.

Above Changes Per: Justin Piegaro

Date: 7/11/2013

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

JB40351: Chain of Custody
Page 4 of 4

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Job No: JB40351

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40351-1 P-6	Collected: 20-JUN-13 15:25 By: JP		Received: 21-JUN-13 By: AS			
JB40351-1	SW846 8260B	26-JUN-13 18:00	NT			V8260NJPTCL11+
JB40351-1	NJDEP EPH	26-JUN-13 22:01	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40351-1	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40351-1	SW846 7471B	04-JUL-13 09:45	JW	03-JUL-13	JW	HG
JB40351-1	SW846 6010C	04-JUL-13 20:08	GT	26-JUN-13	RP	AL,BA,CA,CO,CR,K,MG,NA,NI,V,ZN
JB40351-1	SW846 6010C	06-JUL-13 16:36	ND	26-JUN-13	RP	AG,AS,BE,CD,CU,FE,MN,PB,SB,SE,TL
JB40351-2 P-7	Collected: 20-JUN-13 13:44 By: JP		Received: 21-JUN-13 By: AS			
JB40351-2	NJDEP EPH	27-JUN-13 11:40	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40351-2	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40351-2	NJDEP EPH	27-JUN-13 21:38	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40351-2	SW846 8260B	03-JUL-13 15:39	OTR			V8260NJPTCL11+
JB40351-2	SW846 7471B	04-JUL-13 09:46	JW	03-JUL-13	JW	HG
JB40351-2	SW846 6010C	04-JUL-13 20:25	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB40351-3 P-8	Collected: 20-JUN-13 12:22 By: JP		Received: 21-JUN-13 By: AS			
JB40351-3	SW846 8260B	26-JUN-13 18:30	NT			V8260NJPTCL11+
JB40351-3	NJDEP EPH	26-JUN-13 22:23	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40351-3	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40351-3	SW846 7471B	04-JUL-13 09:48	JW	03-JUL-13	JW	HG
JB40351-3	SW846 6010C	04-JUL-13 20:31	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB40351-4 P-9	Collected: 20-JUN-13 10:40 By: JP		Received: 21-JUN-13 By: AS			
JB40351-4	SW846 8260B	26-JUN-13 19:00	NT			V8260NJPTCL11+
JB40351-4	NJDEP EPH	26-JUN-13 22:45	KD	26-JUN-13	KS	BNJEPHCAT2NF

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Job No: JB40351

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40351-4	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40351-4	SW846 7471B	04-JUL-13 09:49	JW	03-JUL-13	JW	HG
JB40351-4	SW846 6010C	04-JUL-13 20:37	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB40351-5	Collected: 20-JUN-13 11:44 By: JP		Received: 21-JUN-13 By: AS			
P-10						
JB40351-5	SW846 8260B	26-JUN-13 19:30	NT			V8260NJPTCL11+
JB40351-5	NJDEP EPH	26-JUN-13 23:07	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40351-5	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40351-5	SW846 7471B	04-JUL-13 09:50	JW	03-JUL-13	JW	HG
JB40351-5	SW846 6010C	04-JUL-13 20:43	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN

Accutest Internal Chain of Custody

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40351-1.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40351-1.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40351-1.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40351-1.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40351-1.1	Darnell Brown		07/30/13 15:15	Disposed
JB40351-1.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40351-1.1
JB40351-1.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40351-1.1
JB40351-1.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40351-1.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40351-1.1
JB40351-1.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40351-1.1
JB40351-1.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40351-1.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40351-1.1.2	Gwendolyn Dymowski	GC5Y	06/26/13 18:23	Load on Instrument
JB40351-1.1.2	GC5Y	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40351-1.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40351-1.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40351-1.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40351-1.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40351-1.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40351-1.2	Darnell Brown		07/30/13 15:15	Disposed
JB40351-1.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40351-1.2
JB40351-1.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40351-1.2
JB40351-1.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40351-1.4	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-1.4	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-1.4	Darnell Brown		07/30/13 15:15	Disposed
JB40351-1.5	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-1.5	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-1.5	Secured Storage	Nathaniel Tuvera	06/25/13 15:46	Retrieve from Storage
JB40351-1.5	Nathaniel Tuvera	GCMSX	06/25/13 15:46	Load on Instrument
JB40351-1.5	GCMSX	Nathaniel Tuvera	06/26/13 09:35	Unload from Instrument
JB40351-1.5	Nathaniel Tuvera		06/26/13 09:35	Depleted
JB40351-1.6	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-1.6	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-1.6	Secured Storage	Nathaniel Tuvera	06/26/13 14:31	Retrieve from Storage
JB40351-1.6	Nathaniel Tuvera	GCMSX	06/26/13 14:31	Load on Instrument
JB40351-1.6	GCMSX	Nathaniel Tuvera	06/27/13 10:01	Unload from Instrument

Accutest Internal Chain of Custody

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40351-1.6	Nathaniel Tuvera		06/27/13 10:01	Depleted
JB40351-2.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40351-2.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40351-2.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40351-2.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40351-2.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40351-2.1
JB40351-2.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40351-2.1
JB40351-2.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40351-2.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40351-2.1
JB40351-2.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40351-2.1
JB40351-2.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40351-2.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40351-2.1.2	Gwendolyn Dymowski	GC5Z	06/26/13 18:23	Load on Instrument
JB40351-2.1.2	GC5Z	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40351-2.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40351-2.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40351-2.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40351-2.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40351-2.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40351-2.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40351-2.2
JB40351-2.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40351-2.2
JB40351-2.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40351-2.4	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-2.4	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-2.4	Secured Storage	Oksana Treglazova	07/01/13 15:52	Retrieve from Storage
JB40351-2.4	Oksana Treglazova	Secured Storage	07/01/13 15:52	Return to Storage
JB40351-2.4	Secured Storage	Oksana Treglazova	07/02/13 15:45	Retrieve from Storage
JB40351-2.4	Oksana Treglazova	Secured Storage	07/02/13 16:02	Return to Storage
JB40351-2.4	Secured Storage	Oksana Treglazova	07/03/13 15:52	Retrieve from Storage
JB40351-2.4	Oksana Treglazova	Secured Storage	07/03/13 15:52	Return to Storage
JB40351-2.5	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-2.5	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-2.6	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-2.6	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-3.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40351-3.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40351-3.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40351-3.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40351-3.1	Darnell Brown		07/30/13 15:15	Disposed
JB40351-3.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40351-3.1
JB40351-3.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40351-3.1
JB40351-3.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40351-3.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40351-3.1
JB40351-3.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40351-3.1
JB40351-3.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40351-3.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40351-3.1.2	Gwendolyn Dymowski	GC5Y	06/26/13 18:23	Load on Instrument
JB40351-3.1.2	GC5Y	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40351-3.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40351-3.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40351-3.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40351-3.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40351-3.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40351-3.2	Darnell Brown		07/30/13 15:15	Disposed
JB40351-3.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40351-3.2
JB40351-3.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40351-3.2
JB40351-3.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40351-3.4	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-3.4	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-3.4	Darnell Brown		07/30/13 15:15	Disposed
JB40351-3.5	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-3.5	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-3.5	Secured Storage	Nathaniel Tuvera	06/25/13 15:46	Retrieve from Storage
JB40351-3.5	Nathaniel Tuvera	GCMSX	06/25/13 15:46	Load on Instrument
JB40351-3.5	GCMSX	Nathaniel Tuvera	06/26/13 09:35	Unload from Instrument
JB40351-3.5	Nathaniel Tuvera		06/26/13 09:35	Depleted
JB40351-3.6	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-3.6	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-3.6	Secured Storage	Nathaniel Tuvera	06/26/13 14:31	Retrieve from Storage
JB40351-3.6	Nathaniel Tuvera	GCMSX	06/26/13 14:31	Load on Instrument
JB40351-3.6	GCMSX	Nathaniel Tuvera	06/27/13 10:01	Unload from Instrument
JB40351-3.6	Nathaniel Tuvera		06/27/13 10:01	Depleted

Accutest Internal Chain of Custody

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40351-4.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40351-4.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40351-4.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40351-4.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40351-4.1	Darnell Brown		07/30/13 15:15	Disposed
JB40351-4.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40351-4.1
JB40351-4.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40351-4.1
JB40351-4.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40351-4.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40351-4.1
JB40351-4.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40351-4.1
JB40351-4.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40351-4.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40351-4.1.2	Gwendolyn Dymowski	GC5Y	06/26/13 18:23	Load on Instrument
JB40351-4.1.2	GC5Y	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40351-4.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40351-4.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40351-4.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40351-4.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40351-4.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40351-4.2	Darnell Brown		07/30/13 15:15	Disposed
JB40351-4.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40351-4.2
JB40351-4.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40351-4.2
JB40351-4.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40351-4.4	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-4.4	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-4.4	Darnell Brown		07/30/13 15:15	Disposed
JB40351-4.5	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-4.5	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-4.5	Secured Storage	Nathaniel Tuvera	06/25/13 15:46	Retrieve from Storage
JB40351-4.5	Nathaniel Tuvera	GCMSX	06/25/13 15:46	Load on Instrument
JB40351-4.5	GCMSX	Nathaniel Tuvera	06/26/13 09:35	Unload from Instrument
JB40351-4.5	Nathaniel Tuvera		06/26/13 09:35	Depleted
JB40351-4.6	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-4.6	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-4.6	Secured Storage	Nathaniel Tuvera	06/26/13 14:31	Retrieve from Storage
JB40351-4.6	Nathaniel Tuvera	GCMSX	06/26/13 14:31	Load on Instrument

Accutest Internal Chain of Custody

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40351-4.6	GCMSX	Nathaniel Tuvera	06/27/13 10:01	Unload from Instrument
JB40351-4.6	Nathaniel Tuvera		06/27/13 10:01	Depleted
JB40351-5.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40351-5.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40351-5.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40351-5.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40351-5.1	Darnell Brown		07/30/13 15:15	Disposed
JB40351-5.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40351-5.1
JB40351-5.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40351-5.1
JB40351-5.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40351-5.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40351-5.1
JB40351-5.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40351-5.1
JB40351-5.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40351-5.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40351-5.1.2	Gwendolyn Dymowski	GC5Y	06/26/13 18:23	Load on Instrument
JB40351-5.1.2	GC5Y	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40351-5.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40351-5.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40351-5.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40351-5.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40351-5.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40351-5.2	Darnell Brown		07/30/13 15:15	Disposed
JB40351-5.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40351-5.2
JB40351-5.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40351-5.2
JB40351-5.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40351-5.4	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-5.4	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-5.4	Darnell Brown		07/30/13 15:15	Disposed
JB40351-5.5	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-5.5	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage
JB40351-5.5	Secured Storage	Nathaniel Tuvera	06/25/13 15:46	Retrieve from Storage
JB40351-5.5	Nathaniel Tuvera	GCMSX	06/25/13 15:46	Load on Instrument
JB40351-5.5	GCMSX	Nathaniel Tuvera	06/26/13 09:35	Unload from Instrument
JB40351-5.5	Nathaniel Tuvera		06/26/13 09:35	Depleted
JB40351-5.6	Secured Storage	Frank Zhu	06/22/13 09:55	Retrieve from Storage
JB40351-5.6	Frank Zhu	Secured Storage	06/22/13 11:54	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40351-5.6	Secured Storage	Nathaniel Tuvera	06/26/13 14:31	Retrieve from Storage
JB40351-5.6	Nathaniel Tuvera	GCMSX	06/26/13 14:31	Load on Instrument
JB40351-5.6	GCMSX	Nathaniel Tuvera	06/27/13 10:01	Unload from Instrument
JB40351-5.6	Nathaniel Tuvera		06/27/13 10:01	Depleted

New Jersey
ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX5957-MB1	X137467.D	1	06/26/13	NT	n/a	n/a	VX5957

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-1, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	1.7	ug/kg	
71-43-2	Benzene	ND	1.0	0.12	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.27	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.11	ug/kg	
75-25-2	Bromoform	ND	5.0	0.15	ug/kg	
74-83-9	Bromomethane	ND	5.0	0.27	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	2.4	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.12	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.13	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.11	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.23	ug/kg	
67-66-3	Chloroform	ND	5.0	0.083	ug/kg	
74-87-3	Chloromethane	ND	5.0	0.19	ug/kg	
110-82-7	Cyclohexane	ND	5.0	0.12	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.18	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.23	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.14	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.14	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.0	0.26	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	0.18	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	0.24	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.15	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.14	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.16	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.26	ug/kg	
76-13-1	Freon 113	ND	5.0	0.43	ug/kg	
591-78-6	2-Hexanone	ND	5.0	0.62	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.074	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	2.6	ug/kg	
108-87-2	Methylcyclohexane	ND	5.0	0.17	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	0.75	ug/kg	
75-09-2	Methylene chloride	ND	5.0	1.3	ug/kg	

Method Blank Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX5957-MB1	X137467.D	1	06/26/13	NT	n/a	n/a	VX5957

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-1, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	Result	RL	MDL	Units	Q
100-42-5	Styrene	ND	5.0	0.092	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.13	ug/kg	
127-18-4	Tetrachloroethene	ND	5.0	0.17	ug/kg	
108-88-3	Toluene	ND	1.0	0.11	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.16	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.14	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.11	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.17	ug/kg	
79-01-6	Trichloroethene	ND	5.0	0.17	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.30	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	0.14	ug/kg	
	m,p-Xylene	ND	1.0	0.17	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.14	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.14	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	65-131%
17060-07-0	1,2-Dichloroethane-D4	103%	70-121%
2037-26-5	Toluene-D8	100%	80-128%
460-00-4	4-Bromofluorobenzene	104%	67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9003-MB	E204865.D	1	07/03/13	OTR	n/a	n/a	VE9003

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	85	ug/kg	
71-43-2	Benzene	ND	50	6.0	ug/kg	
74-97-5	Bromochloromethane	ND	250	13	ug/kg	
75-27-4	Bromodichloromethane	ND	250	5.3	ug/kg	
75-25-2	Bromoform	ND	250	7.6	ug/kg	
74-83-9	Bromomethane	ND	250	14	ug/kg	
78-93-3	2-Butanone (MEK)	ND	500	120	ug/kg	
75-15-0	Carbon disulfide	ND	250	5.9	ug/kg	
56-23-5	Carbon tetrachloride	ND	250	6.7	ug/kg	
108-90-7	Chlorobenzene	ND	250	5.4	ug/kg	
75-00-3	Chloroethane	ND	250	11	ug/kg	
67-66-3	Chloroform	ND	250	4.1	ug/kg	
74-87-3	Chloromethane	ND	250	9.3	ug/kg	
110-82-7	Cyclohexane	ND	250	6.2	ug/kg	
124-48-1	Dibromochloromethane	ND	250	8.2	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	250	9.5	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	250	9.4	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	250	8.8	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	250	11	ug/kg	
75-34-3	1,1-Dichloroethane	ND	250	6.9	ug/kg	
107-06-2	1,2-Dichloroethane	ND	50	6.8	ug/kg	
75-35-4	1,1-Dichloroethene	ND	250	13	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	250	9.2	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	250	12	ug/kg	
78-87-5	1,2-Dichloropropane	ND	250	7.7	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	250	7.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	250	7.8	ug/kg	
100-41-4	Ethylbenzene	ND	50	13	ug/kg	
76-13-1	Freon 113	ND	250	22	ug/kg	
591-78-6	2-Hexanone	ND	250	31	ug/kg	
98-82-8	Isopropylbenzene	ND	250	3.7	ug/kg	
79-20-9	Methyl Acetate	ND	250	130	ug/kg	
108-87-2	Methylcyclohexane	ND	250	8.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	12	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	250	38	ug/kg	
75-09-2	Methylene chloride	ND	250	64	ug/kg	

Method Blank Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9003-MB	E204865.D	1	07/03/13	OTR	n/a	n/a	VE9003

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-2

CAS No.	Compound	Result	RL	MDL	Units	Q
100-42-5	Styrene	ND	250	4.6	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	6.6	ug/kg	
127-18-4	Tetrachloroethene	ND	250	8.6	ug/kg	
108-88-3	Toluene	ND	50	5.3	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	250	8.2	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	7.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	250	5.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	250	8.7	ug/kg	
79-01-6	Trichloroethene	ND	250	8.7	ug/kg	
75-69-4	Trichlorofluoromethane	ND	250	15	ug/kg	
75-01-4	Vinyl chloride	ND	250	7.2	ug/kg	
	m,p-Xylene	ND	50	8.7	ug/kg	
95-47-6	o-Xylene	ND	50	7.0	ug/kg	
1330-20-7	Xylene (total)	ND	50	7.0	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	85%	65-131%
17060-07-0	1,2-Dichloroethane-D4	88%	70-121%
2037-26-5	Toluene-D8	98%	80-128%
460-00-4	4-Bromofluorobenzene	93%	67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX5957-BS	X137468.D	1	06/26/13	NT	n/a	n/a	VX5957

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-1, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	58.9	118	49-150
71-43-2	Benzene	50	50.6	101	79-121
74-97-5	Bromochloromethane	50	54.0	108	81-127
75-27-4	Bromodichloromethane	50	50.7	101	78-129
75-25-2	Bromoform	50	52.1	104	73-135
74-83-9	Bromomethane	50	52.0	104	58-145
78-93-3	2-Butanone (MEK)	50	62.7	125	66-138
75-15-0	Carbon disulfide	50	51.1	102	69-134
56-23-5	Carbon tetrachloride	50	50.9	102	73-140
108-90-7	Chlorobenzene	50	46.1	92	81-119
75-00-3	Chloroethane	50	55.1	110	65-138
67-66-3	Chloroform	50	51.6	103	79-124
74-87-3	Chloromethane	50	60.7	121	53-136
110-82-7	Cyclohexane	50	53.0	106	71-133
124-48-1	Dibromochloromethane	50	48.9	98	77-127
95-50-1	1,2-Dichlorobenzene	50	47.5	95	78-120
541-73-1	1,3-Dichlorobenzene	50	46.6	93	77-120
106-46-7	1,4-Dichlorobenzene	50	46.1	92	74-118
75-71-8	Dichlorodifluoromethane	50	62.9	126	33-144
75-34-3	1,1-Dichloroethane	50	55.1	110	77-131
107-06-2	1,2-Dichloroethane	50	55.4	111	73-132
75-35-4	1,1-Dichloroethene	50	52.4	105	72-131
156-59-2	cis-1,2-Dichloroethene	50	53.1	106	77-125
156-60-5	trans-1,2-Dichloroethene	50	53.1	106	74-126
78-87-5	1,2-Dichloropropane	50	53.1	106	78-125
10061-01-5	cis-1,3-Dichloropropene	50	47.1	94	76-122
10061-02-6	trans-1,3-Dichloropropene	50	51.5	103	78-126
100-41-4	Ethylbenzene	50	47.4	95	78-119
76-13-1	Freon 113	50	56.2	112	61-138
591-78-6	2-Hexanone	50	58.7	117	64-134
98-82-8	Isopropylbenzene	50	46.6	93	75-122
79-20-9	Methyl Acetate	50	65.1	130	53-134
108-87-2	Methylcyclohexane	50	50.0	100	62-134
1634-04-4	Methyl Tert Butyl Ether	100	112	112	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	50	60.2	120	69-136
75-09-2	Methylene chloride	50	51.4	103	72-124

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX5957-BS	X137468.D	1	06/26/13	NT	n/a	n/a	VX5957

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-1, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
100-42-5	Styrene	50	46.7	93	78-121
79-34-5	1,1,2,2-Tetrachloroethane	50	48.5	97	71-118
127-18-4	Tetrachloroethene	50	48.5	97	71-130
108-88-3	Toluene	50	48.6	97	78-121
87-61-6	1,2,3-Trichlorobenzene	50	52.9	106	66-134
120-82-1	1,2,4-Trichlorobenzene	50	51.0	102	70-135
71-55-6	1,1,1-Trichloroethane	50	52.9	106	76-132
79-00-5	1,1,2-Trichloroethane	50	52.1	104	79-124
79-01-6	Trichloroethene	50	50.7	101	81-127
75-69-4	Trichlorofluoromethane	50	55.2	110	63-144
75-01-4	Vinyl chloride	50	54.5	109	58-137
	m,p-Xylene	100	93.5	94	78-120
95-47-6	o-Xylene	50	46.7	93	79-122
1330-20-7	Xylene (total)	150	140	93	79-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	65-131%
17060-07-0	1,2-Dichloroethane-D4	104%	70-121%
2037-26-5	Toluene-D8	100%	80-128%
460-00-4	4-Bromofluorobenzene	97%	67-131%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9003-BS	E204866.D	1	07/03/13	OTR	n/a	n/a	VE9003

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	2500	2380	95	49-150
71-43-2	Benzene	2500	2280	91	79-121
74-97-5	Bromochloromethane	2500	2250	90	81-127
75-27-4	Bromodichloromethane	2500	2250	90	78-129
75-25-2	Bromoform	2500	2300	92	73-135
74-83-9	Bromomethane	2500	2510	100	58-145
78-93-3	2-Butanone (MEK)	2500	2150	86	66-138
75-15-0	Carbon disulfide	2500	2340	94	69-134
56-23-5	Carbon tetrachloride	2500	2390	96	73-140
108-90-7	Chlorobenzene	2500	2210	88	81-119
75-00-3	Chloroethane	2500	2300	92	65-138
67-66-3	Chloroform	2500	2190	88	79-124
74-87-3	Chloromethane	2500	1800	72	53-136
110-82-7	Cyclohexane	2500	2520	101	71-133
124-48-1	Dibromochloromethane	2500	2240	90	77-127
95-50-1	1,2-Dichlorobenzene	2500	2160	86	78-120
541-73-1	1,3-Dichlorobenzene	2500	2190	88	77-120
106-46-7	1,4-Dichlorobenzene	2500	2130	85	74-118
75-71-8	Dichlorodifluoromethane	2500	1740	70	33-144
75-34-3	1,1-Dichloroethane	2500	2330	93	77-131
107-06-2	1,2-Dichloroethane	2500	2170	87	73-132
75-35-4	1,1-Dichloroethene	2500	2410	96	72-131
156-59-2	cis-1,2-Dichloroethene	2500	2250	90	77-125
156-60-5	trans-1,2-Dichloroethene	2500	2270	91	74-126
78-87-5	1,2-Dichloropropane	2500	2350	94	78-125
10061-01-5	cis-1,3-Dichloropropene	2500	2170	87	76-122
10061-02-6	trans-1,3-Dichloropropene	2500	2290	92	78-126
100-41-4	Ethylbenzene	2500	2220	89	78-119
76-13-1	Freon 113	2500	2250	90	61-138
591-78-6	2-Hexanone	2500	2400	96	64-134
98-82-8	Isopropylbenzene	2500	2280	91	75-122
79-20-9	Methyl Acetate	2500	2320	93	53-134
108-87-2	Methylcyclohexane	2500	2540	102	62-134
1634-04-4	Methyl Tert Butyl Ether	5000	4420	88	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	2500	2340	94	69-136
75-09-2	Methylene chloride	2500	2280	91	72-124

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9003-BS	E204866.D	1	07/03/13	OTR	n/a	n/a	VE9003

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
100-42-5	Styrene	2500	2340	94	78-121
79-34-5	1,1,2,2-Tetrachloroethane	2500	2020	81	71-118
127-18-4	Tetrachloroethene	2500	2260	90	71-130
108-88-3	Toluene	2500	2190	88	78-121
87-61-6	1,2,3-Trichlorobenzene	2500	2220	89	66-134
120-82-1	1,2,4-Trichlorobenzene	2500	2270	91	70-135
71-55-6	1,1,1-Trichloroethane	2500	2370	95	76-132
79-00-5	1,1,2-Trichloroethane	2500	2240	90	79-124
79-01-6	Trichloroethene	2500	2410	96	81-127
75-69-4	Trichlorofluoromethane	2500	2040	82	63-144
75-01-4	Vinyl chloride	2500	1800	72	58-137
	m,p-Xylene	5000	4420	88	78-120
95-47-6	o-Xylene	2500	2210	88	79-122
1330-20-7	Xylene (total)	7500	6630	88	79-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	88%	65-131%
17060-07-0	1,2-Dichloroethane-D4	86%	70-121%
2037-26-5	Toluene-D8	98%	80-128%
460-00-4	4-Bromofluorobenzene	92%	67-131%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40552-12MS	X137476.D	1	06/26/13	NT	n/a	n/a	VX5957
JB40552-12	X137471.D	1	06/26/13	NT	n/a	n/a	VX5957

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-1, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	JB40552-12 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
67-64-1	Acetone	ND		50.9	57.2	112	10-189
71-43-2	Benzene	ND		50.9	43.8	86	47-130
74-97-5	Bromochloromethane	ND		50.9	50.2	99	51-136
75-27-4	Bromodichloromethane	ND		50.9	46.5	91	45-138
75-25-2	Bromoform	ND		50.9	46.2	91	37-141
74-83-9	Bromomethane	ND		50.9	52.8	104	10-155
78-93-3	2-Butanone (MEK)	ND		50.9	55.4	109	23-173
75-15-0	Carbon disulfide	ND		50.9	47.7	94	34-143
56-23-5	Carbon tetrachloride	ND		50.9	44.4	87	36-150
108-90-7	Chlorobenzene	ND		50.9	39.2	77	36-138
75-00-3	Chloroethane	ND		50.9	56.5	111	29-144
67-66-3	Chloroform	ND		50.9	46.6	92	50-131
74-87-3	Chloromethane	ND		50.9	65.7	129	40-142
110-82-7	Cyclohexane	ND		50.9	44.2	87	25-150
124-48-1	Dibromochloromethane	ND		50.9	43.4	85	42-139
95-50-1	1,2-Dichlorobenzene	ND		50.9	39.2	77	24-142
541-73-1	1,3-Dichlorobenzene	ND		50.9	38.7	76	23-142
106-46-7	1,4-Dichlorobenzene	ND		50.9	39.2	77	22-141
75-71-8	Dichlorodifluoromethane	ND		50.9	66.5	131	24-164
75-34-3	1,1-Dichloroethane	ND		50.9	49.7	98	50-134
107-06-2	1,2-Dichloroethane	ND		50.9	52.6	103	46-135
75-35-4	1,1-Dichloroethene	ND		50.9	46.8	92	39-143
156-59-2	cis-1,2-Dichloroethene	ND		50.9	47.6	94	47-133
156-60-5	trans-1,2-Dichloroethene	ND		50.9	48.1	94	44-135
78-87-5	1,2-Dichloropropane	ND		50.9	47.9	94	50-131
10061-01-5	cis-1,3-Dichloropropene	ND		50.9	46.7	92	42-135
10061-02-6	trans-1,3-Dichloropropene	ND		50.9	47.4	93	38-138
100-41-4	Ethylbenzene	ND		50.9	39.7	78	30-139
76-13-1	Freon 113	ND		50.9	48.9	96	29-154
591-78-6	2-Hexanone	ND		50.9	65.0	128	20-162
98-82-8	Isopropylbenzene	ND		50.9	41.1	81	30-140
79-20-9	Methyl Acetate	ND		50.9	95.6	188* [a]	24-175
108-87-2	Methylcyclohexane	ND		50.9	41.8	82	15-153
1634-04-4	Methyl Tert Butyl Ether	ND		50.9	53.8	106	50-127
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50.9	58.5	115	37-141
75-09-2	Methylene chloride	3.3	J	50.9	51.8	95	50-127

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40552-12MS	X137476.D	1	06/26/13	NT	n/a	n/a	VX5957
JB40552-12	X137471.D	1	06/26/13	NT	n/a	n/a	VX5957

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-1, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	JB40552-12 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
100-42-5	Styrene	ND		50.9	38.8	76	30-143
79-34-5	1,1,2,2-Tetrachloroethane	ND		50.9	47.6	94	35-132
127-18-4	Tetrachloroethene	15.4		50.9	61.2	90	20-175
108-88-3	Toluene	ND		50.9	42.1	83	38-136
87-61-6	1,2,3-Trichlorobenzene	ND		50.9	27.9	55	10-160
120-82-1	1,2,4-Trichlorobenzene	ND		50.9	31.1	61	10-157
71-55-6	1,1,1-Trichloroethane	ND		50.9	45.9	90	44-142
79-00-5	1,1,2-Trichloroethane	ND		50.9	48.2	95	43-135
79-01-6	Trichloroethene	ND		50.9	42.3	83	31-158
75-69-4	Trichlorofluoromethane	ND		50.9	57.0	112	31-156
75-01-4	Vinyl chloride	ND		50.9	58.1	114	38-151
	m,p-Xylene	ND		102	77.7	76	30-140
95-47-6	o-Xylene	ND		50.9	38.6	76	33-139
1330-20-7	Xylene (total)	ND		153	116	76	31-140

CAS No.	Surrogate Recoveries	MS	JB40552-12	Limits
1868-53-7	Dibromofluoromethane	103%	101%	65-131%
17060-07-0	1,2-Dichloroethane-D4	108%	103%	70-121%
2037-26-5	Toluene-D8	100%	98%	80-128%
460-00-4	4-Bromofluorobenzene	103%	110%	67-131%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40918-4MS	E204875.D	1	07/03/13	OTR	n/a	n/a	VE9003
JB40918-4MSD	E204876.D	1	07/03/13	OTR	n/a	n/a	VE9003
JB40918-4	E204878.D	1	07/03/13	OTR	n/a	n/a	VE9003

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-2

CAS No.	Compound	JB40918-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		2640	2760	105	2770	105	0	10-189/35
71-43-2	Benzene	134		2640	2390	86	2330	83	3	47-130/22
74-97-5	Bromochloromethane	ND		2640	2550	97	2550	97	0	51-136/21
75-27-4	Bromodichloromethane	ND		2640	2530	96	2470	94	2	45-138/22
75-25-2	Bromoform	ND		2640	2590	98	2600	99	0	37-141/23
74-83-9	Bromomethane	ND		2640	1770	67	1720	65	3	10-155/31
78-93-3	2-Butanone (MEK)	ND		2640	2450	93	2520	96	3	23-173/30
75-15-0	Carbon disulfide	ND		2640	2010	76	1970	75	2	34-143/27
56-23-5	Carbon tetrachloride	ND		2640	2010	76	2000	76	0	36-150/25
108-90-7	Chlorobenzene	ND		2640	2360	89	2290	87	3	36-138/24
75-00-3	Chloroethane	ND		2640	1440	55	1400	53	3	29-144/29
67-66-3	Chloroform	ND		2640	2340	89	2310	88	1	50-131/22
74-87-3	Chloromethane	ND		2640	1810	69	1790	68	1	40-142/24
110-82-7	Cyclohexane	ND		2640	1920	73	1930	73	1	25-150/27
124-48-1	Dibromochloromethane	ND		2640	2540	96	2500	95	2	42-139/22
95-50-1	1,2-Dichlorobenzene	ND		2640	2370	90	2330	88	2	24-142/27
541-73-1	1,3-Dichlorobenzene	ND		2640	2310	88	2290	87	1	23-142/27
106-46-7	1,4-Dichlorobenzene	ND		2640	2320	88	2280	86	2	22-141/27
75-71-8	Dichlorodifluoromethane	ND		2640	1540	58	1650	63	7	24-164/28
75-34-3	1,1-Dichloroethane	ND		2640	2350	89	2330	88	1	50-134/23
107-06-2	1,2-Dichloroethane	ND		2640	2490	94	2450	93	2	46-135/21
75-35-4	1,1-Dichloroethene	ND		2640	2000	76	1990	75	1	39-143/26
156-59-2	cis-1,2-Dichloroethene	ND		2640	2370	90	2310	88	3	47-133/22
156-60-5	trans-1,2-Dichloroethene	ND		2640	2180	83	2160	82	1	44-135/25
78-87-5	1,2-Dichloropropane	ND		2640	2590	98	2520	96	3	50-131/21
10061-01-5	cis-1,3-Dichloropropene	ND		2640	2640	100	2590	98	2	42-135/23
10061-02-6	trans-1,3-Dichloropropene	ND		2640	2620	99	2620	99	0	38-138/23
100-41-4	Ethylbenzene	56.2		2640	2220	82	2200	81	1	30-139/25
76-13-1	Freon 113	ND		2640	1830	69	1910	72	4	29-154/27
591-78-6	2-Hexanone	ND		2640	2730	104	2830	107	4	20-162/29
98-82-8	Isopropylbenzene	ND		2640	2210	84	2140	81	3	30-140/27
79-20-9	Methyl Acetate	ND		2640	2740	104	2730	104	0	24-175/29
108-87-2	Methylcyclohexane	ND		2640	1950	74	2000	76	3	15-153/29
1634-04-4	Methyl Tert Butyl Ether	ND		2640	2650	100	2610	99	2	50-127/21
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		2640	2650	100	2630	100	1	37-141/24
75-09-2	Methylene chloride	ND		2640	2540	96	2480	94	2	50-127/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40918-4MS	E204875.D	1	07/03/13	OTR	n/a	n/a	VE9003
JB40918-4MSD	E204876.D	1	07/03/13	OTR	n/a	n/a	VE9003
JB40918-4	E204878.D	1	07/03/13	OTR	n/a	n/a	VE9003

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-2

CAS No.	Compound	JB40918-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
100-42-5	Styrene	ND		2640	2520	96	2500	95	1	30-143/26
79-34-5	1,1,2,2-Tetrachloroethane	ND		2640	2330	88	2330	88	0	35-132/26
127-18-4	Tetrachloroethene	ND		2640	2090	79	2070	78	1	20-175/26
108-88-3	Toluene	ND		2640	2280	86	2230	85	2	38-136/24
87-61-6	1,2,3-Trichlorobenzene	ND		2640	2580	98	2520	96	2	10-160/33
120-82-1	1,2,4-Trichlorobenzene	ND		2640	2560	97	2470	94	4	10-157/33
71-55-6	1,1,1-Trichloroethane	ND		2640	2110	80	2110	80	0	44-142/24
79-00-5	1,1,2-Trichloroethane	ND		2640	2560	97	2540	96	1	43-135/22
79-01-6	Trichloroethene	ND		2640	2300	87	2220	84	4	31-158/25
75-69-4	Trichlorofluoromethane	ND		2640	1350	51	1390	53	3	31-156/28
75-01-4	Vinyl chloride	ND		2640	1630	62	1620	61	1	38-151/25
	m,p-Xylene	28.7	J	5270	4490	85	4400	83	2	30-140/26
95-47-6	o-Xylene	ND		2640	2340	89	2290	87	2	33-139/25
1330-20-7	Xylene (total)	28.7	J	7910	6830	86	6700	84	2	31-140/26

CAS No.	Surrogate Recoveries	MS	MSD	JB40918-4	Limits
1868-53-7	Dibromofluoromethane	88%	88%	84%	65-131%
17060-07-0	1,2-Dichloroethane-D4	86%	88%	87%	70-121%
2037-26-5	Toluene-D8	98%	99%	98%	80-128%
460-00-4	4-Bromofluorobenzene	93%	92%	92%	67-131%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40552-14DUP	X137478.D	1	06/26/13	NT	n/a	n/a	VX5957
JB40552-14	X137472.D	1	06/26/13	NT	n/a	n/a	VX5957

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-1, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	JB40552-14 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
67-64-1	Acetone	ND		ND		nc	36
71-43-2	Benzene	ND		ND		nc	20
74-97-5	Bromochloromethane	ND		ND		nc	10
75-27-4	Bromodichloromethane	ND		ND		nc	10
75-25-2	Bromoform	ND		ND		nc	10
74-83-9	Bromomethane	ND		ND		nc	10
78-93-3	2-Butanone (MEK)	ND		ND		nc	14
75-15-0	Carbon disulfide	ND		ND		nc	24
56-23-5	Carbon tetrachloride	ND		ND		nc	10
108-90-7	Chlorobenzene	ND		ND		nc	10
75-00-3	Chloroethane	ND		ND		nc	10
67-66-3	Chloroform	ND		ND		nc	10
74-87-3	Chloromethane	ND		ND		nc	10
110-82-7	Cyclohexane	ND		ND		nc	10
124-48-1	Dibromochloromethane	ND		ND		nc	10
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	10
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	10
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	12
75-71-8	Dichlorodifluoromethane	ND		ND		nc	10
75-34-3	1,1-Dichloroethane	ND		ND		nc	10
107-06-2	1,2-Dichloroethane	ND		ND		nc	10
75-35-4	1,1-Dichloroethene	ND		ND		nc	12
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	14
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	10
78-87-5	1,2-Dichloropropane	ND		ND		nc	10
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	10
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	10
100-41-4	Ethylbenzene	ND		ND		nc	19
76-13-1	Freon 113	ND		ND		nc	10
591-78-6	2-Hexanone	ND		ND		nc	10
98-82-8	Isopropylbenzene	ND		ND		nc	15
79-20-9	Methyl Acetate	ND		ND		nc	10
108-87-2	Methylcyclohexane	ND		ND		nc	13
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	16
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	10
75-09-2	Methylene chloride	2.8	J	3.5	J	22	26

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40552-14DUP	X137478.D	1	06/26/13	NT	n/a	n/a	VX5957
JB40552-14	X137472.D	1	06/26/13	NT	n/a	n/a	VX5957

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40351-1, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	JB40552-14 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
100-42-5	Styrene	ND		ND		nc	10
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	10
127-18-4	Tetrachloroethene	ND		ND		nc	20
108-88-3	Toluene	ND		ND		nc	24
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	10
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	10
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	10
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	10
79-01-6	Trichloroethene	ND		ND		nc	18
75-69-4	Trichlorofluoromethane	ND		ND		nc	10
75-01-4	Vinyl chloride	ND		ND		nc	12
	m,p-Xylene	ND		ND		nc	25
95-47-6	o-Xylene	ND		ND		nc	15
1330-20-7	Xylene (total)	ND		ND		nc	24

CAS No.	Surrogate Recoveries	DUP	JB40552-14	Limits
1868-53-7	Dibromofluoromethane	102%	101%	65-131%
17060-07-0	1,2-Dichloroethane-D4	106%	102%	70-121%
2037-26-5	Toluene-D8	99%	97%	80-128%
460-00-4	4-Bromofluorobenzene	105%	104%	67-131%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VE8959-BFB
Lab File ID: E203868.D
Instrument ID: GCMSE
Injection Date: 06/03/13
Injection Time: 08:51

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	10874	17.7		Pass
75	30.0 - 60.0% of mass 95	28973	47.2		Pass
95	Base peak, 100% relative abundance	61445	100.0		Pass
96	5.0 - 9.0% of mass 95	4093	6.66		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	55701	90.7		Pass
175	5.0 - 9.0% of mass 174	4307	7.01	(7.73) [a]	Pass
176	95.0 - 101.0% of mass 174	54797	89.2	(98.4) [a]	Pass
177	5.0 - 9.0% of mass 176	3733	6.08	(6.81) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VE8959-IC8959	E203869.D	06/03/13	09:51	01:00	Initial cal 0.5
VE8959-IC8959	E203871.D	06/03/13	10:51	02:00	Initial cal 2
VE8959-IC8959	E203872.D	06/03/13	11:22	02:31	Initial cal 5
VE8959-IC8959	E203873.D	06/03/13	11:52	03:01	Initial cal 10
VE8959-IC8959	E203874.D	06/03/13	12:22	03:31	Initial cal 20
VE8959-ICC8959	E203875.D	06/03/13	12:53	04:02	Initial cal 50
VE8959-IC8959	E203876.D	06/03/13	13:23	04:32	Initial cal 100
VE8959-IC8959	E203877.D	06/03/13	13:53	05:02	Initial cal 200
VE8959-IC8959	E203880.D	06/03/13	15:24	06:33	Initial cal 1
VE8959-ICV8959	E203881.D	06/03/13	16:11	07:20	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VE9003-BFB
Lab File ID: E204862.D
Instrument ID: GCMSE
Injection Date: 07/03/13
Injection Time: 09:23

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	10650	17.8		Pass
75	30.0 - 60.0% of mass 95	27765	46.4		Pass
95	Base peak, 100% relative abundance	59858	100.0		Pass
96	5.0 - 9.0% of mass 95	3943	6.59		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	56330	94.1		Pass
175	5.0 - 9.0% of mass 174	4321	7.22	(7.67) [a]	Pass
176	95.0 - 101.0% of mass 174	55544	92.8	(98.6) [a]	Pass
177	5.0 - 9.0% of mass 176	3593	6.00	(6.47) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VE9003-CC8959	E204863.D	07/03/13	09:55	00:32	Continuing cal 20
VE9003-MB	E204865.D	07/03/13	11:00	01:37	Method Blank
VE9003-BS	E204866.D	07/03/13	11:30	02:07	Blank Spike
ZZZZZZ	E204867.D	07/03/13	12:04	02:41	(unrelated sample)
ZZZZZZ	E204868.D	07/03/13	12:34	03:11	(unrelated sample)
ZZZZZZ	E204869.D	07/03/13	13:05	03:42	(unrelated sample)
ZZZZZZ	E204870.D	07/03/13	13:36	04:13	(unrelated sample)
ZZZZZZ	E204871.D	07/03/13	14:06	04:43	(unrelated sample)
ZZZZZZ	E204872.D	07/03/13	14:37	05:14	(unrelated sample)
ZZZZZZ	E204873.D	07/03/13	15:08	05:45	(unrelated sample)
JB40351-2	E204874.D	07/03/13	15:39	06:16	P-7
JB40918-4MS	E204875.D	07/03/13	16:10	06:47	Matrix Spike
JB40918-4MSD	E204876.D	07/03/13	16:41	07:18	Matrix Spike Duplicate
JB40918-4	E204878.D	07/03/13	17:43	08:20	(used for QC only; not part of job JB40351)
ZZZZZZ	E204879.D	07/03/13	18:14	08:51	(unrelated sample)
ZZZZZZ	E204880.D	07/03/13	18:44	09:21	(unrelated sample)
ZZZZZZ	E204881.D	07/03/13	19:15	09:52	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VX5934-BFB
Lab File ID: X136939.D
Instrument ID: GCMSX
Injection Date: 06/11/13
Injection Time: 09:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12210	16.9		Pass
75	30.0 - 60.0% of mass 95	32613	45.0		Pass
95	Base peak, 100% relative abundance	72459	100.0		Pass
96	5.0 - 9.0% of mass 95	5014	6.92		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	66112	91.2		Pass
175	5.0 - 9.0% of mass 174	5402	7.46	(8.17) [a]	Pass
176	95.0 - 101.0% of mass 174	64368	88.8	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	4370	6.03	(6.79) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VX5934-IC5934	X136940.D	06/11/13	09:50	00:33	Initial cal 10
VX5934-IC5934	X136941.D	06/11/13	10:20	01:03	Initial cal 5
VX5934-IC5934	X136942.D	06/11/13	10:49	01:32	Initial cal 2
VX5934-IC5934	X136943.D	06/11/13	11:18	02:01	Initial cal 1
VX5934-IC5934	X136944.D	06/11/13	11:48	02:31	Initial cal 0.5
VX5934-IC5934	X136945.D	06/11/13	12:18	03:01	Initial cal 20
VX5934-ICC5934	X136946.D	06/11/13	12:48	03:31	Initial cal 50
VX5934-IC5934	X136947.D	06/11/13	13:18	04:01	Initial cal 75
VX5934-IC5934	X136948.D	06/11/13	13:47	04:30	Initial cal 100
VX5934-IC5934	X136949.D	06/11/13	14:17	05:00	Initial cal 200
VX5934-ICV5934	X136951.D	06/11/13	15:16	05:59	Initial cal verification 50
VX5935-MB1	X136953.D	06/11/13	16:36	07:19	Method Blank
ZZZZZZ	X136954.D	06/11/13	17:06	07:49	(unrelated sample)
ZZZZZZ	X136955.D	06/11/13	17:36	08:19	(unrelated sample)
ZZZZZZ	X136956.D	06/11/13	18:06	08:49	(unrelated sample)
ZZZZZZ	X136957.D	06/11/13	18:36	09:19	(unrelated sample)
ZZZZZZ	X136958.D	06/11/13	19:06	09:49	(unrelated sample)
ZZZZZZ	X136959.D	06/11/13	19:36	10:19	(unrelated sample)
ZZZZZZ	X136960.D	06/11/13	20:06	10:49	(unrelated sample)
ZZZZZZ	X136961.D	06/11/13	20:35	11:18	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VX5957-BFB
Lab File ID: X137464.D
Instrument ID: GCMSX
Injection Date: 06/26/13
Injection Time: 08:42

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	8453	16.8		Pass
75	30.0 - 60.0% of mass 95	22667	45.1		Pass
95	Base peak, 100% relative abundance	50232	100.0		Pass
96	5.0 - 9.0% of mass 95	3393	6.75		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	47544	94.6		Pass
175	5.0 - 9.0% of mass 174	3730	7.43	(7.85) [a]	Pass
176	95.0 - 101.0% of mass 174	46613	92.8	(98.0) [a]	Pass
177	5.0 - 9.0% of mass 176	3070	6.11	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VX5957-CC5934	X137466.D	06/26/13	09:56	01:14	Continuing cal 20
VX5957-MB1	X137467.D	06/26/13	10:25	01:43	Method Blank
VX5957-BS	X137468.D	06/26/13	11:01	02:19	Blank Spike
ZZZZZZ	X137470.D	06/26/13	12:01	03:19	(unrelated sample)
JB40552-12	X137471.D	06/26/13	12:31	03:49	(used for QC only; not part of job JB40351)
JB40552-14	X137472.D	06/26/13	13:01	04:19	(used for QC only; not part of job JB40351)
ZZZZZZ	X137473.D	06/26/13	13:31	04:49	(unrelated sample)
ZZZZZZ	X137474.D	06/26/13	14:01	05:19	(unrelated sample)
ZZZZZZ	X137475.D	06/26/13	14:31	05:49	(unrelated sample)
JB40552-12MS	X137476.D	06/26/13	15:01	06:19	Matrix Spike
JB40552-14DUP	X137478.D	06/26/13	16:00	07:18	Duplicate
ZZZZZZ	X137479.D	06/26/13	16:30	07:48	(unrelated sample)
ZZZZZZ	X137480.D	06/26/13	17:00	08:18	(unrelated sample)
ZZZZZZ	X137481.D	06/26/13	17:30	08:48	(unrelated sample)
JB40351-1	X137482.D	06/26/13	18:00	09:18	P-6
JB40351-3	X137483.D	06/26/13	18:30	09:48	P-8
JB40351-4	X137484.D	06/26/13	19:00	10:18	P-9
JB40351-5	X137485.D	06/26/13	19:30	10:48	P-10
ZZZZZZ	X137487.D	06/26/13	20:29	11:47	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	VE9003-CC8959	**Injection Date:**	07/03/13
Lab File ID:	E204863.D	**Injection Time:**	09:55
Instrument ID:	GCMSE	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	115907	7.65	180270	9.86	251157	10.78	234576	14.11	127242	16.68
Upper Limit [a]	231814	8.15	360540	10.36	502314	11.28	469152	14.61	254484	17.18
Lower Limit [b]	57954	7.15	90135	9.36	125579	10.28	117288	13.61	63621	16.18

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VE9003-MB	72761	7.66	177618	9.86	246348	10.78	229357	14.11	128866	16.68
VE9003-BS	103177	7.65	170014	9.86	239332	10.78	226444	14.11	123580	16.68
ZZZZZZ	95084	7.66	176163	9.86	243366	10.78	225475	14.11	127385	16.68
ZZZZZZ	84251	7.64	176610	9.86	241396	10.78	227011	14.11	128899	16.68
ZZZZZZ	100855	7.64	181374	9.86	252847	10.78	232308	14.11	129799	16.68
ZZZZZZ	80703	7.64	174113	9.86	242228	10.78	228029	14.10	127710	16.68
ZZZZZZ	106062	7.65	183167	9.86	253673	10.78	234526	14.11	130774	16.68
ZZZZZZ	107263	7.64	179624	9.86	249181	10.78	231677	14.11	127996	16.68
ZZZZZZ	101189	7.64	178831	9.86	246541	10.78	230245	14.11	129139	16.68
JB40351-2	103250	7.66	177070	9.86	237752	10.78	216034	14.11	121478	16.68
JB40918-4MS	79074	7.65	166773	9.86	237197	10.78	225077	14.11	121261	16.68
JB40918-4MSD	83165	7.66	168293	9.86	240767	10.78	229563	14.10	125360	16.68
JB40918-4	82578	7.65	183027	9.86	252665	10.78	235664	14.11	133071	16.68
ZZZZZZ	121017	7.66	184443	9.86	247753	10.78	225870	14.11	124021	16.68
ZZZZZZ	122764	7.67	188273	9.87	253934	10.78	238979	14.11	131444	16.68
ZZZZZZ	79397	7.66	184251	9.86	255783	10.78	225934	14.11	116986	16.68

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	VX5957-CC5934	**Injection Date:**	06/26/13
Lab File ID:	X137466.D	**Injection Time:**	09:56
Instrument ID:	GCMSX	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	90414	7.05	183661	9.72	267725	10.88	256606	15.12	145979	17.96
Upper Limit [a]	180828	7.55	367322	10.22	535450	11.38	513212	15.62	291958	18.46
Lower Limit [b]	45207	6.55	91831	9.22	133863	10.38	128303	14.62	72990	17.46

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VX5957-MB1	82226	7.05	186651	9.73	276540	10.89	265540	15.12	142441	17.96
VX5957-BS	87998	7.05	180539	9.72	269518	10.88	259073	15.12	149861	17.96
ZZZZZZ	79836	7.05	191293	9.73	281910	10.88	265514	15.12	141906	17.96
JB40552-12	79311	7.05	189299	9.72	279101	10.88	259510	15.12	129598	17.96
JB40552-14	72434	7.06	189392	9.73	279721	10.89	262376	15.12	140909	17.96
ZZZZZZ	88781	7.05	185608	9.73	276137	10.89	265421	15.12	143649	17.96
ZZZZZZ	78621	7.05	184711	9.72	275627	10.89	260083	15.12	136589	17.96
ZZZZZZ	85387	7.05	179487	9.73	268996	10.89	260445	15.12	138222	17.96
JB40552-12MS	83143	7.06	183354	9.73	274219	10.89	264522	15.12	141520	17.96
JB40552-14DUP	79749	7.05	181619	9.73	270336	10.89	257473	15.13	138028	17.96
ZZZZZZ	75390	7.05	178221	9.73	266535	10.89	246987	15.13	127838	17.96
ZZZZZZ	73769	7.05	180771	9.73	269958	10.89	256408	15.13	138268	17.96
ZZZZZZ	75595	7.05	181010	9.73	270204	10.89	256474	15.13	138424	17.96
JB40351-1	79509	7.06	180756	9.73	271281	10.89	259777	15.13	140906	17.96
JB40351-3	82294	7.05	184154	9.73	273571	10.89	262830	15.13	143280	17.96
JB40351-4	81259	7.05	179291	9.73	270406	10.89	259581	15.13	141519	17.96
JB40351-5	85272	7.05	181821	9.73	271155	10.89	261730	15.13	142352	17.96
ZZZZZZ	79333	7.06	180901	9.73	270197	10.89	257858	15.13	139727	17.96

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB40351-1	X137482.D	104.0	109.0	100.0	104.0
JB40351-2	E204874.D	86.0	88.0	98.0	91.0
JB40351-3	X137483.D	104.0	108.0	100.0	104.0
JB40351-4	X137484.D	106.0	111.0	100.0	103.0
JB40351-5	X137485.D	97.0	108.0	100.0	103.0
JB40552-12MS	X137476.D	103.0	108.0	100.0	103.0
JB40552-14DUP	X137478.D	102.0	106.0	99.0	105.0
JB40918-4MS	E204875.D	88.0	86.0	98.0	93.0
JB40918-4MSD	E204876.D	88.0	88.0	99.0	92.0
VE9003-BS	E204866.D	88.0	86.0	98.0	92.0
VE9003-MB	E204865.D	85.0	88.0	98.0	93.0
VX5957-BS	X137468.D	102.0	104.0	100.0	97.0
VX5957-MB1	X137467.D	100.0	103.0	100.0	104.0

Surrogate Compounds		Recovery Limits
S1 =	Dibromofluoromethane	65-131%
S2 =	1,2-Dichloroethane-D4	70-121%
S3 =	Toluene-D8	80-128%
S4 =	4-Bromofluorobenzene	67-131%

Initial Calibration Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VE8959-ICC8959
Lab FileID: E203875.D

Response Factor Report MSE

```
Method       : C:\MSDCHEM\1\METHODS\ME8959.M (RTE Integrator)
Title        : SW846  8260B,ZB624 60m x 0.25mm x 1.4um
Last Update  : Tue Jun 04 11:33:14 2013
Response via : Initial Calibration

Calibration Files
5   =E203872.D   2   =E203871.D   20  =E203874.D   50  =E203875.D
100 =E203876.D   1   =E203880.D   200 =E203877.D   0.5 =E203869.D
10  =E203873.D       =

 Compound
           5     2     20    50    100   1     200   0.5   10      Avg    %RSD
-------------------------------------------------------------------------------

1)     Tert Butyl Alcohol-d9 ----------------ISTD---------------------
2)  1,4-dioxane
          0.086 0.090 0.103 0.096 0.096       0.107       0.094   0.096    7.60
3)  tertiary butyl alcohol
          1.328 1.292 1.376 1.278 1.256       1.354       1.258   1.306    3.64
4)  ethanol
                                                                  0.000#  -1.00

5) I   pentafluorobenzene    ----------------ISTD---------------------
6)  freon 23
                                                                  0.000#  -1.00
7)  freon 115
                                                                  0.000#  -1.00
8)  freon 143a
                                                                  0.000#  -1.00
9)  freon 152a
                                                                  0.000#  -1.00
10)  chlorotrifluoroethene
                                                                  0.000#  -1.00
11)  chlorodifluoromethane
          0.438 0.479 0.488 0.455 0.492 0.326 0.463       0.453   0.449   11.83
12)  dichlorodifluoromethane
          0.567       0.705 0.615 0.686       0.639       0.688   0.650    8.13
13)  freon 114
                                                                  0.000#  -1.00
14)  freon 142b
                                                                  0.000#  -1.00
15)  chloromethane
          0.857 1.070 0.911 0.832 0.905 0.905 0.820 1.008 0.892   0.911    8.89
16)  vinyl chloride
          0.823       0.913 0.828 0.895       0.828       0.911   0.866    5.10
17)  1,3-Butadiene
                                                                  0.000#  -1.00
18)  acetaldehyde
                                                                  0.000#  -1.00
19)  bromomethane
          0.478 0.559 0.452 0.381 0.327 0.535 0.241       0.454   0.428   24.92
        ----- Quadratic regression -----                 Coefficient =  0.9996
            Response Ratio = 0.00920 + 0.41205 *A + -0.04334 *A^2

20)  chloroethane
          0.369 0.437 0.378 0.346 0.348 0.324 0.290       0.372   0.358   12.02
21)  vinyl bromide
                                                                  0.000#  -1.00
```

Initial Calibration Summary

Job Number: JB40351 **Sample:** VE8959-ICC8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E203875.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

22)	trichlorofluoromethane										
		0.729	0.915	0.810	0.744	0.773	0.730	0.710	0.651	0.815	0.764	9.94
23)	pentane											
		0.816	0.860	0.807	0.702	0.755	0.717	0.645	0.669	0.814	0.754	9.91
24)	ethyl ether											
		0.268	0.277	0.311	0.293	0.316	0.323	0.295	0.336	0.292	0.301	7.29
25)	freon 141b											
											0.000#	-1.00
26)	freon 123a											
											0.000#	-1.00
27)	freon 123											
											0.000#	-1.00
28)	2-chloropropane											
		0.767	0.733	0.893	0.793	0.843	0.826	0.788	0.735	0.834	0.801	6.59
29)	acrolein											
		0.104	0.100	0.115	0.104	0.074	0.106	0.096	0.113	0.111	0.103	11.93
30)	1,1-dichloroethene											
		0.423	0.404	0.485	0.426	0.462	0.378	0.418	0.322	0.475	0.421	12.07
31)	isopropyl alcohol											
											0.000#	-1.00
32)	acetone											
			0.047	0.047	0.051		0.047		0.040		0.046	8.01
33)	allyl chloride											
		0.845	0.997	1.021	0.802	0.879	1.174	0.786		0.908	0.926	14.10
34)	acetonitrile											
		0.024		0.029	0.031	0.031		0.029		0.030	0.029	9.02
35)	iodomethane											
		0.827	0.757	0.912	0.831	0.896	0.765	0.829	0.725	0.870	0.824	7.78
36)	iso-butyl alcohol											
											0.000#	-1.00
37)	carbon disulfide											
		1.441	1.460	1.648	1.471	1.516	1.474	1.418	1.612	1.595	1.515	5.47
38)	methylene chloride											
		0.512	0.482	0.554	0.504	0.539	0.544	0.493	0.488	0.534	0.517	5.21
39)	1-chloropropane											
		0.908	0.961	0.951	0.809	0.867		0.780		0.915	0.884	7.80
40)	methyl acetate											
		0.390	0.430	0.428	0.393	0.418	0.300	0.379		0.389	0.391	10.60
41)	methyl tert butyl ether											
		1.394	1.396	1.501	1.396	1.470	1.538	1.337	1.403	1.431	1.429	4.37
42)	trans-1,2-dichloroethene											
		0.451	0.461	0.510	0.454	0.478	0.464	0.432	0.374	0.505	0.459	8.85
43)	di-isopropyl ether											
		1.618	1.817	1.650	1.500	1.568	1.520	1.398	1.376	1.527	1.553	8.63
44)	ethyl tert-butyl ether											
		1.470	1.648	1.551	1.434	1.559	1.354	1.369	1.213	1.441	1.449	8.94
45)	2-butanone											
		0.038		0.066	0.066	0.070		0.065		0.061	0.061	18.86

----- Linear regression ----- Coefficient = 0.9983
Response Ratio = 0.00015 + 0.06599 *A

46)	1,1-dichloroethane										
		0.850	0.829	0.944	0.838	0.877	0.899	0.802	0.773	0.909	0.858	6.33
47)	chloroprene											
		0.640	0.685	0.707	0.634	0.678	0.517	0.616		0.652	0.641	9.14
48)	acrylonitrile											
		0.200	0.173	0.215	0.201	0.212	0.216	0.195		0.200	0.201	6.99
49)	vinyl acetate											
		0.074		0.087	0.087	0.092		0.086		0.080	0.084	7.70
50)	ethyl acetate											

Initial Calibration Summary

Job Number: JB40351 **Sample:** VE8959-ICC8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E203875.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
            0.063 0.057 0.077 0.072 0.075       0.068       0.069   0.069   10.13
51)  2,2-dichloropropane
            0.635 0.641 0.691 0.601 0.614 0.670 0.561 0.505 0.687   0.623    9.79
52)  cis-1,2-dichloroethene
            0.520 0.512 0.559 0.503 0.523 0.526 0.475 0.501 0.544   0.518    4.75
53)  methyl acrylate
            0.477 0.412 0.511 0.481 0.497 0.385 0.460       0.498   0.465    9.56
54)  propionitrile
            0.080 0.070 0.084 0.078 0.081 0.088 0.072       0.080   0.079    7.16
55)  bromochloromethane
            0.259 0.238 0.284 0.263 0.275 0.246 0.254       0.269   0.261    5.74
56)  tetrahydrofuran
            0.191 0.156 0.198 0.180 0.187 0.190 0.172       0.183   0.182    7.13
57)  chloroform
            0.821 0.804 0.898 0.814 0.842 0.923 0.770 0.796 0.860   0.837    5.95
58)  t-butyl formate
            0.378 0.391 0.404 0.390 0.430 0.310 0.395       0.359   0.382    9.30
59)  Iso-octane
            1.555 1.805 1.678 1.483 1.547 1.368 1.332       1.624   1.549   10.12
60)  dibromofluoromethane (s)
            0.481 0.404 0.470 0.459 0.478 0.464 0.445 0.638 0.442   0.476   13.74
61)  1,2-dichloroethane-d4 (s)
            0.599 0.486 0.557 0.541 0.549 0.533 0.504 0.735 0.540   0.561   12.95
62)  freon 113
            0.294 0.289 0.341 0.309 0.329       0.292       0.330   0.312    6.83
63)  methacrylonitrile
            0.293 0.272 0.336 0.321 0.334 0.324 0.311       0.318   0.314    6.87
64)  1,1,1-trichloroethane
            0.631 0.633 0.732 0.669 0.704 0.629 0.657 0.527 0.697   0.653    9.12
65)  tert-amyl methyl ether
            1.390 1.579 1.403 1.259 1.351 1.324 1.173       1.312   1.349    8.79

66) I   1,4-difluorobenzene   ----------------ISTD---------------------
67)  Di-isobutylene
                                                                    0.000#  -1.00
68)  tert amyl alcohol
            0.017 0.011 0.018 0.017 0.016       0.014       0.016   0.016   14.72
69)  epichlorohydrin
            0.040 0.041 0.043 0.038 0.040       0.037       0.038   0.040    4.84
70)  n-butyl alcohol
            0.012 0.012 0.013 0.012 0.013       0.011       0.011   0.012    7.72
71)  tert-amyl ethyl ether
            0.496 0.429 0.522 0.474 0.503 0.550 0.453       0.470   0.487    7.98
72)  carbon tetrachloride
            0.400 0.394 0.462 0.409 0.433 0.396 0.399 0.336 0.439   0.408    8.72
73)  1,1-dichloropropene
            0.412 0.406 0.473 0.427 0.444 0.419 0.410 0.347 0.460   0.422    8.66
74)  hexane
            0.370 0.437 0.423 0.375 0.404 0.328 0.354       0.397   0.386    9.34
75)  benzene
            1.296 1.297 1.398 1.234 1.273 1.430 1.146 1.306 1.349   1.303    6.51
76)  heptane
            0.231 0.245 0.263 0.243 0.250 0.155 0.230       0.246   0.233   14.26
77)  isopropyl acetate
            0.744 0.746 0.764 0.638 0.671 0.654 0.598       0.706   0.690    8.60
78)  1,2-dichloroethane
            0.451 0.436 0.479 0.439 0.452 0.469 0.419 0.408 0.456   0.446    5.08
79)  ethyl acrylate
            0.395 0.331 0.443 0.413 0.438 0.324 0.405       0.395   0.393   11.21
80)  trichloroethene
```

Initial Calibration Summary

Job Number: JB40351 **Sample:** VE8959-ICC8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E203875.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
            0.323 0.321 0.367 0.330 0.343 0.314 0.313 0.274 0.353   0.327    8.27
 81)  2-nitropropane
                                                                    0.000#  -1.00
 82)  2-chloroethyl vinyl ether
            0.219 0.226 0.225 0.208 0.200 0.176 0.192       0.197   0.205    8.57
 83)  methylcyclohexane
            0.532 0.610 0.579 0.497 0.515 0.439 0.451       0.557   0.523   11.39
 84)  methyl methacrylate
            0.340 0.335 0.378 0.344 0.357 0.313 0.323       0.350   0.343    5.93
 85)  1,2-dichloropropane
            0.352 0.353 0.374 0.335 0.346 0.347 0.317       0.353   0.347    4.71
 86)  dibromomethane
            0.213 0.205 0.230 0.214 0.221 0.220 0.207       0.213   0.215    3.76
 87)  bromodichloromethane
            0.444 0.415 0.485 0.445 0.467 0.466 0.437 0.431 0.455   0.449    4.70
 88)  cis-1,3-dichloropropene
            0.573 0.557 0.627 0.570 0.600 0.559 0.554 0.466 0.591   0.566    7.86
 89)  toluene-d8 (s)
            1.368 1.159 1.332 1.223 1.240 1.190 1.102       1.296   1.239    7.25
 90)  4-methyl-2-pentanone
            0.151 0.125 0.163 0.150 0.154 0.154 0.141       0.150   0.148    7.66
 91)  toluene
            0.840 0.860 0.908 0.797 0.832 0.903 0.760 0.846 0.873   0.847    5.61
 92)  3-methyl-1-butanol
            0.020 0.020 0.021 0.019 0.019 0.018 0.016       0.019   0.019    8.23
 93)  trans-1,3-dichloropropene
            0.511 0.492 0.570 0.525 0.550 0.517 0.504 0.434 0.538   0.516    7.55
 94)  ethyl methacrylate
            0.443 0.399 0.497 0.462 0.487 0.428 0.444       0.448   0.451    6.92
 95)  1,1,2-trichloroethane
            0.269 0.276 0.296 0.267 0.278 0.288 0.256 0.245 0.277   0.273    5.69
 96)  2-hexanone
            0.128 0.106 0.144 0.140 0.149       0.136       0.129   0.133   10.67

 97) I   chlorobenzene-d5      ----------------ISTD---------------------
 98)  cyclohexanone
            0.028 0.032 0.021 0.019 0.019       0.015       0.023   0.022   26.05
          ----- Quadratic regression -----                Coefficient =  0.9992
              Response Ratio = 0.00314 + 0.02148 *A + -0.00017 *A^2

 99)  tetrachloroethene
            0.418 0.445 0.464 0.403 0.411 0.415 0.373 0.406 0.473   0.423    7.48
100)  1,3-dichloropropane
            0.593 0.554 0.619 0.569 0.572 0.642 0.525 0.566 0.602   0.583    6.08
101)  butyl acetate
            0.240 0.261 0.258 0.238 0.245 0.194 0.225       0.233   0.237    8.92
102)  3,3-dimethyl-1-butanol
            0.048 0.048 0.048 0.044 0.044 0.048 0.035       0.043   0.045    9.68
103)  dibromochloromethane
            0.391 0.373 0.424 0.396 0.409 0.404 0.386 0.400 0.397   0.398    3.60
104)  1,2-dibromoethane
            0.367 0.325 0.388 0.363 0.375 0.388 0.348 0.296 0.371   0.358    8.48
105)  n-butyl ether
                                                                    0.000#  -1.00
106)  chlorobenzene
            0.988 1.001 1.059 0.963 0.994 1.103 0.905 1.022 1.014   1.005    5.55
107)  1,1,1,2-tetrachloroethane
            0.362 0.351 0.381 0.351 0.358 0.398 0.337 0.340 0.367   0.361    5.37
108)  ethylbenzene
            1.634 1.626 1.749 1.546 1.552 1.774 1.397 1.736 1.718   1.637    7.51
```

Initial Calibration Summary

Job Number: JB40351 **Sample:** VE8959-ICC8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E203875.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

109)	m,p-xylene										
	0.645	0.645	0.696	0.616	0.624	0.700	0.567	0.683	0.682	0.651	6.74
110)	o-xylene										
	0.660	0.635	0.713	0.639	0.643	0.698	0.589	0.715	0.694	0.665	6.42
111)	butyl acrylate										
										0.000#	-1.00
112)	styrene										
	1.063	1.006	1.164	1.060	1.058	1.067	0.967	0.908	1.104	1.044	7.20
113)	bromoform										
	0.279	0.262	0.304	0.301	0.312	0.288	0.296	0.279	0.279	0.289	5.46
114) I	1,4-dichlorobenzene-d ----------ISTD----------										
115)	isopropylbenzene										
	3.051	3.073	3.456	3.037	3.075	3.194	2.760	2.845	3.297	3.087	6.88
116)	4-bromofluorobenzene (s)										
	1.042	0.887	1.021	0.957	0.984	0.973	0.900		0.967	0.967	5.51
117)	bromobenzene										
	0.875	0.870	0.937	0.839	0.861	0.882	0.780	0.837	0.904	0.865	5.14
118)	1,1,2,2-tetrachloroethane										
	0.908	0.890	0.960	0.889	0.905	1.066	0.825		0.888	0.916	7.72
119)	trans-1,4-dichloro-2-butene										
	0.188		0.234	0.229	0.244		0.232		0.201	0.221	9.79
120)	1,2,3-trichloropropane										
	0.256	0.212	0.256	0.237	0.244	0.287	0.224		0.246	0.245	9.29
121)	n-propylbenzene										
	3.448	3.531	3.872	3.357	3.416	3.646	3.024	3.342	3.736	3.486	7.15
122)	p-ethyltoluene										
	3.221	2.318	3.270	2.952	2.962	3.526	2.700	3.413	2.944	3.034	12.33
123)	2-chlorotoluene										
	0.753	0.767	0.821	0.724	0.750	0.844	0.676	0.683	0.807	0.758	7.71
124)	4-chlorotoluene										
	2.230	2.208	2.471	2.204	2.273	2.515	2.037	2.371	2.331	2.294	6.42
125)	1,3,5-trimethylbenzene										
	2.536	2.718	2.800	2.420	2.471	2.884	2.126	2.860	2.726	2.616	9.50
126)	tert-butylbenzene										
	2.244	2.288	2.550	2.222	2.270	2.480	2.103	2.316	2.426	2.322	6.01
127)	pentachloroethane										
	0.535	0.481	0.549	0.512	0.522	0.574	0.501	0.535	0.516	0.525	5.18
128)	1,2,4-trimethylbenzene										
	2.591	2.602	2.873	2.518	2.566	2.827	2.325	3.031	2.738	2.675	7.98
129)	sec-butylbenzene										
	3.255	3.234	3.635	3.246	3.275	3.527	2.986	3.276	3.498	3.326	5.88
130)	1,3-dichlorobenzene										
	1.561	1.570	1.701	1.531	1.579	1.748	1.432	1.609	1.629	1.596	5.82
131)	p-isopropyltoluene										
	2.709	2.701	3.102	2.743	2.797	2.824	2.534	2.665	2.929	2.778	5.89
132)	1,4-dichlorobenzene										
	1.562	1.565	1.692	1.543	1.600	1.749	1.466	1.782	1.599	1.618	6.37
133)	benzyl chloride										
	1.568	1.653	1.692	1.603	1.661	1.480	1.510	1.328	1.511	1.556	7.30
134)	p-diethylbenzene										
	1.792	1.304	1.940	1.762	1.787	1.904	1.611	1.836	1.733	1.741	10.90
135)	1,2-dichlorobenzene										
	1.548	1.537	1.667	1.517	1.563	1.772	1.423	1.736	1.590	1.595	6.96
136)	n-butylbenzene										
	1.389	1.309	1.595	1.413	1.485	1.453	1.367	1.213	1.504	1.414	7.97
137)	1,2,4,5-tetramethylbenzene										
	2.831	2.248	3.097	2.828	2.779	3.225	2.514	2.862	2.731	2.791	10.33
138)	1,2-dibromo-3-chloropropane										
	0.147	0.141	0.172	0.166	0.175	0.160	0.167		0.161	0.161	7.42

Initial Calibration Summary

Job Number: JB40351 **Sample:** VE8959-ICC8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E203875.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
139)  1,3,5-trichlorobenzene
            1.277 1.214 1.434 1.310 1.348 1.489 1.231 1.305 1.353   1.329    6.73
140)  1,2,4-trichlorobenzene
            1.030 0.976 1.213 1.153 1.199 1.358 1.102 1.047 1.105   1.131   10.18
141)  hexachlorobutadiene
            0.593 0.610 0.669 0.593 0.613 0.683 0.583 0.543 0.652   0.616    7.31
142)  naphthalene
            2.178 2.023 2.479 2.381 2.470 3.114 2.256       2.241   2.393   13.76
143)  MMT
                                                                    0.000#  -1.00
144)  1,2,3-trichlorobenzene
            0.895 0.829 1.024 0.970 1.023 1.228 0.941 0.891 0.916   0.969   11.96
145)  hexachloroethane
            0.483 0.435 0.552 0.516 0.541 0.497 0.525 0.428 0.508   0.499    8.69
146)  Cyclohexane
            0.897 0.917 1.049 0.921 0.950 0.882 0.860 0.766 1.025   0.919    9.25
147)  ethyleinimine
                                                                    0.000#  -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          ME8959.M          Tue Jun 11 18:07:27 2013   RPT1
```

6.9.1

6

Initial Calibration Verification

Job Number: JB40351 **Sample:** VE8959-ICV8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E203881.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VE old data\E203881.D Vial: 14
Acq On : 3 Jun 2013 4:11 pm Operator: Oksanat
Sample : icv8959-50 Inst : MSE
Misc : MS48940,VE8959,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\ME8959.M (RTE Integrator)
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um
Last Update : Tue Jun 11 18:05:22 2013
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	100	0.00	7.65
2	M	1,4-dioxane	0.096	0.096	0.0	100	-0.01	11.50
3	M	tertiary butyl alcohol	1.306	1.505	-15.2	117	-0.01	7.76
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	9.87
6		freon 23		----------NA----------				
7		freon 115		----------NA----------				
8		freon 143a		----------NA----------				
9		freon 152a		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane	0.449	0.530	-18.0	118	0.00	4.29
12	M	dichlorodifluoromethane	0.650	0.529	18.6	87	0.00	4.28
13		freon 114		----------NA----------				
14		freon 142b		----------NA----------				
15	M	chloromethane	0.911	0.769	15.6	93	0.00	4.63
16	M	vinyl chloride	0.866	0.694	19.9	85	0.00	4.89
17		1,3-Butadiene		----------NA----------				
18	M	acetaldehyde		----------NA----------				
		----------	True	Calc.	% Drift	----------		
19	M	bromomethane	50.000	53.297	-6.6	106	0.00	5.55
		----------	AvgRF	CCRF	% Dev	----------		
20	M	chloroethane	0.358	0.369	-3.1	108	0.00	5.73
21	M	vinyl bromide		----------NA----------				
22	M	trichlorofluoromethane	0.764	0.678	11.3	92	0.00	6.23
23	M	pentane	0.754	0.658	12.7	95	0.00	6.31
24	M	ethyl ether	0.301	0.302	-0.3	104	0.00	6.61
25		freon 141b		----------NA----------				
26		freon 123a		----------NA----------				
27		freon 123		----------NA----------				
28	m	2-chloropropane	0.801	0.812	-1.4	103	0.00	6.80
29	M	acrolein	0.103	0.116	-12.6	112	-0.01	6.81
30	M	1,1-dichloroethene	0.421	0.428	-1.7	102	0.00	7.04
31	M	isopropyl alcohol		----------NA----------				
32	M	acetone	0.046	0.051	-10.9	109	0.00	7.03
33	M	allyl chloride	0.926	0.783	15.4	99	0.00	7.54
34	M	acetonitrile	0.029	0.036	-24.1#	119	0.00	7.43
35	M	iodomethane	0.824	0.828	-0.5	101	0.00	7.31
36	M	iso-butyl alcohol		----------NA----------				
37	M	carbon disulfide	1.515	1.422	6.1	98	0.00	7.47

Initial Calibration Verification

Job Number: JB40351 **Sample:** VE8959-ICV8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E203881.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

38	M	methylene chloride	0.517	0.497	3.9	100	0.00	7.71
39	m	1-chloropropane	0.884	0.813	8.0	102	0.00	7.77
40	M	methyl acetate	0.391	0.415	-6.1	107	0.00	7.50
41	M	methyl tert butyl ether	1.429	1.349	5.6	98	0.00	8.06
42	M	trans-1,2-dichloroethene	0.459	0.436	5.0	97	0.00	8.11
43	M	di-isopropyl ether	1.553	1.593	-2.6	107	0.00	8.65
44	M	ethyl tert-butyl ether	1.449	1.414	2.4	100	0.00	9.11
		----------	True	Calc.	% Drift	----------		
45	M	2-butanone	50.000	51.234	-2.5	103	0.00	9.30
		----------	AvgRF	CCRF	% Dev	----------		
46	M	1,1-dichloroethane	0.858	0.843	1.7	102	0.00	8.64
47	M	chloroprene	0.641	0.675	-5.3	108	0.00	8.76
48	M	acrylonitrile	0.201	0.207	-3.0	104	0.00	7.97
49	M	vinyl acetate	0.084	0.097	-15.5	113	0.00	8.61
50	M	ethyl acetate	0.069	0.077	-11.6	107	0.00	9.33
51	M	2,2-dichloropropane	0.623	0.571	8.3	96	0.00	9.39
52	M	cis-1,2-dichloroethene	0.518	0.486	6.2	98	0.00	9.36
53	m	methyl acrylate	0.465	0.465	0.0	98	0.00	9.41
54	M	propionitrile	0.079	0.079	0.0	102	0.00	9.35
55	M	bromochloromethane	0.261	0.255	2.3	98	0.00	9.66
56	M	tetrahydrofuran	0.182	0.175	3.8	98	0.00	9.72
57	M	chloroform	0.837	0.798	4.7	99	0.00	9.71
58	m	t-butyl formate	0.382	0.340	11.0	88	0.00	9.76
59	M	Iso-octane	1.549	1.471	5.0	100	0.00	10.48
60	S	dibromofluoromethane (s)	0.476	0.419	12.0	92	0.00	9.90
61	S	1,2-dichloroethane-d4 (s)	0.561	0.497	11.4	93	0.00	10.32
62	M	freon 113	0.312	0.312	0.0	102	0.00	7.03
63	M	methacrylonitrile	0.314	0.315	-0.3	99	0.00	9.56
64	M	1,1,1-trichloroethane	0.653	0.651	0.3	98	0.00	10.01
65	M	tert-amyl methyl ether	1.349	1.271	5.8	102	0.00	10.47
66	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	10.78
67	M	Di-isobutylene		----------NA----------				
68	M	tert amyl alcohol	0.016	0.015	6.3	92	0.00	10.25
69	M	epichlorohydrin	0.040	0.039	2.5	103	0.00	12.02
70	M	n-butyl alcohol	0.012	0.012	0.0	98	0.00	10.86
71	M	tert-amyl ethyl ether	0.487	0.420	13.9	89	0.00	11.32
72	M	carbon tetrachloride	0.408	0.401	1.7	99	0.00	10.22
73	M	1,1-dichloropropene	0.422	0.391	7.3	92	0.00	10.18
74	M	hexane	0.386	0.457	-18.4	123	0.00	8.43
75	M	benzene	1.303	1.230	5.6	100	0.00	10.43
76	M	heptane	0.233	0.251	-7.7	104	0.00	10.64
77	M	isopropyl acetate	0.690	0.671	2.8	106	0.00	10.32
78	M	1,2-dichloroethane	0.446	0.433	2.9	99	0.00	10.41
79		ethyl acrylate	0.393	0.396	-0.8	96	0.00	11.11
80	M	trichloroethene	0.327	0.332	-1.5	101	0.00	11.15
81	M	2-nitropropane		----------NA----------				
82	M	2-chloroethyl vinyl ether	0.205	0.247	-20.3#	119	0.00	11.91
83	M	methylcyclohexane	0.523	0.559	-6.9	113	0.00	11.41
84	M	methyl methacrylate	0.343	0.355	-3.5	104	0.00	11.38
85	M	1,2-dichloropropane	0.347	0.332	4.3	99	0.00	11.39
86	M	dibromomethane	0.215	0.212	1.4	99	0.00	11.55
87	M	bromodichloromethane	0.449	0.443	1.3	100	0.00	11.67
88	M	cis-1,3-dichloropropene	0.566	0.523	7.6	92	0.00	12.15
89	S	toluene-d8 (s)	1.239	1.133	8.6	93	0.00	12.48
90	M	4-methyl-2-pentanone	0.148	0.148	0.0	99	0.00	12.23
91	M	toluene	0.847	0.790	6.7	100	0.00	12.56
92	M	3-methyl-1-butanol	0.019	0.018	5.3	95	0.00	12.24

Initial Calibration Verification

Job Number: JB40351 **Sample:** VE8959-ICV8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E203881.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

93	M	trans-1,3-dichloropropene	0.516	0.521	-1.0	100	0.00	12.73
94	M	ethyl methacrylate	0.451	0.457	-1.3	100	0.00	12.73
95	M	1,1,2-trichloroethane	0.273	0.272	0.4	102	0.00	12.96
96	M	2-hexanone	0.133	0.140	-5.3	101	0.00	13.14
97	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	14.11
		----------	True	Calc.	% Drift	----------		
98	M	cyclohexanone	500.000	399.466	20.1#	87	0.00	15.31
		----------	AvgRF	CCRF	% Dev	----------		
99	M	tetrachloroethene	0.423	0.405	4.3	101	0.00	13.21
100	M	1,3-dichloropropane	0.583	0.564	3.3	100	0.00	13.16
101	M	butyl acetate	0.237	0.249	-5.1	105	0.00	13.23
102	m	3,3-dimethyl-1-butanol	0.045	0.039	13.3	89	0.00	13.32
103	M	dibromochloromethane	0.398	0.398	0.0	101	0.00	13.46
104	M	1,2-dibromoethane	0.358	0.359	-0.3	99	0.00	13.62
105	M	n-butyl ether		----------NA----------				
106	M	chlorobenzene	1.005	0.967	3.8	101	0.00	14.15
107	M	1,1,1,2-tetrachloroethane	0.361	0.344	4.7	99	0.00	14.20
108	M	ethylbenzene	1.637	1.541	5.9	100	0.00	14.21
109	M	m,p-xylene	0.651	0.615	5.5	101	0.00	14.32
110	M	o-xylene	0.665	0.634	4.7	100	0.00	14.78
111	M	butyl acrylate		----------NA----------				
112	M	styrene	1.044	1.050	-0.6	100	0.00	14.79
113	M	bromoform	0.289	0.300	-3.8	100	0.00	15.07
114	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	16.68
115	M	isopropylbenzene	3.087	3.004	2.7	100	0.00	15.17
116	S	4-bromofluorobenzene (s)	0.967	0.886	8.4	93	0.00	15.38
117	M	bromobenzene	0.865	0.836	3.4	100	0.00	15.61
118	M	1,1,2,2-tetrachloroethane	0.916	0.869	5.1	98	0.00	15.46
119	M	trans-1,4-dichloro-2-bute	0.221	0.234	-5.9	103	0.00	15.51
120	M	1,2,3-trichloropropane	0.245	0.231	5.7	98	0.00	15.55
121	M	n-propylbenzene	3.486	3.433	1.5	103	0.00	15.62
122	M	p-ethyltoluene	3.034	2.756	9.2	94	0.00	15.73
123	M	2-chlorotoluene	0.758	0.732	3.4	102	0.00	15.78
124	M	4-chlorotoluene	2.294	2.188	4.6	100	0.00	15.89
125	M	1,3,5-trimethylbenzene	2.616	2.423	7.4	101	0.00	15.78
126	M	tert-butylbenzene	2.322	2.228	4.0	101	0.00	16.18
127	M	pentachloroethane	0.525	0.508	3.2	100	0.00	16.26
128	M	1,2,4-trimethylbenzene	2.675	2.571	3.9	103	0.00	16.22
129	M	sec-butylbenzene	3.326	3.236	2.7	101	0.00	16.42
130	M	1,3-dichlorobenzene	1.596	1.540	3.5	101	0.00	16.62
131	M	p-isopropyltoluene	2.778	2.848	-2.5	105	0.00	16.54
132	M	1,4-dichlorobenzene	1.618	1.541	4.8	101	0.00	16.71
133		benzyl chloride	1.556	1.584	-1.8	100	0.00	16.82
134	M	p-diethylbenzene	1.741	1.662	4.5	95	0.00	16.97
135	M	1,2-dichlorobenzene	1.595	1.526	4.3	101	0.00	17.14
136	M	n-butylbenzene	1.414	1.431	-1.2	102	0.00	17.00
137	M	1,2,4,5-tetramethylbenzen	2.791	2.682	3.9	96	0.00	17.83
138	M	1,2-dibromo-3-chloropropa	0.161	0.167	-3.7	101	0.00	17.96
139	m	1,3,5-trichlorobenzene	1.329	1.317	0.9	101	0.00	18.20
140	M	1,2,4-trichlorobenzene	1.131	1.155	-2.1	101	0.00	18.92
141	M	hexachlorobutadiene	0.616	0.590	4.2	100	0.00	19.06
142	M	naphthalene	2.393	2.389	0.2	101	0.00	19.22
143		MMT		----------NA----------				
144	M	1,2,3-trichlorobenzene	0.969	0.985	-1.7	102	0.00	19.50
145	M	hexachloroethane	0.499	0.502	-0.6	98	0.00	17.46
146	M	Cyclohexane	0.919	0.901	2.0	99	0.00	10.11

Initial Calibration Verification

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VE8959-ICV8959
Lab FileID: E203881.D

```
147     ethyleinimine                        ----------NA----------
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range                SPCC's out = 0  CCC's out = 0
     E203875.D  ME8959.M         Tue Jun 11 18:09:17 2013   RPT1
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6.9.2

6

Continuing Calibration Summary

Job Number: JB40351 **Sample:** VE9003-CC8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E204863.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E204863.D Vial: 2
Acq On : 3 Jul 2013 9:55 am Operator: Oksanat
Sample : cc8959-20 Inst : MSE
Misc : MS50715,VE9003,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\ME8959.M (RTE Integrator)
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um
Last Update : Mon Jul 01 17:29:58 2013
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	114	0.00	7.65
2	M	1,4-dioxane	0.096	0.084	12.5	94	0.00	11.51
3	M	tertiary butyl alcohol	1.306	1.070	18.1	89	0.00	7.78
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	9.86
6		freon 23		----------NA----------				
7		freon 115		----------NA----------				
8		freon 143a		----------NA----------				
9		freon 152a		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane	0.449	0.437	2.7	93	0.00	4.29
12	M	dichlorodifluoromethane	0.650	0.596	8.3	87	0.00	4.29
13		freon 114		----------NA----------				
14		freon 142b		----------NA----------				
15	M	chloromethane	0.911	0.746	18.1	85	0.00	4.62
16	M	vinyl chloride	0.866	0.760	12.2	86	0.00	4.89
17		1,3-Butadiene		----------NA----------				
18	M	acetaldehyde		----------NA----------				
		----------	True	Calc.	% Drift	----------		
19	M	bromomethane	20.000	18.499	7.5	89	0.00	5.55
		----------	AvgRF	CCRF	% Dev	----------		
20	M	chloroethane	0.358	0.321	10.3	88	0.00	5.73
21	M	vinyl bromide		----------NA----------				
22	M	trichlorofluoromethane	0.764	0.699	8.5	89	0.01	6.23
23	M	pentane		----------NA----------				
24	M	ethyl ether	0.301	0.283	6.0	94	0.00	6.61
25		freon 141b		----------NA----------				
26		freon 123a		----------NA----------				
27		freon 123		----------NA----------				
28	m	2-chloropropane	0.801	0.809	-1.0	94	0.00	6.80
29	M	acrolein	0.103	0.110	-6.8	99	0.00	6.82
30	M	1,1-dichloroethene	0.421	0.418	0.7	89	0.00	7.04
31	M	isopropyl alcohol		----------NA----------				
32	M	acetone	0.046	0.049	-6.5	107	0.01	7.04
33	M	allyl chloride	0.926	0.766	17.3	78	0.00	7.54
34	M	acetonitrile	0.029	0.037	-27.6#	133	0.01	7.45
35	M	iodomethane	0.824	0.809	1.8	92	0.00	7.31
36	M	iso-butyl alcohol		----------NA----------				
37	M	carbon disulfide	1.515	1.470	3.0	92	0.00	7.47

Continuing Calibration Summary

Job Number: JB40351 **Sample:** VE9003-CC8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E204863.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

38	M	methylene chloride	0.517	0.487	5.8	91	0.00	7.71
39	m	1-chloropropane	0.884	0.787	11.0	86	0.00	7.77
40	M	methyl acetate	0.391	0.380	2.8	92	0.00	7.51
41	M	methyl tert butyl ether	1.429	1.398	2.2	96	0.00	8.06
42	M	trans-1,2-dichloroethene	0.459	0.443	3.5	90	0.00	8.11
43	M	di-isopropyl ether	1.553	1.472	5.2	92	0.00	8.66
44	M	ethyl tert-butyl ether	1.449	1.415	2.3	94	0.00	9.11
		----------	True	Calc.	% Drift	----------		
45	M	2-butanone	20.000	16.397	18.0	85	0.00	9.30
		----------	AvgRF	CCRF	% Dev	----------		
46	M	1,1-dichloroethane	0.858	0.828	3.5	91	0.00	8.65
47	M	chloroprene	0.641	0.588	8.3	86	0.00	8.77
48	M	acrylonitrile	0.201	0.201	0.0	97	0.00	7.98
49	M	vinyl acetate	0.084	0.074	11.9	87	0.00	8.61
50	M	ethyl acetate	0.069	0.068	1.4	92	0.00	9.33
51	M	2,2-dichloropropane	0.623	0.620	0.5	93	0.00	9.39
52	M	cis-1,2-dichloroethene	0.518	0.483	6.8	89	0.00	9.37
53	m	methyl acrylate	0.465	0.448	3.7	91	0.00	9.41
54	M	propionitrile	0.079	0.081	-2.5	100	0.00	9.35
55	M	bromochloromethane	0.261	0.246	5.7	90	0.00	9.66
56	M	tetrahydrofuran	0.182	0.186	-2.2	97	0.00	9.73
57	M	chloroform	0.837	0.768	8.2	88	0.00	9.71
58	m	t-butyl formate	0.382	0.375	1.8	96	0.00	9.76
59	M	Iso-octane	1.549	1.573	-1.5	97	0.00	10.48
60	S	dibromofluoromethane (s)	0.476	0.413	13.2	91	0.00	9.91
61	S	1,2-dichloroethane-d4 (s)	0.561	0.482	14.1	89	0.00	10.32
62	M	freon 113	0.312	0.291	6.7	88	0.00	7.03
63	M	methacrylonitrile	0.314	0.304	3.2	94	0.00	9.56
64	M	1,1,1-trichloroethane	0.653	0.632	3.2	89	0.00	10.01
65	M	tert-amyl methyl ether	1.349	1.260	6.6	93	0.00	10.48
66	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	10.78
67	M	Di-isobutylene		----------NA----------				
68	M	tert amyl alcohol		----------NA----------				
69	M	epichlorohydrin	0.040	0.038	5.0	91	0.00	12.02
70	M	n-butyl alcohol	0.012	0.012	0.0	90	0.00	10.87
71	M	tert-amyl ethyl ether		----------NA----------				
72	M	carbon tetrachloride	0.408	0.404	1.0	88	0.00	10.23
73	M	1,1-dichloropropene	0.422	0.425	-0.7	91	0.00	10.18
74	M	hexane	0.386	0.366	5.2	87	0.00	8.43
75	M	benzene	1.303	1.229	5.7	89	0.00	10.43
76	M	heptane	0.233	0.233	0.0	90	0.00	10.63
77	M	isopropyl acetate	0.690	0.606	12.2	80	0.00	10.32
78	M	1,2-dichloroethane	0.446	0.411	7.8	87	0.00	10.41
79		ethyl acrylate		----------NA----------				
80	M	trichloroethene	0.327	0.317	3.1	87	0.00	11.15
81	M	2-nitropropane		----------NA----------				
82	M	2-chloroethyl vinyl ether	0.205	0.219	-6.8	98	0.00	11.91
83	M	methylcyclohexane	0.523	0.507	3.1	88	0.00	11.41
84	M	methyl methacrylate	0.343	0.341	0.6	91	0.00	11.39
85	M	1,2-dichloropropane	0.347	0.345	0.6	93	0.00	11.39
86	M	dibromomethane	0.215	0.198	7.9	87	0.00	11.54
87	M	bromodichloromethane	0.449	0.418	6.9	87	0.00	11.67
88	M	cis-1,3-dichloropropene	0.566	0.546	3.5	88	0.00	12.15
89	S	toluene-d8 (s)	1.239	1.183	4.5	90	0.00	12.48
90	M	4-methyl-2-pentanone	0.148	0.154	-4.1	95	0.00	12.23
91	M	toluene	0.847	0.760	10.3	84	0.00	12.56
92	M	3-methyl-1-butanol	0.019	0.020	-5.3	95	0.00	12.24

Continuing Calibration Summary

Job Number: JB40351 **Sample:** VE9003-CC8959
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** E204863.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

93	M	trans-1,3-dichloropropene	0.516	0.501	2.9	89	0.00	12.73
94	M	ethyl methacrylate	0.451	0.447	0.9	91	0.00	12.74
95	M	1,1,2-trichloroethane	0.273	0.255	6.6	87	0.00	12.96
96	M	2-hexanone	0.133	0.140	-5.3	98	0.00	13.14
97	I	chlorobenzene-d5	1.000	1.000	0.0	98	0.00	14.11
		----------	True	Calc.	% Drift	----------		
98	M	cyclohexanone	200.000	207.594	-3.8	102	0.00	15.31
		----------	AvgRF	CCRF	% Dev	----------		
99	M	tetrachloroethene	0.423	0.402	5.0	85	0.00	13.21
100	M	1,3-dichloropropane	0.583	0.552	5.3	88	0.00	13.16
101	M	butyl acetate	0.237	0.231	2.5	88	0.00	13.23
102	m	3,3-dimethyl-1-butanol	0.045	0.048	-6.7	98	0.00	13.32
103	M	dibromochloromethane	0.398	0.370	7.0	86	0.00	13.45
104	M	1,2-dibromoethane	0.358	0.339	5.3	86	0.00	13.62
105	M	n-butyl ether		----------NA----------				
106	M	chlorobenzene	1.005	0.930	7.5	86	0.00	14.14
107	M	1,1,1,2-tetrachloroethane	0.361	0.342	5.3	88	0.00	14.20
108	M	ethylbenzene	1.637	1.544	5.7	87	0.00	14.20
109	M	m,p-xylene	0.651	0.612	6.0	86	0.00	14.33
110	M	o-xylene	0.665	0.624	6.2	86	0.00	14.79
111	M	butyl acrylate		----------NA----------				
112	M	styrene	1.044	1.038	0.6	88	0.00	14.79
113	M	bromoform	0.289	0.282	2.4	91	0.00	15.07
114	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	16.68
115	M	isopropylbenzene	3.087	3.021	2.1	88	0.00	15.16
116	S	4-bromofluorobenzene (s)	0.967	0.916	5.3	91	0.00	15.38
117	M	bromobenzene	0.865	0.804	7.1	87	0.00	15.61
118	M	1,1,2,2-tetrachloroethane	0.916	0.833	9.1	88	0.00	15.46
119	M	trans-1,4-dichloro-2-bute	0.221	0.227	-2.7	98	0.00	15.50
120	M	1,2,3-trichloropropane	0.245	0.223	9.0	88	0.00	15.54
121	M	n-propylbenzene	3.486	3.371	3.3	88	0.00	15.62
122	M	p-ethyltoluene		----------NA----------				
123	M	2-chlorotoluene	0.758	0.716	5.5	88	0.00	15.78
124	M	4-chlorotoluene	2.294	2.155	6.1	88	0.00	15.89
125	M	1,3,5-trimethylbenzene	2.616	2.480	5.2	90	0.00	15.78
126	M	tert-butylbenzene	2.322	2.229	4.0	88	0.00	16.17
127	M	pentachloroethane	0.525	0.496	5.5	91	0.00	16.26
128	M	1,2,4-trimethylbenzene	2.675	2.501	6.5	88	0.00	16.22
129	M	sec-butylbenzene	3.326	3.215	3.3	89	0.00	16.41
130	M	1,3-dichlorobenzene	1.596	1.494	6.4	89	0.00	16.62
131	M	p-isopropyltoluene	2.778	2.697	2.9	88	0.00	16.54
132	M	1,4-dichlorobenzene	1.618	1.476	8.8	88	0.00	16.71
133		benzyl chloride	1.556	1.572	-1.0	94	0.00	16.81
134	M	p-diethylbenzene		----------NA----------				
135	M	1,2-dichlorobenzene	1.595	1.484	7.0	90	0.00	17.14
136	M	n-butylbenzene	1.414	1.376	2.7	87	0.00	17.00
137	M	1,2,4,5-tetramethylbenzen		----------NA----------				
138	M	1,2-dibromo-3-chloropropa	0.161	0.158	1.9	93	0.00	17.97
139	m	1,3,5-trichlorobenzene	1.329	1.264	4.9	89	0.00	18.21
140	M	1,2,4-trichlorobenzene	1.131	1.064	5.9	89	0.00	18.91
141	M	hexachlorobutadiene	0.616	0.601	2.4	91	0.00	19.06
142	M	naphthalene	2.393	2.194	8.3	90	0.00	19.23
143		MMT		----------NA----------				
144	M	1,2,3-trichlorobenzene	0.969	0.903	6.8	89	0.00	19.50
145	M	hexachloroethane	0.499	0.511	-2.4	94	0.00	17.45
146	M	Cyclohexane	0.919	0.966	-5.1	93	0.00	10.12

Continuing Calibration Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VE9003-CC8959
Lab FileID: E204863.D

```
147     ethyleinimine                        ----------NA----------
 ---------------------------------------------------------------------------
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    (#) = Out of Range               SPCC's out = 0  CCC's out = 0
     E203874.D  ME8959.M         Wed Jul 03 13:51:58 2013   RPT1
```

Initial Calibration Summary

Job Number: JB40351 **Sample:** VX5934-ICC5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X136946.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Response Factor Report ACC-VOA-M

```
Method       : C:\MSDCHEM\1\METHODS\MX5934.M (RTE Integrator)
Title        : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
Last Update  : Wed Jul 10 12:03:24 2013
Response via : Initial Calibration

Calibration Files
1   =X136943.D   2   =X136942.D   100 =X136948.D   50  =X136946.D
20  =X136945.D   200 =X136949.D   5   =X136941.D   10  =X136940.D
0.5 =X136944.D   75  =X136947.D       =                =

Compound
        1     2     100   50    20    200   5     10    0.5   75     Avg   %RSD
-------------------------------------------------------------------------------

1) I   tert butyl alcohol-d9 ----------------ISTD---------------------
2)  tertiary butyl alcohol
           1.142 1.156 1.120 1.194 0.936 1.179 1.071       1.119  1.115    7.34
3)  ethyl alcohol
                                                                  0.000   -1.00
4)  1,4-dioxane
           0.095 0.100 0.099 0.104 0.085 0.101 0.091       0.105  0.097    7.04

5) I   pentafluorobenzene    ----------------ISTD---------------------
6)  freon 23
                                                                  0.000   -1.00
7)  freon 115
                                                                  0.000   -1.00
8)  freon 143a
                                                                  0.000   -1.00
9)  freon 152a
                                                                  0.000   -1.00
10)  chlorotrifluoroethene
                                                                  0.000   -1.00
11)  chlorodifluoromethane
      0.405 0.395 0.339 0.336 0.353 0.275 0.404 0.340 0.358 0.326  0.353   11.39
12)  dichlorodifluoromethane
      0.482 0.505 0.444 0.448 0.471 0.384 0.472 0.418 0.497 0.454  0.458    8.00
13)  freon 114
                                                                  0.000   -1.00
14)  freon 142b
                                                                  0.000   -1.00
15)  chloromethane
           0.654 0.553 0.554 0.564 0.468 0.617 0.551       0.551  0.564    9.68
16)  vinyl chloride
      0.638 0.658 0.561 0.560 0.595 0.478 0.632 0.551 0.674 0.558  0.591   10.20
17)  acetaldehyde
                 0.009 0.009 0.007 0.006                   0.011  0.009   22.75
           ----- Linear regression -----  Coefficient =  0.8781
             Response Ratio = 0.03943 + 0.00582 *A

18)  bromomethane
                 0.348 0.346 0.362 0.271 0.403 0.363       0.339  0.347   11.47
19)  chloroethane
      0.279 0.307 0.272 0.263 0.290 0.226 0.299 0.281 0.245 0.274  0.274    8.79
20)  vinyl bromide
                                                                  0.000   -1.00
21)  trichlorofluoromethane
      0.679 0.711 0.610 0.613 0.662 0.541 0.683 0.602 0.676 0.629  0.641    7.93
```

Initial Calibration Summary

Job Number: JB40351 **Sample:** VX5934-ICC5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X136946.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

22)	pentane										0.000	-1.00
23)	ethyl ether	0.226	0.225	0.204	0.200	0.211	0.177	0.212	0.210	0.245	0.205	0.212	8.58
24)	freon 141b										0.000	-1.00
25)	freon 123a										0.000	-1.00
26)	freon 123										0.000	-1.00
27)	acrolein	0.058	0.065		0.064	0.073		0.067	0.071		0.068	0.066	6.93
28)	1,1-dichloroethene	0.403	0.395	0.343	0.350	0.354	0.285	0.404	0.338	0.365	0.348	0.359	10.09
29)	acetone			0.030	0.026	0.032	0.024		0.029		0.027	0.028	10.06
30)	allyl chloride	0.242	0.257	0.208	0.203	0.221	0.158	0.241	0.215		0.205	0.217	13.35
31)	acetonitrile			0.028	0.028	0.027	0.027	0.023	0.032	0.029		0.027	0.028	8.40
32)	iodomethane	0.784	0.771	0.731	0.726	0.722	0.598	0.812	0.712	0.658	0.719	0.723	8.49
33)	iso-butyl alcohol	0.022	0.018	0.018	0.016	0.016	0.015	0.017	0.018		0.016	0.017	11.37
34)	carbon disulfide	1.485	1.513	1.298	1.319	1.361	1.063	1.511	1.284	1.565	1.296	1.370	11.05
35)	methylene chloride			0.557	0.437	0.430	0.439	0.355	0.476	0.453		0.429	0.447	12.57
36)	methyl acetate			0.233	0.252	0.238	0.244	0.212	0.232	0.235		0.232	0.235	4.83
37)	methyl tert butyl ether	1.098	1.233	1.133	1.109	1.105	0.952	1.133	1.123	1.191	1.102	1.118	6.50
38)	trans-1,2-dichloroethene	0.425	0.422	0.387	0.387	0.391	0.317	0.439	0.378	0.355	0.380	0.388	9.15
39)	di-isopropyl ether	1.449	1.570	1.378	1.333	1.356	1.123	1.406	1.286	1.449	1.310	1.366	8.69
40)	2-butanone			0.040	0.039	0.039	0.035	0.031	0.038		0.037	0.037	8.46
41)	1,1-dichloroethane	0.755	0.801	0.698	0.696	0.706	0.571	0.773	0.690	0.730	0.680	0.710	8.89
42)	chloroprene	0.584	0.597	0.537	0.522	0.540	0.438	0.591	0.509	0.499	0.509	0.533	9.20
43)	acrylonitrile			0.108	0.118	0.113	0.114	0.100	0.105	0.118		0.111	0.111	5.46
44)	vinyl acetate			0.061	0.057	0.056	0.052	0.039	0.048		0.057	0.053	14.12
45)	ethyl tert-butyl ether	1.334	1.405	1.358	1.307	1.312	1.120	1.369	1.240	1.380	1.283	1.311	6.33
46)	ethyl acetate			0.039	0.037	0.038	0.034	0.024	0.036		0.037	0.035	14.31
47)	2,2-dichloropropane	0.650	0.629	0.515	0.534	0.565	0.420	0.637	0.544	0.602	0.517	0.561	12.62
48)	cis-1,2-dichloroethene	0.468	0.479	0.442	0.438	0.441	0.367	0.478	0.441	0.439	0.432	0.443	7.15
49)	propionitrile			0.042	0.047	0.045	0.047	0.040	0.042	0.048		0.044	0.044	6.14
50)	tert-Butyl Formate	0.273	0.323	0.349	0.331	0.330	0.288	0.330	0.318		0.328	0.319	7.40
51)	bromochloromethane	0.190	0.224	0.219	0.212	0.215	0.183	0.226	0.207	0.173	0.212	0.206	8.70

Initial Calibration Summary

Job Number: JB40351 **Sample:** VX5934-ICC5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X136946.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
52)  tetrahydrofuran
            0.153 0.119 0.115 0.125 0.100 0.122 0.129       0.113  0.122   12.63
53)  chloroform
      0.917 0.823 0.709 0.707 0.708 0.590 0.797 0.709       0.693  0.739   12.65
54)  dibromofluoromethane (s)
                  0.398 0.396 0.417 0.339 0.441 0.396       0.392  0.397    7.82
55)  1,2-dichloroethane-d4 (s)
                  0.383 0.381 0.390 0.328 0.420 0.388       0.374  0.380    7.21
56)  freon 113
      0.287 0.280 0.274 0.281 0.284 0.227 0.329 0.260       0.270  0.277    9.70
57)  methacrylonitrile
            0.196 0.199 0.189 0.193 0.171 0.193 0.196       0.189  0.191    4.54
58)  1,1,1-trichloroethane
      0.653 0.656 0.588 0.598 0.598 0.484 0.664 0.568 0.626 0.585  0.602    8.84
59)  cyclohexane
      0.670 0.647 0.540 0.560 0.578 0.454 0.662 0.519 0.598 0.556  0.578   11.77
60)  tert amyl alcohol
                                                                   0.000   -1.00
61)  iso-octane
      1.754 1.719 1.475 1.466 1.588 1.239 1.785 1.350 1.683 1.429  1.549   11.97

62) I   1,4-difluorobenzene   ----------------ISTD--------------------
63)  di-isobutylene
                                                                   0.000   -1.00
64)  epichlorohydrin
            0.024 0.024 0.023 0.025 0.021 0.022 0.024       0.023  0.023    5.53
65)  n-butyl alcohol
      0.007 0.006 0.008 0.008 0.008 0.007 0.006 0.008       0.007  0.007    8.78
66)  carbon tetrachloride
      0.396 0.398 0.366 0.374 0.375 0.305 0.419 0.353 0.378 0.368  0.373    8.18
67)  1,1-dichloropropene
      0.363 0.413 0.352 0.359 0.368 0.295 0.414 0.345 0.378 0.352  0.364    9.39
68)  hexane
                  0.325 0.329 0.347 0.269 0.410 0.310       0.314  0.329   13.06
69)  benzene
      1.243 1.251 1.108 1.108 1.118 0.918 1.247 1.079 1.194 1.085  1.135    9.06
70)  tert-amyl methyl ether
      0.898 0.909 0.893 0.853 0.857 0.738 0.895 0.820 0.931 0.839  0.863    6.46
71)  heptane
            0.224 0.191 0.194 0.214 0.162 0.243 0.182       0.183  0.199   13.15
72)  isopropyl acetate
            0.520 0.472 0.446 0.457 0.402 0.487 0.463       0.442  0.461    7.47
73)  1,2-dichloroethane
      0.306 0.346 0.334 0.328 0.330 0.281 0.341 0.321 0.269 0.325  0.318    7.96
74)  trichloroethene
      0.311 0.319 0.284 0.285 0.288 0.237 0.327 0.284 0.276 0.282  0.289    8.81
75)  ethyl acrylate
                                                                   0.000   -1.00
76)  tert amyl ethyl ether
                                                                   0.000   -1.00
77)  2-nitropropane
                  0.004 0.004 0.002 0.004                 0.004  0.004   29.07
            ----- Linear regression -----  Coefficient =  0.9835
              Response Ratio = -0.00010 + 0.00390 *A

78)  2-chloroethyl vinyl ether
      0.129 0.140 0.142 0.133 0.138 0.119 0.131 0.125 0.128 0.133  0.132    5.26
79)  methyl methacrylate
      0.142 0.153 0.174 0.163 0.169 0.150 0.170 0.170       0.166  0.162    6.81
80)  1,2-dichloropropane
```

6.9.4

6

Initial Calibration Summary

Job Number: JB40351 **Sample:** VX5934-ICC5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X136946.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
      0.305 0.307 0.298 0.295 0.295 0.248 0.315 0.287 0.301 0.293  0.295    6.24
 81)  dibromomethane
      0.159 0.175 0.173 0.170 0.170 0.146 0.175 0.167 0.149 0.167  0.165    6.34
 82)  methylcyclohexane
      0.536 0.528 0.452 0.451 0.476 0.375 0.540 0.416 0.490 0.436  0.470   11.58
 83)  bromodichloromethane
      0.413 0.399 0.392 0.388 0.382 0.334 0.414 0.373 0.439 0.381  0.392    7.19
 84)  cis-1,3-dichloropropene
      0.500 0.507 0.489 0.482 0.483 0.411 0.521 0.471 0.487 0.476  0.483    6.05
 85)  toluene-d8 (s)
                  1.028 1.027 1.116 0.862 1.274 1.068       1.009  1.055   11.78
 86)  4-methyl-2-pentanone
            0.081 0.104 0.099 0.105 0.090 0.100 0.105       0.098  0.098    8.76
 87)  toluene
      0.809 0.768 0.708 0.706 0.726 0.588 0.810 0.684 0.778 0.695  0.727    9.25
 88)  3-methyl-1-butanol
      0.014 0.012 0.013 0.012 0.013 0.011 0.011 0.013 0.012 0.012  0.012    7.49
 89)  trans-1,3-dichloropropene
      0.415 0.445 0.433 0.424 0.431 0.370 0.459 0.420 0.482 0.418  0.430    6.87
 90)  ethyl methacrylate
      0.320 0.346 0.357 0.346 0.353 0.310 0.363 0.340 0.405 0.343  0.348    7.37
 91)  1,1,2-trichloroethane
      0.201 0.214 0.216 0.211 0.213 0.186 0.229 0.208 0.219 0.210  0.211    5.44
 92)  2-hexanone
                  0.101 0.095 0.100 0.088 0.094 0.097       0.094  0.096    4.31

 93) I   chlorobenzene-d5      ----------------ISTD---------------------
 94)  3,3-Dimethyl-1-butanol
      0.034 0.030 0.033 0.029 0.031 0.027 0.027 0.030 0.037 0.029  0.031   10.36
 95)  tetrachloroethene
      0.283 0.293 0.273 0.269 0.280 0.222 0.310 0.263 0.279 0.268  0.274    8.30
 96)  1,3-dichloropropane
      0.433 0.452 0.436 0.425 0.434 0.363 0.462 0.428 0.541 0.423  0.440   10.03
 97)  butyl acetate
      0.173 0.188 0.192 0.178 0.191 0.158 0.184 0.180 0.158 0.176  0.178    6.84
 98)  dibromochloromethane
      0.344 0.345 0.355 0.341 0.341 0.299 0.363 0.328 0.393 0.341  0.345    6.92
 99)  1,2-dibromoethane
      0.254 0.293 0.287 0.282 0.284 0.241 0.296 0.279 0.345 0.276  0.284    9.66
100)  n-butyl ether
                                                                   0.000   -1.00
101)  chlorobenzene
      0.986 0.986 0.902 0.891 0.908 0.743 1.024 0.870 1.075 0.885  0.927   10.14
102)  1,1,1,2-tetrachloroethane
      0.341 0.373 0.350 0.342 0.342 0.288 0.374 0.320 0.403 0.340  0.347    9.06
103)  ethylbenzene
      1.660 1.637 1.487 1.466 1.520 1.229 1.701 1.422 1.743 1.454  1.532   10.14
104)  m,p-xylene
      0.631 0.641 0.576 0.571 0.591 0.473 0.676 0.560 0.670 0.565  0.595   10.23
105)  o-xylene
      0.635 0.648 0.587 0.579 0.600 0.482 0.680 0.579 0.687 0.577  0.605    9.93
106)  styrene
      1.111 1.076 1.037 1.007 1.036 0.861 1.129 0.975 1.186 1.006  1.042    8.70
107)  bromoform
      0.243 0.235 0.257 0.238 0.244 0.219 0.253 0.233       0.242  0.240    4.68

108) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
109)  isopropylbenzene
      3.073 2.947 2.530 2.587 2.614 2.175 3.112 2.490 3.138 2.520  2.719   12.00
110)  Cyclohexanone
```

Initial Calibration Summary

Job Number: JB40351 **Sample:** VX5934-ICC5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X136946.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
       0.057 0.064 0.049 0.036 0.080 0.042 0.073 0.070       0.046  0.057   26.84
          ----- Quadratic regression -----                Coefficient =  0.9865
               Response Ratio = 0.02777 + 0.04665 *A + -0.00013 *A^2

111)  4-bromofluorobenzene (s)
                    0.751 0.773 0.828 0.664       0.893       0.754  0.777   10.00
112)  bromobenzene
       0.830 0.822 0.733 0.740 0.735 0.644 0.863 0.725 0.903 0.732  0.773   10.17
113)  1,1,2,2-tetrachloroethane
       0.813 0.736 0.675 0.666 0.698 0.596 0.762 0.687       0.658  0.699    9.08
114)  trans-1,4-dichloro-2-butene
             0.175 0.163 0.158 0.164 0.141 0.181 0.165       0.158  0.163    7.36
115)  1,2,3-trichloropropane
       0.179 0.153 0.164 0.161 0.162 0.145 0.176 0.162       0.160  0.162    6.34
116)  n-propylbenzene
       3.709 3.521 2.961 3.031 3.091 2.565 3.711 2.951 3.736 2.946  3.222   12.80
117)  4-ethyltoluene
                                                                    0.000   -1.00
118)  2-chlorotoluene
       0.760 0.760 0.645 0.656 0.657 0.556 0.771 0.642 0.855 0.639  0.694   12.73
119)  4-chlorotoluene
       2.359 2.279 1.932 1.952 1.991 1.680 2.353 1.932 2.492 1.926  2.090   12.48
120)  1,3,5-trimethylbenzene
       2.694 2.568 2.225 2.258 2.290 1.923 2.742 2.186 2.781 2.208  2.388   12.08
121)  tert-butylbenzene
       2.336 2.244 1.895 1.921 1.979 1.624 2.327 1.867 2.435 1.849  2.048   13.07
122)  pentachloroethane
       0.558 0.535 0.494 0.498 0.501 0.432 0.569 0.479       0.487  0.506    8.35
123)  1,2,4-trimethylbenzene
       2.804 2.681 2.276 2.310 2.394 1.969 2.806 2.291 2.910 2.278  2.472   12.44
124)  1,2,3-trimethylbenzene
       2.754 2.550 2.502 2.842 3.071 2.560 2.737 3.039 3.462 2.976  2.849   10.42
125)  sec-butylbenzene
       3.632 3.480 2.841 2.923 3.076 2.455 3.673 2.795 3.585 2.820  3.128   13.77
126)  1,3-dichlorobenzene
       1.724 1.632 1.413 1.431 1.455 1.212 1.702 1.404       1.402  1.486   11.22
127)  p-isopropyltoluene
       2.978 2.874 2.399 2.455 2.583 2.053 3.097 2.384 3.039 2.372  2.623   13.40
128)  1,4-dichlorobenzene
       1.810 1.696 1.435 1.465 1.510 1.236 1.719 1.409       1.451  1.526   11.88
129)  1,2-dichlorobenzene
       1.628 1.521 1.349 1.366 1.424 1.148 1.616 1.348       1.346  1.416   10.72
130)  benzyl chloride
       1.349 1.412 1.296 1.255 1.414 1.069 1.369 1.323 1.472 1.235  1.319    8.71
131)  1,4-diethylbenzene
                                                                    0.000   -1.00
132)  n-butylbenzene
       1.521 1.522 1.243 1.288 1.386 1.058 1.595 1.244 1.540 1.237  1.363   12.91
133)  1,2,4,5-tetramethylbenzene
                                                                    0.000   -1.00
134)  1,2-dibromo-3-chloropropane
       0.131 0.112 0.103 0.102 0.114 0.090 0.111 0.111       0.100  0.108   10.64
135)  1,3,5-trichlorobenzene
       1.246 1.169 0.976 1.027 1.140 0.866 1.267 1.059 1.290 0.998  1.104   12.78
136)  hexachlorobutadiene
       0.658 0.646 0.471 0.522 0.591       0.680 0.508 0.687 0.492  0.584   14.83
137)  naphthalene
       1.756 1.598 1.670 1.675 1.808 1.421 1.737 1.728 2.168 1.674  1.723   10.96
138)  1,2,4-trichlorobenzene
       0.907 0.834 0.818 0.849 0.923 0.725 0.968 0.867 1.001 0.832  0.872    9.20
```

Initial Calibration Summary

Job Number: JB40351 **Sample:** VX5934-ICC5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X136946.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
139)  1,2,3-trichlorobenzene
       0.763 0.670 0.650 0.701 0.760 0.539 0.779 0.734 0.872 0.671  0.714   12.59
140)  hexachloroethane
       0.518 0.510 0.447 0.454 0.461 0.384 0.536 0.424 0.542 0.440  0.472   11.11
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          MX5934.M          Wed Jul 10 15:02:59 2013   ACCNJ
```

Initial Calibration Verification

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VX5934-ICV5934
Lab FileID: X136951.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\X\VX5934FINAL\X136951.D    Vial: 13
Acq On    : 11 Jun 2013   3:16 pm                    Operator: natet
Sample    : icv5934-50                               Inst    : ACC-VOA-MSX
Misc      : MS49266,VX5934,5.0,,,,1                  Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MX5934.M (RTE Integrator)
Title        : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
Last Update  : Thu Jun 13 08:06:58 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	107	0.00	7.06
2		tertiary butyl alcohol	1.115	1.219	-9.3	117	0.00	7.19
3		ethyl alcohol		----------NA----------				
4		1,4-dioxane	0.097	0.094	3.1	102	0.00	11.84
5	I	pentafluorobenzene	1.000	1.000	0.0	99	0.00	9.74
6	m	freon 23		----------NA----------				
7	m	freon 115		----------NA----------				
8	m	freon 143a		----------NA----------				
9	m	freon 152a		----------NA----------				
10	m	chlorotrifluoroethene		----------NA----------				
11		chlorodifluoromethane	0.353	0.330	6.5	97	0.00	3.66
12		dichlorodifluoromethane	0.458	0.417	9.0	92	0.00	3.65
13	m	freon 114		----------NA----------				
14	m	freon 142b		----------NA----------				
15		chloromethane	0.564	0.522	7.4	94	0.00	3.93
16		vinyl chloride	0.591	0.535	9.5	95	0.00	4.19
		----------	True	Calc.	% Drift	----------		
17	m	acetaldehyde		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
18		bromomethane	0.347	0.339	2.3	98	-0.01	4.81
19		chloroethane	0.274	0.257	6.2	97	0.00	4.99
20		vinyl bromide		----------NA----------				
21		trichlorofluoromethane	0.641	0.586	8.6	95	0.00	5.49
22		pentane		----------NA----------				
23		ethyl ether	0.212	0.224	-5.7	111	0.00	5.87
24	m	freon 141b		----------NA----------				
25	m	freon 123a		----------NA----------				
26	m	freon 123		----------NA----------				
27		acrolein	0.066	0.070	-6.1	107	0.00	6.13
28		1,1-dichloroethene	0.359	0.346	3.6	98	0.00	6.31
29		acetone	0.028	0.032	-14.3	124	0.00	6.37
30		allyl chloride	0.217	0.234	-7.8	115	0.00	6.88
31		acetonitrile	0.028	0.029	-3.6	106	0.00	6.84
32		iodomethane	0.723	0.735	-1.7	101	0.00	6.60
33		iso-butyl alcohol	0.017	0.018	-5.9	109	0.00	10.12
34		carbon disulfide	1.370	1.307	4.6	98	0.00	6.73
35		methylene chloride	0.447	0.453	-1.3	104	0.00	7.09
36		methyl acetate	0.235	0.256	-8.9	107	0.00	6.87
37		methyl tert butyl ether	1.118	1.165	-4.2	105	0.00	7.46

Initial Calibration Verification

Job Number: JB40351 **Sample:** VX5934-ICV5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X136951.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

38		trans-1,2-dichloroethene	0.388	0.385	0.8	99	0.00	7.51
39		di-isopropyl ether	1.366	1.343	1.7	100	0.00	8.16
40		2-butanone	0.037	0.044	-18.9	113	0.00	9.03
41		1,1-dichloroethane	0.710	0.716	-0.8	102	0.00	8.17
42		chloroprene	0.533	0.493	8.1	94	0.00	8.30
43		acrylonitrile	0.111	0.131	-18.0	115	0.00	7.45
44		vinyl acetate	0.053	0.063	-18.9	110	0.00	8.17
45		ethyl tert-butyl ether	1.311	1.289	1.7	98	0.00	8.73
46		ethyl acetate	0.035	0.042	-20.0	113	0.00	9.07
47		2,2-dichloropropane	0.561	0.525	6.4	98	0.00	9.05
48		cis-1,2-dichloroethene	0.443	0.445	-0.5	101	0.00	9.06
49		propionitrile	0.044	0.052	-18.2	115	0.00	9.14
50		tert-Butyl Formate	0.319	0.299	6.3	90	0.00	9.57
51		bromochloromethane	0.206	0.223	-8.3	105	0.00	9.44
52		tetrahydrofuran	0.122	0.129	-5.7	112	0.01	9.50
53		chloroform	0.739	0.722	2.3	101	0.00	9.53
54	S	dibromofluoromethane (s)	0.397	0.389	2.0	98	0.00	9.78
55	S	1,2-dichloroethane-d4 (s)	0.380	0.379	0.3	99	0.00	10.30
56		freon 113	0.277	0.239	13.7	85	0.01	6.30
57		methacrylonitrile	0.191	0.211	-10.5	111	0.00	9.37
58		1,1,1-trichloroethane	0.602	0.590	2.0	98	0.00	9.83
59		cyclohexane	0.578	0.568	1.7	101	0.00	9.92
60	m	tert amyl alcohol		----------NA----------				
61	m	iso-octane	1.549	1.262	18.5	86	0.00	10.41
62	I	1,4-difluorobenzene	1.000	1.000	0.0	100	0.00	10.90
63		di-isobutylene		----------NA----------				
64		epichlorohydrin	0.023	0.026	-13.0	110	0.00	12.59
65		n-butyl alcohol	0.007	0.008	-14.3	111	0.00	11.10
66		carbon tetrachloride	0.373	0.374	-0.3	100	0.00	10.08
67		1,1-dichloropropene	0.364	0.340	6.6	95	0.00	10.06
68		hexane	0.329	0.292	11.2	89	0.00	7.86
69		benzene	1.135	1.120	1.3	101	0.00	10.39
70		tert-amyl methyl ether	0.863	0.879	-1.9	103	0.00	10.46
71		heptane	0.199	0.171	14.1	88	0.00	10.64
72		isopropyl acetate	0.461	0.428	7.2	96	0.00	10.34
73		1,2-dichloroethane	0.318	0.342	-7.5	104	0.00	10.41
74		trichloroethene	0.289	0.293	-1.4	103	0.00	11.33
75	m	ethyl acrylate		----------NA----------				
76	m	tert amyl ethyl ether		----------NA----------				
		----------	True	Calc.	% Drift	----------		
77		2-nitropropane	50.000	24.489	51.0#	46	-0.05	12.38
		----------	AvgRF	CCRF	% Dev	----------		
78		2-chloroethyl vinyl ether	0.132	0.135	-2.3	100	0.00	12.44
79		methyl methacrylate	0.162	0.191	-17.9	117	0.00	11.73
80		1,2-dichloropropane	0.295	0.308	-4.4	104	0.00	11.67
81		dibromomethane	0.165	0.184	-11.5	108	0.00	11.89
82		methylcyclohexane	0.470	0.427	9.1	94	0.00	11.61
83		bromodichloromethane	0.392	0.401	-2.3	103	0.00	12.08
84		cis-1,3-dichloropropene	0.483	0.471	2.5	98	0.00	12.71
85	S	toluene-d8 (s)	1.055	1.000	5.2	97	0.00	13.10
86		4-methyl-2-pentanone	0.098	0.115	-17.3	116	0.00	12.86
87		toluene	0.727	0.716	1.5	101	0.00	13.20
88		3-methyl-1-butanol	0.012	0.013	-8.3	111	0.00	12.92
89		trans-1,3-dichloropropene	0.430	0.455	-5.8	107	0.00	13.49
90		ethyl methacrylate	0.348	0.377	-8.3	109	0.00	13.51
91		1,1,2-trichloroethane	0.211	0.233	-10.4	110	0.00	13.77
92		2-hexanone	0.096	0.113	-17.7	119	0.00	14.03

Initial Calibration Verification

Job Number: JB40351 **Sample:** VX5934-ICV5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X136951.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

93	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	15.13
94		3,3-Dimethyl-1-butanol	0.031	0.030	3.2	103	0.00	14.28
95		tetrachloroethene	0.274	0.277	-1.1	104	0.00	13.99
96		1,3-dichloropropane	0.440	0.451	-2.5	107	0.00	14.01
97		butyl acetate	0.178	0.202	-13.5	115	0.00	14.15
98		dibromochloromethane	0.345	0.364	-5.5	108	0.00	14.36
99		1,2-dibromoethane	0.284	0.298	-4.9	107	0.00	14.54
100	m	n-butyl ether		----------NA----------				
101		chlorobenzene	0.927	0.912	1.6	104	0.00	15.17
102		1,1,1,2-tetrachloroethane	0.347	0.346	0.3	102	0.00	15.26
103		ethylbenzene	1.532	1.486	3.0	103	0.00	15.26
104		m,p-xylene	0.595	0.583	2.0	103	0.00	15.41
105		o-xylene	0.605	0.594	1.8	104	0.00	15.95
106		styrene	1.042	1.048	-0.6	105	0.00	15.97
107		bromoform	0.240	0.262	-9.2	111	0.00	16.30
108	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	17.97
109		isopropylbenzene	2.719	2.557	6.0	102	0.00	16.41
		----------	True	Calc.	% Drift	----------		
110		Cyclohexanone	500.000	735.420	-47.1#	198	0.00	16.60
		----------	AvgRF	CCRF	% Dev	----------		
111	S	4-bromofluorobenzene (s)	0.777	0.759	2.3	101	0.00	16.65
112		bromobenzene	0.773	0.756	2.2	105	0.00	16.87
113		1,1,2,2-tetrachloroethane	0.699	0.708	-1.3	110	0.00	16.80
114		trans-1,4-dichloro-2-bute	0.163	0.176	-8.0	115	0.00	16.85
115		1,2,3-trichloropropane	0.162	0.175	-8.0	113	0.00	16.87
116		n-propylbenzene	3.222	3.106	3.6	106	0.00	16.91
117	m	4-ethyltoluene		----------NA----------				
118		2-chlorotoluene	0.694	0.654	5.8	103	0.00	17.07
119		4-chlorotoluene	2.090	1.953	6.6	103	0.00	17.19
120		1,3,5-trimethylbenzene	2.388	2.260	5.4	103	0.00	17.10
121		tert-butylbenzene	2.048	1.933	5.6	104	0.00	17.48
122		pentachloroethane	0.506	0.491	3.0	102	0.00	17.56
123		1,2,4-trimethylbenzene	2.472	2.353	4.8	105	0.00	17.53
124	m	1,2,3-trimethylbenzene		----------NA----------				
125		sec-butylbenzene	3.128	2.930	6.3	103	0.00	17.72
126		1,3-dichlorobenzene	1.486	1.468	1.2	106	0.00	17.90
127		p-isopropyltoluene	2.623	2.570	2.0	108	0.00	17.85
128		1,4-dichlorobenzene	1.526	1.505	1.4	106	0.00	17.99
129		1,2-dichlorobenzene	1.416	1.417	-0.1	107	0.00	18.39
130		benzyl chloride	1.319	1.368	-3.7	113	0.00	18.11
131	m	1,4-diethylbenzene		----------NA----------				
132		n-butylbenzene	1.363	1.313	3.7	105	0.00	18.27
133	m	1,2,4,5-tetramethylbenzen		----------NA----------				
134		1,2-dibromo-3-chloropropa	0.108	0.114	-5.6	116	0.00	19.13
135		1,3,5-trichlorobenzene	1.104	1.089	1.4	110	0.00	19.30
136		hexachlorobutadiene	0.584	0.538	7.9	106	0.00	20.01
137		naphthalene	1.723	1.891	-9.8	117	0.00	20.16
138		1,2,4-trichlorobenzene	0.872	0.934	-7.1	114	0.00	19.90
139	m	1,2,3-trichlorobenzene	0.714	0.775	-8.5	114	0.00	20.39
140		hexachloroethane	0.472	0.466	1.3	106	0.00	18.63

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X136946.D MX5934.M Thu Jun 13 08:26:31 2013 ACCNJ

6.9.5

6

Continuing Calibration Summary

Job Number: JB40351 **Sample:** VX5957-CC5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X137466.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\X137466.D                    Vial: 3
Acq On    : 26 Jun 2013   9:56 am                     Operator: natet
Sample    : cc5934-20                                 Inst    : ACC-VOA-M
Misc      : MS50551,VX5957,5.0,,,,1                   Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\MSDCHEM\1\METHODS\MX5934.M (RTE Integrator)
Title        : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
Last Update  : Tue Jun 25 15:47:59 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	114	-0.02	7.05
2		tertiary butyl alcohol	1.115	1.146	-2.8	110	-0.01	7.18
3		ethyl alcohol		----------NA----------				
4		1,4-dioxane	0.097	0.096	1.0	105	0.00	11.83
5	I	pentafluorobenzene	1.000	1.000	0.0	83	-0.01	9.72
6	m	freon 23		----------NA----------				
7	m	freon 115		----------NA----------				
8	m	freon 143a		----------NA----------				
9	m	freon 152a		----------NA----------				
10	m	chlorotrifluoroethene		----------NA----------				
11		chlorodifluoromethane	0.353	0.359	-1.7	85	-0.02	3.65
12		dichlorodifluoromethane	0.458	0.567	-23.8#	100	0.00	3.64
13	m	freon 114		----------NA----------				
14	m	freon 142b		----------NA----------				
15		chloromethane	0.564	0.680	-20.6#	101	-0.01	3.93
16		vinyl chloride	0.591	0.650	-10.0	91	-0.02	4.18
		----------	True	Calc.	% Drift	----------		
17	m	acetaldehyde		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
18		bromomethane	0.347	0.379	-9.2	87	-0.02	4.80
19		chloroethane	0.274	0.311	-13.5	89	0.00	4.98
20		vinyl bromide		----------NA----------				
21		trichlorofluoromethane	0.641	0.702	-9.5	88	-0.02	5.47
22		pentane		----------NA----------				
23		ethyl ether	0.212	0.235	-10.8	93	-0.02	5.85
24	m	freon 141b		----------NA----------				
25	m	freon 123a		----------NA----------				
26	m	freon 123		----------NA----------				
27		acrolein	0.066	0.086	-30.3#	98	-0.01	6.12
28		1,1-dichloroethene	0.359	0.406	-13.1	96	0.00	6.31
29		acetone	0.028	0.033	-17.9	87	0.00	6.37
30		allyl chloride	0.217	0.257	-18.4	97	-0.02	6.86
31		acetonitrile	0.028	0.038	-35.7#	115	0.00	6.83
32		iodomethane	0.723	0.821	-13.6	95	-0.02	6.59
33		iso-butyl alcohol	0.017	0.023	-35.3#	121	-0.02	10.11
34		carbon disulfide	1.370	1.568	-14.5	96	-0.02	6.72
35		methylene chloride	0.447	0.492	-10.1	94	-0.02	7.08
36		methyl acetate	0.235	0.316	-34.5#	108	0.00	6.86
37		methyl tert butyl ether	1.118	1.300	-16.3	98	-0.02	7.44

Continuing Calibration Summary

Job Number: JB40351 **Sample:** VX5957-CC5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X137466.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

38		trans-1,2-dichloroethene	0.388	0.449	-15.7	96	-0.01	7.50
39		di-isopropyl ether	1.366	1.556	-13.9	96	-0.01	8.14
40		2-butanone	0.037	0.047	-27.0#	100	-0.01	9.02
41		1,1-dichloroethane	0.710	0.827	-16.5	98	-0.01	8.15
42		chloroprene	0.533	0.601	-12.8	93	-0.02	8.28
43		acrylonitrile	0.111	0.155	-39.6#	113	-0.01	7.44
44		vinyl acetate	0.053	0.065	-22.6#	96	-0.01	8.15
45		ethyl tert-butyl ether	1.311	1.479	-12.8	94	-0.02	8.71
46		ethyl acetate	0.035	0.044	-25.7#	97	-0.02	9.05
47		2,2-dichloropropane	0.561	0.644	-14.8	95	-0.02	9.04
48		cis-1,2-dichloroethene	0.443	0.496	-12.0	94	-0.02	9.04
49		propionitrile	0.044	0.061	-38.6#	109	-0.01	9.13
50		tert-Butyl Formate	0.319	0.396	-24.1#	100	-0.01	9.55
51		bromochloromethane	0.206	0.237	-15.0	92	-0.01	9.43
52		tetrahydrofuran	0.122	0.161	-32.0#	108	-0.01	9.48
53		chloroform	0.739	0.805	-8.9	95	-0.01	9.51
54	S	dibromofluoromethane (s)	0.397	0.396	0.3	79	-0.01	9.76
55	S	1,2-dichloroethane-d4 (s)	0.380	0.386	-1.6	83	-0.02	10.28
56		freon 113	0.277	0.307	-10.8	90	0.00	6.29
57		methacrylonitrile	0.191	0.249	-30.4#	108	-0.01	9.36
58		1,1,1-trichloroethane	0.602	0.669	-11.1	93	-0.02	9.81
59		cyclohexane	0.578	0.654	-13.1	94	-0.02	9.90
60	m	tert amyl alcohol		----------NA----------				
61	m	iso-octane	1.549	1.829	-18.1	96	-0.02	10.40
62	I	1,4-difluorobenzene	1.000	1.000	0.0	86	-0.01	10.88
63		di-isobutylene		----------NA----------				
64		epichlorohydrin	0.023	0.031	-34.8#	107	-0.01	12.57
65		n-butyl alcohol	0.007	0.010	-42.9#	107	-0.01	11.08
66		carbon tetrachloride	0.373	0.411	-10.2	94	-0.02	10.07
67		1,1-dichloropropene	0.364	0.407	-11.8	95	-0.01	10.05
68		hexane	0.329	0.383	-16.4	94	-0.01	7.85
69		benzene	1.135	1.226	-8.0	94	-0.02	10.37
70		tert-amyl methyl ether	0.863	0.942	-9.2	94	-0.01	10.45
71		heptane	0.199	0.224	-12.6	90	-0.02	10.63
72		isopropyl acetate	0.461	0.575	-24.7#	108	-0.02	10.32
73		1,2-dichloroethane	0.318	0.378	-18.9	98	-0.02	10.40
74		trichloroethene	0.289	0.306	-5.9	91	-0.01	11.31
75	m	ethyl acrylate		----------NA----------				
76	m	tert amyl ethyl ether		----------NA----------				
		----------	True	Calc.	% Drift	----------		
77		2-nitropropane	20.000	16.312	18.4	144	-0.01	12.41
		----------	AvgRF	CCRF	% Dev	----------		
78		2-chloroethyl vinyl ether	0.132	0.199	-50.8#	123	-0.02	12.42
79		methyl methacrylate	0.162	0.197	-21.6#	100	-0.02	11.71
80		1,2-dichloropropane	0.295	0.331	-12.2	96	-0.02	11.66
81		dibromomethane	0.165	0.191	-15.8	96	-0.02	11.87
82		methylcyclohexane	0.470	0.492	-4.7	88	-0.01	11.60
83		bromodichloromethane	0.392	0.418	-6.6	94	-0.02	12.06
84		cis-1,3-dichloropropene	0.483	0.529	-9.5	94	-0.01	12.69
85	S	toluene-d8 (s)	1.055	1.061	-0.6	81	-0.01	13.08
86		4-methyl-2-pentanone	0.098	0.126	-28.6#	103	-0.02	12.84
87		toluene	0.727	0.772	-6.2	91	-0.01	13.18
88		3-methyl-1-butanol	0.012	0.016	-33.3#	104	0.00	12.91
89		trans-1,3-dichloropropene	0.430	0.468	-8.8	93	-0.01	13.47
90		ethyl methacrylate	0.348	0.386	-10.9	94	-0.01	13.50
91		1,1,2-trichloroethane	0.211	0.234	-10.9	94	-0.01	13.76
92		2-hexanone	0.096	0.118	-22.9#	102	0.00	14.02

Continuing Calibration Summary

Job Number: JB40351 **Sample:** VX5957-CC5934
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** X137466.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

93	I	chlorobenzene-d5	1.000	1.000	0.0	88	-0.01	15.12
94		3,3-Dimethyl-1-butanol	0.031	0.037	-19.4	104	0.00	14.27
95		tetrachloroethene	0.274	0.287	-4.7	91	-0.02	13.97
96		1,3-dichloropropane	0.440	0.469	-6.6	95	-0.01	14.00
97		butyl acetate	0.178	0.213	-19.7	98	-0.01	14.14
98		dibromochloromethane	0.345	0.351	-1.7	91	-0.01	14.35
99		1,2-dibromoethane	0.284	0.301	-6.0	94	-0.01	14.53
100	m	n-butyl ether		----------NA----------				
101		chlorobenzene	0.927	0.909	1.9	88	-0.01	15.16
102		1,1,1,2-tetrachloroethane	0.347	0.341	1.7	88	0.00	15.25
103		ethylbenzene	1.532	1.546	-0.9	90	-0.01	15.25
104		m,p-xylene	0.595	0.596	-0.2	89	-0.01	15.40
105		o-xylene	0.605	0.598	1.2	88	-0.01	15.94
106		styrene	1.042	1.014	2.7	86	0.00	15.96
107		bromoform	0.240	0.260	-8.3	94	-0.01	16.29
108	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	84	0.00	17.96
109		isopropylbenzene	2.719	2.755	-1.3	89	-0.01	16.40
		----------	True	Calc.	% Drift	----------		
110		Cyclohexanone	200.000	162.663	18.7	47	-0.01	16.59
		----------	AvgRF	CCRF	% Dev	----------		
111	S	4-bromofluorobenzene (s)	0.777	0.768	1.2	78	0.00	16.64
112		bromobenzene	0.773	0.768	0.6	88	0.00	16.86
113		1,1,2,2-tetrachloroethane	0.699	0.758	-8.4	91	-0.01	16.79
114		trans-1,4-dichloro-2-bute	0.163	0.188	-15.3	96	-0.01	16.84
115		1,2,3-trichloropropane	0.162	0.181	-11.7	94	-0.01	16.86
116		n-propylbenzene	3.222	3.281	-1.8	89	-0.01	16.90
117	m	4-ethyltoluene		----------NA----------				
118		2-chlorotoluene	0.694	0.691	0.4	88	-0.01	17.06
119		4-chlorotoluene	2.090	2.063	1.3	87	0.00	17.18
120		1,3,5-trimethylbenzene	2.388	2.379	0.4	87	0.00	17.09
121		tert-butylbenzene	2.048	2.022	1.3	86	-0.01	17.47
122		pentachloroethane	0.506	0.509	-0.6	85	-0.01	17.55
123		1,2,4-trimethylbenzene	2.472	2.423	2.0	85	-0.01	17.52
124	m	1,2,3-trimethylbenzene		----------NA----------				
125		sec-butylbenzene	3.128	3.158	-1.0	86	-0.01	17.71
126		1,3-dichlorobenzene	1.486	1.472	0.9	85	0.00	17.89
127		p-isopropyltoluene	2.623	2.603	0.8	85	0.00	17.84
128		1,4-dichlorobenzene	1.526	1.509	1.1	84	0.00	17.98
129		1,2-dichlorobenzene	1.416	1.434	-1.3	85	0.00	18.37
130		benzyl chloride	1.319	1.538	-16.6	91	0.00	18.11
131	m	1,4-diethylbenzene		----------NA----------				
132		n-butylbenzene	1.363	1.393	-2.2	85	-0.01	18.26
133	m	1,2,4,5-tetramethylbenzen		----------NA----------				
134		1,2-dibromo-3-chloropropa	0.108	0.125	-15.7	93	0.00	19.12
135		1,3,5-trichlorobenzene	1.104	1.168	-5.8	86	0.00	19.29
136		hexachlorobutadiene	0.584	0.605	-3.6	86	0.00	20.00
137		naphthalene	1.723	1.930	-12.0	90	0.00	20.15
138		1,2,4-trichlorobenzene	0.872	0.910	-4.4	83	-0.01	19.89
139	m	1,2,3-trichlorobenzene	0.714	0.800	-12.0	89	0.00	20.38
140		hexachloroethane	0.472	0.495	-4.9	90	-0.01	18.62

(#) = Out of Range SPCC's out = 0 CCC's out = 0
X136945.D MX5934.M Wed Jun 26 15:37:59 2013 GCMSX

New Jersey

ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137482.D
Acq On : 26 Jun 2013 6:00 pm
Operator : natet
Sample : jb40351-1
Misc : MS50556,VX5957,5.0,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jun 27 14:43:14 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration

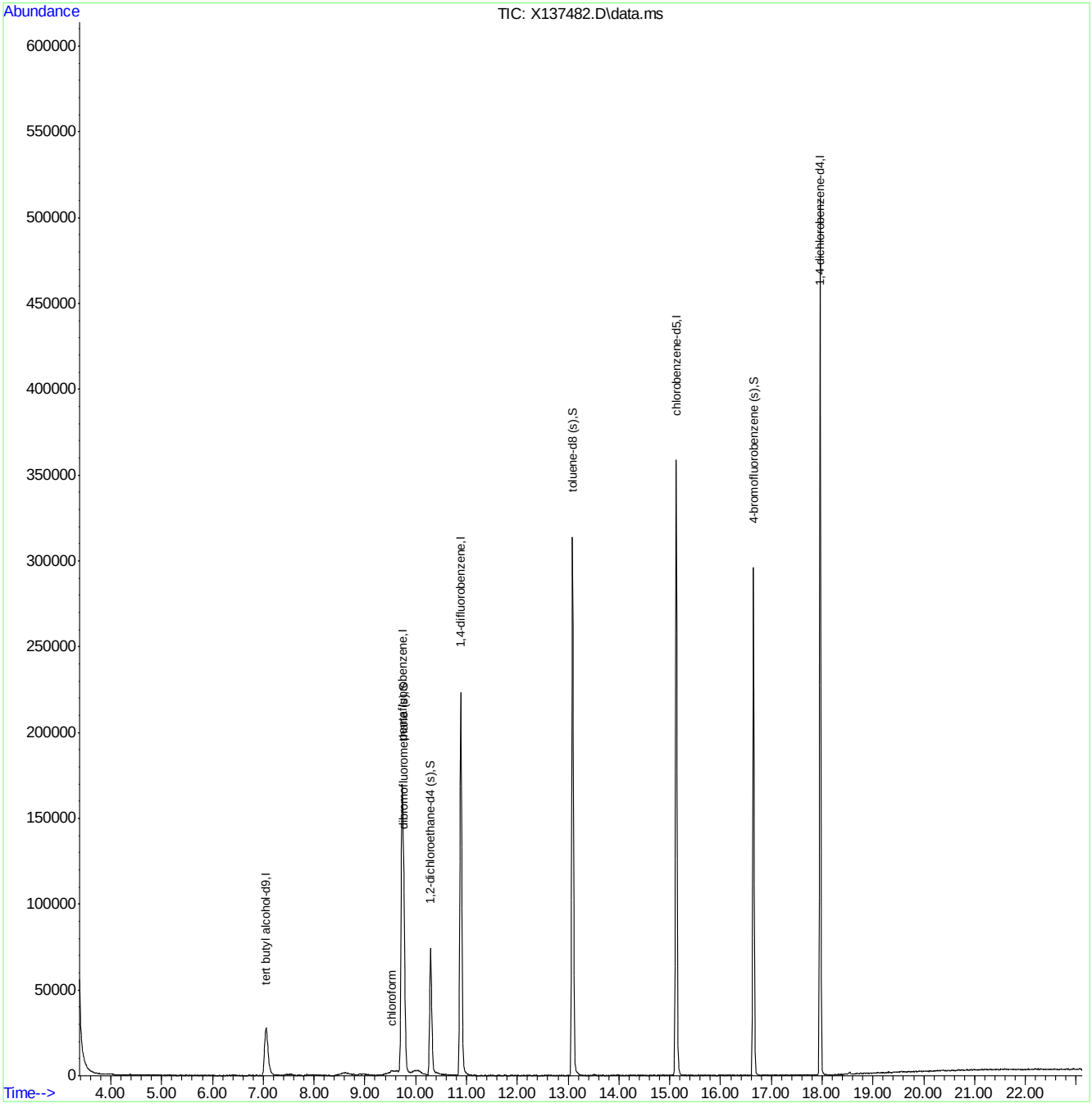
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.057	65	79509	500.00	ug/L	0.00
5) pentafluorobenzene	9.735	168	180756	50.00	ug/L	0.00
62) 1,4-difluorobenzene	10.885	114	271281	50.00	ug/L	0.00
93) chlorobenzene-d5	15.127	117	259777	50.00	ug/L	0.00
108) 1,4-dichlorobenzene-d4	17.962	152	140906	50.00	ug/L	0.00
System Monitoring Compounds						
54) dibromofluoromethane (s)	9.766	113	74489	51.93	ug/L	0.00
Spiked Amount 50.000	Range 65 - 131		Recovery = 103.86%			
55) 1,2-dichloroethane-d4 (s)	10.294	65	74759	54.35	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 108.70%			
85) toluene-d8 (s)	13.087	98	285027	49.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 128		Recovery = 99.62%			
111) 4-bromofluorobenzene (s)	16.649	95	113694	51.91	ug/L	0.00
Spiked Amount 50.000	Range 67 - 131		Recovery = 103.82%			
Target Compounds						Qvalue
53) chloroform	9.520	83	951	0.36	ug/L	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

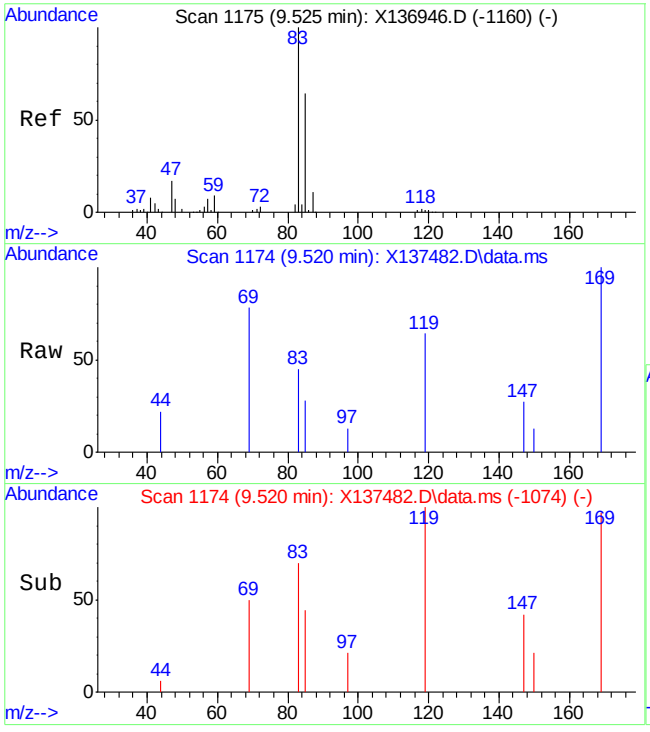
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137482.D
Acq On : 26 Jun 2013 6:00 pm
Operator : natet
Sample : jb40351-1
Misc : MS50556,VX5957,5.0,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jun 27 14:43:14 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration



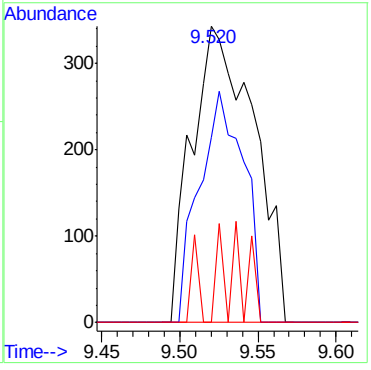
MX5934.M Thu Jun 27 14:49:51 2013 VOA-CLN-02 Page: 2



#53
chloroform
Concen: 0.36 ug/L
RT: 9.520 min Scan# 1174
Delta R.T. -0.005 min
Lab File: X137482.D
Acq: 26 Jun 2013 6:00 pm

Tgt Ion: 83 Resp: 951

Ion	Ratio	Lower	Upper
83	100		
85	62.7	34.4	94.4
47	0.0	0.0	51.4



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137482.D
Acq On : 26 Jun 2013 6:00 pm
Operator : natet
Sample : jb40351-1
Misc : MS50556,VX5957,5.0,,,,1
ALS Vial : 19 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.06 Max Peaks: 100
Stop Thrs : 0.04 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MX5934.M
Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: X137482.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.051	684	702	728	rBV2	27810	134934	16.09%	2.964%
2	9.735	1201	1215	1243	rVB2	167668	702251	83.76%	15.424%
3	10.294	1310	1322	1341	rBV	73985	210919	25.16%	4.632%
4	10.885	1423	1435	1463	rBV	223190	603418	71.97%	13.253%
5	13.087	1845	1856	1874	rBV	313889	739840	88.24%	16.249%
6	15.127	2235	2246	2268	rBV	358832	771447	92.01%	16.943%
7	16.649	2528	2537	2552	rBV	296087	551899	65.83%	12.121%
8	17.956	2779	2787	2802	rBV	511115	838405	100.00%	18.414%

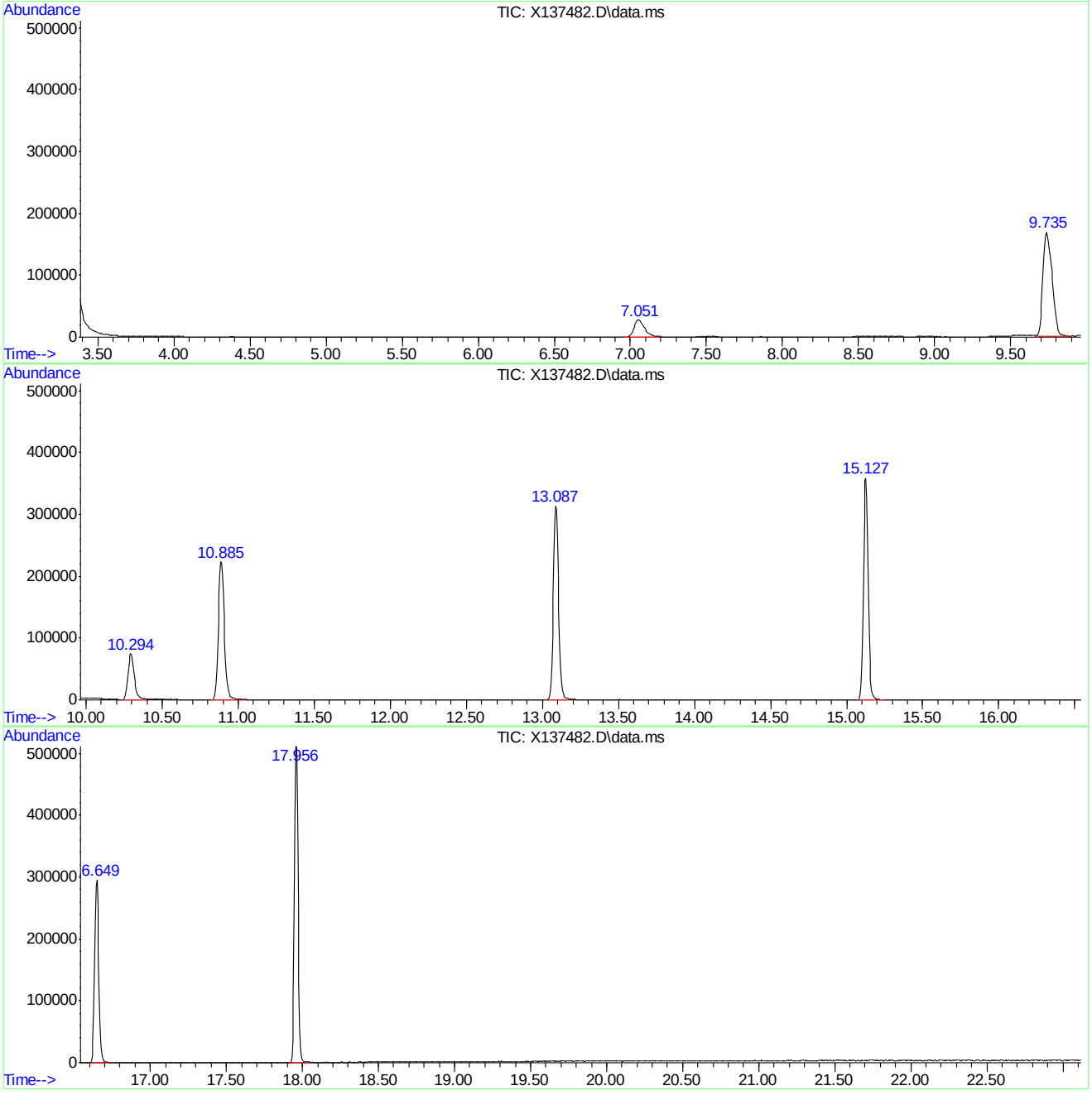
Sum of corrected areas: 4553113

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137482.D
Acq On : 26 Jun 2013 6:00 pm
Operator : natet
Sample : jb40351-1
Misc : MS50556,VX5957,5.0,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: Lscint.p



Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
  Data File : X137482.D
  Acq On    : 26 Jun 2013   6:00 pm
  Operator  : natet
  Sample    : jb40351-1
  Misc      : MS50556,VX5957,5.0,,,,1
  ALS Vial  : 19   Sample Multiplier: 1

  Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
  Quant Title  : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

  TIC Library   : C:\DATABASE\NIST98.L
  TIC Integration Parameters: Lscint.p

                                                   |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-----------------------------------------------------------------------------



   No Library Search Compounds Detected
   ************************************************************************
```

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 03 17:06:58 2013
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um
QLast Update : Mon Jul 01 17:29:58 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.655	65	103250	500.00	ug/L	0.00
5) pentafluorobenzene	9.862	168	177070	50.00	ug/L	0.00
66) 1,4-difluorobenzene	10.777	114	237752	50.00	ug/L	0.00
97) chlorobenzene-d5	14.109	117	216034	50.00	ug/L	0.00
114) 1,4-dichlorobenzene-d4	16.682	152	121478	50.00	ug/L	0.00

System Monitoring Compounds						
60) dibromofluoromethane (s)	9.904	113	72163	42.84	ug/L	0.00
Spiked Amount 50.000	Range 81 - 121		Recovery = 85.68%			
61) 1,2-dichloroethane-d4 (s)	10.317	65	87016	43.83	ug/L	0.00
Spiked Amount 50.000	Range 74 - 127		Recovery = 87.66%			
89) toluene-d8 (s)	12.482	98	288270	48.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 122		Recovery = 97.88%			
116) 4-bromofluorobenzene (s)	15.380	95	106296	45.27	ug/L	0.00
Spiked Amount 50.000	Range 78 - 116		Recovery = 90.54%			

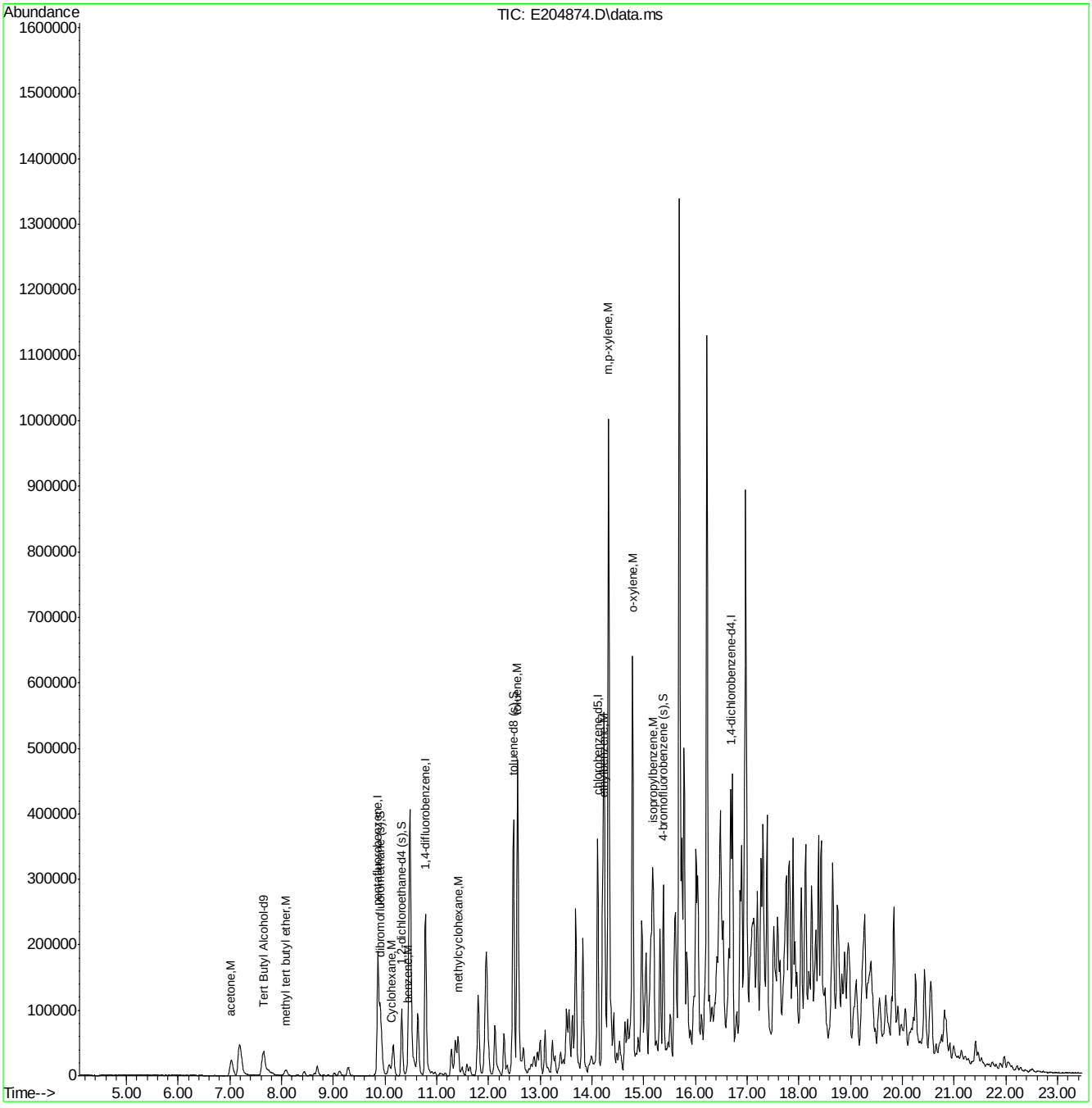
Target Compounds						Qvalue
32) acetone	7.022	58	20227	123.04	ug/L #	84
41) methyl tert butyl ether	8.073	73	10961	2.17	ug/L #	41
75) benzene	10.432	78	7432	1.20	ug/L	99
83) methylcyclohexane	11.410	83	31906	12.84	ug/L	99
91) toluene	12.561	92	220092	54.67	ug/L	98
108) ethylbenzene	14.208	91	222090	31.40	ug/L	100
109) m,p-xylene	14.318	106	358084	127.33	ug/L	98
110) o-xylene	14.784	106	124196	43.21	ug/L	99
115) isopropylbenzene	15.165	105	32368	4.32	ug/L	97
146) Cyclohexane	10.118	84	4323	1.94	ug/L #	6

(#) = qualifier out of range (m) = manual integration (+) = signals summed

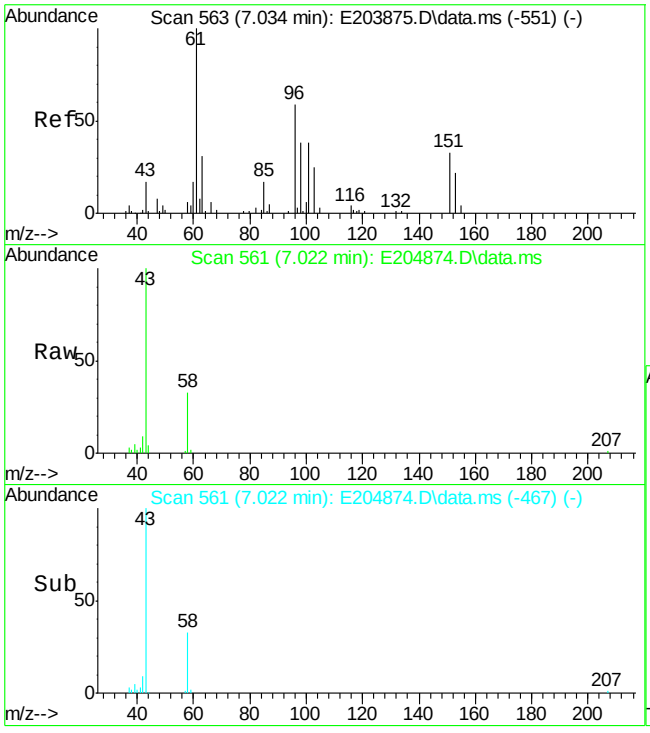
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 03 17:06:58 2013
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um
QLast Update : Mon Jul 01 17:29:58 2013
Response via : Initial Calibration



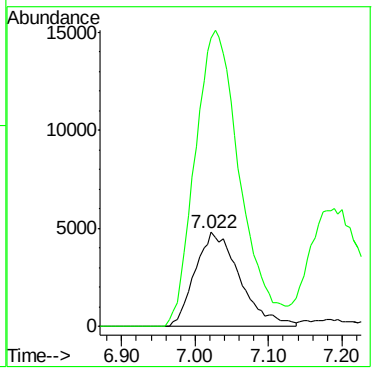
ME8959.M Wed Jul 03 17:07:06 2013 RPT1 Page: 2

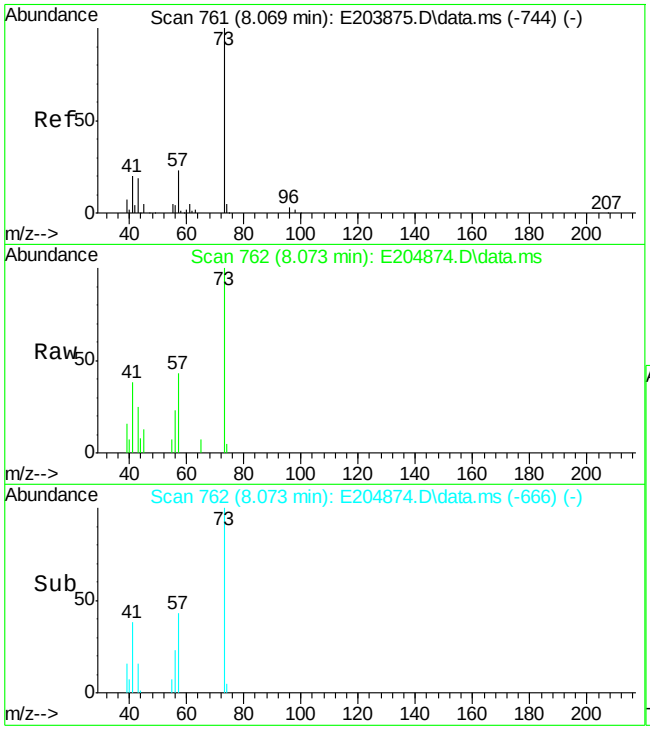


#32
acetone
Concen: 123.04 ug/L
RT: 7.022 min Scan# 561
Delta R.T. -0.011 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

Tgt Ion: 58 Resp: 20227

Ion	Ratio	Lower	Upper
58	100		
43	318.5	323.0	383.0#

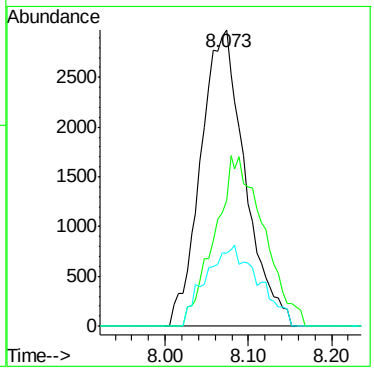


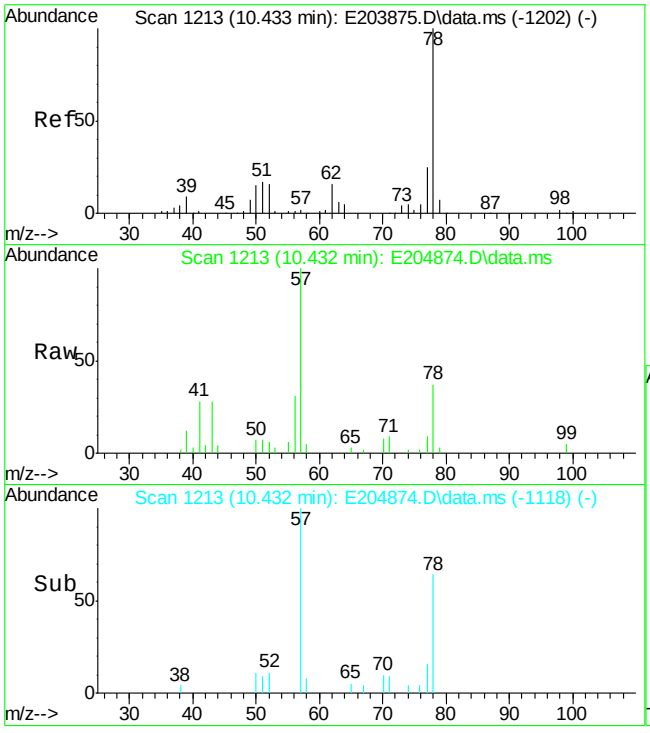


#41
methyl tert butyl ether
Concen: 2.17 ug/L
RT: 8.073 min Scan# 762
Delta R.T. 0.004 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

Tgt Ion: 73 Resp: 10961

Ion	Ratio	Lower	Upper
73	100		
57	63.9	0.0	52.4#
43	32.5	0.0	49.8

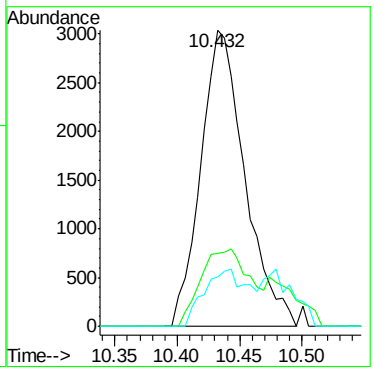


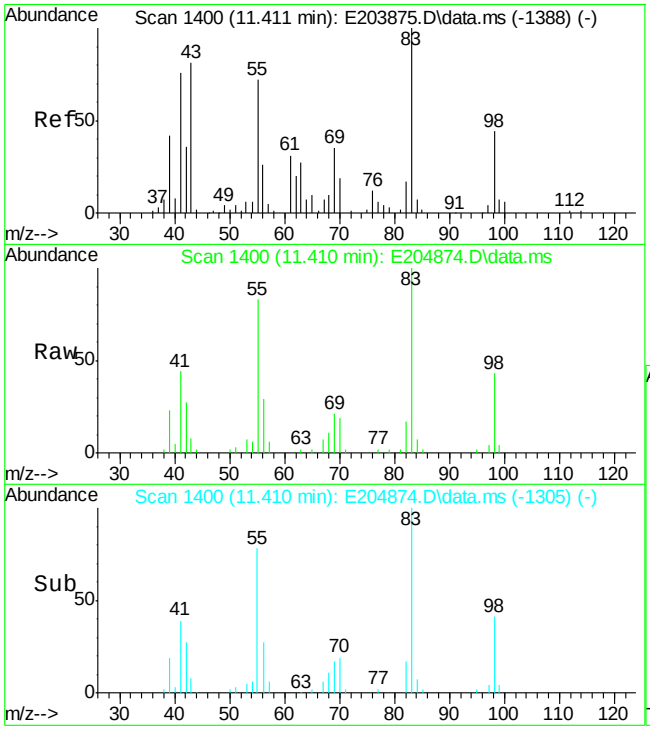


#75
benzene
Concen: 1.20 ug/L
RT: 10.432 min Scan# 1213
Delta R.T. -0.001 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

Tgt Ion: 78 Resp: 7432

Ion	Ratio	Lower	Upper
78	100		
77	24.5	0.0	54.5
52	16.9	0.0	45.9

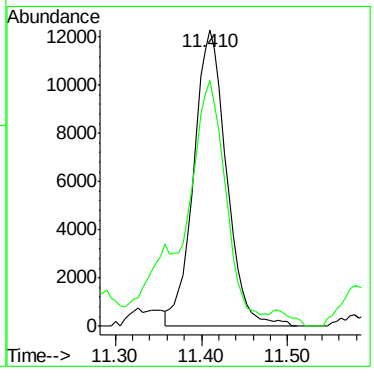




#83
methylcyclohexane
Concen: 12.84 ug/L
RT: 11.410 min Scan# 1400
Delta R.T. -0.001 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

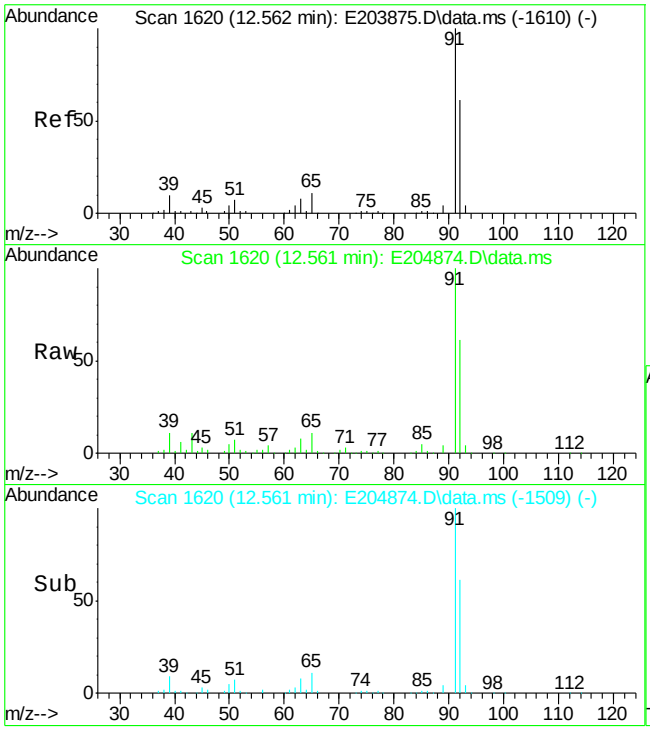
Tgt Ion: 83 Resp: 31906

Ion	Ratio	Lower	Upper
83	100		
55	82.7	58.5	108.7



7.1.3

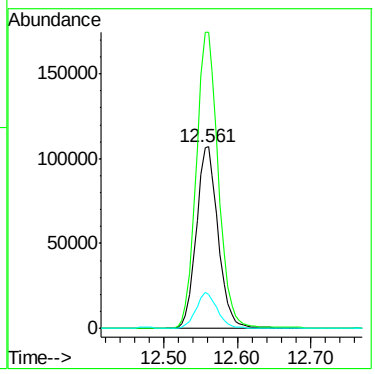
7

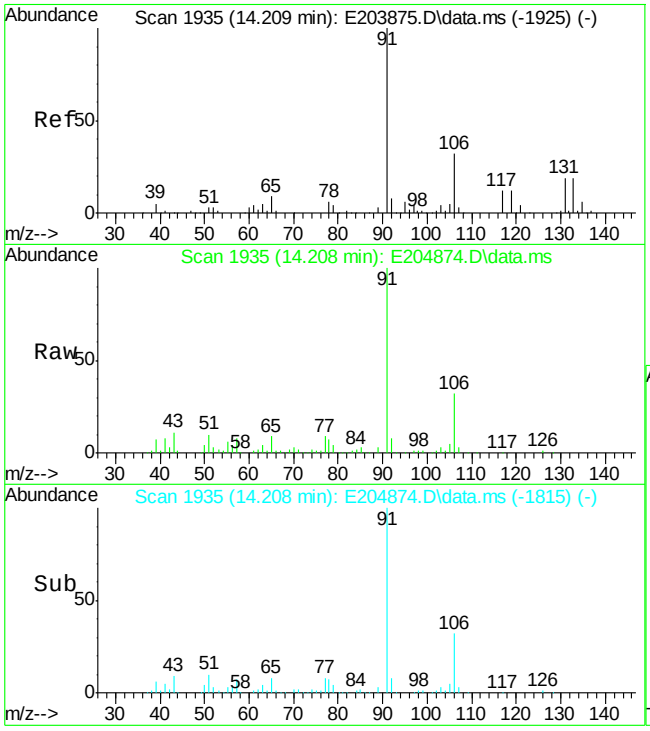


#91
toluene
Concen: 54.67 ug/L
RT: 12.561 min Scan# 1620
Delta R.T. -0.001 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

Tgt Ion: 92 Resp: 220092

Ion	Ratio	Lower	Upper
92	100		
91	163.0	135.3	195.3
65	18.2	0.0	48.8

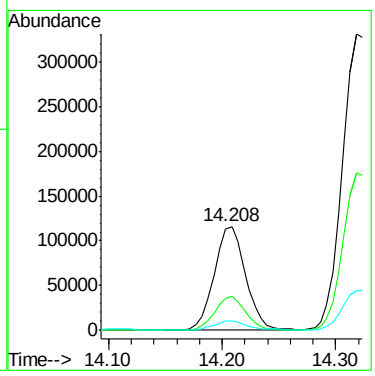


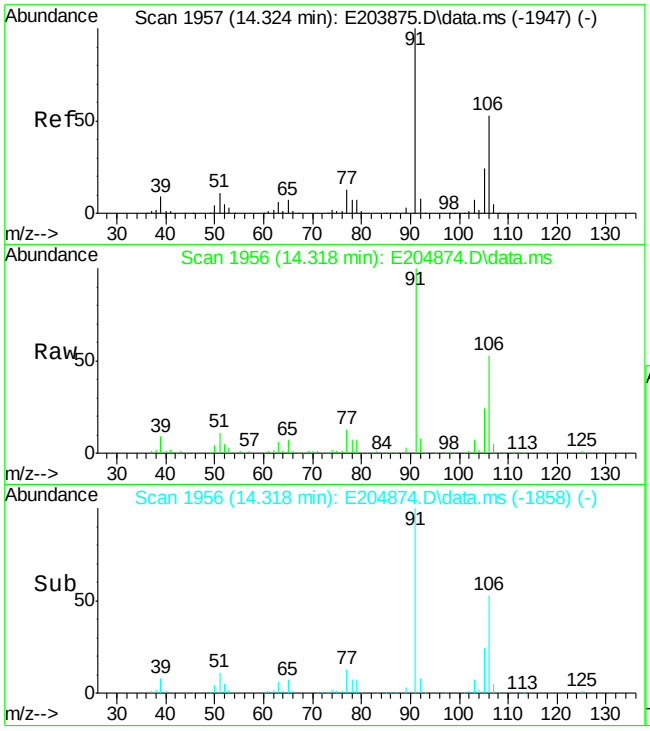


#108
ethylbenzene
Concen: 31.40 ug/L
RT: 14.208 min Scan# 1935
Delta R.T. -0.001 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

Tgt Ion: 91 Resp: 222090

Ion	Ratio	Lower	Upper
91	100		
106	32.1	2.1	62.1
77	8.7	0.0	38.7

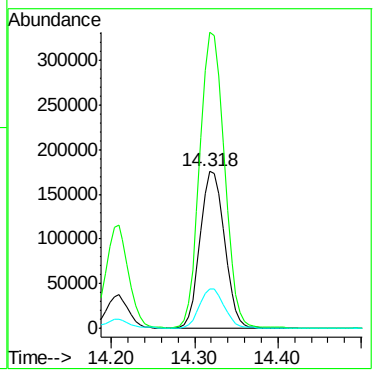


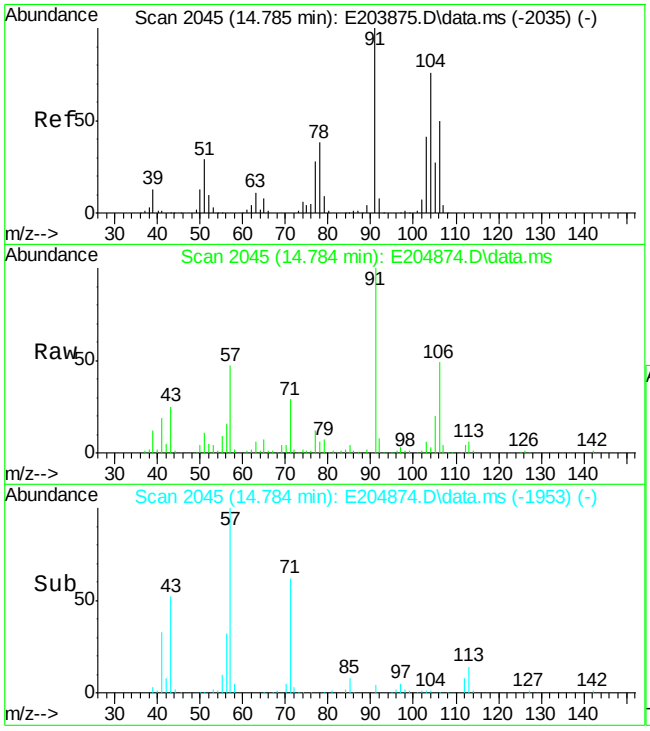


#109
m,p-xylene
Concen: 127.33 ug/L
RT: 14.318 min Scan# 1956
Delta R.T. -0.006 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

Tgt Ion:106 Resp: 358084

Ion	Ratio	Lower	Upper
106	100		
91	188.0	160.4	220.4
77	24.8	0.0	55.3

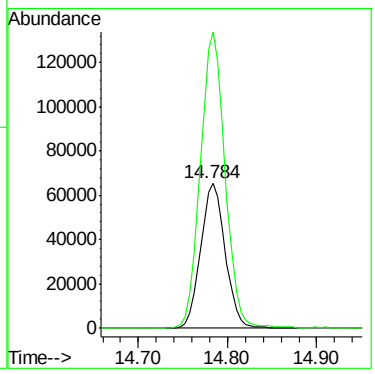


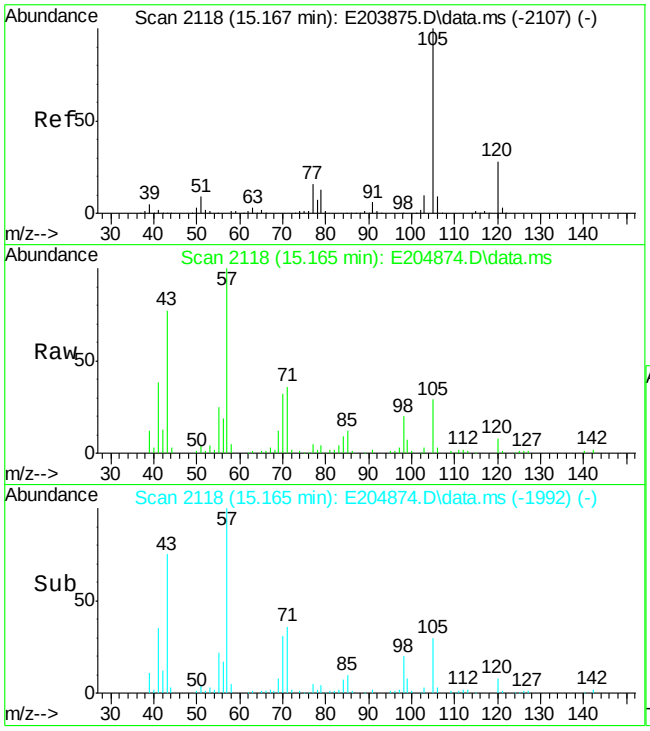


#110
o-xylene
Concen: 43.21 ug/L
RT: 14.784 min Scan# 2045
Delta R.T. -0.001 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

Tgt Ion:106 Resp: 124196

Ion	Ratio	Lower	Upper
106	100		
91	203.5	171.4	231.4

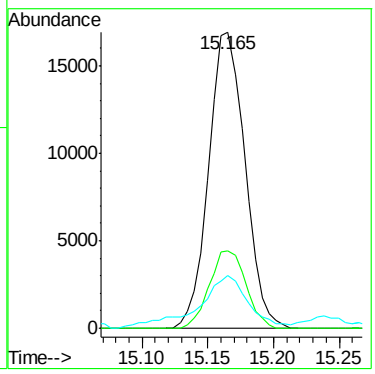


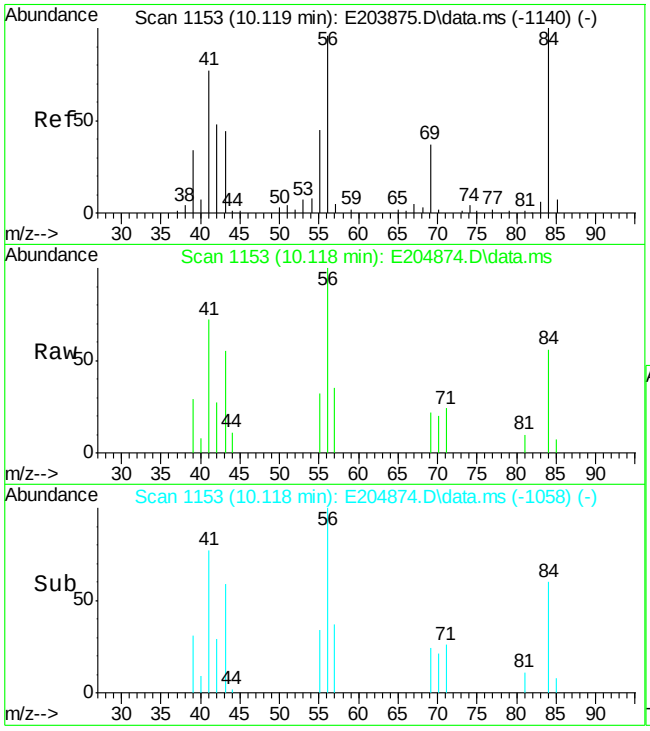


#115
isopropylbenzene
Concen: 4.32 ug/L
RT: 15.165 min Scan# 2118
Delta R.T. -0.001 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

Tgt Ion:105 Resp: 32368

Ion	Ratio	Lower	Upper
105	100		
120	26.1	0.0	58.0
77	15.9	0.0	45.6

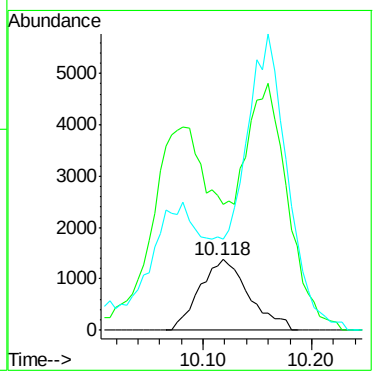




#146
Cyclohexane
Concen: 1.94 ug/L
RT: 10.118 min Scan# 1153
Delta R.T. -0.001 min
Lab File: E204874.D
Acq: 3 Jul 2013 3:39 pm

Tgt Ion: 84 Resp: 4323

Ion	Ratio	Lower	Upper
84	100		
56	0.0	0.0	30.0
41	0.0	56.9	116.9#



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 10 Area counts
Start Thrs: 0.001 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\ME8959.M
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

Signal : TIC: E204874.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.190	579	593	622	rVV	46697	232273	8.13%	0.355%
2	7.655	665	682	695	rBV	36698	171248	5.99%	0.262%
3	9.862	1085	1104	1110	rBV	190969	503269	17.62%	0.769%
4	9.904	1110	1112	1132	rVV3	112396	290200	10.16%	0.443%
5	10.160	1152	1161	1177	rVB2	47741	139637	4.89%	0.213%
6	10.322	1181	1192	1205	rBV	102155	247429	8.66%	0.378%
7	10.479	1205	1222	1243	rVV	405636	1307191	45.76%	1.996%
8	10.631	1243	1251	1270	rVB	93145	242759	8.50%	0.371%
9	10.777	1270	1279	1298	rBV	245842	575731	20.15%	0.879%
10	11.358	1382	1390	1395	rVV2	51856	134595	4.71%	0.206%
11	11.797	1459	1474	1488	rBV	122690	331725	11.61%	0.507%
12	11.954	1488	1504	1526	rVB4	186952	676259	23.67%	1.033%
13	12.122	1526	1536	1560	rVB	76329	224158	7.85%	0.342%
14	12.299	1560	1570	1577	rBV	63420	147219	5.15%	0.225%
15	12.482	1588	1605	1613	rBV	387464	922705	32.30%	1.409%
16	12.561	1613	1620	1632	rVV2	476823	1132691	39.65%	1.730%
17	13.094	1713	1722	1729	rBV	66963	144519	5.06%	0.221%
18	13.508	1792	1801	1806	rVV3	94100	240979	8.43%	0.368%
19	13.555	1806	1810	1817	rVV2	93079	209037	7.32%	0.319%
20	13.623	1817	1823	1828	rVV3	84283	193445	6.77%	0.295%
21	13.685	1828	1835	1850	rVV	246798	559003	19.57%	0.854%
22	13.821	1850	1861	1878	rVB2	204348	500378	17.51%	0.764%
23	14.109	1904	1916	1925	rVV	352290	736379	25.78%	1.125%
24	14.235	1925	1940	1949	rVV2	545255	1630695	57.08%	2.490%
25	14.318	1949	1956	1970	rVV	993165	2261720	79.17%	3.454%
26	14.418	1970	1975	1982	rVV2	86330	186017	6.51%	0.284%
27	14.637	2009	2017	2022	rBV3	73493	175993	6.16%	0.269%
28	14.684	2022	2026	2032	rVV3	76378	186109	6.51%	0.284%
29	14.784	2032	2045	2054	rVV	629551	1405896	49.21%	2.147%
30	14.962	2071	2079	2086	rVV2	225689	584783	20.47%	0.893%
31	15.045	2086	2095	2102	rVV5	177335	513762	17.98%	0.785%
32	15.171	2102	2119	2129	rVV7	306664	1452445	50.84%	2.218%
33	15.317	2138	2147	2153	rVV	212108	473711	16.58%	0.723%
34	15.380	2153	2159	2167	rVV	279790	576041	20.16%	0.880%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 10 Area counts
Start Thrs: 0.001 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\ME8959.M
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

35	15.516	2179	2185	2192	rVV4	81997	203207	7.11%	0.310%
36	15.605	2192	2202	2210	rVV2	237494	770897	26.98%	1.177%
37	15.683	2210	2217	2224	rVV2	1326634	2856895	100.00%	4.363%
38	15.730	2224	2226	2230	rVV	350412	562517	19.69%	0.859%
39	15.777	2230	2235	2242	rVV2	487768	1108350	38.80%	1.693%
40	15.835	2242	2246	2256	rVV2	176234	471948	16.52%	0.721%
41	16.013	2264	2280	2283	rVV3	332643	956135	33.47%	1.460%
42	16.044	2283	2286	2295	rVV	292083	617809	21.63%	0.944%
43	16.117	2295	2300	2306	rVV4	80403	214157	7.50%	0.327%
44	16.222	2306	2320	2327	rVV	1116146	2401073	84.04%	3.667%
45	16.264	2327	2328	2334	rVV4	108972	197751	6.92%	0.302%
46	16.316	2334	2338	2344	rVV6	90795	251184	8.79%	0.384%
47	16.374	2344	2349	2350	rVV3	98376	167028	5.85%	0.255%
48	16.415	2350	2357	2359	rVV5	168618	394032	13.79%	0.602%
49	16.478	2359	2369	2376	rVV6	391569	1454374	50.91%	2.221%
50	16.531	2376	2379	2389	rVV2	223007	563046	19.71%	0.860%
51	16.640	2389	2400	2403	rVV2	180106	514773	18.02%	0.786%
52	16.682	2403	2408	2411	rVV	422187	837126	29.30%	1.278%
53	16.714	2411	2414	2421	rVV	447229	758904	26.56%	1.159%
54	16.797	2421	2430	2435	rVV5	82464	268753	9.41%	0.410%
55	16.865	2435	2443	2445	rVV3	267968	556255	19.47%	0.850%
56	16.891	2445	2448	2453	rVV	336211	615542	21.55%	0.940%
57	16.970	2453	2463	2474	rVV5	879153	2600917	91.04%	3.972%
58	17.101	2474	2488	2490	rVV9	218178	884120	30.95%	1.350%
59	17.127	2491	2493	2499	rVV2	226030	460715	16.13%	0.704%
60	17.195	2499	2506	2513	rVV2	266649	748649	26.20%	1.143%
61	17.268	2513	2520	2523	rVV	316298	679197	23.77%	1.037%
62	17.305	2523	2527	2536	rVV3	367564	945802	33.11%	1.444%
63	17.383	2536	2542	2557	rVV	381956	971883	34.02%	1.484%
64	17.509	2557	2566	2576	rVV4	212569	806203	28.22%	1.231%
65	17.587	2576	2581	2586	rVV2	226524	568316	19.89%	0.868%
66	17.629	2586	2589	2596	rVV4	160408	391386	13.70%	0.598%
67	17.754	2596	2613	2618	rVV6	288870	1220791	42.73%	1.864%
68	17.807	2618	2623	2632	rVV2	310321	1018794	35.66%	1.556%
69	17.885	2632	2638	2643	rVV2	346312	761233	26.65%	1.163%
70	17.927	2643	2646	2650	rVV2	187773	343461	12.02%	0.525%
71	17.964	2650	2653	2659	rVV	141234	287048	10.05%	0.438%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 10 Area counts
Start Thrs: 0.001 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\ME8959.M
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

72	18.042	2659	2668	2675	rVV6	269699	786733	27.54%	1.202%
73	18.131	2675	2685	2692	rVV4	335037	1038504	36.35%	1.586%
74	18.194	2692	2697	2701	rVV3	142048	352650	12.34%	0.539%
75	18.246	2701	2707	2714	rVV5	272678	744900	26.07%	1.138%
76	18.324	2714	2722	2727	rVV3	203984	635214	22.23%	0.970%
77	18.377	2727	2732	2737	rVV2	349759	744884	26.07%	1.138%
78	18.429	2737	2742	2753	rVV2	340529	939872	32.90%	1.435%
79	18.502	2753	2756	2768	rVV6	115989	351289	12.30%	0.537%
80	18.654	2768	2785	2795	rVV3	306342	1142252	39.98%	1.744%
81	18.743	2795	2802	2814	rVV7	241476	958523	33.55%	1.464%
82	18.832	2814	2819	2823	rVV2	136038	333060	11.66%	0.509%
83	18.884	2823	2829	2835	rVV4	169738	498697	17.46%	0.762%
84	18.952	2835	2842	2855	rVV5	183233	788186	27.59%	1.204%
85	19.104	2855	2871	2883	rVV6	127937	686309	24.02%	1.048%
86	19.271	2883	2903	2909	rVV4	227085	1089951	38.15%	1.665%
87	19.391	2909	2926	2939	rVV4	154187	1072412	37.54%	1.638%
88	19.559	2947	2958	2968	rVV5	98590	440567	15.42%	0.673%
89	19.679	2970	2981	2997	rVV5	102631	543281	19.02%	0.830%
90	19.799	2997	3004	3005	rVV2	100040	197294	6.91%	0.301%
91	19.836	3005	3011	3020	rVV2	235866	631212	22.09%	0.964%
92	19.914	3020	3026	3032	rVV4	84755	246238	8.62%	0.376%
93	19.977	3032	3038	3045	rVV3	57044	209551	7.33%	0.320%
94	20.056	3045	3053	3062	rVV5	80273	301491	10.55%	0.460%
95	20.213	3078	3083	3086	rVV2	68138	153452	5.37%	0.234%
96	20.254	3086	3091	3104	rVV3	133796	393998	13.79%	0.602%
97	20.427	3112	3124	3136	rVV4	139990	478599	16.75%	0.731%
98	20.547	3136	3147	3161	rVV4	121574	488854	17.11%	0.747%
99	20.756	3173	3187	3190	rVV10	38967	148599	5.20%	0.227%
100	20.814	3190	3198	3213	rVV5	77392	340915	11.93%	0.521%

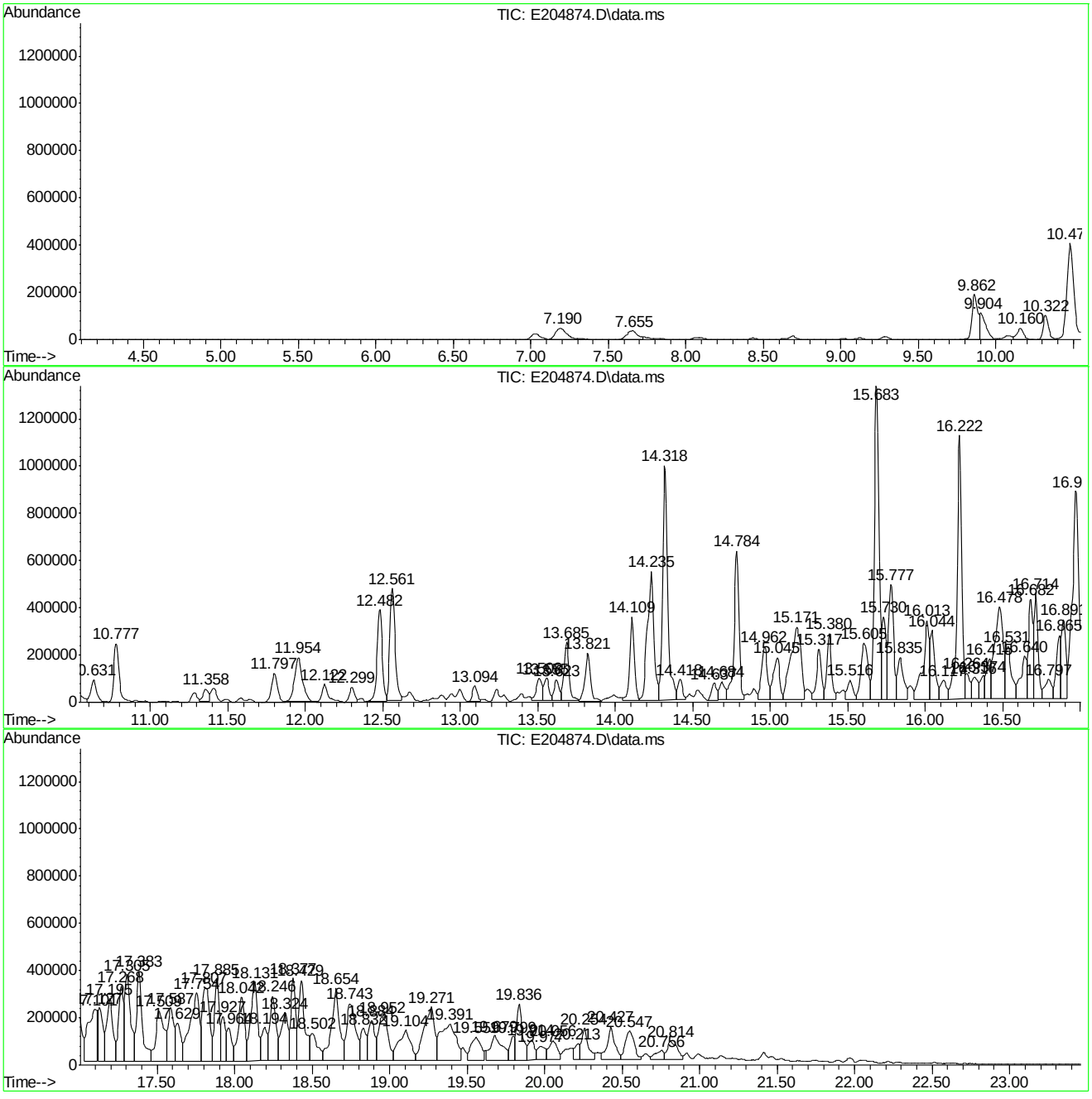
Sum of corrected areas: 65477759

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

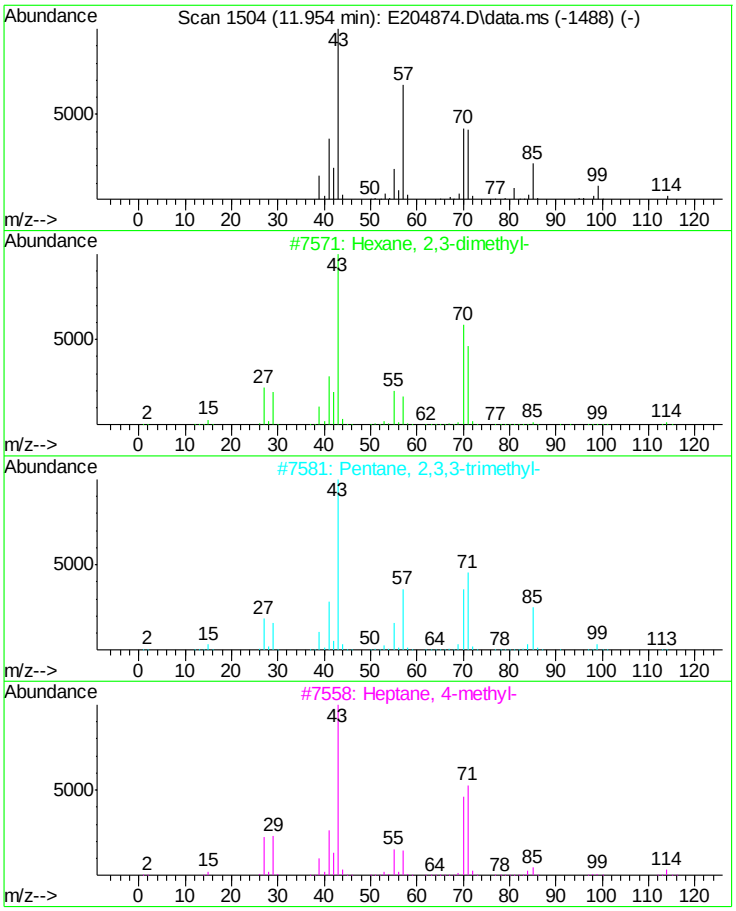
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

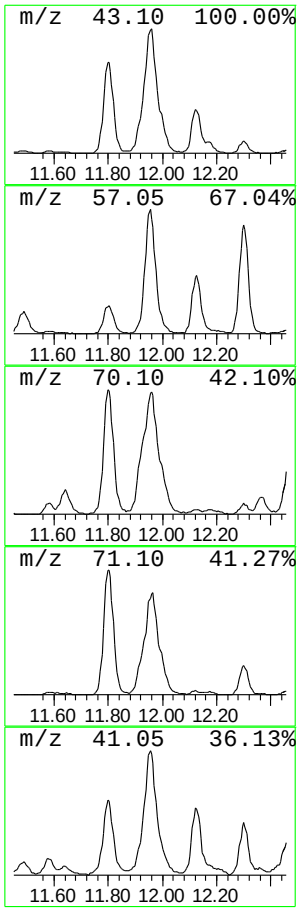
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 1 Hexane, 2,3-dimethyl- Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.95	58.73 ug/L	676259	1,4-difluorobenzene	10.78

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 2,3-dimethyl-	114	C8H18	000584-94-1	72
2	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	64
3	Heptane, 4-methyl-	114	C8H18	000589-53-7	59
4	Pentane, 3-ethyl-2-methyl-	114	C8H18	000609-26-7	53
5	Heptane, 4-methyl-	114	C8H18	000589-53-7	53





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

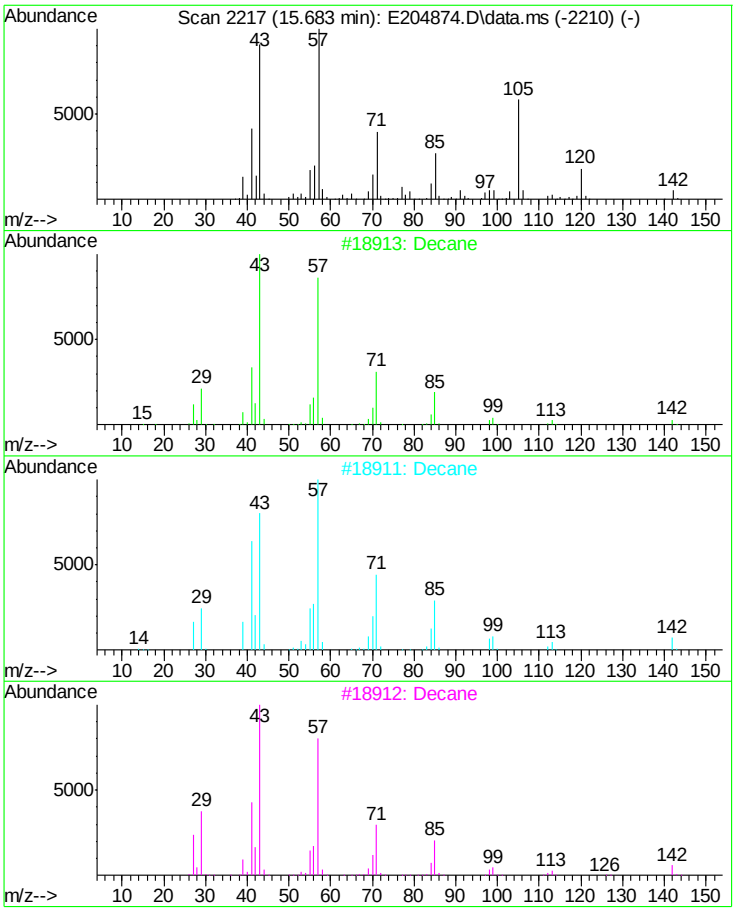
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

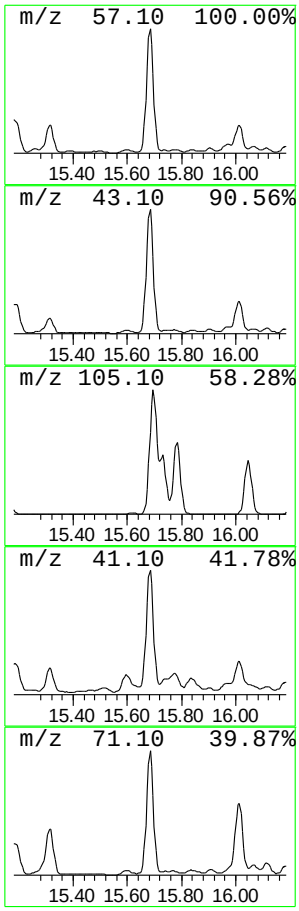
****

Peak Number 2 Decane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.68	170.64 ug/L	2856900	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Decane	142	C10H22	000124-18-5	90
2	Decane	142	C10H22	000124-18-5	64
3	Decane	142	C10H22	000124-18-5	55
4	Octane, 4-ethyl-	142	C10H22	015869-86-0	52
5	Tridecane	184	C13H28	000629-50-5	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

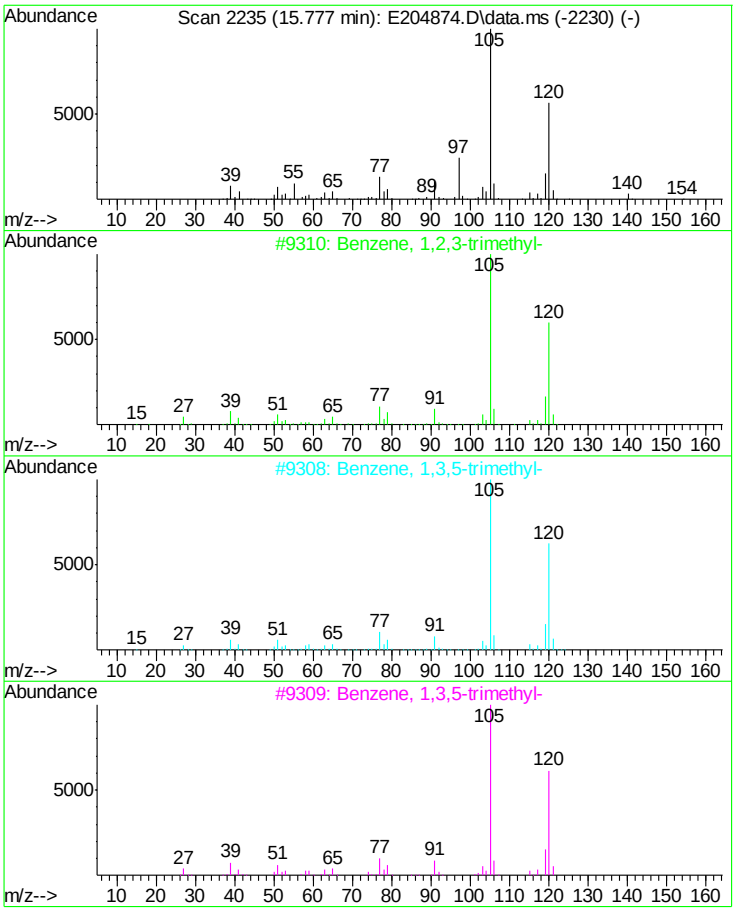
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

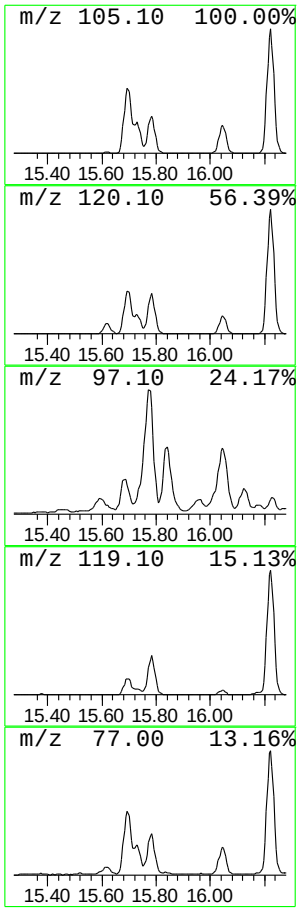
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 3 Benzene, 1,2,3-trimethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.78	66.20 ug/L	1108350	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

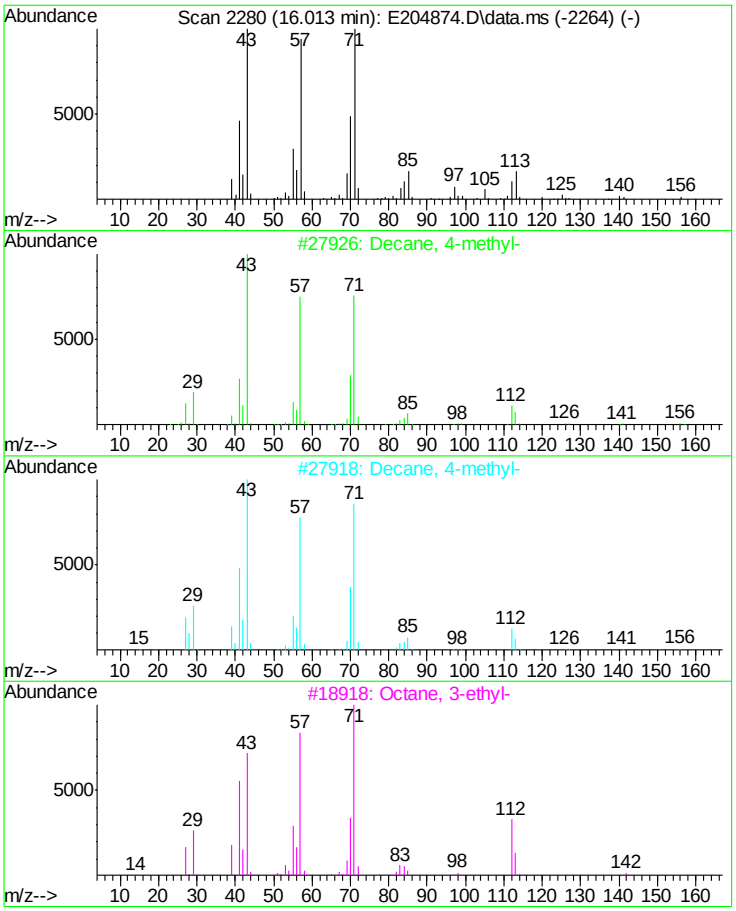
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

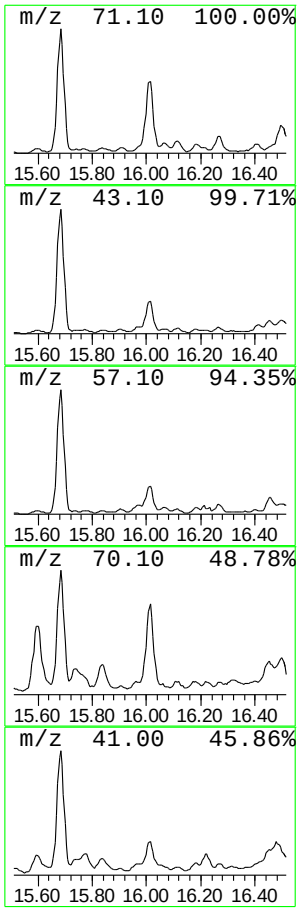
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 4 Decane, 4-methyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.01	57.11 ug/L	956135	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Decane, 4-methyl-	156	C11H24	002847-72-5	87
2	Decane, 4-methyl-	156	C11H24	002847-72-5	83
3	Octane, 3-ethyl-	142	C10H22	005881-17-4	72
4	Sulfurous acid, 2-ethylhexyl hex...	418	C24H50O3S	1000309-19-9	59
5	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	53





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

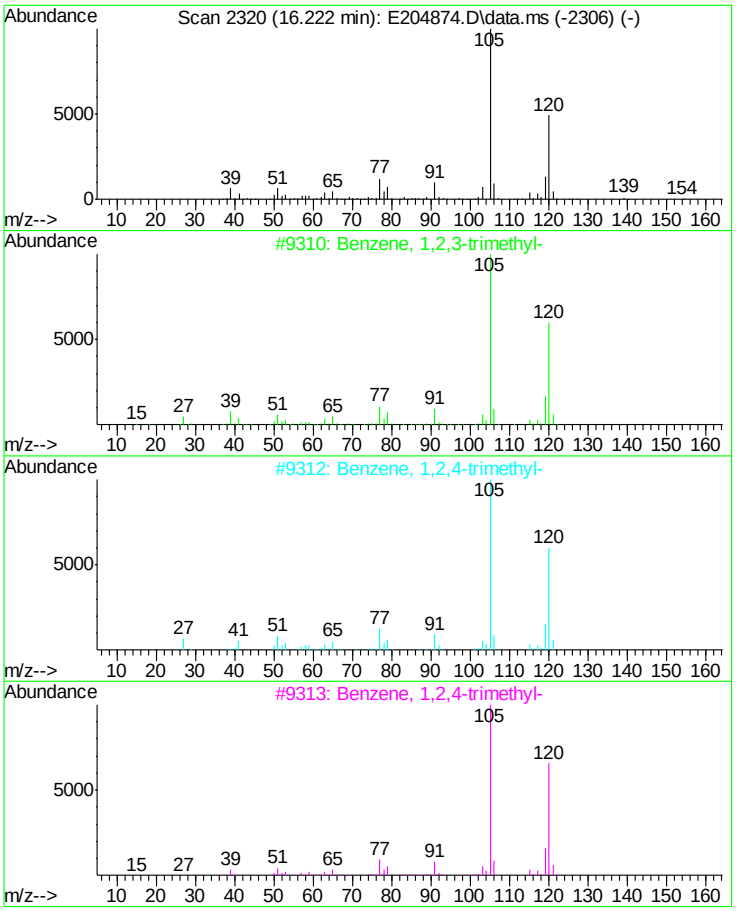
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

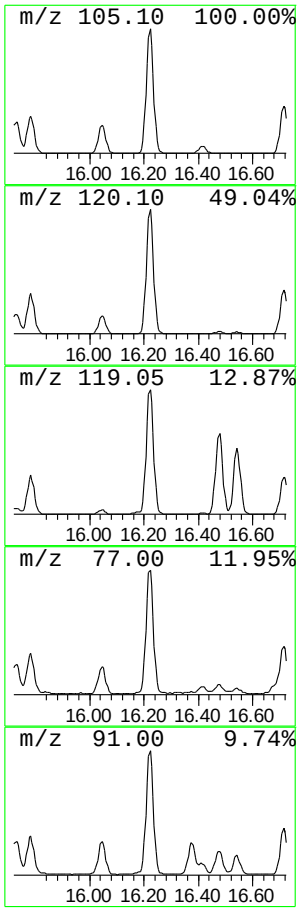
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 5 Benzene, 1,2,3-trimethyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.22	143.41 ug/L	2401070	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

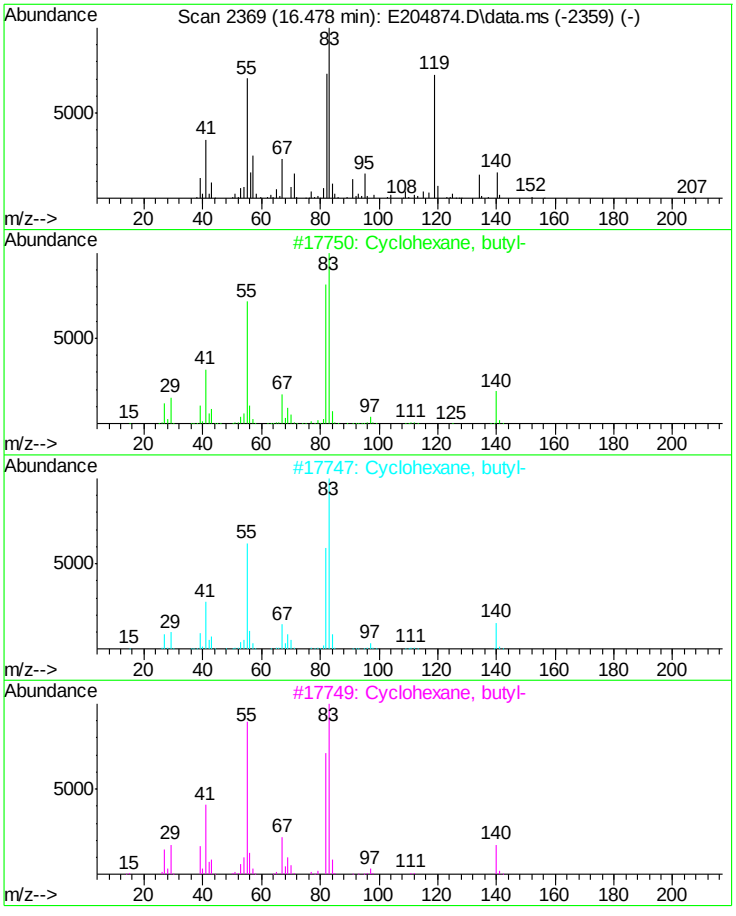
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

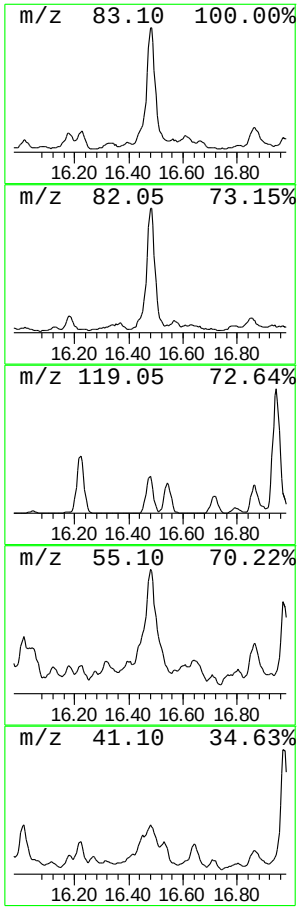
****

Peak Number 6 Cyclohexane, butyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.48	86.87 ug/L	1454370	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, butyl-	140	C10H20	001678-93-9	64
2	Cyclohexane, butyl-	140	C10H20	001678-93-9	64
3	Cyclohexane, butyl-	140	C10H20	001678-93-9	58
4	Cyclohexane, (2-methylpropyl)-	140	C10H20	001678-98-4	58
5	Cyclohexane, (1-methylethyl)-	126	C9H18	000696-29-7	50





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

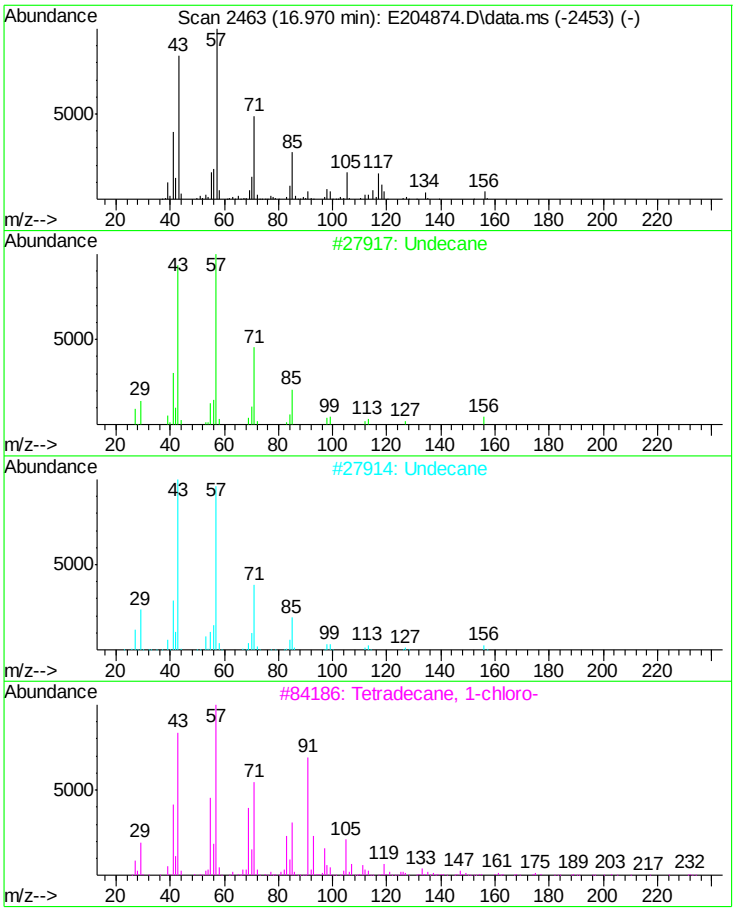
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

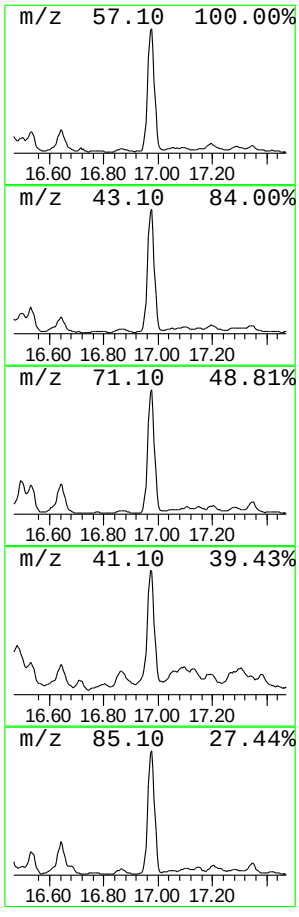
****

Peak Number 7 Undecane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.97	155.35 ug/L	2600920	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Undecane	156	C11H24	001120-21-4	86
2	Undecane	156	C11H24	001120-21-4	70
3	Tetradecane, 1-chloro-	232	C14H29Cl	002425-54-9	64
4	Decane	142	C10H22	000124-18-5	52
5	Tridecane	184	C13H28	000629-50-5	52





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

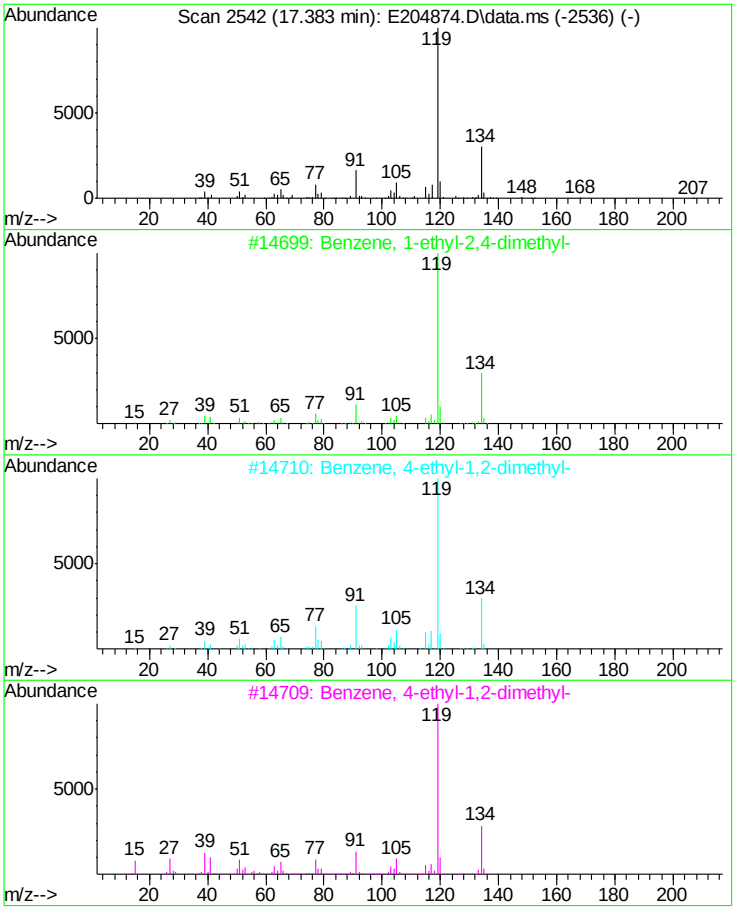
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

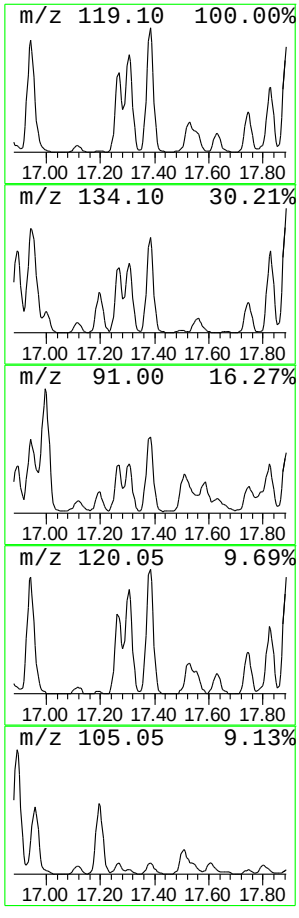
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 8 Benzene, 1-ethyl-2,4-dimethyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.38	58.05 ug/L	971883	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	95
2	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
3	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	94
4	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	94
5	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	93





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

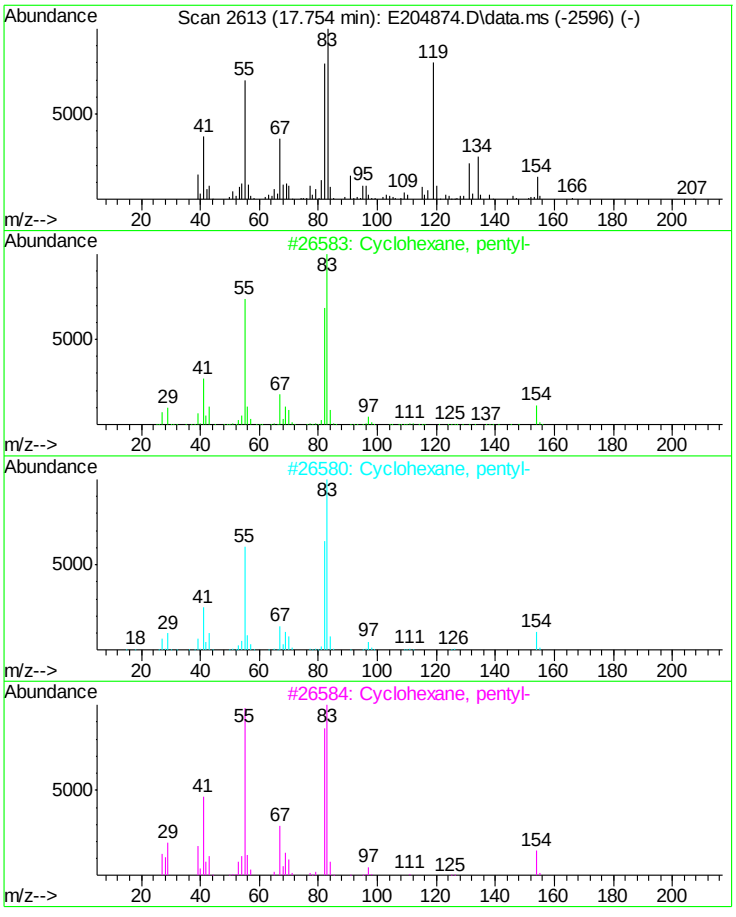
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

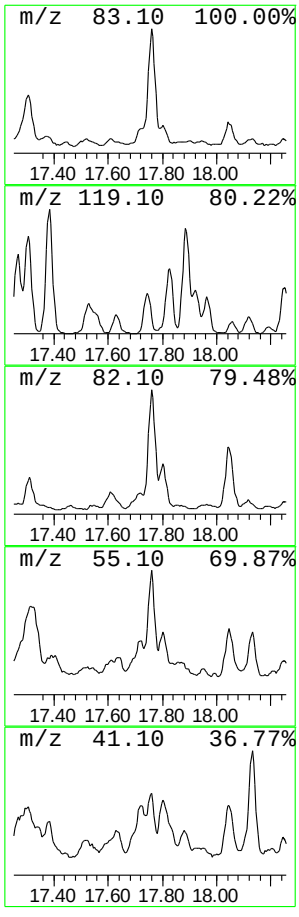
****

Peak Number 9 Cyclohexane, pentyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.75	72.92 ug/L	1220790	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, pentyl-	154	C11H22	004292-92-6	55
2	Cyclohexane, pentyl-	154	C11H22	004292-92-6	55
3	Cyclohexane, pentyl-	154	C11H22	004292-92-6	49
4	n-Amylcyclohexane	154	C11H22	029949-27-7	38
5	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	35





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

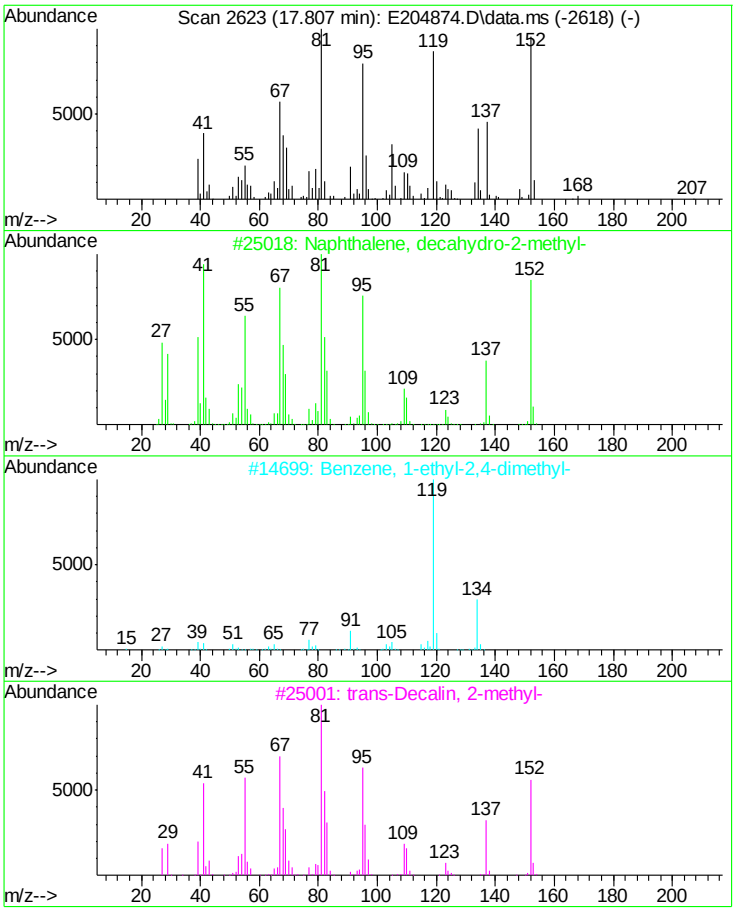
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

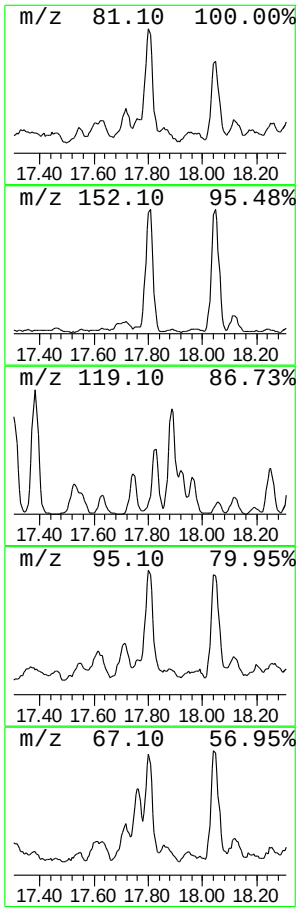
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 10 Naphthalene, decahydro-2-me... Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.81	60.85 ug/L	1018790	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, decahydro-2-methyl-	152	C11H20	002958-76-1	58
2	Benzene, 1-ethyl-2,4-dimethyl-	134	C10H14	000874-41-9	53
3	trans-Decalin, 2-methyl-	152	C11H20	1000152-47-3	41
4	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	25
5	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	25





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

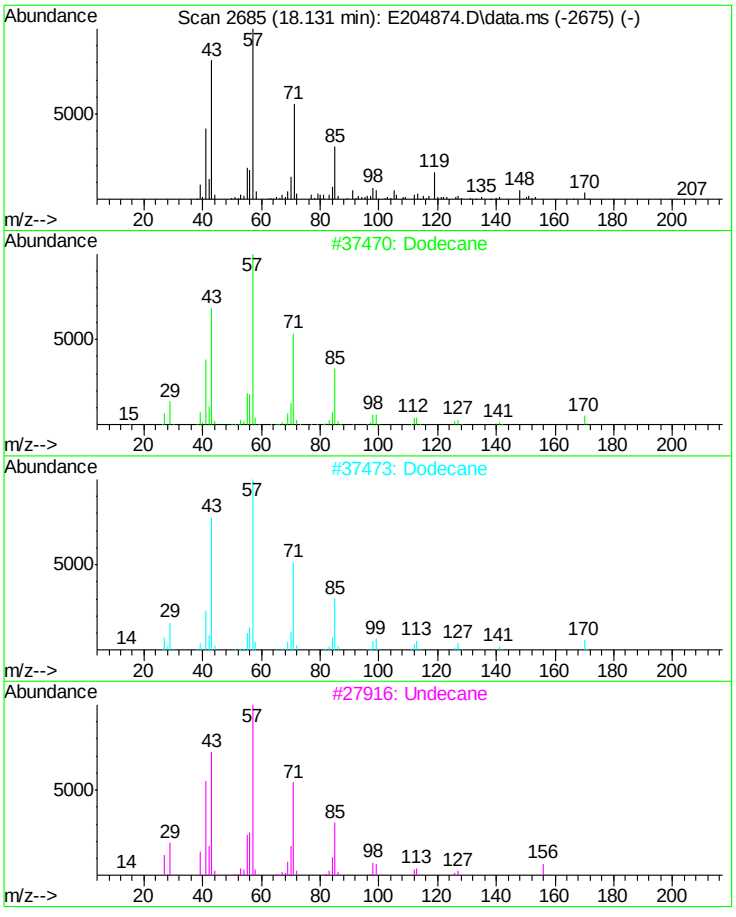
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

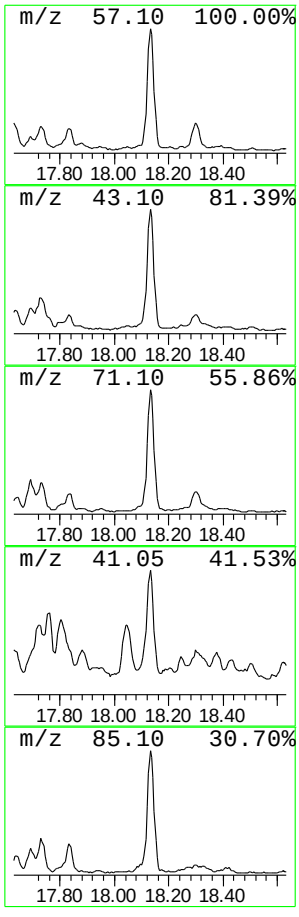
****

Peak Number 11 Dodecane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.13	62.03 ug/L	1038500	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dodecane	170	C12H26	000112-40-3	96
2	Dodecane	170	C12H26	000112-40-3	83
3	Undecane	156	C11H24	001120-21-4	72
4	Hexadecane	226	C16H34	000544-76-3	72
5	Undecane	156	C11H24	001120-21-4	72





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

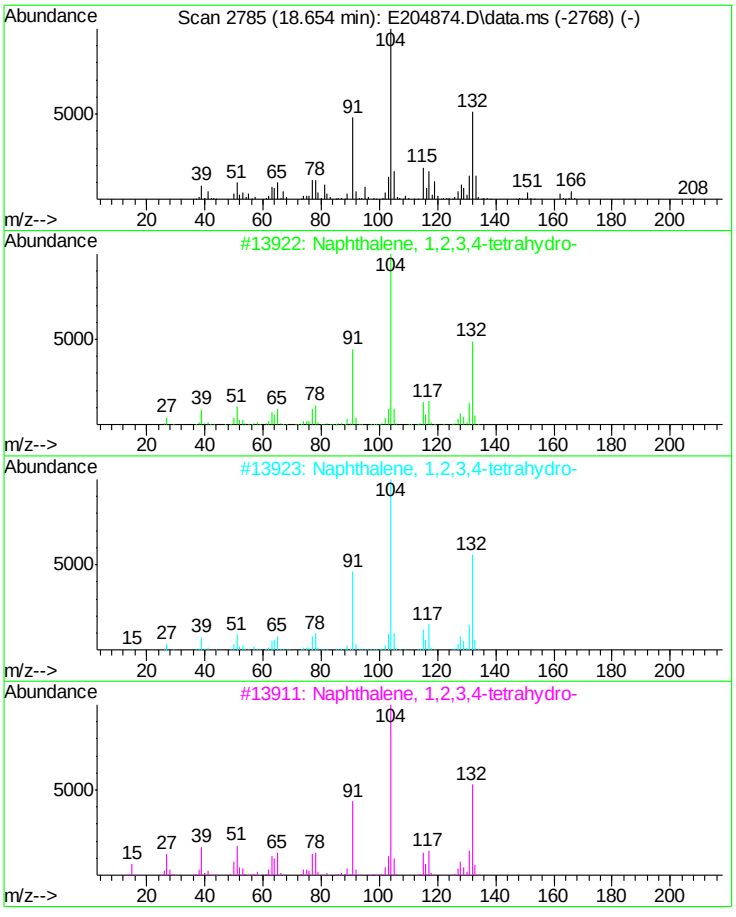
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

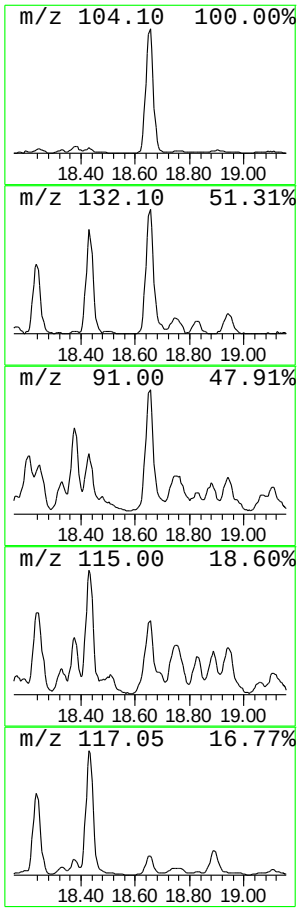
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 12 Naphthalene, 1,2,3,4-tetrah... Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.65	68.22 ug/L	1142250	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-	132	C10H12	000119-64-2	96
2	Naphthalene, 1,2,3,4-tetrahydro-	132	C10H12	000119-64-2	95
3	Naphthalene, 1,2,3,4-tetrahydro-	132	C10H12	000119-64-2	90
4	Naphthalene, 1,2,3,4-tetrahydro-	132	C10H12	000119-64-2	81
5	Indan, epoxide	132	C9H8O	000768-22-9	58





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

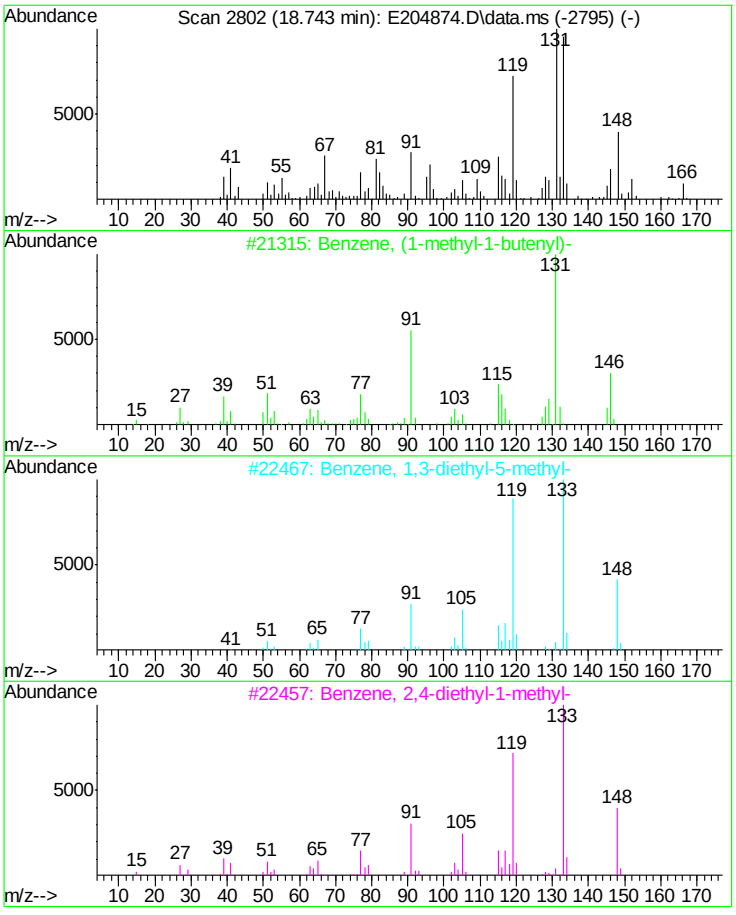
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

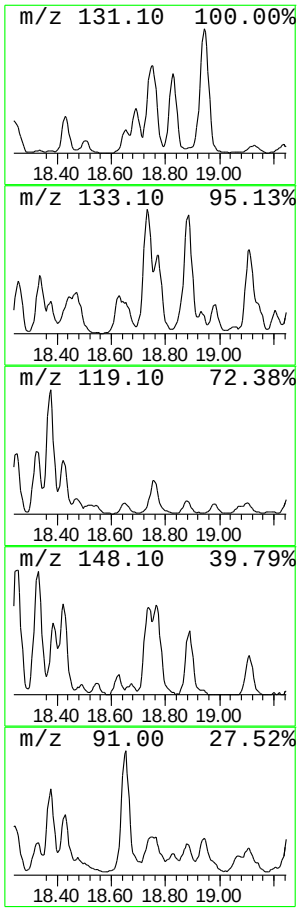
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 13 Benzene, (1-methyl-1-butenyl)- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.74	57.25 ug/L	958523	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methyl-1-butenyl)-	146	C11H14	053172-84-2	68
2	Benzene, 1,3-diethyl-5-methyl-	148	C11H16	002050-24-0	49
3	Benzene, 2,4-diethyl-1-methyl-	148	C11H16	001758-85-6	49
4	1H-Indene, 2,3-dihydro-4,7-dimet...	146	C11H14	006682-71-9	43
5	Ethanone, 1-(2,4-dimethylphenyl)-	148	C10H12O	000089-74-7	42





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

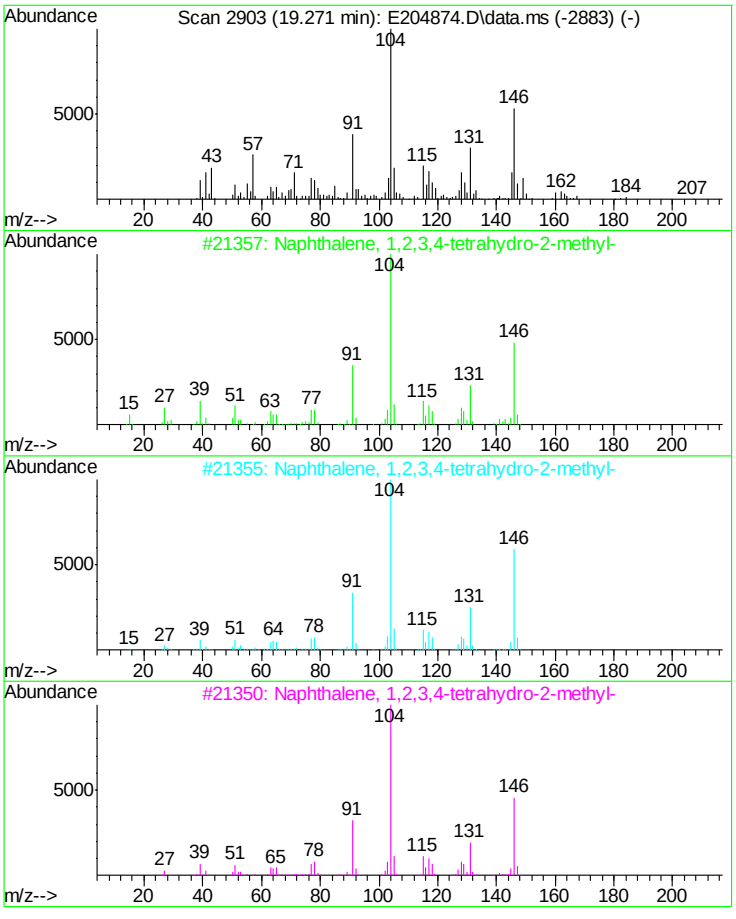
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

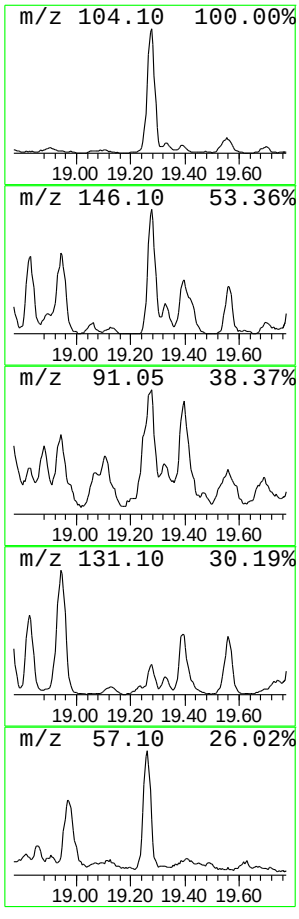
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 14 Naphthalene, 1,2,3,4-tetrah... Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.27	65.10 ug/L	1089950	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-...	146	C11H14	003877-19-8	91
2	Naphthalene, 1,2,3,4-tetrahydro-...	146	C11H14	003877-19-8	87
3	Naphthalene, 1,2,3,4-tetrahydro-...	146	C11H14	003877-19-8	64
4	2(1H)-Naphthalenone, 3,4-dihydro-	146	C10H10O	000530-93-8	62
5	Naphthalene, 2-ethyl-1,2,3,4-tet...	160	C12H16	032367-54-7	60





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

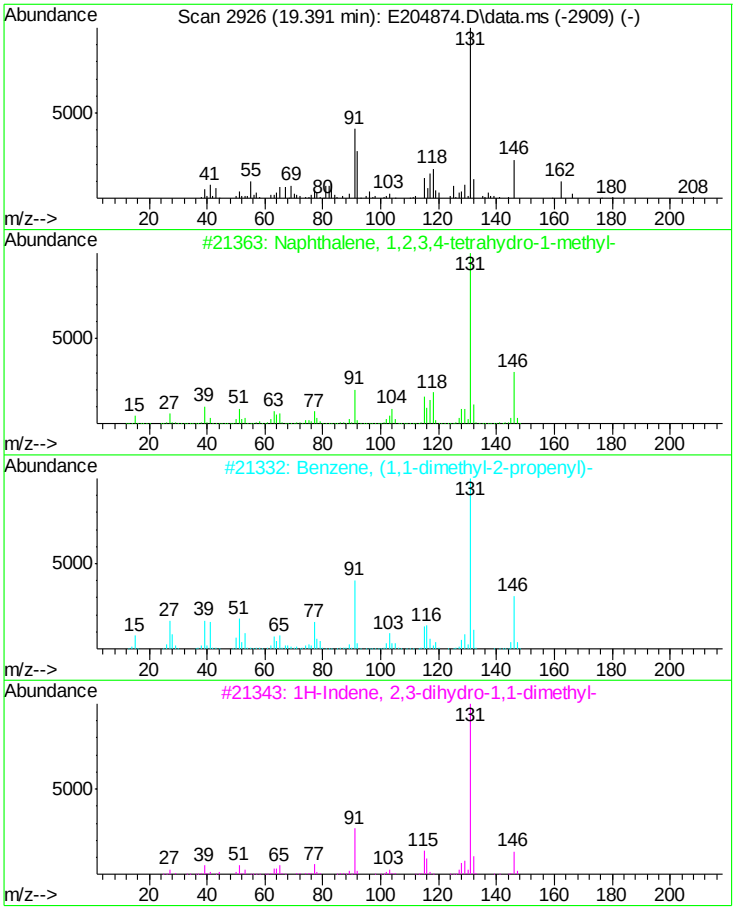
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

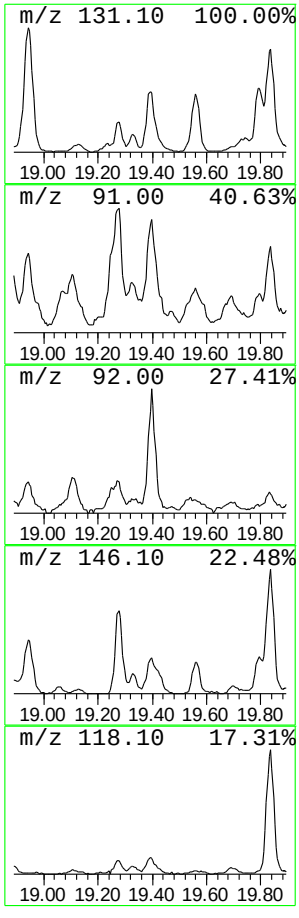
TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 15 Naphthalene, 1,2,3,4-tetrah... Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.39	64.05 ug/L	1072410	1,4-dichlorobenzene-d4	16.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-...	146	C11H14	001559-81-5	59
2	Benzene, (1,1-dimethyl-2-propenyl)-	146	C11H14	018321-36-3	58
3	1H-Indene, 2,3-dihydro-1,1-dimet...	146	C11H14	004912-92-9	50
4	Naphthalene, 1,2,3,4-tetrahydro-...	146	C11H14	001559-81-5	49
5	Benzene, 1-methyl-3-(1-methyl-2-...	146	C11H14	052161-57-6	43





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\
Data File : E204874.D
Acq On : 3 Jul 2013 3:39 pm
Operator : Oksanat
Sample : jb40351-2
Misc : MS50556,VE9003,4.5,,20,5,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
Hexane, 2,3-dimet...	11.95	58.7	ug/L	676259	3	10.78	575731	50.0
Decane	15.68	170.6	ug/L	2856900	5	16.68	837126	50.0
Benzene, 1,2,3-tr...	15.78	66.2	ug/L	1108350	5	16.68	837126	50.0
Decane, 4-methyl-	16.01	57.1	ug/L	956135	5	16.68	837126	50.0
Benzene, 1,2,3-tr...	16.22	143.4	ug/L	2401070	5	16.68	837126	50.0
Cyclohexane, butyl-	16.48	86.9	ug/L	1454370	5	16.68	837126	50.0
Undecane	16.97	155.3	ug/L	2600920	5	16.68	837126	50.0
Benzene, 1-ethyl-...	17.38	58.0	ug/L	971883	5	16.68	837126	50.0
Cyclohexane, pentyl-	17.75	72.9	ug/L	1220790	5	16.68	837126	50.0
Naphthalene, deca...	17.81	60.9	ug/L	1018790	5	16.68	837126	50.0
Dodecane	18.13	62.0	ug/L	1038500	5	16.68	837126	50.0
Naphthalene, 1,2,...	18.65	68.2	ug/L	1142250	5	16.68	837126	50.0
Benzene, (1-methy...	18.74	57.3	ug/L	958523	5	16.68	837126	50.0
Naphthalene, 1,2,...	19.27	65.1	ug/L	1089950	5	16.68	837126	50.0
Naphthalene, 1,2,...	19.39	64.1	ug/L	1072410	5	16.68	837126	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137483.D
Acq On : 26 Jun 2013 6:30 pm
Operator : natet
Sample : jb40351-3
Misc : MS50556,VX5957,5.3,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jun 27 14:43:38 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration

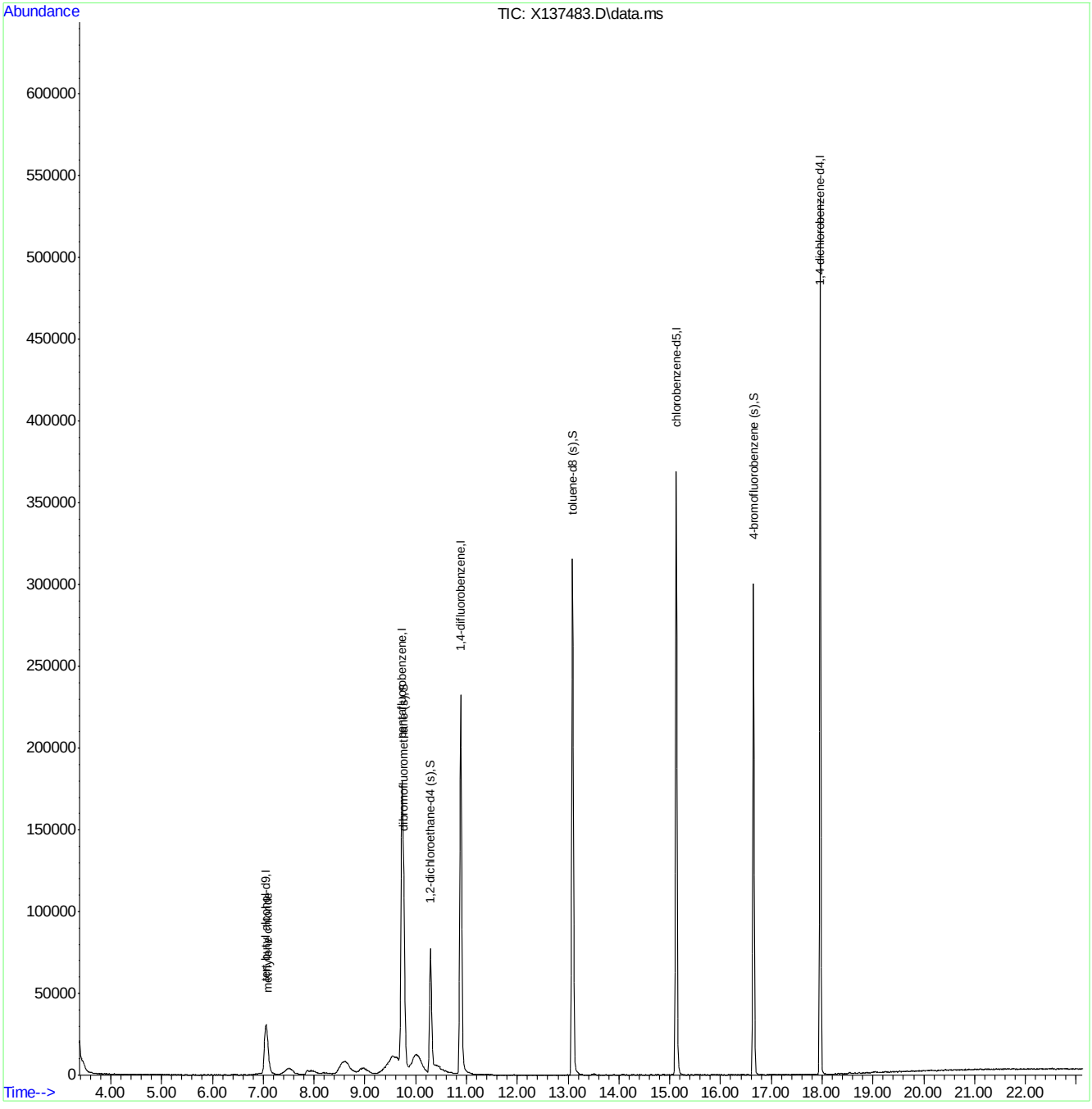
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.052	65	82294	500.00	ug/L	-0.01
5) pentafluorobenzene	9.729	168	184154	50.00	ug/L	0.00
62) 1,4-difluorobenzene	10.885	114	273571	50.00	ug/L	0.00
93) chlorobenzene-d5	15.127	117	262830	50.00	ug/L	0.00
108) 1,4-dichlorobenzene-d4	17.962	152	143280	50.00	ug/L	0.00
System Monitoring Compounds						
54) dibromofluoromethane (s)	9.766	113	76323	52.23	ug/L	0.00
Spiked Amount 50.000	Range 65 - 131		Recovery = 104.46%			
55) 1,2-dichloroethane-d4 (s)	10.294	65	75595	53.95	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 107.90%			
85) toluene-d8 (s)	13.087	98	289784	50.21	ug/L	0.00
Spiked Amount 50.000	Range 80 - 128		Recovery = 100.42%			
111) 4-bromofluorobenzene (s)	16.649	95	115480	51.85	ug/L	0.00
Spiked Amount 50.000	Range 67 - 131		Recovery = 103.70%			
Target Compounds						Qvalue
35) methylene chloride	7.083	84	3141	1.91	ug/L	90

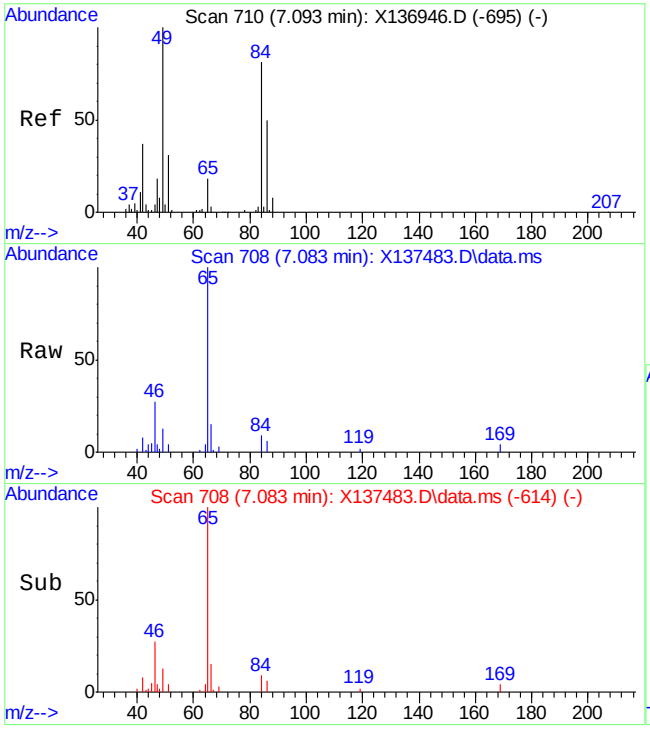
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137483.D
Acq On : 26 Jun 2013 6:30 pm
Operator : natet
Sample : jb40351-3
Misc : MS50556,VX5957,5.3,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jun 27 14:43:38 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration

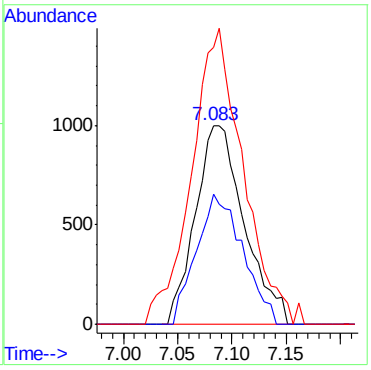




#35
methylene chloride
Concen: 1.91 ug/L
RT: 7.083 min Scan# 708
Delta R.T. -0.010 min
Lab File: X137483.D
Acq: 26 Jun 2013 6:30 pm

Tgt Ion: 84 Resp: 3141

Ion	Ratio	Lower	Upper
84	100		
86	65.3	32.2	92.2
49	139.3	93.8	153.8



7.1.5

7

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137483.D
Acq On : 26 Jun 2013 6:30 pm
Operator : natet
Sample : jb40351-3
Misc : MS50556,VX5957,5.3,,,,1
ALS Vial : 20 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.06 Max Peaks: 100
Stop Thrs : 0.04 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MX5934.M
Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: X137483.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.057	686	703	727	rBV	29899	150731	17.63%	3.125%
2	7.878	843	860	866	rBV7	2512	10016	1.17%	0.208%
3	8.610	996	1000	1038	rVB6	6379	40683	4.76%	0.844%
4	9.468	1151	1164	1165	rBV2	3108	8580	1.00%	0.178%
5	9.735	1202	1215	1240	rVB2	174873	728806	85.25%	15.112%
6	10.001	1245	1266	1267	rVV3	7268	31608	3.70%	0.655%
7	10.033	1270	1272	1308	rVB5	10501	60368	7.06%	1.252%
8	10.294	1311	1322	1339	rBV	76115	220728	25.82%	4.577%
9	10.885	1424	1435	1472	rVB	231416	617067	72.18%	12.795%
10	13.087	1845	1856	1875	rBV	315817	752527	88.02%	15.603%
11	15.127	2236	2246	2264	rBV	368777	784408	91.75%	16.264%
12	16.649	2527	2537	2555	rBV	300264	562411	65.79%	11.661%
13	17.962	2778	2788	2804	rBV	536154	854907	100.00%	17.726%

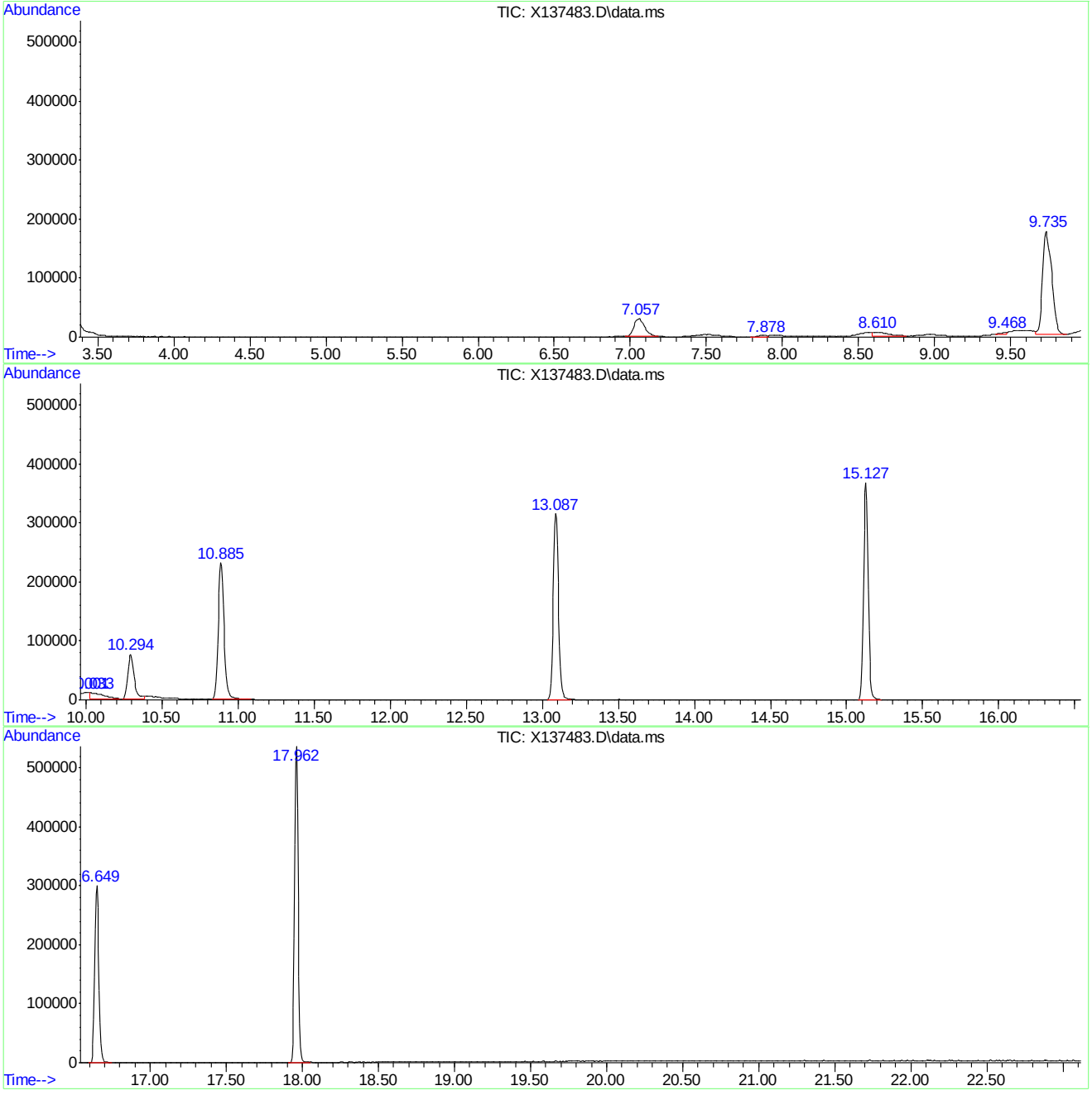
Sum of corrected areas: 4822840

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137483.D
Acq On : 26 Jun 2013 6:30 pm
Operator : natet
Sample : jb40351-3
Misc : MS50556,VX5957,5.3,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: Lscint.p



Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
  Data File : X137483.D
  Acq On    : 26 Jun 2013   6:30 pm
  Operator  : natet
  Sample    : jb40351-3
  Misc      : MS50556,VX5957,5.3,,,,1
  ALS Vial  : 20   Sample Multiplier: 1

  Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
  Quant Title  : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

  TIC Library   : C:\DATABASE\NIST98.L
  TIC Integration Parameters: Lscint.p

                                                    |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------



   No Library Search Compounds Detected
   ************************************************************************
```

Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat 07/05/13 06:36

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137484.D
Acq On : 26 Jun 2013 7:00 pm
Operator : natet
Sample : jb40351-4
Misc : MS50556,VX5957,5.5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jun 27 15:13:29 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.052	65	81259	500.00	ug/L	-0.01
5) pentafluorobenzene	9.729	168	179291	50.00	ug/L	0.00
62) 1,4-difluorobenzene	10.885	114	270406	50.00	ug/L	0.00
93) chlorobenzene-d5	15.127	117	259581	50.00	ug/L	0.00
108) 1,4-dichlorobenzene-d4	17.962	152	141519	50.00	ug/L	0.00
System Monitoring Compounds						
54) dibromofluoromethane (s)	9.771	113	75519	53.08	ug/L	0.00
Spiked Amount 50.000	Range 65 - 131		Recovery = 106.16%			
55) 1,2-dichloroethane-d4 (s)	10.289	65	75660	55.46	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 110.92%			
85) toluene-d8 (s)	13.087	98	285360	50.03	ug/L	0.00
Spiked Amount 50.000	Range 80 - 128		Recovery = 100.06%			
111) 4-bromofluorobenzene (s)	16.649	95	113121	51.42	ug/L	0.00
Spiked Amount 50.000	Range 67 - 131		Recovery = 102.84%			
Target Compounds						Qvalue
29) acetone	6.393	58	863m	8.62	ug/L	
35) methylene chloride	7.088	84	7866	4.91	ug/L	93
87) toluene	13.187	92	2534	0.64	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

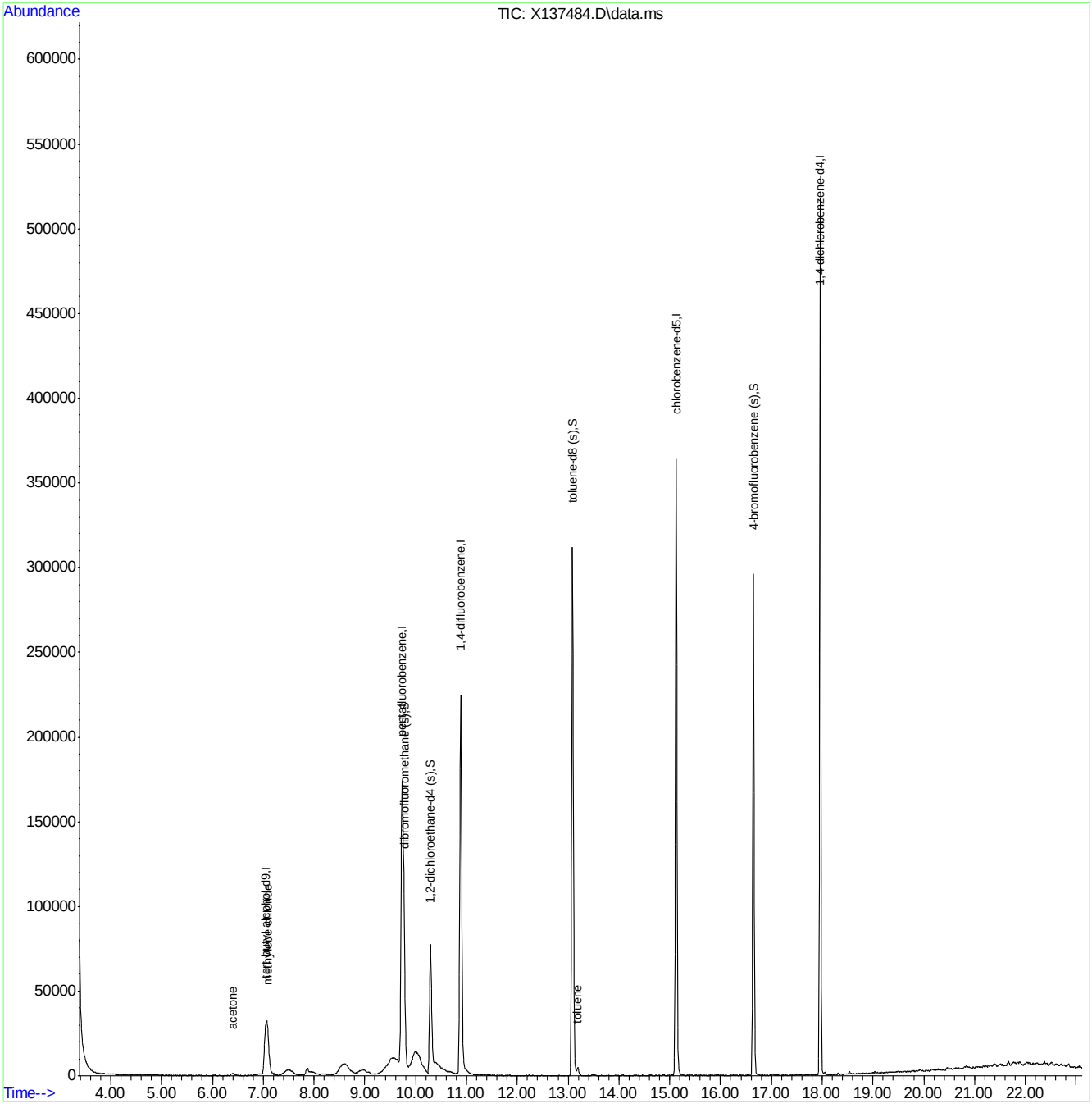
7.1.7

7

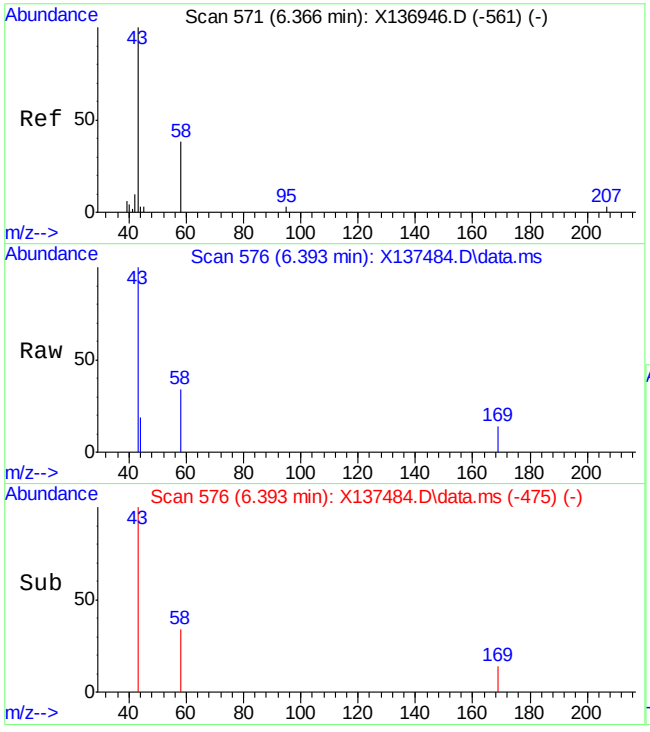
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137484.D
Acq On : 26 Jun 2013 7:00 pm
Operator : natet
Sample : jb40351-4
Misc : MS50556,VX5957,5.5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jun 27 15:13:29 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration



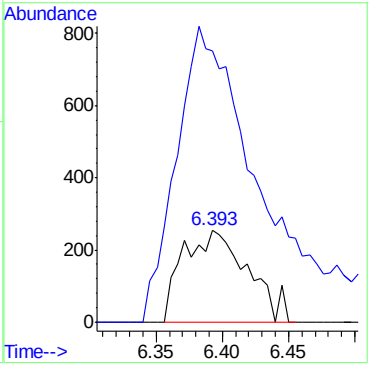
MX5934.M Thu Jun 27 15:13:43 2013 VOA-CLN-02 Page: 2

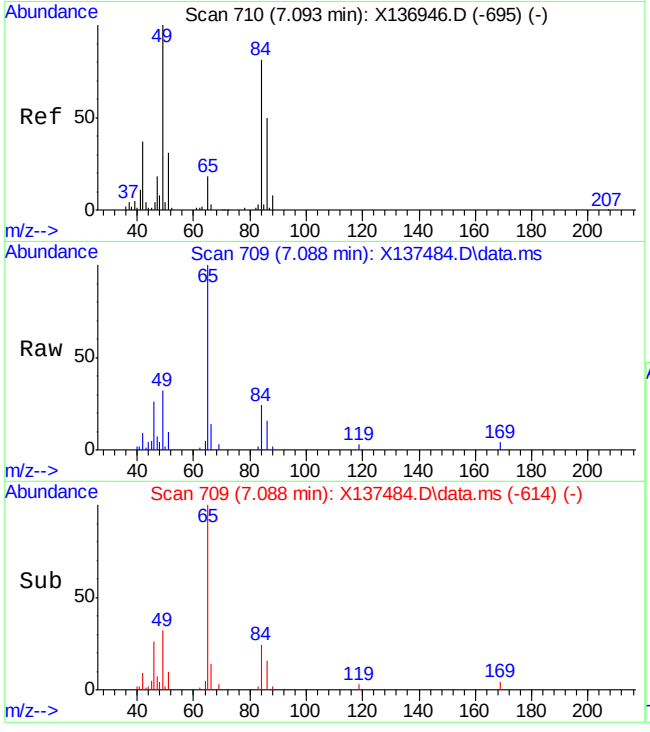


#29
acetone
Concen: 8.62 ug/L m
RT: 6.393 min Scan# 576
Delta R.T. 0.026 min
Lab File: X137484.D
Acq: 26 Jun 2013 7:00 pm

Tgt Ion: 58 Resp: 863

Ion	Ratio	Lower	Upper
58	100		
43	294.1	253.0	313.0

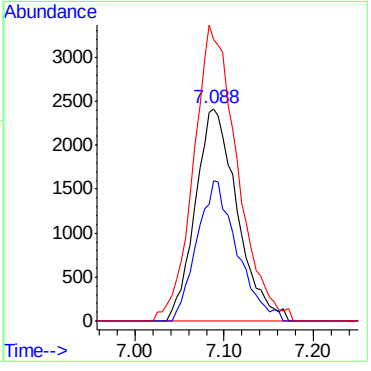


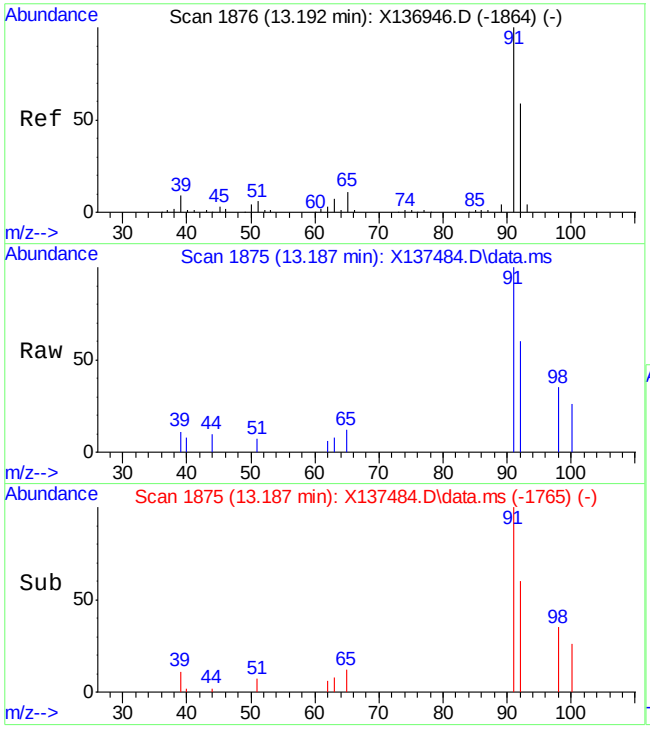


#35
methylene chloride
Concen: 4.91 ug/L
RT: 7.088 min Scan# 709
Delta R.T. -0.005 min
Lab File: X137484.D
Acq: 26 Jun 2013 7:00 pm

Tgt Ion: 84 Resp: 7866

Ion	Ratio	Lower	Upper
84	100		
86	66.0	32.2	92.2
49	133.0	93.8	153.8

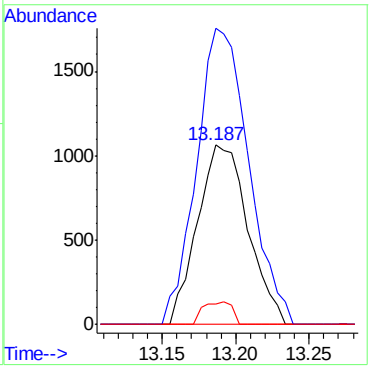




#87
toluene
Concen: 0.64 ug/L
RT: 13.187 min Scan# 1875
Delta R.T. -0.005 min
Lab File: X137484.D
Acq: 26 Jun 2013 7:00 pm

Tgt Ion: 92 Resp: 2534

Ion	Ratio	Lower	Upper
92	100		
91	165.3	139.1	199.1
51	11.6	0.0	39.8



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137484.D
Acq On : 26 Jun 2013 7:00 pm
Operator : natet
Sample : jb40351-4
Misc : MS50556,VX5957,5.5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.06 Max Peaks: 100
Stop Thrs : 0.04 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MX5934.M
Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: X137484.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.067	687	705	727	rBV4	31713	169010	19.99%	3.588%
2	7.862	848	857	865	rBV7	4074	14632	1.73%	0.311%
3	8.610	993	1000	1030	rVB6	5200	33636	3.98%	0.714%
4	9.729	1203	1214	1239	rVB2	169112	702659	83.10%	14.919%
5	9.954	1239	1257	1258	rBV2	7406	21626	2.56%	0.459%
6	10.294	1311	1322	1335	rBV	75652	218331	25.82%	4.636%
7	10.394	1338	1341	1364	rVB5	4254	20688	2.45%	0.439%
8	10.885	1422	1435	1456	rBV	223509	611974	72.38%	12.993%
9	13.087	1844	1856	1871	rBV	311997	740744	87.61%	15.727%
10	13.187	1871	1875	1886	rVB3	4655	11193	1.32%	0.238%
11	15.127	2235	2246	2263	rBV	364105	768201	90.86%	16.310%
12	16.649	2527	2537	2555	rBV	296152	551740	65.25%	11.714%
13	17.957	2779	2787	2801	rBV	517775	845518	100.00%	17.952%

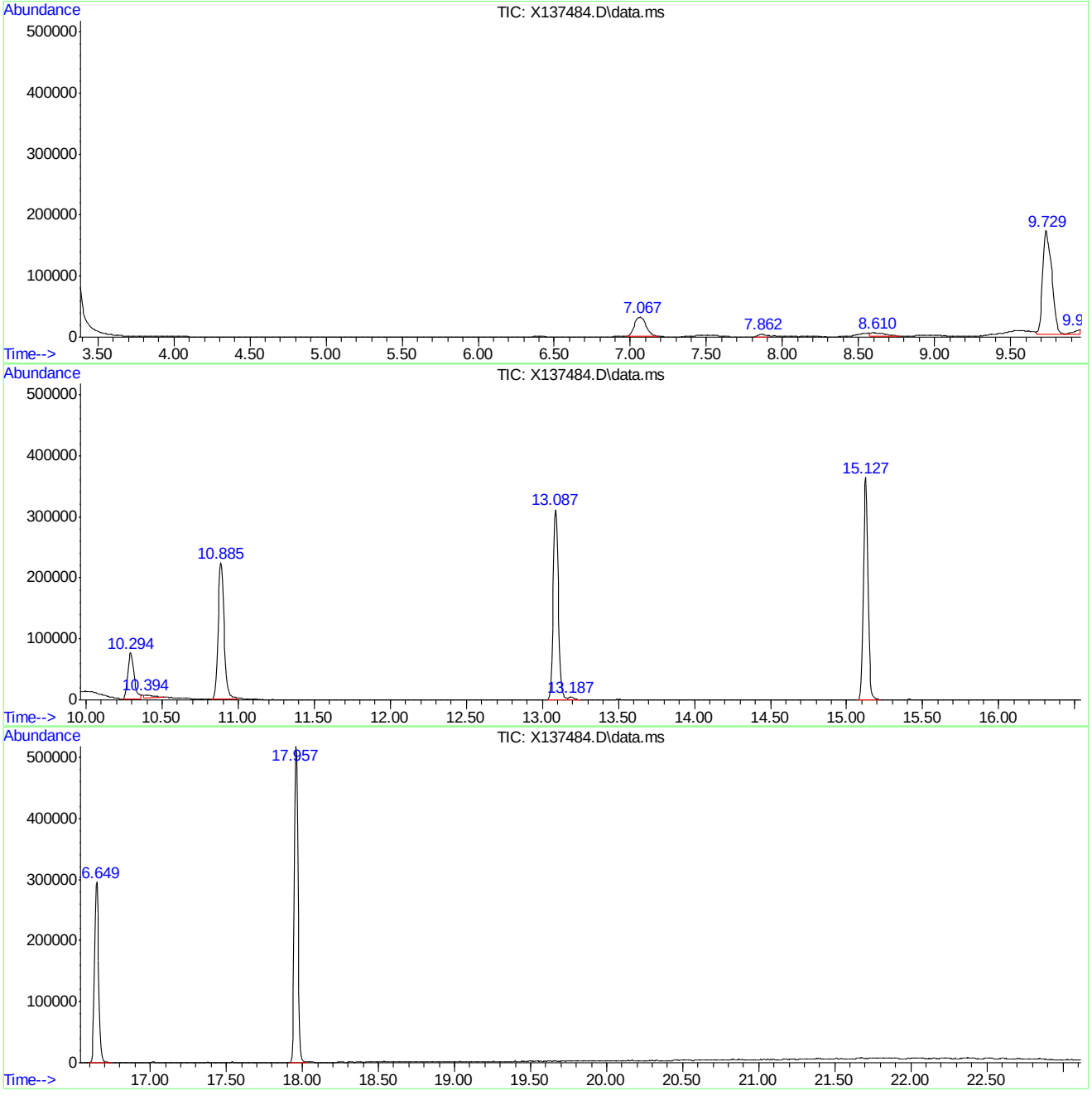
Sum of corrected areas: 4709952

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137484.D
Acq On : 26 Jun 2013 7:00 pm
Operator : natet
Sample : jb40351-4
Misc : MS50556,VX5957,5.5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: Lscint.p



Tentatively Identified Compound (LSC) summary

```
  Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
  Data File : X137484.D
  Acq On    : 26 Jun 2013   7:00 pm
  Operator  : natet
  Sample    : jb40351-4
  Misc      : MS50556,VX5957,5.5,,,,1
  ALS Vial  : 21   Sample Multiplier: 1

  Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
  Quant Title  : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

  TIC Library   : C:\DATABASE\NIST98.L
  TIC Integration Parameters: Lscint.p

                                                   |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-----------------------------------------------------------------------------



   No Library Search Compounds Detected
   ************************************************************************
```

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137485.D
Acq On : 26 Jun 2013 7:30 pm
Operator : natet
Sample : jb40351-5
Misc : MS50556,VX5957,4.6,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jun 27 15:13:52 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration

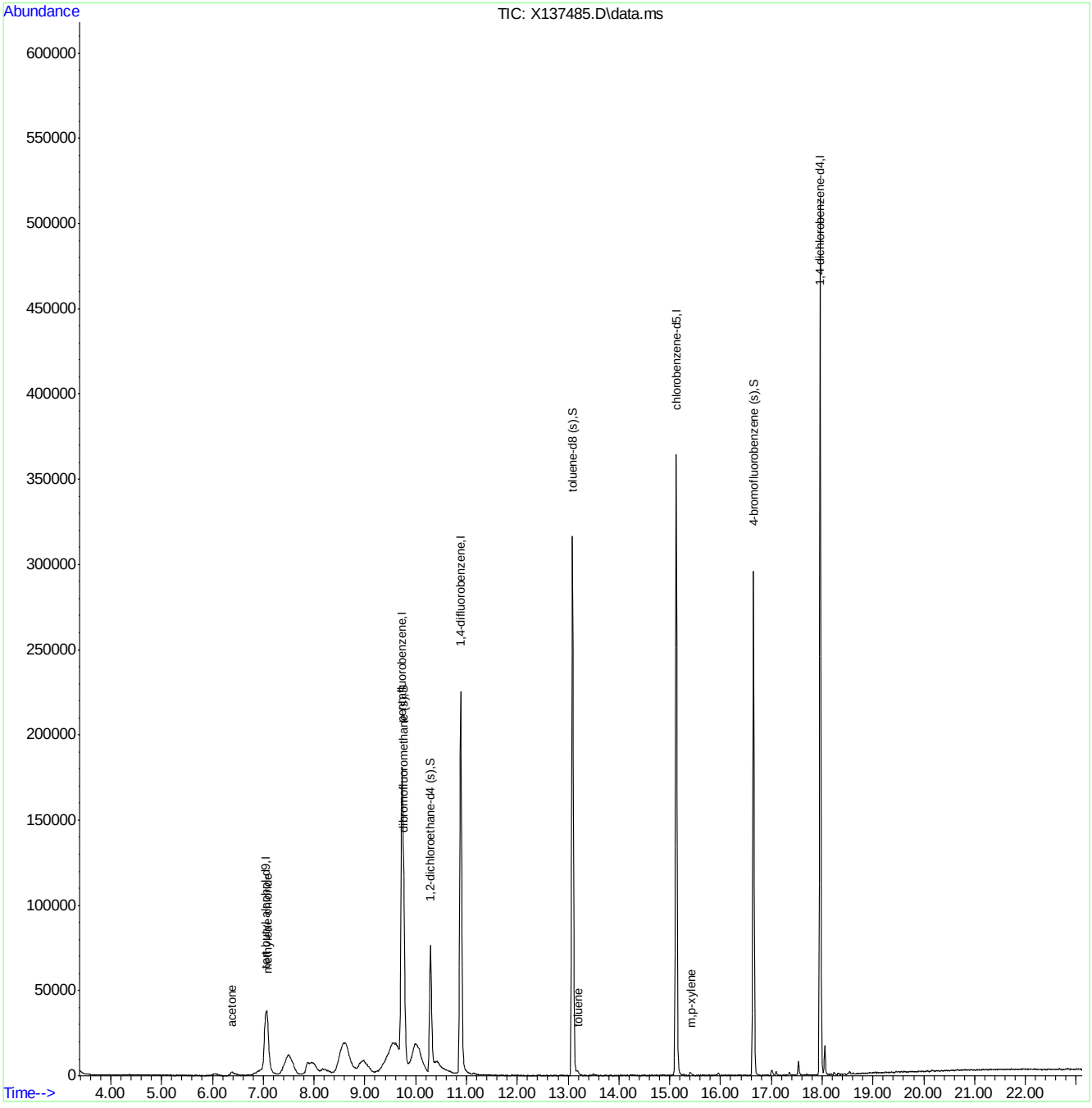
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.046	65	85272	500.00	ug/L	-0.02
5) pentafluorobenzene	9.729	168	181821	50.00	ug/L	0.00
62) 1,4-difluorobenzene	10.885	114	271155	50.00	ug/L	0.00
93) chlorobenzene-d5	15.127	117	261730	50.00	ug/L	0.00
108) 1,4-dichlorobenzene-d4	17.962	152	142352	50.00	ug/L	0.00
System Monitoring Compounds						
54) dibromofluoromethane (s)	9.766	113	70300	48.72	ug/L	0.00
Spiked Amount 50.000	Range 65 - 131		Recovery = 97.44%			
55) 1,2-dichloroethane-d4 (s)	10.289	65	74724	54.01	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 108.02%			
85) toluene-d8 (s)	13.087	98	286855	50.15	ug/L	0.00
Spiked Amount 50.000	Range 80 - 128		Recovery = 100.30%			
111) 4-bromofluorobenzene (s)	16.649	95	114247	51.63	ug/L	0.00
Spiked Amount 50.000	Range 67 - 131		Recovery = 103.26%			
Target Compounds						Qvalue
29) acetone	6.387	58	1036	10.21	ug/L	92
35) methylene chloride	7.083	84	8913	5.48	ug/L	93
87) toluene	13.192	92	1213	0.31	ug/L	90
104) m,p-xylene	15.415	106	1055	0.34	ug/L #	69

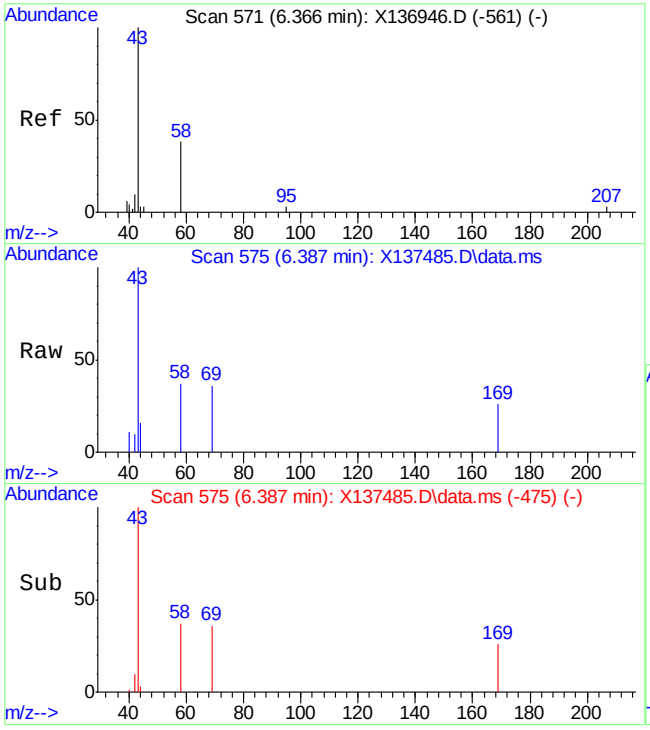
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137485.D
Acq On : 26 Jun 2013 7:30 pm
Operator : natet
Sample : jb40351-5
Misc : MS50556,VX5957,4.6,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jun 27 15:13:52 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration

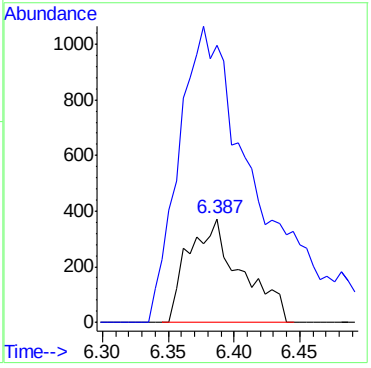


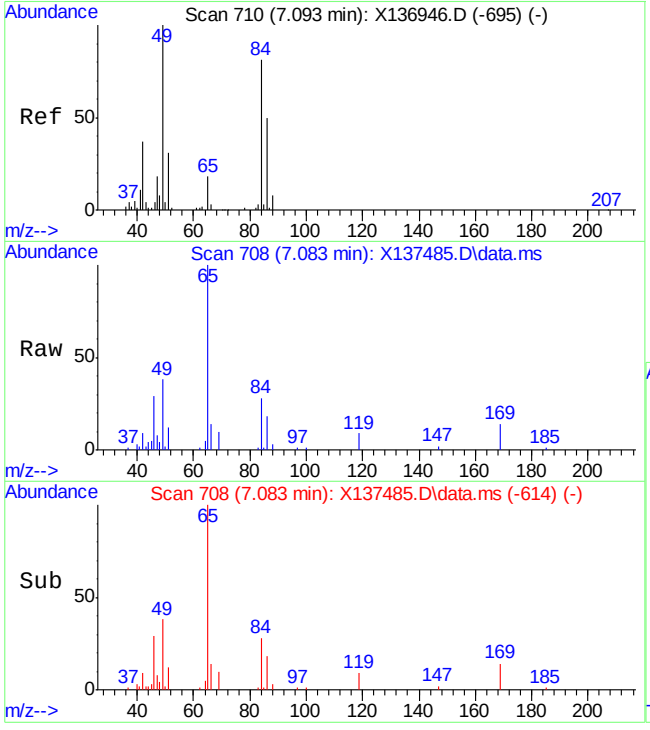


#29
acetone
Concen: 10.21 ug/L
RT: 6.387 min Scan# 575
Delta R.T. 0.021 min
Lab File: X137485.D
Acq: 26 Jun 2013 7:30 pm

Tgt Ion: 58 Resp: 1036

Ion	Ratio	Lower	Upper
58	100		
43	267.5	253.0	313.0

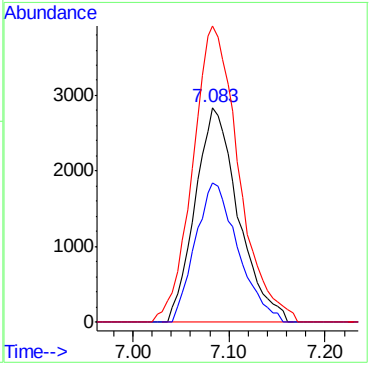


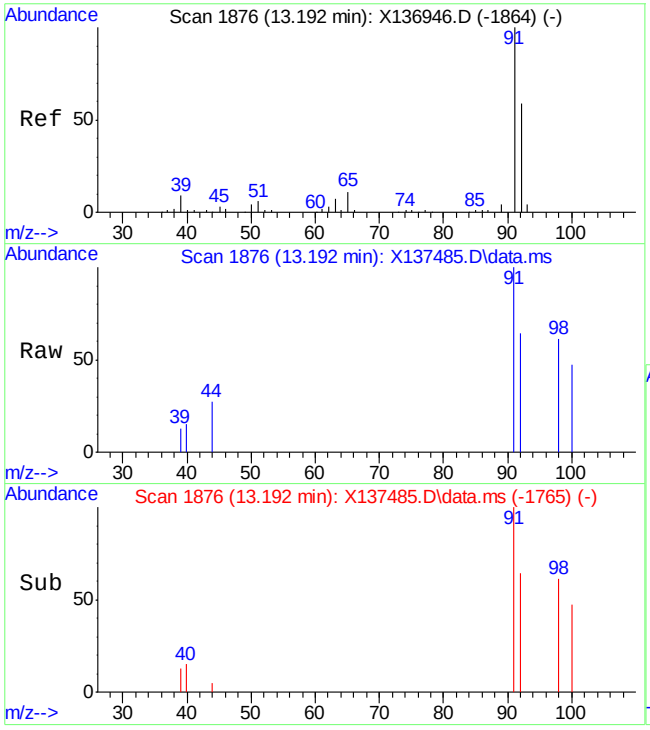


#35
methylene chloride
Concen: 5.48 ug/L
RT: 7.083 min Scan# 708
Delta R.T. -0.011 min
Lab File: X137485.D
Acq: 26 Jun 2013 7:30 pm

Tgt Ion: 84 Resp: 8913

Ion	Ratio	Lower	Upper
84	100		
86	64.7	32.2	92.2
49	133.8	93.8	153.8

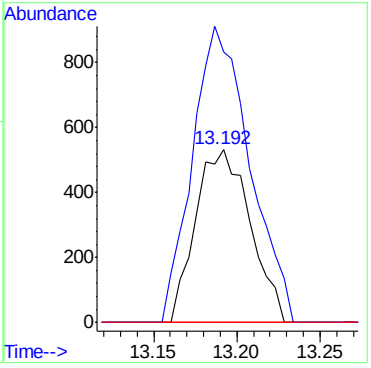


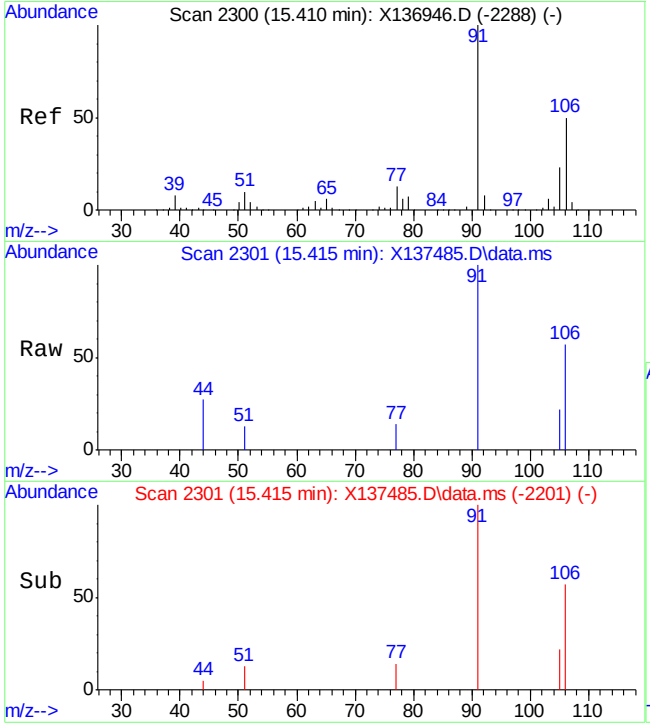


#87
toluene
Concen: 0.31 ug/L
RT: 13.192 min Scan# 1876
Delta R.T. -0.000 min
Lab File: X137485.D
Acq: 26 Jun 2013 7:30 pm

Tgt Ion: 92 Resp: 1213

Ion	Ratio	Lower	Upper
92	100		
91	156.2	139.1	199.1
51	0.0	0.0	39.8

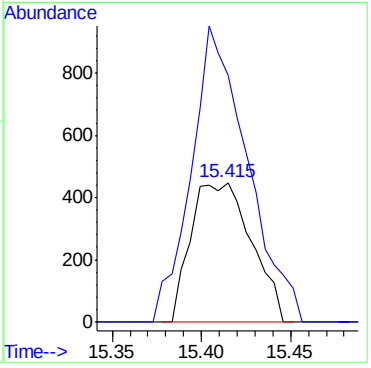




#104
m,p-xylene
Concen: 0.34 ug/L
RT: 15.415 min Scan# 2301
Delta R.T. 0.005 min
Lab File: X137485.D
Acq: 26 Jun 2013 7:30 pm

Tgt Ion:106 Resp: 1055

Ion	Ratio	Lower	Upper
106	100		
91	152.7	169.4	229.4#



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137485.D
Acq On : 26 Jun 2013 7:30 pm
Operator : natet
Sample : jb40351-5
Misc : MS50556,VX5957,4.6,,,,1
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.06 Max Peaks: 100
Stop Thrs : 0.04 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MX5934.M
Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC: X137485.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.067	686	705	743	rVB2	37322	216106	25.11%	4.086%
2	7.496	752	787	825	rBV3	11123	123012	14.29%	2.326%
3	7.867	841	858	867	rBV5	6860	32292	3.75%	0.611%
4	7.951	870	874	904	rVB4	5515	36246	4.21%	0.685%
5	8.584	957	995	1023	rBV5	17409	212528	24.69%	4.019%
6	8.966	1057	1068	1106	rVB5	6930	60187	6.99%	1.138%
7	9.541	1156	1178	1182	rBV3	8916	43776	5.09%	0.828%
8	9.729	1203	1214	1237	rVB2	174040	715823	83.16%	13.536%
9	9.986	1240	1263	1266	rBV2	11389	49223	5.72%	0.931%
10	10.289	1312	1321	1335	rBV	73777	211991	24.63%	4.009%
11	10.885	1423	1435	1460	rBV	224073	605621	70.36%	11.452%
12	13.087	1844	1856	1870	rBV	316403	742632	86.28%	14.043%
13	15.127	2236	2246	2267	rBV	364134	776321	90.19%	14.680%
14	16.649	2527	2537	2553	rBV	296197	559304	64.98%	10.576%
15	17.533	2698	2706	2718	rBV2	8235	14333	1.67%	0.271%
16	17.957	2779	2787	2800	rBV	514494	860752	100.00%	16.277%
17	18.051	2800	2805	2815	rVB	17025	28164	3.27%	0.533%

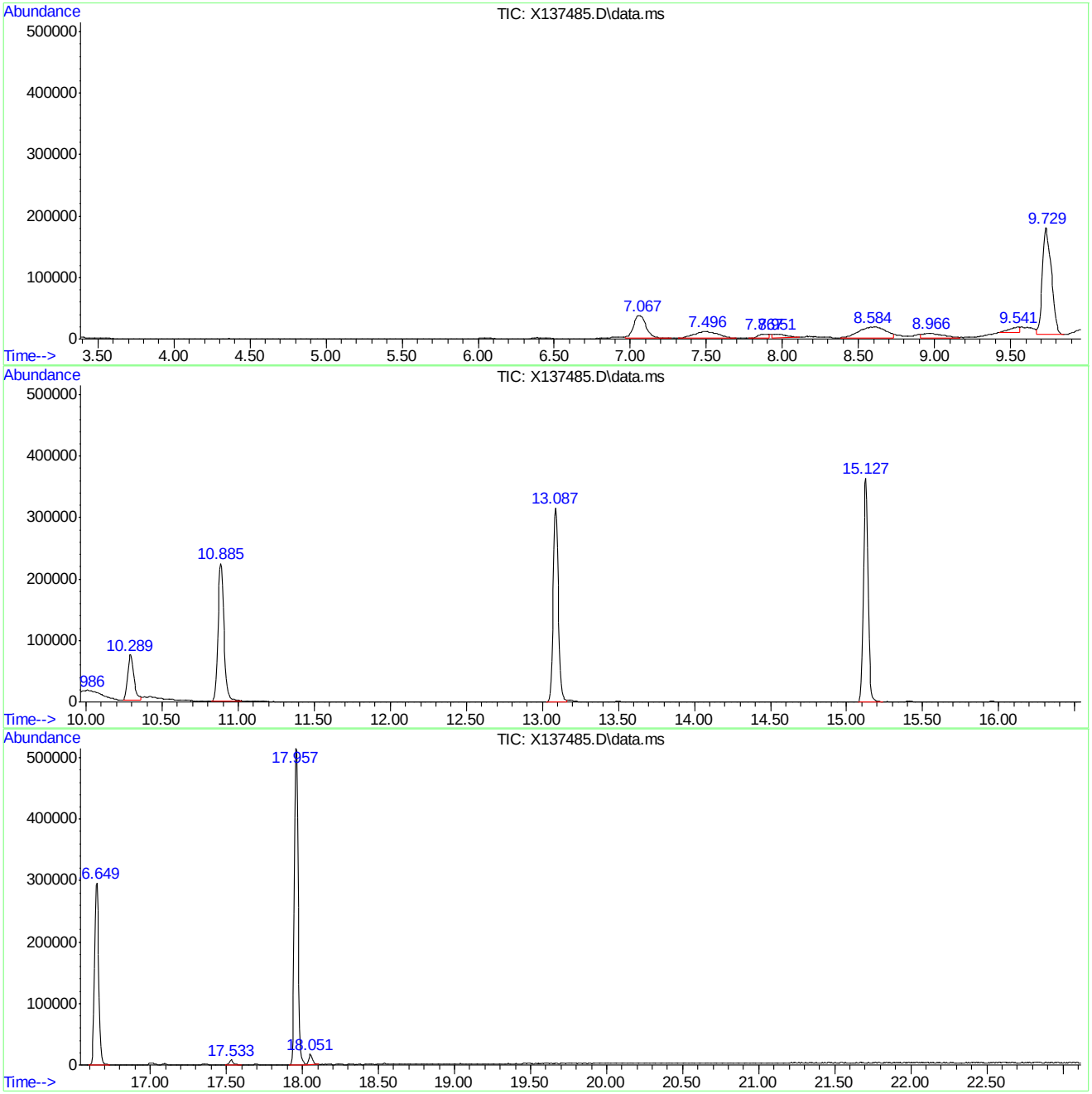
Sum of corrected areas: 5288311

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137485.D
Acq On : 26 Jun 2013 7:30 pm
Operator : natet
Sample : jb40351-5
Misc : MS50556,VX5957,4.6,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: Lscint.p



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137485.D
Acq On : 26 Jun 2013 7:30 pm
Operator : natet
Sample : jb40351-5
Misc : MS50556,VX5957,4.6,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

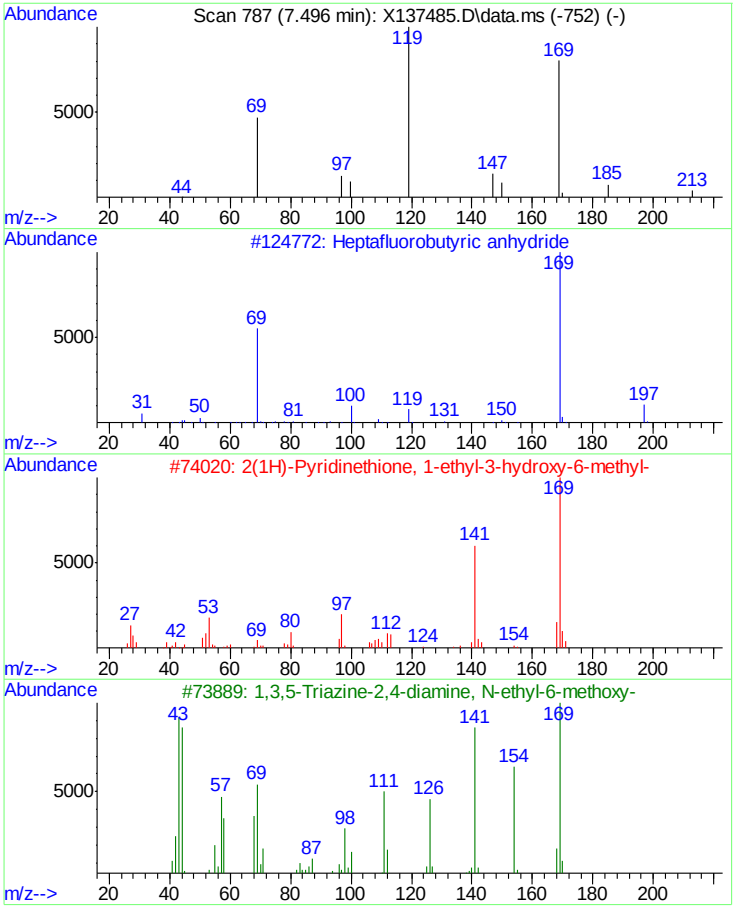
TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: Lscint.p

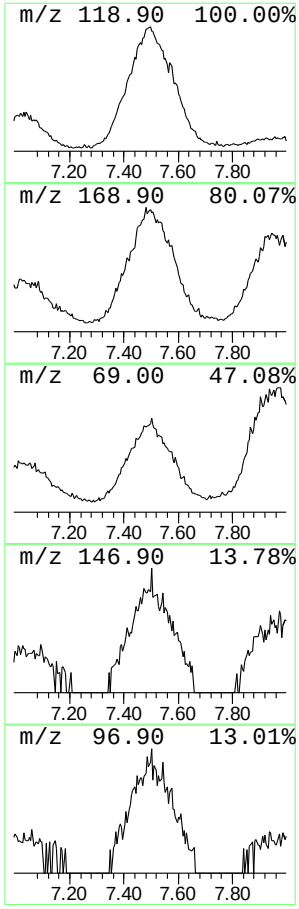
****

Peak Number 1 Heptafluorobutyric anhydride Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.496	8.59 ug/L	123012	pentafluorobenzene	9.729

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptafluorobutyric anhydride	410	C8F14O3	000336-59-4	9
2	2(1H)-Pyridinethione, 1-ethyl-3-...	169	C8H11NOS	024207-15-6	5
3	1,3,5-Triazine-2,4-diamine, N-et...	169	C6H11N5O	030360-56-6	4
4	2-Butynenitrile, 4,4,4-trifluoro-	119	C4F3N	066051-48-7	4
5	2-Toluic hydrazide	150	C8H10N2O	007658-80-2	4





Library Search Compound Report

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137485.D
Acq On : 26 Jun 2013 7:30 pm
Operator : natet
Sample : jb40351-5
Misc : MS50556,VX5957,4.6,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

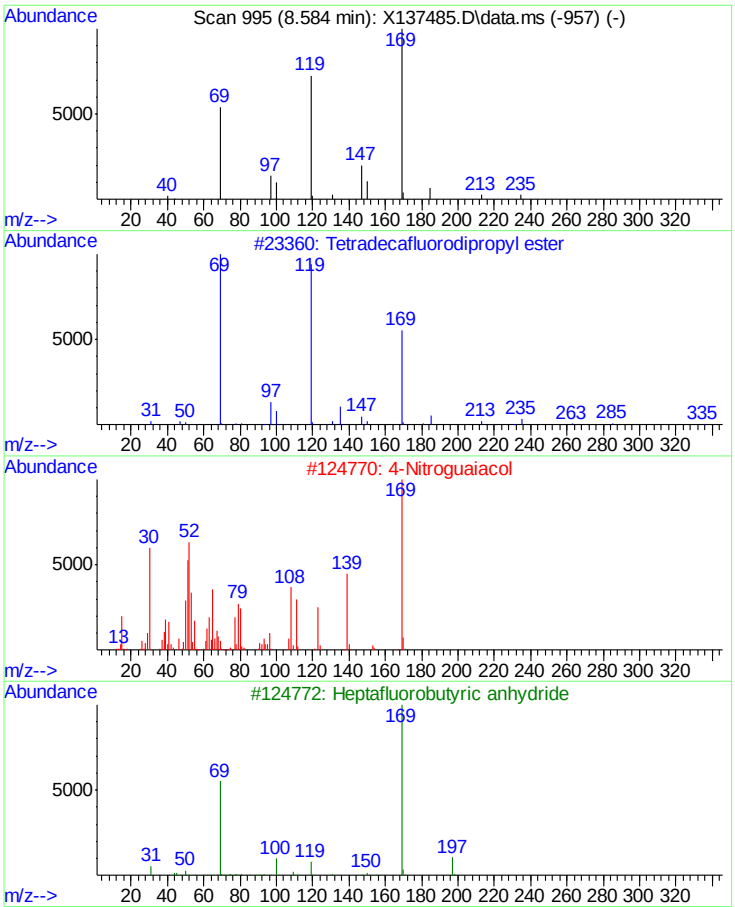
TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: Lscint.p

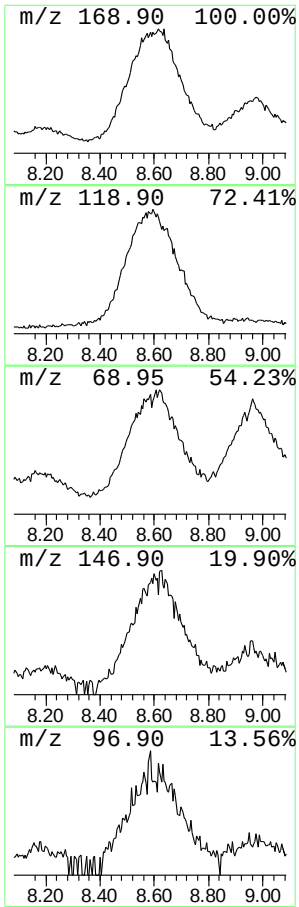
****

Peak Number 2 Tetradecafluorodipropyl ester Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.584	14.85 ug/L	212528	pentafluorobenzene	9.729

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetradecafluorodipropyl ester	354	C6F14O	1000222-68-9	32
2	4-Nitroguaiacol	169	C7H7NO4	003251-56-7	9
3	Heptafluorobutyric anhydride	410	C8F14O3	000336-59-4	9
4	Heptafluorobutyric anhydride	410	C8F14O3	000336-59-4	9
5	Hexane, tetradecafluoro-	338	C6F14	000355-42-0	9





Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\X core\VX5955-5957\
Data File : X137485.D
Acq On : 26 Jun 2013 7:30 pm
Operator : natet
Sample : jb40351-5
Misc : MS50556,VX5957,4.6,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: Lscint.p

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
Heptafluorobuty...	7.496	8.6	ug/L	123012	2	9.729	715823	50.0
Tetradecafluoro...	8.584	14.8	ug/L	212528	2	9.729	715823	50.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : E204865.D
Acq On : 3 Jul 2013 11:00 am
Operator : Oksanat
Sample : mb
Misc : MS50814,VE9003,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 03 13:53:47 2013
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um
QLast Update : Mon Jul 01 17:29:58 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.655	65	72761	500.00	ug/L	0.00
5) pentafluorobenzene	9.862	168	177618	50.00	ug/L	0.00
66) 1,4-difluorobenzene	10.778	114	246348	50.00	ug/L	0.00
97) chlorobenzene-d5	14.109	117	229357	50.00	ug/L	0.00
114) 1,4-dichlorobenzene-d4	16.677	152	128866	50.00	ug/L	0.00

System Monitoring Compounds

60) dibromofluoromethane (s)	9.899	113	71812	42.50	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 121		Recovery = 85.00%			
61) 1,2-dichloroethane-d4 (s)	10.317	65	87711	44.04	ug/L	0.00
Spiked Amount 50.000	Range 74 - 127		Recovery = 88.08%			
89) toluene-d8 (s)	12.477	98	299046	49.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 122		Recovery = 98.00%			
116) 4-bromofluorobenzene (s)	15.380	95	115451	46.35	ug/L	0.00
Spiked Amount 50.000	Range 78 - 116		Recovery = 92.70%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

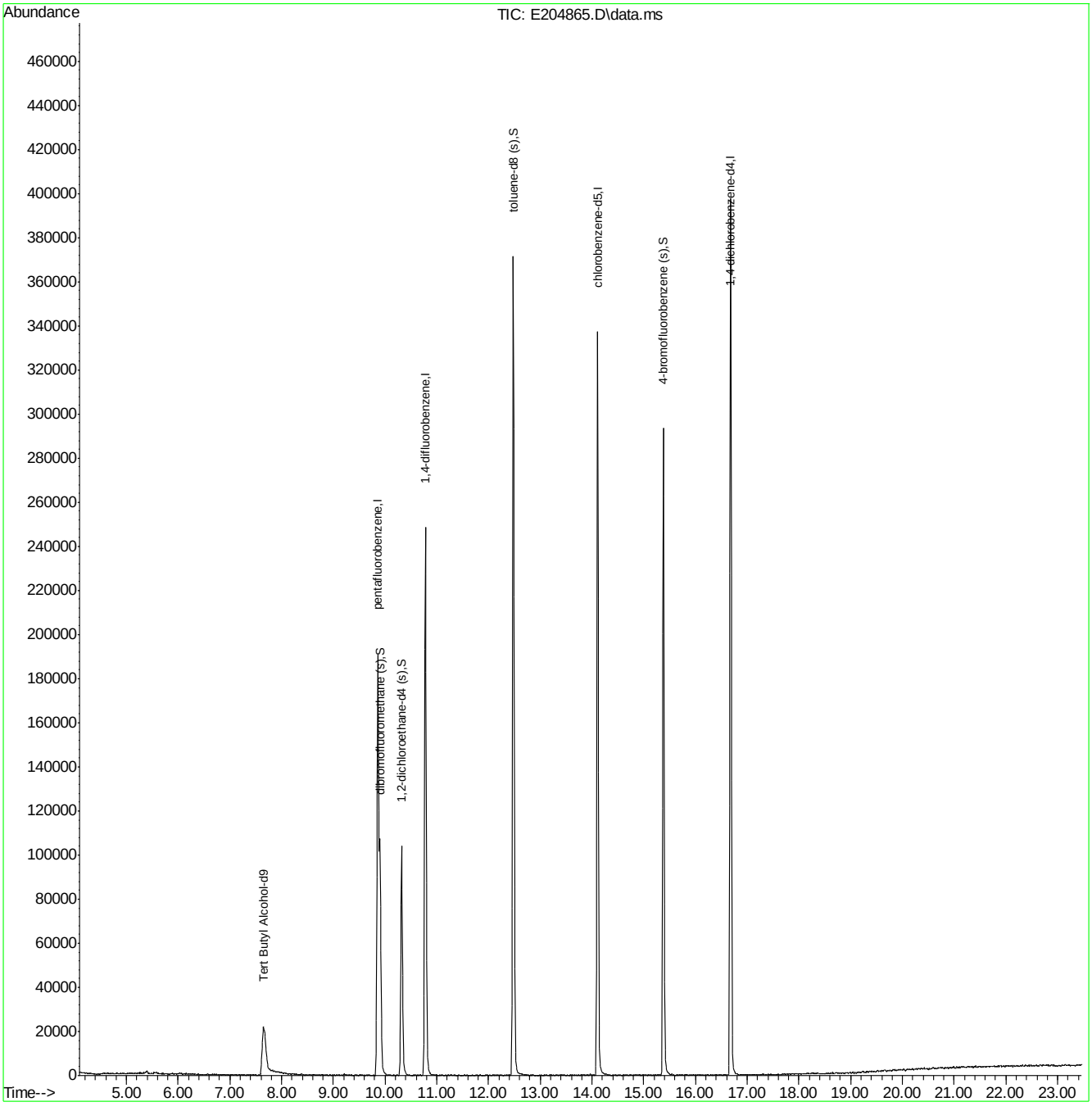
7.2.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : E204865.D
Acq On : 3 Jul 2013 11:00 am
Operator : Oksanat
Sample : mb
Misc : MS50814,VE9003,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 03 13:53:47 2013
Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um
QLast Update : Mon Jul 01 17:29:58 2013
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : E204865.D
Acq On : 3 Jul 2013 11:00 am
Operator : Oksanat
Sample : mb
Misc : MS50715,VE9003,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 10 Area counts
Start Thrs: 0.001 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\ME8959.M
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

Signal : TIC: E204865.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.705	114	118	122	rVB2	472	768	0.10%	0.018%
2	4.737	122	124	128	rBV	592	578	0.08%	0.014%
3	4.810	133	138	143	rVV2	409	934	0.12%	0.022%
4	4.888	147	153	156	rVV	426	617	0.08%	0.015%
5	5.286	226	229	234	rBV2	489	746	0.10%	0.018%
6	5.333	234	238	240	rVV2	721	686	0.09%	0.016%
7	5.354	240	242	243	rVV2	858	616	0.08%	0.015%
8	5.396	244	250	255	rVV4	1230	2890	0.38%	0.069%
9	5.479	261	266	273	rVV2	518	881	0.12%	0.021%
10	5.527	273	275	278	rVV	908	747	0.10%	0.018%
11	5.579	278	285	288	rVV2	929	1826	0.24%	0.044%
12	5.621	292	293	303	rVB2	672	917	0.12%	0.022%
13	5.710	304	310	312	rVB2	590	878	0.11%	0.021%
14	5.741	312	316	318	rBV2	515	639	0.08%	0.015%
15	5.846	334	336	341	rBV2	538	775	0.10%	0.018%
16	5.893	341	345	349	rVV2	615	764	0.10%	0.018%
17	5.929	349	352	356	rVV2	463	730	0.10%	0.017%
18	5.987	360	363	368	rVV2	489	727	0.10%	0.017%
19	6.029	368	371	375	rVV2	673	935	0.12%	0.022%
20	6.065	375	378	380	rVV2	627	621	0.08%	0.015%
21	6.128	384	390	392	rVB2	600	976	0.13%	0.023%
22	6.379	435	438	444	rBV	405	634	0.08%	0.015%
23	7.399	627	633	636	rVB	432	858	0.11%	0.020%
24	7.645	666	680	708	rBV2	22079	118842	15.55%	2.832%
25	7.823	711	714	717	rVV3	1293	1817	0.24%	0.043%
26	7.843	717	718	729	rVB3	754	1837	0.24%	0.044%
27	8.068	758	761	765	rVV2	566	741	0.10%	0.018%
28	8.529	848	849	853	rBV	438	582	0.08%	0.014%
29	8.597	856	862	863	rBV	448	672	0.09%	0.016%
30	8.754	891	892	896	rBV2	440	596	0.08%	0.014%
31	9.209	970	979	986	rBV	617	1469	0.19%	0.035%
32	9.413	1010	1018	1022	rBV	239	674	0.09%	0.016%
33	9.862	1093	1104	1109	rBV	190757	470872	61.61%	11.220%
34	10.317	1180	1191	1211	rBV	103991	244554	32.00%	5.827%

ME8959.M Wed Jul 03 13:53:59 2013 RPT1 Page: 1

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : E204865.D
Acq On : 3 Jul 2013 11:00 am
Operator : Oksanat
Sample : mb
Misc : MS50715,VE9003,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 10 Area counts
Start Thrs: 0.001 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\ME8959.M
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

35	10.778	1264	1279	1302	rVV	248347	539507	70.59%	12.856%
36	11.091	1335	1339	1347	rBV	396	797	0.10%	0.019%
37	11.782	1468	1471	1477	rBV	282	562	0.07%	0.013%
38	12.477	1592	1604	1631	rBV	371260	764298	100.00%	18.212%
39	12.854	1675	1676	1682	rBV	399	580	0.08%	0.014%
40	13.832	1858	1863	1868	rBV2	457	762	0.10%	0.018%
41	13.968	1882	1889	1894	rBV2	497	769	0.10%	0.018%
42	14.109	1905	1916	1934	rBV	337250	674758	88.28%	16.079%
43	15.380	2150	2159	2183	rBV	293391	550261	72.00%	13.112%
44	15.537	2187	2189	2194	rVB	640	562	0.07%	0.013%
45	16.677	2397	2407	2428	rBV	397557	751137	98.28%	17.899%
46	16.803	2428	2431	2438	rVB	712	1245	0.16%	0.030%
47	18.251	2703	2708	2711	rBV2	508	846	0.11%	0.020%
48	18.466	2744	2749	2752	rBV2	344	595	0.08%	0.014%
49	18.984	2842	2848	2850	rBV3	743	1091	0.14%	0.026%
50	19.041	2852	2859	2864	rBV3	580	1261	0.16%	0.030%
51	19.078	2864	2866	2871	rBV	810	793	0.10%	0.019%
52	19.250	2890	2899	2901	rBV5	868	1908	0.25%	0.045%
53	19.282	2901	2905	2906	rBV3	571	658	0.09%	0.016%
54	19.365	2916	2921	2924	rBV3	552	824	0.11%	0.020%
55	19.454	2932	2938	2942	rVB3	447	873	0.11%	0.021%
56	19.522	2942	2951	2954	rBV4	809	1842	0.24%	0.044%
57	19.601	2963	2966	2969	rBV2	510	612	0.08%	0.015%
58	19.800	3001	3004	3005	rBV	644	644	0.08%	0.015%
59	19.820	3005	3008	3010	rVV3	840	902	0.12%	0.021%
60	19.852	3010	3014	3016	rVV3	943	933	0.12%	0.022%
61	19.868	3016	3017	3021	rVB3	669	582	0.08%	0.014%
62	19.915	3021	3026	3027	rBV3	584	847	0.11%	0.020%
63	19.930	3027	3029	3034	rVV2	599	975	0.13%	0.023%
64	19.967	3034	3036	3042	rVV2	593	983	0.13%	0.023%
65	20.019	3042	3046	3054	rVV5	815	1571	0.21%	0.037%
66	20.092	3057	3060	3064	rVV3	670	851	0.11%	0.020%
67	20.119	3064	3065	3070	rVV4	572	747	0.10%	0.018%
68	20.234	3084	3087	3089	rBV3	616	572	0.07%	0.014%
69	20.270	3089	3094	3097	rVB4	676	1069	0.14%	0.025%
70	20.296	3097	3099	3101	rBV2	672	694	0.09%	0.017%
71	20.317	3101	3103	3108	rVB4	638	567	0.07%	0.014%

LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\
Data File : E204865.D
Acq On : 3 Jul 2013 11:00 am
Operator : Oksanat
Sample : mb
Misc : MS50715,VE9003,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 10 Area counts
Start Thrs: 0.001 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\ME8959.M
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

72	20.490	3133	3136	3139	rVB3	814	852	0.11%	0.020%
73	20.521	3139	3142	3148	rBV5	783	1499	0.20%	0.036%
74	20.568	3148	3151	3152	rBV2	908	725	0.09%	0.017%
75	20.642	3162	3165	3169	rVB4	563	718	0.09%	0.017%
76	20.694	3169	3175	3176	rBV3	611	889	0.12%	0.021%
77	20.725	3176	3181	3184	rVV5	703	971	0.13%	0.023%
78	20.867	3206	3208	3212	rVB2	1139	1389	0.18%	0.033%
79	20.898	3212	3214	3215	rBV2	989	642	0.08%	0.015%
80	20.924	3215	3219	3221	rBV4	670	1117	0.15%	0.027%
81	21.133	3256	3259	3261	rBV2	665	674	0.09%	0.016%
82	21.348	3298	3300	3304	rVB3	734	842	0.11%	0.020%
83	21.379	3304	3306	3309	rBV3	760	610	0.08%	0.015%
84	21.410	3309	3312	3319	rBV5	938	1118	0.15%	0.027%
85	21.515	3330	3332	3334	rVB3	709	602	0.08%	0.014%
86	21.536	3334	3336	3339	rBV4	595	652	0.09%	0.016%
87	21.698	3364	3367	3370	rBV4	537	661	0.09%	0.016%
88	21.818	3385	3390	3391	rVB4	546	699	0.09%	0.017%
89	21.960	3416	3417	3421	rVB4	530	567	0.07%	0.014%
90	21.986	3421	3422	3427	rBV4	627	894	0.12%	0.021%
91	22.022	3427	3429	3433	rVB3	624	588	0.08%	0.014%
92	22.143	3449	3452	3456	rBV4	718	1183	0.15%	0.028%
93	22.451	3506	3511	3514	rBV6	769	1002	0.13%	0.024%
94	22.477	3514	3516	3519	rVB3	781	626	0.08%	0.015%
95	22.587	3532	3537	3541	rVB3	776	1335	0.17%	0.032%
96	22.660	3547	3551	3554	rBV5	641	857	0.11%	0.020%
97	22.875	3587	3592	3594	rBV4	692	930	0.12%	0.022%
98	23.021	3617	3620	3625	rVB5	494	703	0.09%	0.017%
99	23.079	3628	3631	3633	rBV2	757	770	0.10%	0.018%
100	23.251	3663	3664	3667	rBV3	570	573	0.07%	0.014%

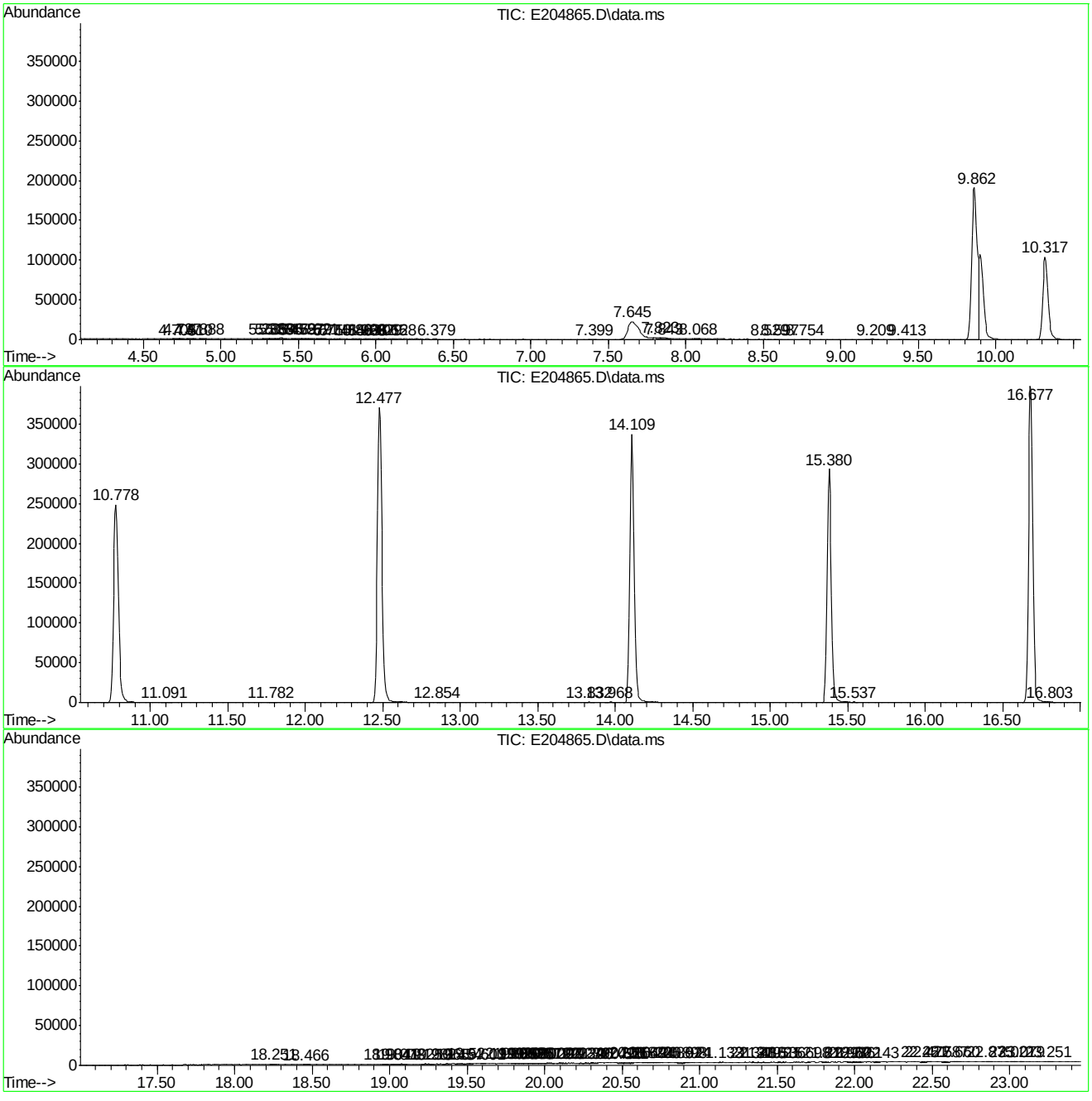
Sum of corrected areas: 4196565

LSC Report - Integrated Chromatogram

Data Path : C:\msdchem\1\DATA\
Data File : E204865.D
Acq On : 3 Jul 2013 11:00 am
Operator : Oksanat
Sample : mb
Misc : MS50715,VE9003,5,,100,5,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P



ACCUTEST LABORATORIES JB40351

Tentatively Identified Compound (LSC) summary

```
Data Path : C:\msdchem\1\DATA\
Data File : E204865.D
Acq On    :  3 Jul 2013  11:00 am
Operator  : Oksanat
Sample    : mb
Misc      : MS50715,VE9003,5,,100,5,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ME8959.M
Quant Title  : SW846  8260B,ZB624 60m x 0.25mm x 1.4um

TIC Library   : C:\Database\NIST08.L
TIC Integration Parameters: RTEINT.P

                                                  |--Internal Standard---|
TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : X137467.D
Acq On : 26 Jun 2013 10:25 am
Operator : natet
Sample : mb1
Misc : MS50583,VX5957,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 15:29:58 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.05	65	82226	500.00	ug/L	-0.02
5) pentafluorobenzene	9.73	168	186651	50.00	ug/L	0.00
62) 1,4-difluorobenzene	10.89	114	276540	50.00	ug/L	0.00
93) chlorobenzene-d5	15.12	117	265540	50.00	ug/L	-0.01
108) 1,4-dichlorobenzene-d4	17.96	152	142441	50.00	ug/L	0.00

System Monitoring Compounds

54) dibromofluoromethane (s)	9.77	113	74262	50.14	ug/L	0.00
Spiked Amount 50.000	Range 65 - 131		Recovery = 100.28%			
55) 1,2-dichloroethane-d4 (s)	10.29	65	72887	51.32	ug/L	0.00
Spiked Amount 50.000	Range 70 - 121		Recovery = 102.64%			
85) toluene-d8 (s)	13.09	98	291984	50.05	ug/L	0.00
Spiked Amount 50.000	Range 80 - 128		Recovery = 100.10%			
111) 4-bromofluorobenzene (s)	16.64	95	114629	51.77	ug/L	0.00
Spiked Amount 50.000	Range 67 - 131		Recovery = 103.54%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

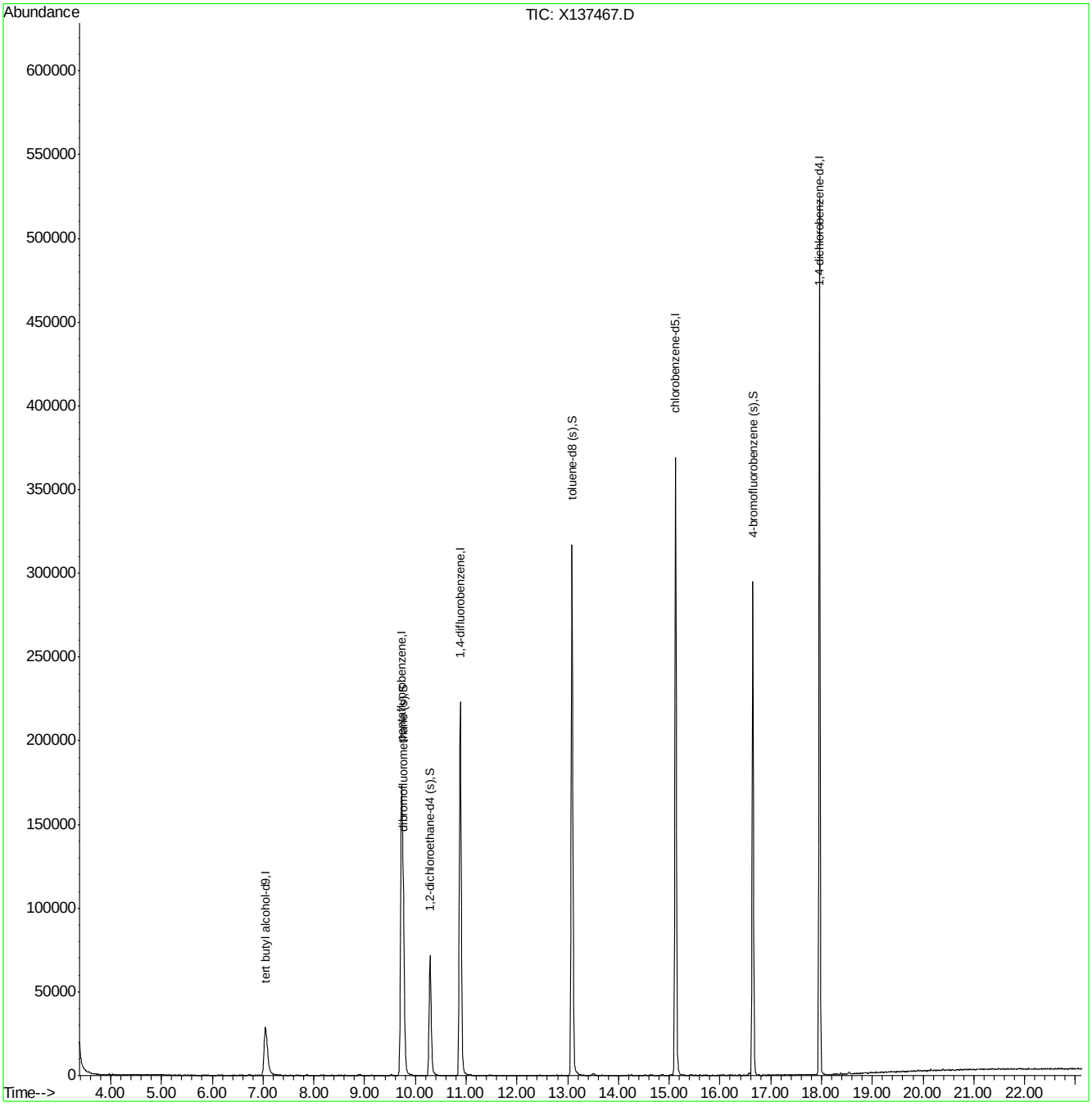
7.2.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : X137467.D
Acq On : 26 Jun 2013 10:25 am
Operator : natet
Sample : mb1
Misc : MS50583,VX5957,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 26 15:29:58 2013
Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um
QLast Update : Tue Jun 25 15:47:59 2013
Response via : Initial Calibration



MX5934.M Wed Jun 26 15:36:42 2013 GCMSX

LSC Area Percent Report

Data Path : C:\msdchem\1\data\
Data File : X137467.D
Acq On : 26 Jun 2013 10:25 am
Operator : natet
Sample : mb1
Misc : MS50583,VX5957,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.06 Max Peaks: 100
Stop Thrs : 0.04 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\MX5934.M
Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.046	686	701	730	rBV	28885	136542	16.30%	2.987%
2	9.729	1201	1214	1241	rBV2	173207	711841	84.96%	15.571%
3	10.289	1310	1321	1346	rBV	71490	202333	24.15%	4.426%
4	10.885	1422	1435	1452	rBV	223066	597647	71.33%	13.073%
5	13.087	1842	1856	1882	rBV	317153	751597	89.70%	16.440%
6	15.122	2236	2245	2268	rBV	368878	778059	92.86%	17.019%
7	16.644	2528	2536	2558	rVB	295023	555731	66.33%	12.156%
8	17.957	2779	2787	2801	rBV	523305	837885	100.00%	18.328%

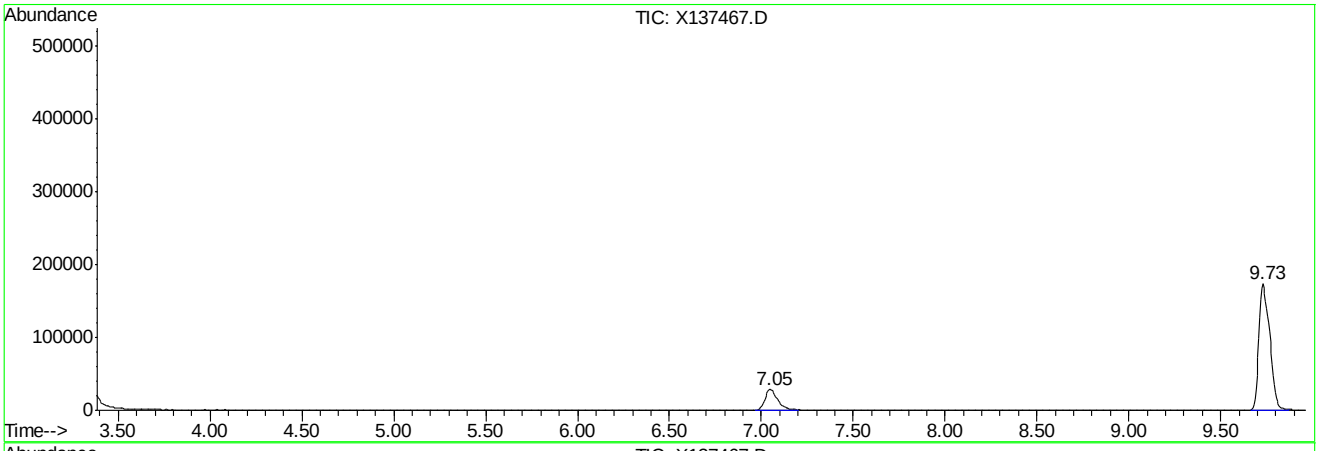
Sum of corrected areas: 4571635

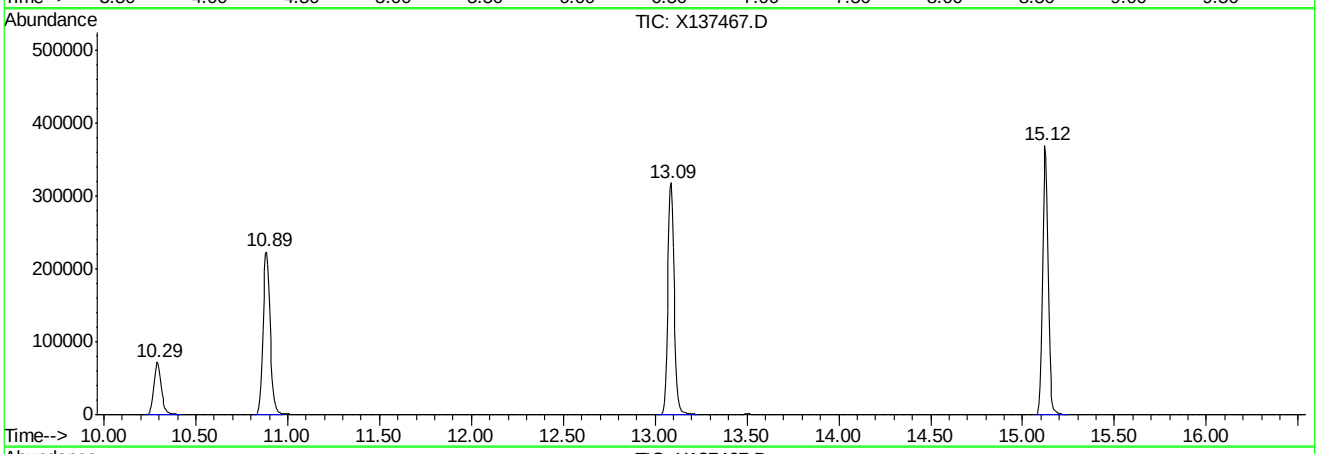
LSC Report - Integrated Chromatogram

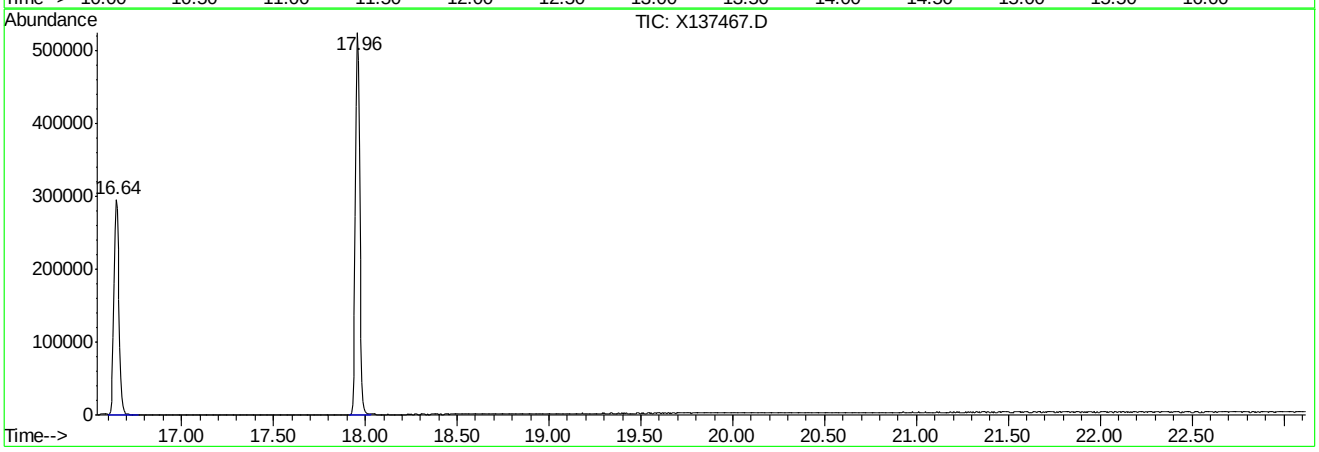
Data Path : C:\msdchem\1\data\
Data File : X137467.D
Acq On : 26 Jun 2013 10:25 am
Operator : natet
Sample : mb1
Misc : MS50583,VX5957,5.0,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: Lscint.p







Tentatively Identified Compound (LSC) summary

```
Data Path : C:\msdchem\1\data\
Data File : X137467.D
Acq On    : 26 Jun 2013  10:25 am
Operator  : natet
Sample    : mb1
Misc      : MS50583,VX5957,5.0,,,,1
ALS Vial  : 4   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MX5934.M
Quant Title  : SW-846 Method 8260B, ZB624 60m x 0.25mm x 1.4um

TIC Library   : C:\DATABASE\NIST98.L
TIC Integration Parameters: Lscint.p

                                                  |--Internal Standard---|
TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-----------------------------------------------------------------------------
```

No Library Search Compounds Detected
****

New Jersey
ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-MB1	5Z9253.D	1	06/26/13	KD	06/26/13	OP67011	G5Z311

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	5.3	2.4	mg/kg	
	EPH (> C28-C40)	ND	5.3	2.9	mg/kg	
	Total EPH (C9-C40)	ND	5.3	2.4	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	83%	40-140%
3386-33-2	1-Chlorooctadecane	93%	40-140%

Method Blank Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-MB1	5Y12911.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	6.7	2.4	mg/kg	
	EPH (> C28-C40)	ND	6.7	2.9	mg/kg	
	Total EPH (C9-C40)	ND	6.7	2.4	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	93%	40-140%
3386-33-2	1-Chlorooctadecane	100%	40-140%

Blank Spike Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-BS11	5Z9254.D	1	06/26/13	KD	06/26/13	OP67011	G5Z311

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	EPH (C9-C28)	33.3	27.4	82	40-140
	Total EPH (C9-C40)	33.3	27.4	82	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	79%	40-140%
3386-33-2	1-Chlorooctadecane	91%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-MS	5Y12927.D	1	06/27/13	KD	06/26/13	OP67011	G5Y385
OP67011-MSD	5Y12928.D	1	06/27/13	KD	06/26/13	OP67011	G5Y385
JB40294-1	5Y12913.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	JB40294-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	EPH (C9-C28)	ND		188	147	78	160	84	8	40-140/50
	EPH (> C28-C40)	ND		94.1	53.5	57	58.0	61	8	40-140/50
	Total EPH (C9-C40)	ND		282	200	71	218	76	9	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	JB40294-1	Limits
84-15-1	o-Terphenyl	85%	91%	81%	40-140%
3386-33-2	1-Chlorooctadecane	77%	83%	88%	40-140%

8.3.1

8

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-DUP	5Y12926.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
JB40350-2	5Y12918.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

CAS No.	Compound	JB40350-2 mg/kg	Q	DUP mg/kg	Q	RPD	Limits
	EPH (C9-C28)	ND		ND		nc	25
	EPH (> C28-C40)	ND		ND		nc	25
	Total EPH (C9-C40)	ND		ND		nc	25

CAS No.	Surrogate Recoveries	DUP	JB40350-2	Limits
84-15-1	o-Terphenyl	74%	79%	40-140%
3386-33-2	1-Chlorooctadecane	80%	87%	40-140%

8.4.1

8

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: NJDEP EPH **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
JB40351-1	5Y12921.D	64.0	72.0
JB40351-2	5Z9308.D	62.0	98.0
JB40351-2	5Z9292.D	80.0	88.0
JB40351-3	5Y12922.D	75.0	83.0
JB40351-4	5Y12923.D	74.0	78.0
JB40351-5	5Y12924.D	61.0	70.0
OP67011-BS11	5Z9254.D	79.0	91.0
OP67011-DUP	5Y12926.D	74.0	80.0
OP67011-MB1	5Z9253.D	83.0	93.0
OP67011-MB1	5Y12911.D	93.0	100.0
OP67011-MS	5Y12927.D	85.0	77.0
OP67011-MSD	5Y12928.D	91.0	83.0

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 1-Chlorooctadecane	40-140%

(a) Recovery from GC signal #1

8.5.1

8

GC Surrogate Retention Time Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Y385-CC273	**Injection Date:**	06/26/13
Lab File ID:	5Y12910.D	**Injection Time:**	17:26
Instrument ID:	GC5Y	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.84	8.39

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP67011-MB1	5Y12911.D	06/26/13	18:22	7.85	8.40
ZZZZZZ	5Y12912.D	06/26/13	18:44	7.85	8.40
JB40294-1	5Y12913.D	06/26/13	19:06	7.85	8.40
ZZZZZZ	5Y12914.D	06/26/13	19:28	7.85	8.40
ZZZZZZ	5Y12915.D	06/26/13	19:50	7.85	8.40
ZZZZZZ	5Y12916.D	06/26/13	20:12	7.85	8.39
ZZZZZZ	5Y12917.D	06/26/13	20:34	7.85	8.40
JB40350-2	5Y12918.D	06/26/13	20:56	7.85	8.40
ZZZZZZ	5Y12919.D	06/26/13	21:17	7.85	8.39
ZZZZZZ	5Y12920.D	06/26/13	21:39	7.85	8.40
JB40351-1	5Y12921.D	06/26/13	22:01	7.85	8.40
JB40351-3	5Y12922.D	06/26/13	22:23	7.85	8.40
JB40351-4	5Y12923.D	06/26/13	22:45	7.85	8.40
JB40351-5	5Y12924.D	06/26/13	23:07	7.85	8.40
ZZZZZZ	5Y12925.D	06/26/13	23:29	7.85	8.39
OP67011-DUP	5Y12926.D	06/26/13	23:51	7.85	8.39
OP67011-MS	5Y12927.D	06/27/13	00:13	7.85	8.39
OP67011-MSD	5Y12928.D	06/27/13	00:34	7.85	8.40
OP66741-MS	5Y12929.D	06/27/13	00:56	7.85	8.39
OP66741-MSD	5Y12930.D	06/27/13	01:18	7.85	8.39

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Z311-CC249	**Injection Date:**	06/26/13
Lab File ID:	5Z9252.D	**Injection Time:**	13:24
Instrument ID:	GC5Z	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.78	8.38

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP67011-MB1	5Z9253.D	06/26/13	13:49	7.78	8.38
OP67011-BS11	5Z9254.D	06/26/13	14:11	7.78	8.38
ZZZZZZ	5Z9255.D	06/26/13	14:33	7.78	8.38
OP67034-MB1	5Z9256.D	06/26/13	14:55	7.78	8.38
JB40551-1	5Z9257.D	06/26/13	15:17	7.78	8.38
ZZZZZZ	5Z9258.D	06/26/13	15:38	7.78	8.38
ZZZZZZ	5Z9259.D	06/26/13	16:00	7.78	8.38
ZZZZZZ	5Z9260.D	06/26/13	16:22	7.78	8.38
JB40551-2	5Z9261.D	06/26/13	16:44	7.78	8.38

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Z312-CC249	**Injection Date:**	06/27/13
Lab File ID:	5Z9287.D	**Injection Time:**	08:43
Instrument ID:	GC5Z	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.78	8.38

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
ZZZZZZ	5Z9289.D	06/27/13	10:34	7.78	8.38
ZZZZZZ	5Z9290.D	06/27/13	10:56	7.70	8.35
ZZZZZZ	5Z9291.D	06/27/13	11:18	7.78	8.38
JB40351-2	5Z9292.D	06/27/13	11:40	7.78	8.38
ZZZZZZ	5Z9293.D	06/27/13	12:01	7.80	8.37
OP67034-DUP	5Z9294.D	06/27/13	12:23	7.78	8.38
OP67034-MS	5Z9295.D	06/27/13	12:45	7.78	8.38
OP67034-MSD	5Z9296.D	06/27/13	13:07	7.78	8.38
ZZZZZZ	5Z9299.D	06/27/13	18:21	7.78	8.38
ZZZZZZ	5Z9300.D	06/27/13	18:42	7.79	8.39
ZZZZZZ	5Z9301.D	06/27/13	19:04	7.78	8.38
ZZZZZZ	5Z9302.D	06/27/13	19:26	7.78	8.38
ZZZZZZ	5Z9303.D	06/27/13	19:48	7.78	8.38
ZZZZZZ	5Z9304.D	06/27/13	20:10	7.78	8.38
ZZZZZZ	5Z9305.D	06/27/13	20:32	7.78	8.38
ZZZZZZ	5Z9307.D	06/27/13	21:16	0.00	0.00
JB40351-2	5Z9308.D	06/27/13	21:38	7.78	8.38

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: JB40351 **Sample:** G5Y273-ICC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y8653.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Response Factor Report GC5Y5Z

Method : C:\msdchem\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title : NJDEP Extractable Petroleum Hydrocarbons
Last Update : Thu Jan 31 08:49:13 2013
Response via : Initial Calibration

Calibration Files
5 =5y8650.D 10 =5y8651.D 50 =5y8653.D 100 =5y8654.D
2 =5y8649.D 20 =5y8652.D =

Compound	5	10	50	100	2	20	Avg	%RSD
1)T C9	1.250	1.422	1.395	1.521	1.493	1.397	1.413 E6	6.74
2)T C10	1.314	1.538	1.416	1.532	1.539	1.424	1.461 E6	6.27
3)T C12	1.306	1.480	1.414	1.533	1.477	1.409	1.436 E6	5.50
4)T C14	1.308	1.482	1.426	1.540	1.482	1.420	1.443 E6	5.49
5)T C16	1.318	1.483	1.442	1.555	1.492	1.437	1.454 E6	5.45
6)T C18	1.323	1.496	1.454	1.565	1.495	1.451	1.464 E6	5.50
7)T C20	1.326	1.500	1.461	1.574	1.503	1.456	1.470 E6	5.59
8)T C21	1.450	1.616	1.524	1.637	1.623	1.566	1.569 E6	4.59
9)T C22	1.444	1.633	1.555	1.683	1.651	1.582	1.591 E6	5.40
10)T C24	1.313	1.487	1.426	1.548	1.485	1.441	1.450 E6	5.48
11)T C26	1.321	1.504	1.452	1.565	1.504	1.453	1.466 E6	5.63
12)T C28	1.310	1.494	1.449	1.567	1.495	1.442	1.460 E6	5.87
13)H EPH (C9-C28)	1.332	1.511	1.451	1.568	1.520	1.457	1.473 E6	5.55
14)T C30	1.300	1.492	1.445	1.569	1.487	1.439	1.455 E6	6.14
15)T C32	1.270	1.453	1.414	1.533	1.447	1.400	1.419 E6	6.11
16)T C34	1.308	1.508	1.474	1.599	1.496	1.455	1.473 E6	6.44
17)T C36	1.222	1.415	1.389	1.507	1.397	1.368	1.383 E6	6.68
18)T C38	1.161	1.349	1.333	1.447	1.326	1.307	1.320 E6	7.01
19)T C40	1.195	1.356	1.341	1.459	1.353	1.301	1.334 E6	6.46
20)H EPH (>C28-C40)	1.242	1.429	1.399	1.519	1.418	1.378	1.398 E6	6.44
21)H TOTAL PHC	1.302	1.484	1.434	1.552	1.486	1.430	1.448 E6	5.80
22)S o-Terphenyl (S)	1.459	1.645	1.604	1.732	1.648	1.597	1.614 E6	5.58
23)S 1-chlorooctadecan	1.156	1.316	1.338	1.445	1.313	1.280	1.308 E6	7.15
24)S 2-Fluorobiphenyl							0.000#	-1.00
25)S 2-Bromonaphthalen							0.000#	-1.00

(#) = Out of Range

EPH5Y273.M Thu Jan 31 08:54:17 2013

8.7.1

8

Initial Calibration Verification

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G5Y273-ICV273
Lab FileID: 5Y8655.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y273\5y8655.D            Vial: 8
Acq On    : 29 Jan 2013  12:14 pm                     Operator: gwend
Sample    : icv273-50                                 Inst    : GC5Y5Z
Misc      : op63126,g5y273,15.0,,,2,1                 Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\msdchem\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Tue Jan 29 12:21:37 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.254 E6	11.3	90	0.00	3.24- 3.30
2	T	C10	1.461	1.456 E6	0.3	103	0.00	4.02- 4.08
3	T	C12	1.436	1.455 E6	-1.3	103	0.00	5.22- 5.28
4	T	C14	1.443	1.432 E6	0.8	100	0.00	6.17- 6.23
5	T	C16	1.454	1.430 E6	1.7	99	0.00	6.98- 7.04
6	T	C18	1.464	1.428 E6	2.5	98	0.00	7.72- 7.78
7	T	C20	1.470	1.447 E6	1.6	99	0.00	8.39- 8.45
8	T	C21	1.569	1.467 E6	6.5	96	0.00	8.70- 8.76
9	T	C22	1.591	1.404 E6	11.8	90	0.00	8.99- 9.05
10	T	C24	1.450	1.418 E6	2.2	99	0.00	9.52- 9.58
11	T	C26	1.466	1.442 E6	1.6	99	0.00	10.01-10.07
12	T	C28	1.460	1.457 E6	0.2	100	0.00	10.47-10.53
13	H	EPH (C9-C28)	1.473	1.424 E6	3.3	99	0.00	3.19-10.57
14	T	C30	1.455	1.469 E6	-1.0	102	0.00	10.92-10.98
15	T	C32	1.419	1.473 E6	-3.8	104	0.00	11.39-11.45
16	T	C34	1.473	1.452 E6	1.4	99	0.00	11.97-12.05
17	T	C36	1.383	1.413 E6	-2.2	102	0.00	12.73-12.79
18	T	C38	1.320	1.342 E6	-1.7	101	0.00	13.76-13.82
19	T	C40	1.334	1.285 E6	3.7	96	0.00	15.17-15.23
20	H	EPH (>C28-C40)	1.398	1.406 E6	-0.6	102	0.00	10.56-15.38
21	H	TOTAL PHC	1.210	1.418 E6	2.3	101	0.00	3.19-15.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y8653.D EPH5Y273.M Tue Jan 29 12:43:12 2013

8.7.2
8

Continuing Calibration Summary

Job Number: JB40351 **Sample:** G5Y385-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y12910.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y385\5y12910.D          Vial: 52
Acq On    : 26 Jun 2013   5:26 pm                   Operator: khaliahd
Sample    : cc273-20                                Inst    : GC5Y5Z
Misc      : op67034,g5y385,15.0,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jun 27 08:54:24 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.530 E6	-8.3	110	0.00	2.91- 2.97
2	T	C10	1.461	1.505 E6	-3.0	106	0.00	3.71- 3.77
3	T	C12	1.436	1.475 E6	-2.7	105	0.00	4.93- 4.99
4	T	C14	1.443	1.535 E6	-6.4	108	0.00	5.88- 5.94
5	T	C16	1.454	1.570 E6	-8.0	109	0.00	6.69- 6.75
6	T	C18	1.464	1.609 E6	-9.9	111	0.00	7.42- 7.48
7	T	C20	1.470	1.611 E6	-9.6	111	0.00	8.08- 8.14
8	T	C21	1.569	1.754 E6	-11.8	112	0.00	8.39- 8.45
9	T	C22	1.591	1.751 E6	-10.1	111	0.00	8.68- 8.74
10	T	C24	1.450	1.596 E6	-10.1	111	0.00	9.22- 9.28
11	T	C26	1.466	1.613 E6	-10.0	111	0.00	9.72- 9.78
12	T	C28	1.460	1.631 E6	-11.7	113	0.00	10.17-10.23
13	H	EPH (C9-C28)	1.473	1.598 E6	-8.5	114	0.00	3.19-10.57
14	T	C30	1.455	1.656 E6	-13.8	115	0.00	10.61-10.67
15	T	C32	1.419	1.661 E6	-17.1	119	0.00	11.04-11.10
16	T	C34	1.473	1.695 E6	-15.1	117	0.00	11.51-11.59
17	T	C36	1.383	1.645 E6	-18.9	120	0.00	12.11-12.17
18	T	C38	1.320	1.548 E6	-17.3	118	0.00	12.89-12.95
19	T	C40	1.334	1.591 E6	-19.3	122	0.00	13.95-14.01
20	H	EPH (>C28-C40)	1.398	1.633 E6	-16.8	119	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.610 E6	-11.2	117	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.812 E6	-12.3	113	0.00	7.81- 7.87
23	S	1-chlorooctadecane (S)	1.308	1.301 E6	0.5	102	0.00	8.36- 8.42

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y12910.D EPH5Y273.M Thu Jun 27 12:05:36 2013

8.7.3

8

Continuing Calibration Summary

Job Number: JB40351 **Sample:** G5Y385-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y12933.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y385\5y12933.D          Vial: 53
Acq On    : 27 Jun 2013   2:23 am                   Operator: khaliahd
Sample    : cc273-50                                Inst    : GC5Y5Z
Misc      : op66741,g5y385,15.0,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jun 27 08:54:24 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.591 E6	-12.6	114	0.00	2.90- 2.96
2	T	C10	1.461	1.586 E6	-8.6	112	0.00	3.71- 3.77
3	T	C12	1.436	1.578 E6	-9.9	112	0.00	4.93- 4.99
4	T	C14	1.443	1.623 E6	-12.5	114	0.00	5.88- 5.94
5	T	C16	1.454	1.664 E6	-14.4	115	0.00	6.69- 6.75
6	T	C18	1.464	1.684 E6	-15.0	116	0.00	7.42- 7.48
7	T	C20	1.470	1.689 E6	-14.9	116	0.00	8.08- 8.14
8	T	C21	1.569	1.721 E6	-9.7	113	0.00	8.39- 8.45
9	T	C22	1.591	1.836 E6	-15.4	118	0.00	8.69- 8.75
10	T	C24	1.450	1.645 E6	-13.4	115	0.00	9.23- 9.29
11	T	C26	1.466	1.685 E6	-14.9	116	0.00	9.72- 9.78
12	T	C28	1.460	1.689 E6	-15.7	117	0.00	10.18-10.24
13	H	EPH (C9-C28)	1.473	1.666 E6	-13.1	117	0.00	3.19-10.57
14	T	C30	1.455	1.700 E6	-16.8	118	0.00	10.61-10.67
15	T	C32	1.419	1.673 E6	-17.9	118	0.00	11.04-11.10
16	T	C34	1.473	1.742 E6	-18.3	118	0.00	11.50-11.58
17	T	C36	1.383	1.649 E6	-19.2	119	0.00	12.11-12.17
18	T	C38	1.320	1.589 E6	-20.4	119	0.00	12.89-12.95
19	T	C40	1.334	1.574 E6	-18.0	117	0.00	13.96-14.02
20	H	EPH (>C28-C40)	1.398	1.655 E6	-18.4	118	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.662 E6	-14.8	118	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.895 E6	-17.4	118	0.00	7.82- 7.88
23	S	1-chlorooctadecane (S)	1.308	1.475 E6	-12.8	110	0.00	8.37- 8.43

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5y12526.D  EPH5Y273.M       Thu Jun 27 11:59:40 2013
```

8.7.4

8

Initial Calibration Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G5Z249-ICC249
Lab FileID: 5Z6979.D

Response Factor Report GC5Y5Z

Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title : NJDEP Extractable Petroleum Hydrocarbons
Last Update : Sat Apr 06 06:28:34 2013
Response via : Initial Calibration

Calibration Files
5 =5z6976.D 10 =5z6977.D 50 =5z6979.D 100 =5z6980.D
2 =5z6975.D 20 =5z6978.D =

Compound	5	10	50	100	2	20	Avg	%RSD
1)T C9	1.485	1.697	1.662	1.966	1.720	1.731	1.710 E6	9.03
2)T C10	1.467	1.689	1.717	1.957	1.627	1.756	1.702 E6	9.44
3)T C12	1.473	1.712	1.720	1.857	1.594	1.732	1.681 E6	7.85
4)T C14	1.460	1.624	1.747	1.732	1.610	1.778	1.658 E6	7.16
5)T C16	1.383	1.440	1.745	1.724	1.498	1.764	1.592 E6	10.73
6)T C18	1.446	1.461	1.756	1.733	1.561	1.798	1.626 E6	9.58
7)T C20	1.426	1.432	1.759	1.718	1.605	1.787	1.621 E6	9.94
8)T C21	1.628	1.579	1.877	1.827	1.840	1.937	1.781 E6	8.07
9)T C22	1.528	1.523	1.901	1.832	1.702	1.917	1.734 E6	10.29
10)T C24	1.343	1.364	1.704	1.661	1.513	1.709	1.549 E6	10.79
11)T C26	1.393	1.436	1.682	1.733	1.552	1.700	1.583 E6	9.13
12)T C28	1.394	1.543	1.661	1.790	1.599	1.683	1.612 E6	8.41
13)H EPH (C9-C28)	1.452	1.542	1.744	1.794	1.618	1.774	1.654 E6	8.41
14)T C30	1.442	1.602	1.654	1.818	1.627	1.686	1.638 E6	7.46
15)T C32	1.547	1.783	1.656	1.780	1.780	1.674	1.703 E6	5.62
16)T C34	1.472	1.670	1.680	1.841	1.712	1.726	1.684 E6	7.13
17)T C36	1.393	1.577	1.583	1.717	1.631	1.646	1.591 E6	6.89
18)T C38	1.340	1.532	1.510	1.602	1.562	1.574	1.520 E6	6.18
19)T C40	1.265	1.462	1.449	1.545	1.455	1.552	1.455 E6	7.11
20)H EPH (>C28-C40)	1.410	1.604	1.589	1.717	1.628	1.643	1.598 E6	6.42
21)H TOTAL PHC	1.438	1.563	1.692	1.768	1.622	1.730	1.636 E6	7.46
22)S o-Terphenyl (S)	1.629	1.650	1.930	1.937	1.767	1.960	1.812 E6	8.31
23)S 1-chlorooctadecan	1.158	1.193	1.532	1.516	1.224	1.536	1.360 E6	13.64
24)S 2-Fluorobiphenyl							0.000#	-1.00
25)S 2-Bromonaphthalen							0.000#	-1.00

(#) = Out of Range

EPH5Z249.M Sat Apr 06 06:35:16 2013

8.7.5

8

Initial Calibration Verification

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G5Z249-ICV249
Lab FileID: 5Z6981.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z249\5z6981.D            Vial: 58
Acq On    :  5 Apr 2013   9:29 pm                     Operator: gwend
Sample    : icv249-50                                 Inst    : GC5Y5Z
Misc      : op64993,g5z249,15.0,,,2,1                 Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Apr 06 06:28:34 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.633 E6	4.5	98	0.00	3.01- 3.07
2	T	C10	1.702	1.878 E6	-10.3	109	0.00	3.81- 3.87
3	T	C12	1.681	1.867 E6	-11.1	109	0.00	5.01- 5.07
4	T	C14	1.658	1.737 E6	-4.8	99	0.00	5.96- 6.02
5	T	C16	1.592	1.687 E6	-6.0	97	0.00	6.78- 6.84
6	T	C18	1.626	1.686 E6	-3.7	96	0.00	7.51- 7.57
7	T	C20	1.621	1.684 E6	-3.9	96	0.00	8.18- 8.24
8	T	C21	1.781	1.747 E6	1.9	93	0.00	8.49- 8.55
9	T	C22	1.734	1.662 E6	4.2	87	0.00	8.79- 8.85
10	T	C24	1.549	1.646 E6	-6.3	97	0.00	9.32- 9.38
11	T	C26	1.583	1.679 E6	-6.1	100	0.00	9.81- 9.87
12	T	C28	1.612	1.713 E6	-6.3	103	0.00	10.26-10.32
13	H	EPH (C9-C28)	1.654	1.718 E6	-3.9	96	0.00	2.97-10.41
14	T	C30	1.638	1.734 E6	-5.9	105	0.00	10.66-10.72
15	T	C32	1.703	1.749 E6	-2.7	106	0.00	11.05-11.11
16	T	C34	1.684	1.718 E6	-2.0	102	0.00	11.49-11.57
17	T	C36	1.591	1.674 E6	-5.2	106	0.00	12.08-12.14
18	T	C38	1.520	1.580 E6	-3.9	105	0.00	12.88-12.94
19	T	C40	1.455	1.467 E6	-0.8	101	0.00	14.00-14.06
20	H	EPH (>C28-C40)	1.598	1.654 E6	-3.5	102	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.697 E6	-3.7	102	0.00	2.97-14.21

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z6979.D EPH5Z249.M Sat Apr 06 06:33:14 2013

8.7.6

8

Continuing Calibration Summary

Job Number: JB40351 **Sample:** G5Z311-CC249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z9252.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z311\5z9252.D          Vial: 52
Acq On    : 26 Jun 2013   1:24 pm                  Operator: khaliahd
Sample    : cc249-20                               Inst    : GC5Y5Z
Misc      : op66967,g5z311,960,,,1,20              Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Jun 29 13:24:28 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.715 E6	-0.3	99	0.00	2.85- 2.91
2	T	C10	1.702	1.739 E6	-2.2	99	0.00	3.67- 3.73
3	T	C12	1.681	1.662 E6	1.1	96	0.00	4.89- 4.95
4	T	C14	1.658	1.714 E6	-3.4	96	0.00	5.84- 5.90
5	T	C16	1.592	1.712 E6	-7.5	97	0.00	6.66- 6.72
6	T	C18	1.626	1.686 E6	-3.7	94	0.00	7.39- 7.45
7	T	C20	1.621	1.679 E6	-3.6	94	0.00	8.06- 8.12
8	T	C21	1.781	1.773 E6	0.4	92	0.00	8.37- 8.43
9	T	C22	1.734	1.789 E6	-3.2	93	0.00	8.67- 8.73
10	T	C24	1.549	1.630 E6	-5.2	95	0.00	9.22- 9.28
11	T	C26	1.583	1.640 E6	-3.6	96	0.00	9.72- 9.78
12	T	C28	1.612	1.628 E6	-1.0	97	0.02	10.19-10.25
13	H	EPH (C9-C28)	1.654	1.697 E6	-2.6	98	0.00	2.97-10.41
14	T	C30	1.638	1.655 E6	-1.0	98	0.03	10.62-10.68
15	T	C32	1.703	1.643 E6	3.5	98	0.04	11.02-11.08
16	T	C34	1.684	1.707 E6	-1.4	99	0.05	11.44-11.52
17	T	C36	1.591	1.581 E6	0.6	96	0.05	11.99-12.05
18	T	C38	1.520	1.483 E6	2.4	94	0.05	12.72-12.78
19	T	C40	1.455	1.457 E6	-0.1	94	0.05	13.74-13.80
20	H	EPH (>C28-C40)	1.598	1.588 E6	0.7	95	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.661 E6	-1.5	95	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.855 E6	-2.4	95	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.375 E6	-1.1	90	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z9211.D EPH5Z249.M Sat Jun 29 17:20:39 2013

8.7.7

8

Continuing Calibration Summary

Job Number: JB40351 **Sample:** G5Z311-CC249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z9262.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z311\5z9262.D          Vial: 53
Acq On    : 26 Jun 2013   5:26 pm                  Operator: khaliahd
Sample    : cc249-50                               Inst    : GC5Y5Z
Misc      : op67034,g5z311,15.0,,,2,1              Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Jun 29 13:24:28 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.734 E6	-1.4	104	0.00	2.85- 2.91
2	T	C10	1.702	1.708 E6	-0.4	100	0.00	3.67- 3.73
3	T	C12	1.681	1.692 E6	-0.7	98	0.00	4.89- 4.95
4	T	C14	1.658	1.719 E6	-3.7	98	0.00	5.84- 5.90
5	T	C16	1.592	1.716 E6	-7.8	98	0.00	6.66- 6.72
6	T	C18	1.626	1.687 E6	-3.8	96	0.00	7.40- 7.46
7	T	C20	1.621	1.668 E6	-2.9	95	0.00	8.06- 8.12
8	T	C21	1.781	1.734 E6	2.6	92	0.00	8.37- 8.43
9	T	C22	1.734	1.773 E6	-2.2	93	0.00	8.67- 8.73
10	T	C24	1.549	1.603 E6	-3.5	94	0.00	9.22- 9.28
11	T	C26	1.583	1.610 E6	-1.7	96	0.00	9.71- 9.77
12	T	C28	1.612	1.604 E6	0.5	97	0.00	10.17-10.23
13	H	EPH (C9-C28)	1.654	1.687 E6	-2.0	97	0.00	2.97-10.41
14	T	C30	1.638	1.617 E6	1.3	98	0.00	10.59-10.65
15	T	C32	1.703	1.585 E6	6.9	96	0.00	10.98-11.04
16	T	C34	1.684	1.668 E6	1.0	99	0.00	11.39-11.47
17	T	C36	1.591	1.583 E6	0.5	100	0.00	11.95-12.01
18	T	C38	1.520	1.517 E6	0.2	100	0.00	12.68-12.74
19	T	C40	1.455	1.514 E6	-4.1	105	0.00	13.69-13.75
20	H	EPH (>C28-C40)	1.598	1.581 E6	1.1	102	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.652 E6	-0.9	100	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.845 E6	-1.8	96	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.386 E6	-1.9	90	0.00	8.35- 8.41

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5z8755.D   EPH5Z249.M       Sat Jun 29 17:30:01 2013
```

8.7.8

8

Continuing Calibration Summary

Job Number: JB40351 **Sample:** G5Z312-CC249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z9287.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z312\5z9287.D          Vial: 53
Acq On    : 27 Jun 2013   8:43 am                  Operator: khaliahd
Sample    : cc249-50                               Inst    : GC5Y5Z
Misc      : op67034,g5z312,15.0,,,2,1              Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Jun 29 13:24:28 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.818 E6	-6.3	109	0.00	2.85- 2.91
2	T	C10	1.702	1.800 E6	-5.8	105	0.00	3.67- 3.73
3	T	C12	1.681	1.769 E6	-5.2	103	0.00	4.89- 4.95
4	T	C14	1.658	1.804 E6	-8.8	103	0.00	5.84- 5.90
5	T	C16	1.592	1.799 E6	-13.0	103	0.00	6.66- 6.72
6	T	C18	1.626	1.773 E6	-9.0	101	0.00	7.39- 7.45
7	T	C20	1.621	1.754 E6	-8.2	100	0.00	8.06- 8.12
8	T	C21	1.781	1.813 E6	-1.8	97	0.00	8.37- 8.43
9	T	C22	1.734	1.868 E6	-7.7	98	0.00	8.67- 8.73
10	T	C24	1.549	1.691 E6	-9.2	99	0.00	9.22- 9.28
11	T	C26	1.583	1.700 E6	-7.4	101	0.00	9.71- 9.77
12	T	C28	1.612	1.690 E6	-4.8	102	0.00	10.18-10.24
13	H	EPH (C9-C28)	1.654	1.773 E6	-7.2	103	0.00	2.97-10.41
14	T	C30	1.638	1.702 E6	-3.9	103	0.00	10.59-10.66
15	T	C32	1.703	1.670 E6	1.9	101	0.00	10.99-11.05
16	T	C34	1.684	1.750 E6	-3.9	104	0.00	11.40-11.48
17	T	C36	1.591	1.643 E6	-3.3	104	0.00	11.95-12.01
18	T	C38	1.520	1.554 E6	-2.2	103	0.00	12.68-12.74
19	T	C40	1.455	1.509 E6	-3.7	104	0.00	13.70-13.76
20	H	EPH (>C28-C40)	1.598	1.638 E6	-2.5	103	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.728 E6	-5.7	102	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.949 E6	-7.6	101	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.467 E6	-7.9	96	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z8755.D EPH5Z249.M Sat Jun 29 17:35:14 2013

8.7.9

8

Continuing Calibration Summary

Job Number: JB40351 **Sample:** G5Z312-CC249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z9316.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z312\5z9316.D          Vial: 53
Acq On    : 28 Jun 2013  12:33 am                  Operator: khaliahd
Sample    : cc249-50                               Inst    : GC5Y5Z
Misc      : op66601,g5z312,15.5,,,2,1              Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Mon Jul 01 09:01:17 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.807 E6	-5.7	109	0.00	2.85- 2.91
2	T	C10	1.702	1.785 E6	-4.9	104	0.00	3.67- 3.73
3	T	C12	1.681	1.772 E6	-5.4	103	0.00	4.89- 4.95
4	T	C14	1.658	1.802 E6	-8.7	103	0.00	5.84- 5.90
5	T	C16	1.592	1.794 E6	-12.7	103	0.00	6.66- 6.72
6	T	C18	1.626	1.769 E6	-8.8	101	0.00	7.39- 7.45
7	T	C20	1.621	1.754 E6	-8.2	100	0.00	8.06- 8.12
8	T	C21	1.781	1.820 E6	-2.2	97	0.00	8.37- 8.43
9	T	C22	1.734	1.873 E6	-8.0	99	0.00	8.67- 8.73
10	T	C24	1.549	1.694 E6	-9.4	99	0.00	9.21- 9.27
11	T	C26	1.583	1.704 E6	-7.6	101	0.00	9.71- 9.77
12	T	C28	1.612	1.695 E6	-5.1	102	0.00	10.17-10.23
13	H	EPH (C9-C28)	1.654	1.772 E6	-7.1	101	0.00	2.97-10.41
14	T	C30	1.638	1.705 E6	-4.1	103	0.00	10.58-10.64
15	T	C32	1.703	1.671 E6	1.9	101	-0.01	10.97-11.03
16	T	C34	1.684	1.742 E6	-3.4	104	-0.01	11.38-11.46
17	T	C36	1.591	1.630 E6	-2.5	103	-0.01	11.93-11.99
18	T	C38	1.520	1.525 E6	-0.3	101	-0.01	12.66-12.72
19	T	C40	1.455	1.446 E6	0.6	100	-0.02	13.67-13.73
20	H	EPH (>C28-C40)	1.598	1.620 E6	-1.3	101	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.721 E6	-5.3	101	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.929 E6	-6.5	100	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.461 E6	-7.4	95	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z8755.D EPH5Z249.M Mon Jul 01 11:14:45 2013

8.7.10

8

New Jersey

ACCUTEST LABORATORIES

GC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Owen McKenna
06/28/13 15:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12921.D
Signal(s) : FID1A.ch
Acq On : 26 Jun 2013 10:01 pm
Operator : khaliahd
Sample : jb40351-1
Misc : op67011,g5y385,15.2,,,2,1
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:39:49 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.849	51501756	31.907 ug/L m
Spiked Amount 50.000		Recovery =	63.81%
23) S 1-chlorooctadecane (S)	8.397	46902622	35.860 ug/L
Spiked Amount 50.000		Recovery =	71.72%
Target Compounds			

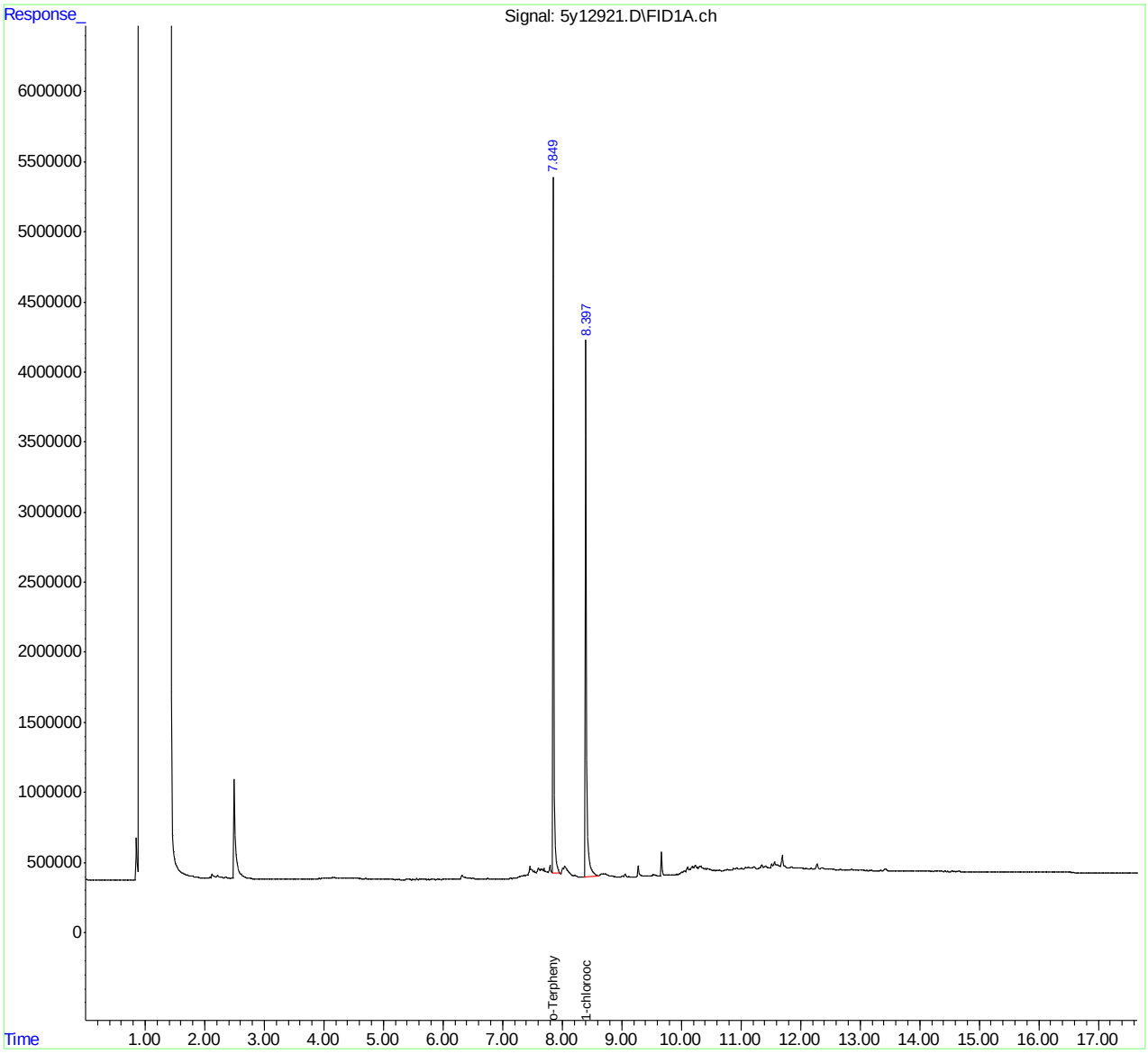
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12921.D
Signal(s) : FID1A.ch
Acq On : 26 Jun 2013 10:01 pm
Operator : khaliahd
Sample : jb40351-1
Misc : op67011,g5y385,15.2,,,2,1
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:39:49 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



Manual Integrations
APPROVED
(compounds with "m" flag)
Owen McKenna
06/28/13 19:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z312\
Data File : 5z9292.D
Signal(s) : FID2B.ch
Acq On : 27 Jun 2013 11:40 am
Operator : khaliahd
Sample : jb40351-2
Misc : op67011,g5z312,15.7,,,2,1
ALS Vial : 77 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 13:02:20 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:50:10 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.784	72421770	39.962 ug/L m
Spiked Amount 50.000		Recovery =	79.92%
23) S 1-chlorooctadecane (S)	8.380	60039048	44.152 ug/L m
Spiked Amount 50.000		Recovery =	88.30%
Target Compounds			
13) H EPH (C9-C28)	6.690	53134096478	32121.689 ug/L
20) H EPH (>C28-C40)	12.310	1494917890	935.269 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

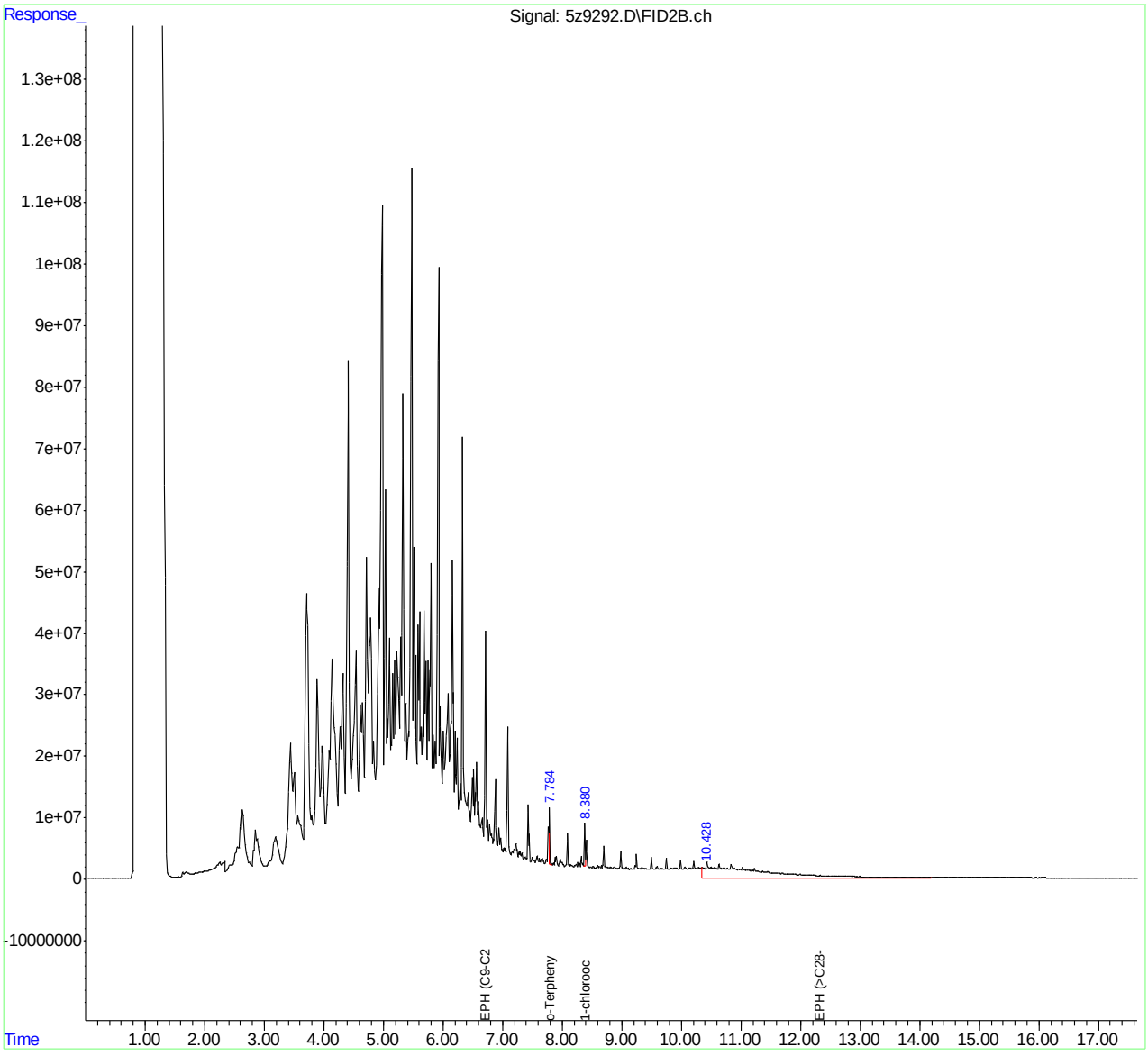
9.1.2
9

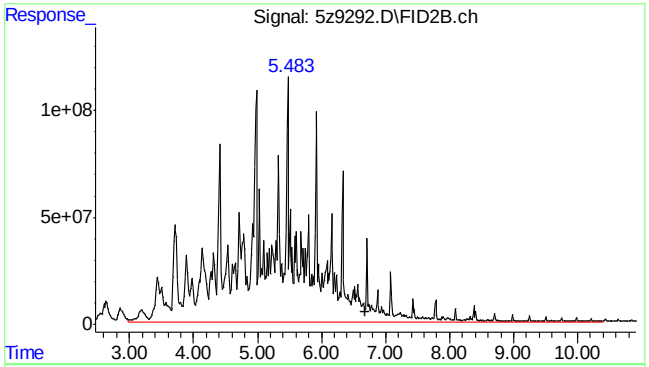
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z312\
Data File : 5z9292.D
Signal(s) : FID2B.ch
Acq On : 27 Jun 2013 11:40 am
Operator : khaliahd
Sample : jb40351-2
Misc : op67011,g5z312,15.7,,,2,1
ALS Vial : 77 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 13:02:20 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:50:10 2013
Response via : Initial Calibration
Integrator: ChemStation

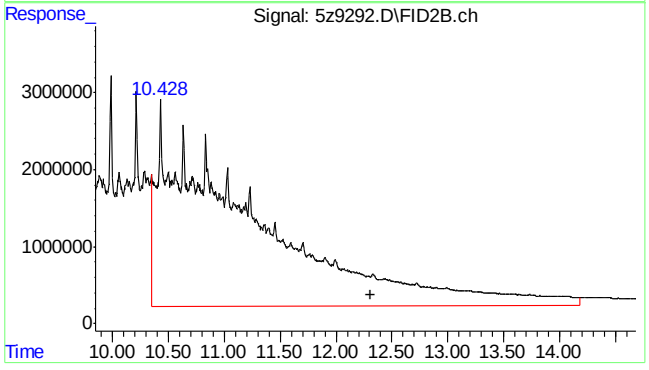
Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um





#13 EPH (C9-C28)

R.T.: 6.690 min
Delta R.T.: 0.000 min
Response: 53134096478
Conc: 32121.69 ug/L m



#20 EPH (>C28-C40)

R.T.: 12.310 min
Delta R.T.: 0.000 min
Response: 1494917890
Conc: 935.27 ug/L m

Manual Integrations APPROVED (compounds with "m" flag)
Owen McKenna 06/28/13 19:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z312\
Data File : 5z9308.D
Signal(s) : FID2B.ch
Acq On : 27 Jun 2013 9:38 pm
Operator : khaliahd
Sample : jb40351-2
Misc : op67011,g5z312,15.7,,,2,10
ALS Vial : 63 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 28 15:17:45 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:50:10 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.780	5641571	3.113 ug/L m
Spiked Amount 50.000		Recovery =	6.23%
23) S 1-chlorooctadecane (S)	8.376	6654670	4.894 ug/L m
Spiked Amount 50.000		Recovery =	9.79%
Target Compounds			
13) H EPH (C9-C28)	6.690	4085135783	2469.628 ug/L
20) H EPH (>C28-C40)	12.310	1287821215	805.703 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

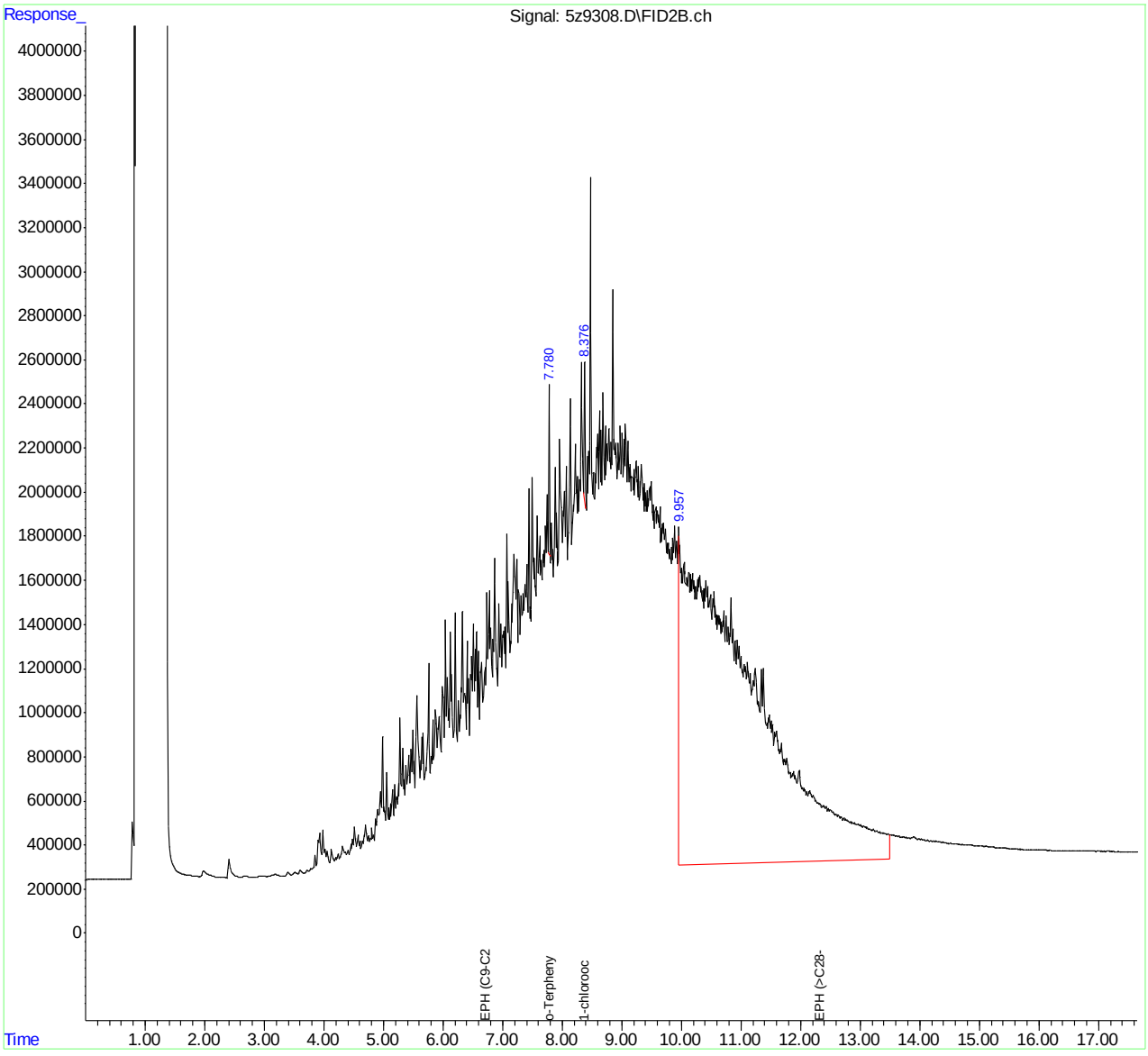
9.1.3
9

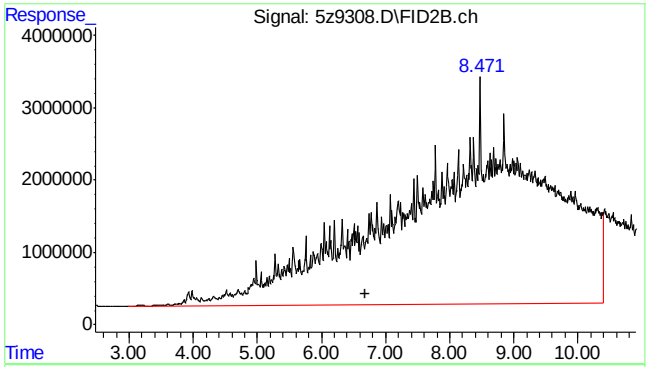
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z312\
Data File : 5z9308.D
Signal(s) : FID2B.ch
Acq On : 27 Jun 2013 9:38 pm
Operator : khaliahd
Sample : jb40351-2
Misc : op67011,g5z312,15.7,,,2,10
ALS Vial : 63 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 28 15:17:45 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:50:10 2013
Response via : Initial Calibration
Integrator: ChemStation

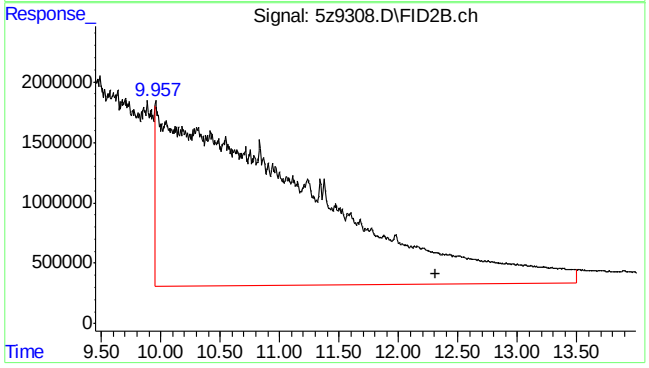
Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um





#13 EPH (C9-C28)

R.T.: 6.690 min
Delta R.T.: 0.000 min
Response: 4085135783
Conc: 2469.63 ug/L m



#20 EPH (>C28-C40)

R.T.: 12.310 min
Delta R.T.: 0.000 min
Response: 1287821215
Conc: 805.70 ug/L m

9.1.3

9

Manual Integrations APPROVED (compounds with "m" flag)
Owen McKenna 06/28/13 15:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12922.D
Signal(s) : FID1A.ch
Acq On : 26 Jun 2013 10:23 pm
Operator : khaliahd
Sample : jb40351-3
Misc : op67011,g5y385,15.1,,,2,1
ALS Vial : 23 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:41:30 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.847	60360502	37.395 ug/L m
Spiked Amount 50.000		Recovery =	74.79%
23) S 1-chlorooctadecane (S)	8.395	54257862	41.483 ug/L
Spiked Amount 50.000		Recovery =	82.97%
Target Compounds			
13) H EPH (C9-C28)	6.880	173139208	117.528 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

9.1.4

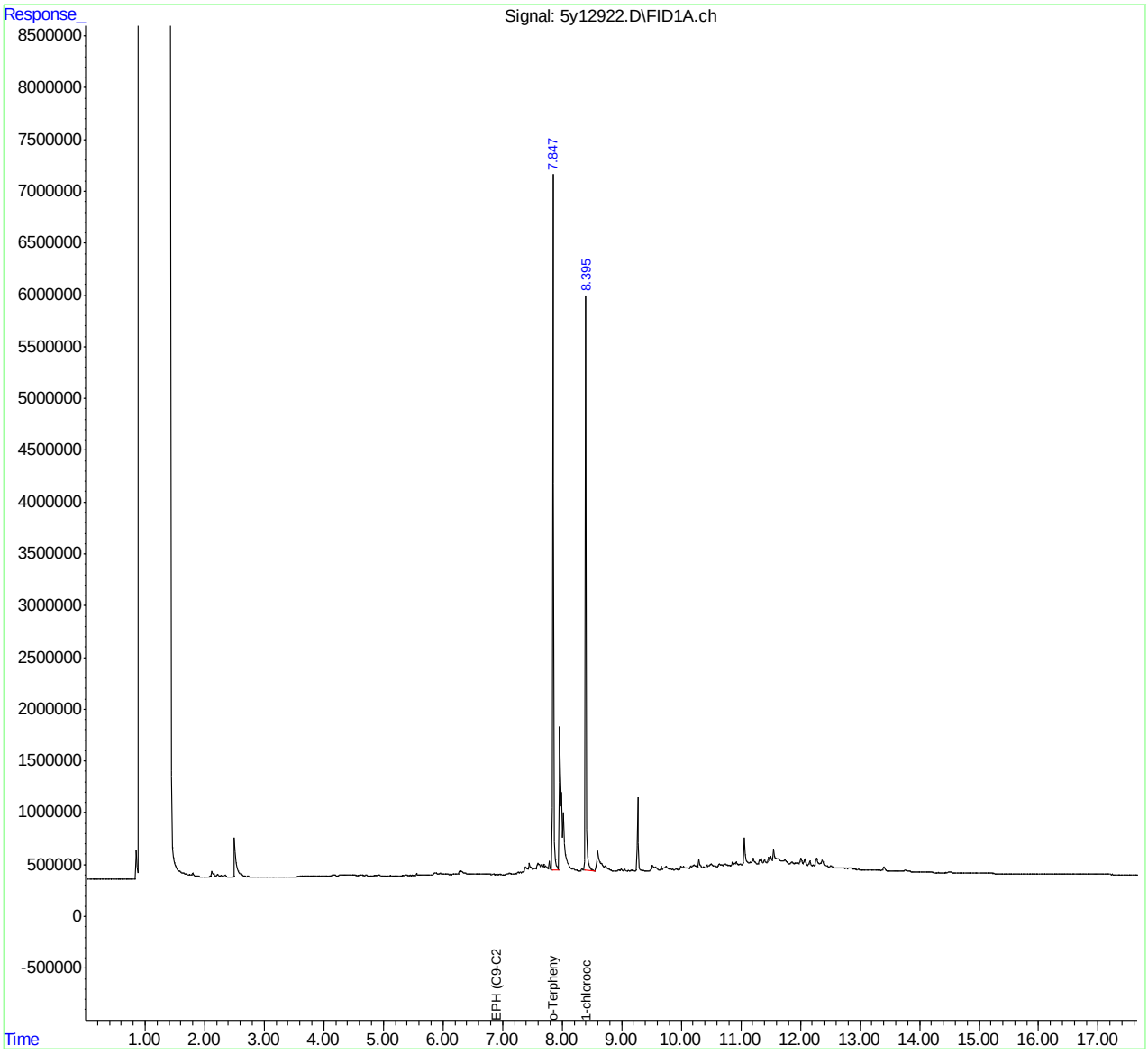
9

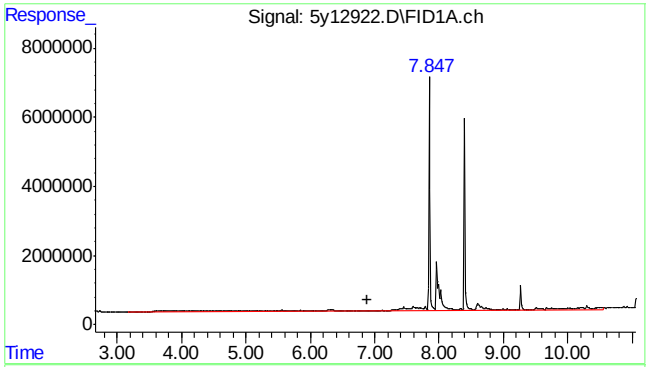
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12922.D
Signal(s) : FID1A.ch
Acq On : 26 Jun 2013 10:23 pm
Operator : khaliahd
Sample : jb40351-3
Misc : op67011,g5y385,15.1,,,2,1
ALS Vial : 23 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:41:30 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

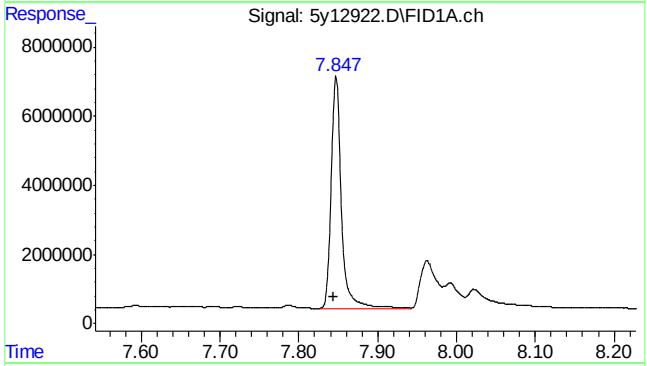
Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um





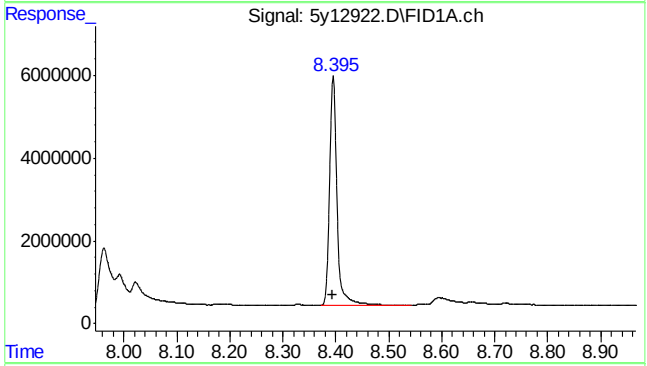
#13 EPH (C9-C28)

R.T.: 6.880 min
Delta R.T.: 0.000 min
Response: 173139208
Conc: 117.53 ug/L m



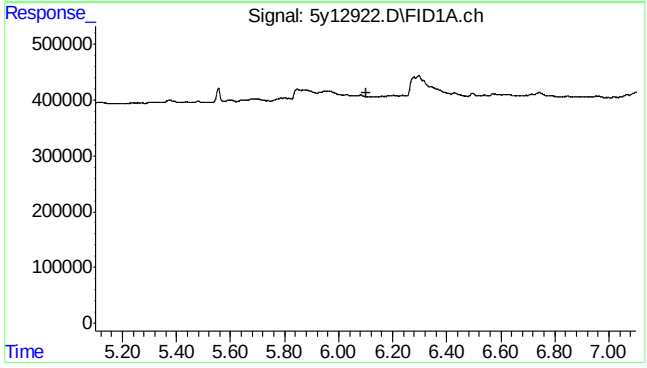
#22 o-Terphenyl (S)

R.T.: 7.847 min
Delta R.T.: 0.002 min
Response: 60360502
Conc: 37.39 ug/L m



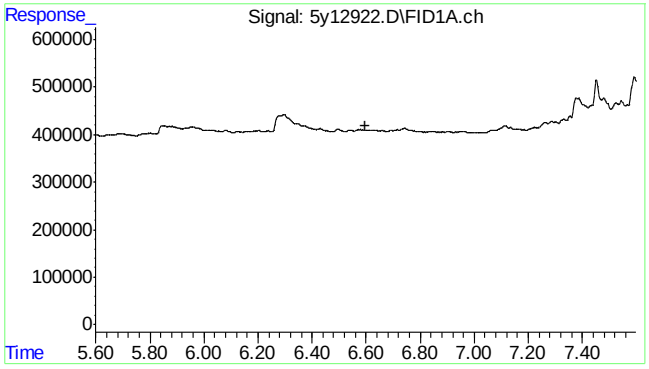
#23 1-chlorooctadecane (S)

R.T.: 8.395 min
Delta R.T.: 0.002 min
Response: 54257862
Conc: 41.48 ug/L



#24 2-Fluorobiphenyl

R.T.: 0.000 min
Exp R.T. : 6.100 min
Response: 0
Conc: N.D.



#25 2-Bromonaphthalene

R.T.: 0.000 min
Exp R.T. : 6.598 min
Response: 0
Conc: N.D.

9.1.4

9

Manual Integrations APPROVED (compounds with "m" flag)
Owen McKenna 06/28/13 15:12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12923.D
Signal(s) : FID1A.ch
Acq On : 26 Jun 2013 10:45 pm
Operator : khaliahd
Sample : jb40351-4
Misc : op67011,g5y385,15.2,,,2,1
ALS Vial : 24 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:44:46 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.847	59980687	37.160 ug/L m
Spiked Amount 50.000		Recovery =	74.32%
23) S 1-chlorooctadecane (S)	8.395	50809248	38.847 ug/L
Spiked Amount 50.000		Recovery =	77.69%
Target Compounds			
13) H EPH (C9-C28)	6.880	1239992656	841.713 ug/L
20) H EPH (>C28-C40)	12.970	810054898	579.616 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

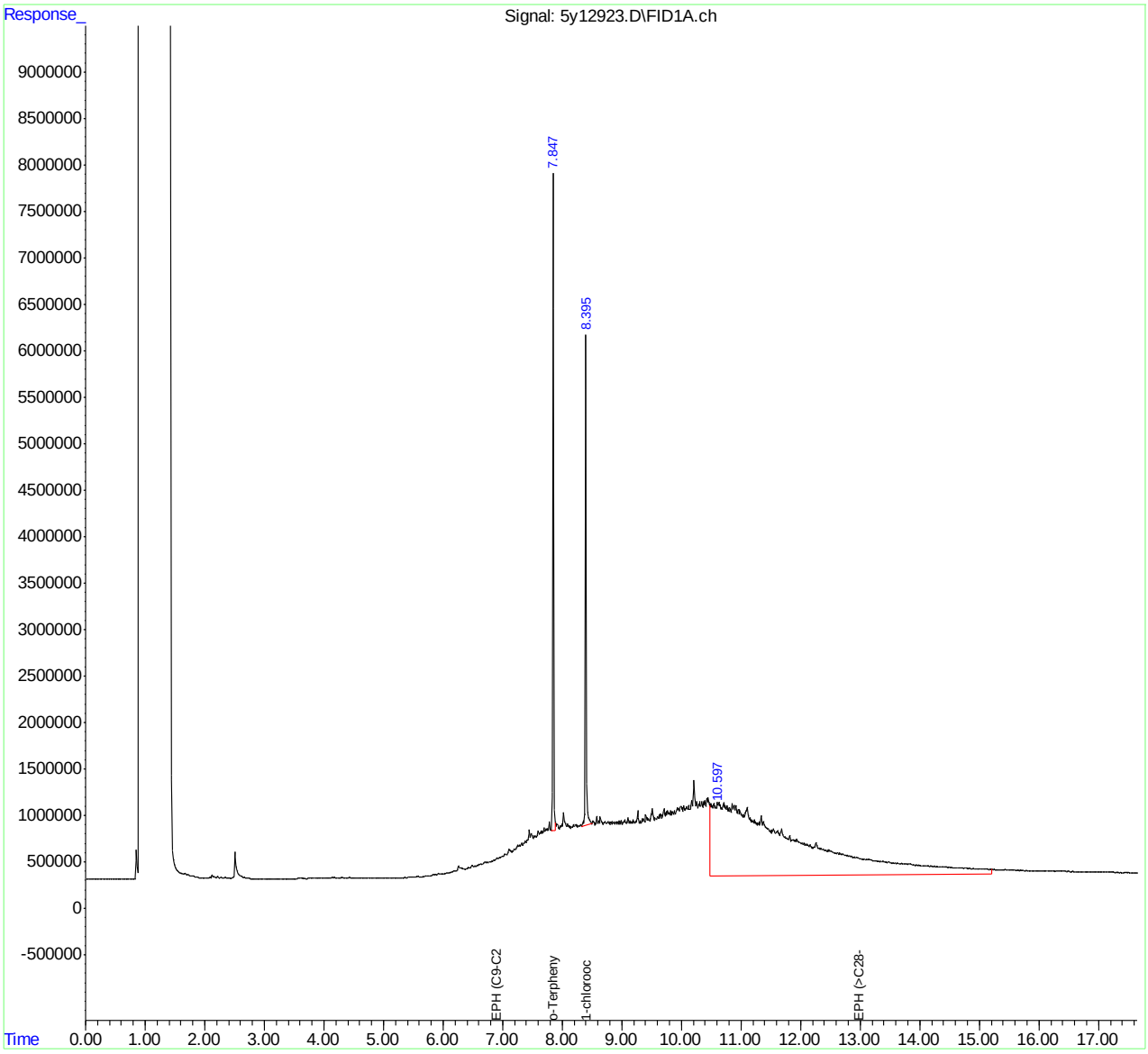
9.1.5
9

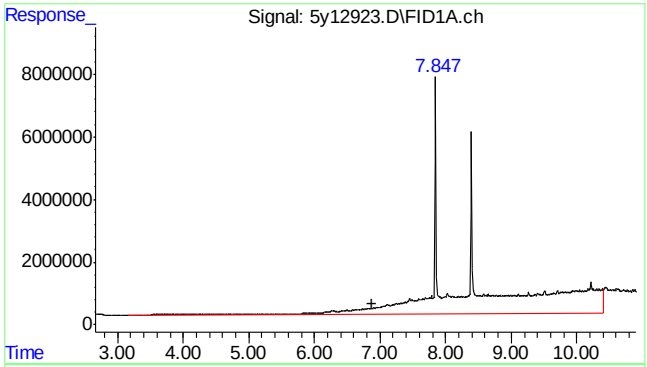
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12923.D
Signal(s) : FID1A.ch
Acq On : 26 Jun 2013 10:45 pm
Operator : khaliahd
Sample : jb40351-4
Misc : op67011,g5y385,15.2,,,2,1
ALS Vial : 24 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:44:46 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

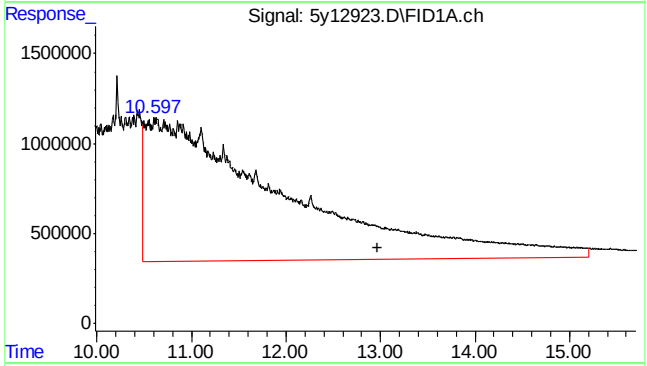
Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um





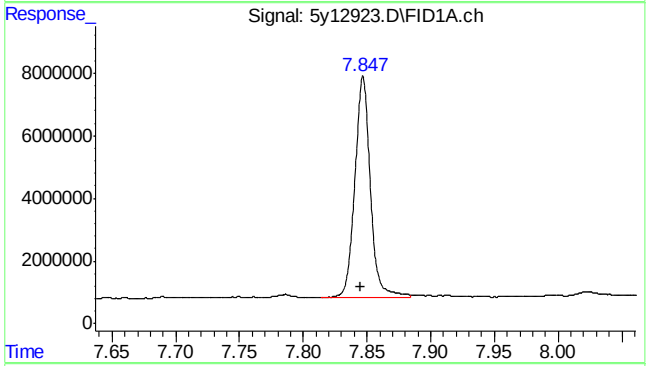
#13 EPH (C9-C28)

R.T.: 6.880 min
Delta R.T.: 0.000 min
Response: 1239992656
Conc: 841.71 ug/L m



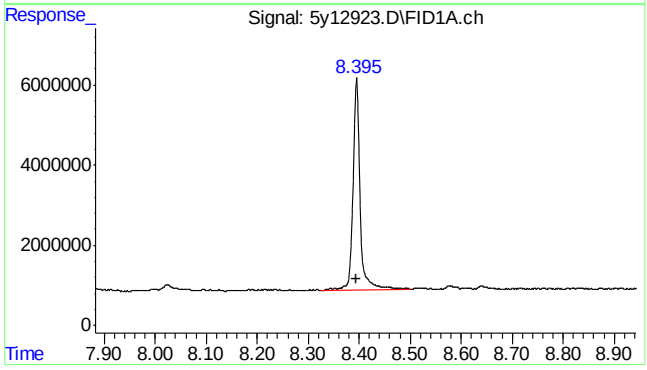
#20 EPH (>C28-C40)

R.T.: 12.970 min
Delta R.T.: 0.000 min
Response: 810054898
Conc: 579.62 ug/L m



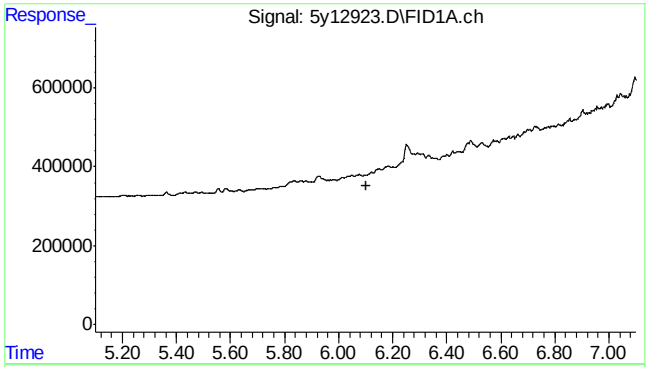
#22 o-Terphenyl (S)

R.T.: 7.847 min
Delta R.T.: 0.002 min
Response: 59980687
Conc: 37.16 ug/L m



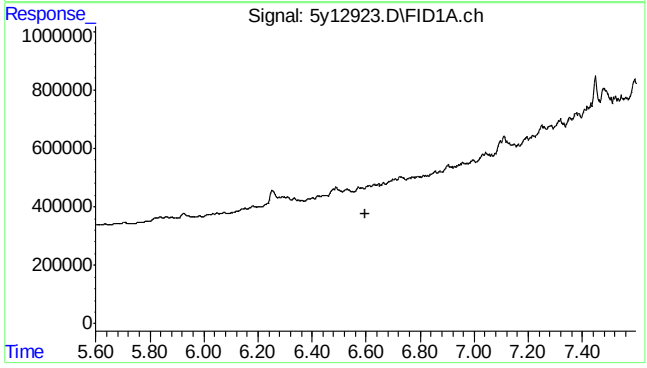
#23 1-chlorooctadecane (S)

R.T.: 8.395 min
Delta R.T.: 0.002 min
Response: 50809248
Conc: 38.85 ug/L



#24 2-Fluorobiphenyl

R.T.: 0.000 min
Exp R.T. : 6.100 min
Response: 0
Conc: N.D.



#25 2-Bromonaphthalene

R.T.: 0.000 min
Exp R.T. : 6.598 min
Response: 0
Conc: N.D.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12924.D
Signal(s) : FID1A.ch
Acq On : 26 Jun 2013 11:07 pm
Operator : khaliahd
Sample : jb40351-5
Misc : op67011,g5y385,15.3,,,2,1
ALS Vial : 25 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:45:44 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.848	49301677	30.544 ug/L
Spiked Amount 50.000		Recovery =	61.09%
23) S 1-chlorooctadecane (S)	8.397	45626535	34.884 ug/L
Spiked Amount 50.000		Recovery =	69.77%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

9.1.6

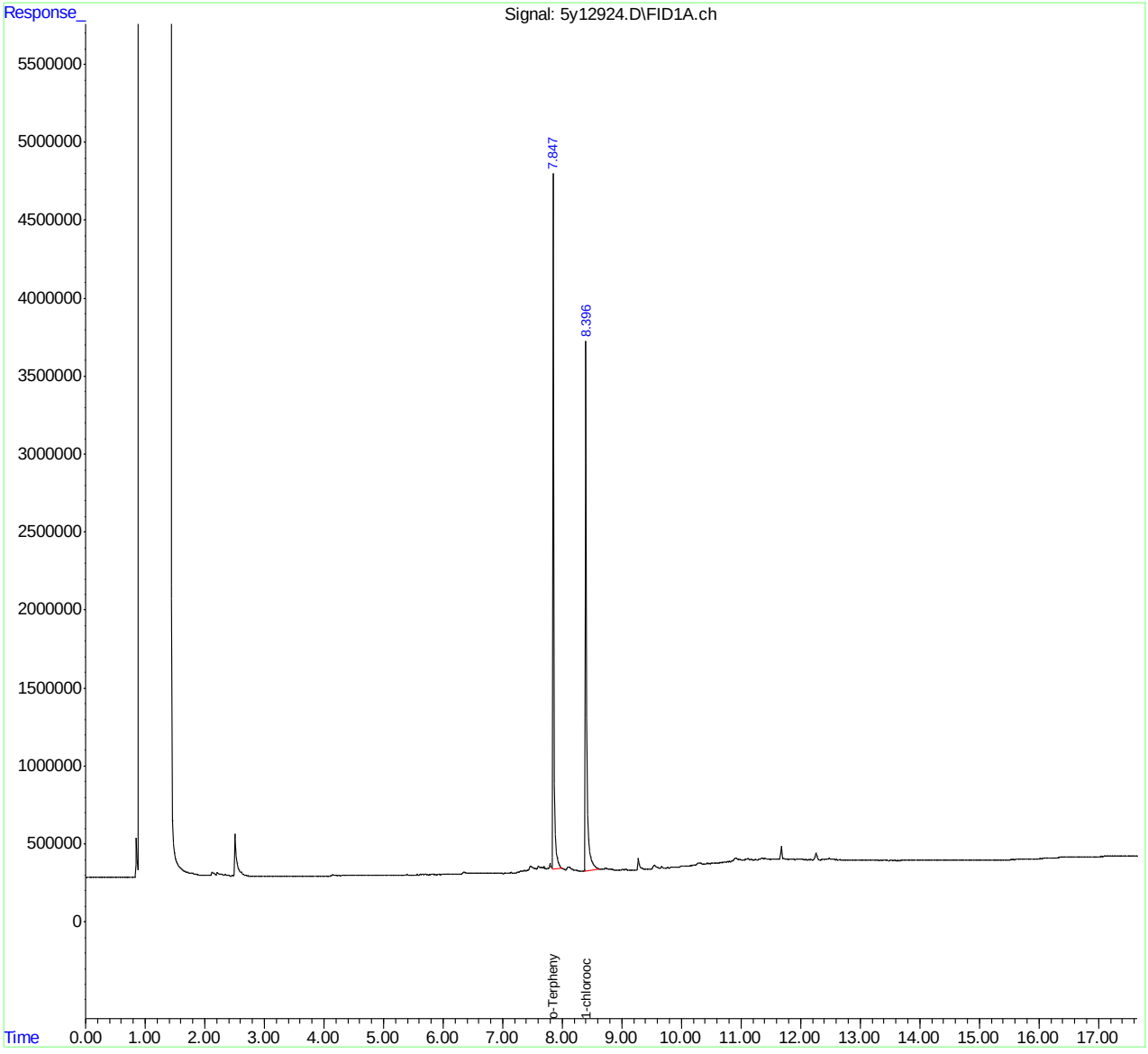
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12924.D
Signal(s) : FID1A.ch
Acq On : 26 Jun 2013 11:07 pm
Operator : khaliahd
Sample : jb40351-5
Misc : op67011,g5y385,15.3,,,2,1
ALS Vial : 25 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:45:44 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



Quantitation Report (QT Reviewed)

```
Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12911.D
Signal(s) : FID1A.ch
Acq On    : 26 Jun 2013   6:22 pm
Operator  : khaliahd
Sample    : op67011-mb1
Misc      : op67011,g5y385,15.0,,,2,1
ALS Vial  : 66   Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:24:10 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title  : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj.  : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info  : 30m x .32mm x .25um

        Compound                      R.T.       Response    Conc Units
 ---------------------------------------------------------------------------

 System Monitoring Compounds
22) S   o-Terphenyl (S)             7.853       75198291   46.587 ug/L
Spiked Amount     50.000                      Recovery   =   93.17%
23) S   1-chlorooctadecane (S)      8.401       65414257   50.013 ug/L
Spiked Amount     50.000                      Recovery   =  100.03%

 Target Compounds
 ---------------------------------------------------------------------------

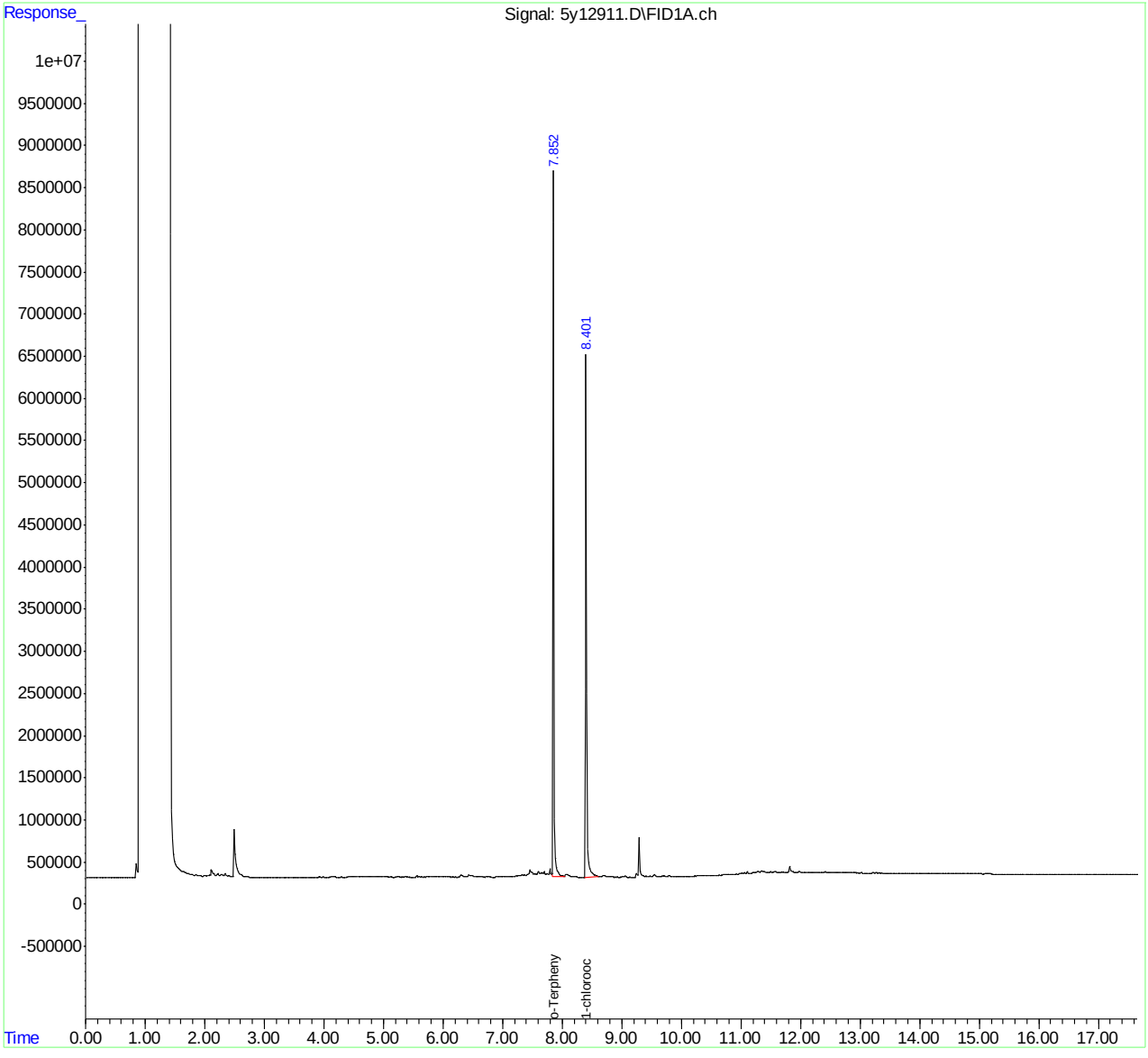
(f)=RT Delta > 1/2 Window                                (m)=manual int.
```

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Y385\
Data File : 5y12911.D
Signal(s) : FID1A.ch
Acq On : 26 Jun 2013 6:22 pm
Operator : khaliahd
Sample : op67011-mb1
Misc : op67011,g5y385,15.0,,,2,1
ALS Vial : 66 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 27 11:24:10 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Y273.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Jun 26 17:49:06 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z311\
Data File : 5z9253.D
Signal(s) : FID2B.ch
Acq On : 26 Jun 2013 1:49 pm
Operator : khaliahd
Sample : op67011-mb1
Misc : op67011,g5z311,15.0,,,2,1
ALS Vial : 66 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 26 14:58:25 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 25 09:09:23 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
22) S o-Terphenyl (S)	7.782	75439446	41.627 ug/L
Spiked Amount 50.000		Recovery =	83.25%
23) S 1-chlorooctadecane (S)	8.378	63309739	46.557 ug/L
Spiked Amount 50.000		Recovery =	93.11%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

9.2.2

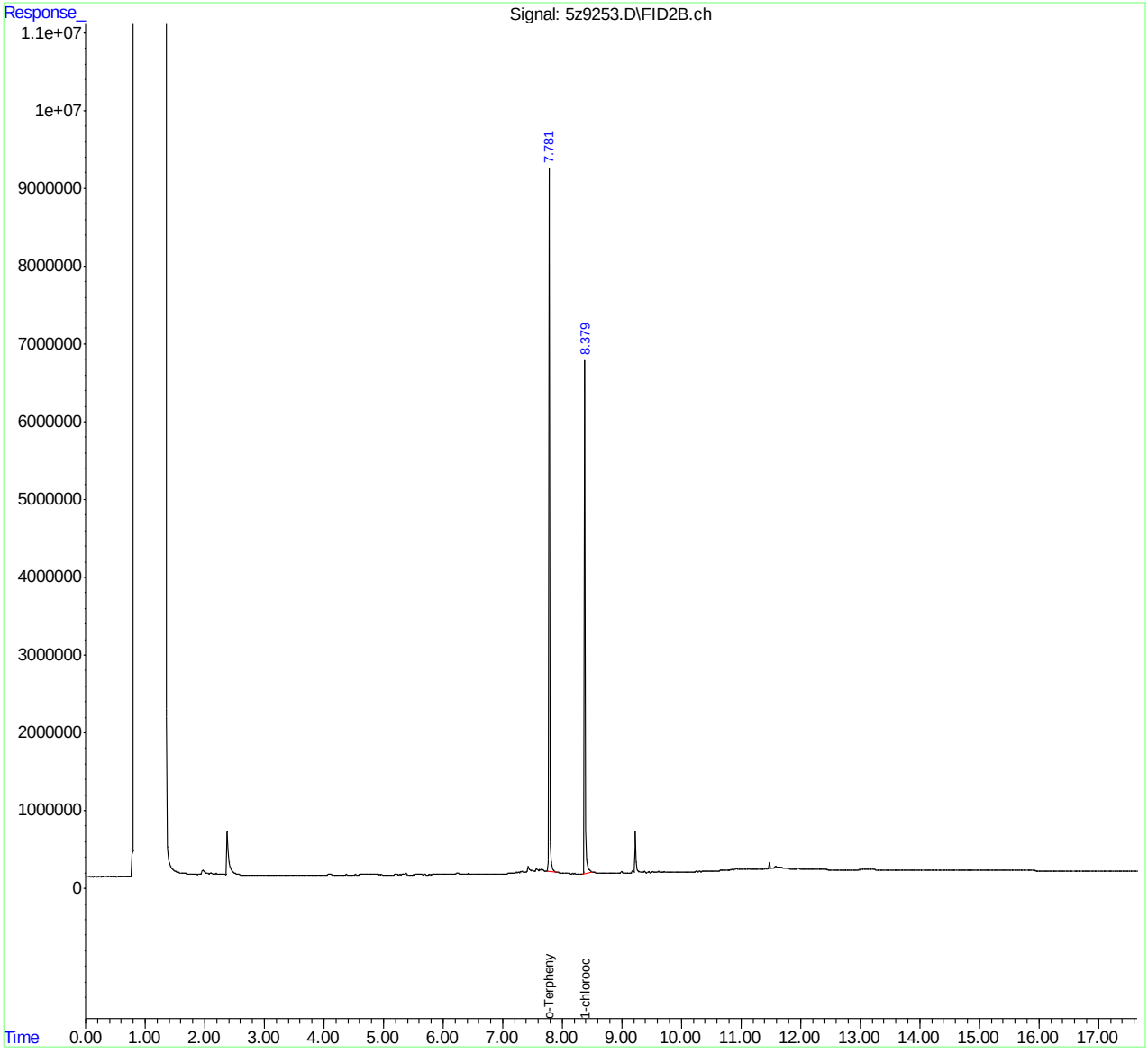
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\G5Z311\
Data File : 5z9253.D
Signal(s) : FID2B.ch
Acq On : 26 Jun 2013 1:49 pm
Operator : khaliahd
Sample : op67011-mb1
Misc : op67011,g5z311,15.0,,,2,1
ALS Vial : 66 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jun 26 14:58:25 2013
Quant Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M
Quant Title : NJDEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Jun 25 09:09:23 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1UL/COLUMN
Signal Phase : RTX-CLP2
Signal Info : 30m x .32mm x .25um



New Jersey

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
Analyst: JW Run ID: MA31589
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:54	MA31589-STD1	1		B=1.4552e-004,C=-6.4477e-002,R=0.9999048
07:55	MA31589-STD2	1		STDB
07:57	MA31589-STD3	1		STDC
07:58	MA31589-STD4	1		STDD
07:59	MA31589-STD5	1		STDE
08:01	MA31589-STD6	1		STDF
08:32	MA31589-ICV1	1		
08:33	MA31589-ICB1	1		
08:35	MA31589-CCV1	1		
08:36	MA31589-CCB1	1		
08:38	MA31589-CRI1	1		
08:39	ZZZZZZ	1		
08:40	ZZZZZZ	1		
08:46	MP73019-MB1	1		
08:47	MP73019-LC1	5		
08:59	MP73019-S1	1		
09:00	MP73019-S2	1		
09:02	JB40851-2	1		(sample used for QC only; not part of login JB40351)
09:03	ZZZZZZ	1		
09:05	ZZZZZZ	1		
09:06	MA31589-CCV2	1		
09:08	MA31589-CCB2	1		
09:09	ZZZZZZ	1		
09:11	ZZZZZZ	1		
09:12	ZZZZZZ	1		
09:14	ZZZZZZ	1		
09:15	ZZZZZZ	1		
09:17	ZZZZZZ	1		
09:19	ZZZZZZ	1		
09:21	ZZZZZZ	1		
09:22	ZZZZZZ	1		
09:24	ZZZZZZ	1		
09:25	MA31589-CCV3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
Analyst: JW Run ID: MA31589
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:26	MA31589-CCB3	1		
09:28	ZZZZZZ	1		
09:29	ZZZZZZ	1		
09:31	ZZZZZZ	1		
09:32	ZZZZZZ	1		
09:33	ZZZZZZ	1		
09:35	MP73021-MB1	1		
09:36	MP73021-LC1	5		
09:37	MP73021-S1	1		
09:39	MP73021-S2	1		
09:40	JB40350-5	1		(sample used for QC only; not part of login JB40351)
09:42	MA31589-CCV4	1		
09:43	MA31589-CCB4	1		
09:45	JB40351-1	1		
09:46	JB40351-2	1		
09:48	JB40351-3	1		
09:49	JB40351-4	1		
09:50	JB40351-5	1		
---------->	Last reportable sample/prep for job JB40351			
09:52	ZZZZZZ	1		
09:53	ZZZZZZ	1		
09:54	ZZZZZZ	1		
09:56	ZZZZZZ	1		
09:57	ZZZZZZ	1		
09:58	MA31589-CCV5	1		
10:00	MA31589-CCB5	1		
10:01	ZZZZZZ	1		
10:03	ZZZZZZ	1		
10:04	ZZZZZZ	1		
10:05	ZZZZZZ	1		
10:07	ZZZZZZ	1		
10:08	ZZZZZZ	1		
10:10	ZZZZZZ	1		
10:11	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
Analyst: JW Run ID: MA31589
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:12	ZZZZZZ	1		
10:14	MP73022-MB1	1		
10:15	MA31589-CCV6	1		
10:16	MA31589-CCB6	1		
10:18	MP73022-LC1	5		
10:19	MP73022-S1	1		Over range
10:21	MP73022-S2	1		Over range
10:22	JB40240-2	1		(sample used for QC only; not part of login JB40351)
10:24	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:27	ZZZZZZ	1		
10:29	ZZZZZZ	1		
10:31	ZZZZZZ	1		
10:32	ZZZZZZ	1		
10:34	MA31589-CCV7	1		
10:36	MA31589-CCB7	1		
10:37	ZZZZZZ	1		
10:39	ZZZZZZ	1		
10:41	ZZZZZZ	1		
10:42	ZZZZZZ	1		
10:44	ZZZZZZ	1		
10:45	ZZZZZZ	1		
10:46	ZZZZZZ	1		
10:48	ZZZZZZ	1		
10:49	ZZZZZZ	1		
10:50	MA31589-CCV8	1		
10:52	MA31589-CCB8	1		
11:38	ZZZZZZ	1		
11:39	ZZZZZZ	2		
11:40	ZZZZZZ	5		
11:42	ZZZZZZ	5		
11:43	ZZZZZZ	5		
11:45	ZZZZZZ	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
Analyst: JW Run ID: MA31589
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:46	ZZZZZZ	20		
11:48	MP73022-S1	2		
11:49	MP73022-S2	2		
11:51	JB40240-2	2		(sample used for QC only; not part of login JB40351)
11:53	MA31589-CCV9	1		
11:54	MA31589-CCB9	1		
11:56	ZZZZZZ	5		
11:57	ZZZZZZ	2		
11:58	ZZZZZZ	2		
12:00	ZZZZZZ	2		
12:01	ZZZZZZ	10		
12:03	ZZZZZZ	10		
12:04	ZZZZZZ	10		
12:06	ZZZZZZ	10		
12:11	MA31589-CRI2	1		
12:13	ZZZZZZ	1		
12:14	MA31589-CCV10	1		
12:15	MA31589-CCB10	1		

----------> Last reportable CCB for job JB40351
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA31589 Units: ug/l

Time:			08:33		08:36		09:08		09:26	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.041	0.022	<0.20	-0.029	<0.20	-0.059	<0.20	-0.12	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA31589 Units: ug/l

Time:			09:43		10:00		10:16		10:36	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.041	-0.19	<0.20	-0.19	<0.20	-0.063	<0.20	-0.058	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA31589 Units: ug/l

Time:			10:52		11:54		12:15	
Sample ID:			CCB8		CCB9		CCB10	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	0.20	.041	0.0012	<0.20	-0.057	<0.20	-0.010	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31589 Units: ug/l

Time:		08:32			08:35			09:06	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.2	106.7	2.5	2.6	104.0	2.5	2.4	96.0

(*) Outside of QC limits
(anr) Analyte not requested

10.1.2
10

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31589 Units: ug/l

Time:		09:25			09:42			09:58	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.7	108.0	2.5	2.6	104.0	2.5	2.6	104.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31589 Units: ug/l

Time:		10:15			10:34			10:50	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.7	108.0	2.5	2.7	108.0	2.5	2.8	112.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31589 Units: ug/l

Time:		11:53			12:14	
Sample ID:	CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.8	112.0	2.5	2.9	116.0

(*) Outside of QC limits
(anr) Analyte not requested

10.1.2
10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 50 to 150 % Recovery Run ID: MA31589 Units: ug/l

Time:			08:38		12:11	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.22	110.0	0.24	120.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:08	MA31593-STD1	1		STDA
10:14	MA31593-STD2	1		STDD
10:20	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:32	MA31593-ICV1	1		
10:37	MA31593-ICB1	1		
10:43	MA31593-CCV1	1		
10:49	MA31593-CCB1	1		
10:55	MA31593-CRI1	1		
11:01	MA31593-CRID1	1		
11:07	MA31593-CRIA1	1		
11:13	MA31593-CRID2	1		
11:18	MA31593-ICSA1	1		
11:24	MA31593-ICSAB1	1		
11:30	MA31593-CCV2	1		
11:36	MA31593-CCB2	1		
11:42	MP73020-MB1	1		
11:48	MP73020-LC1	1		Batch to reanalyze for Pb, lc out
11:53	MP73020-B1	1		
11:59	MP73020-S1	5		Fe and Pb high
12:05	MP73020-S2	5		Fe and Pb high
12:11	JB41214-1	5		(sample used for QC only; not part of login JB40351)
12:17	MP73020-SD1	25		Fe and Pb high
12:23	ZZZZZZ	1		
12:28	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:40	MA31593-CCV3	1		
12:46	MA31593-CCB3	1		
12:52	ZZZZZZ	1		
12:57	MP72964-MB1	1		Rerun for Tl
13:03	MP72964-LC1	1		
13:09	MP72964-S1	1		
13:15	MP72964-S2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:20	JB40787-6	1		(sample used for QC only; not part of login JB40351)
13:26	MP72964-SD1	5		
13:32	ZZZZZZ	1		
13:38	MP72940-MB1	1		
13:44	MA31593-CCV4	1		
13:50	MA31593-CCB4	1		
13:55	MP72940-B1	1		
14:01	MP72940-S1	1		
14:07	MP72940-S2	1		
14:13	JB40946-11	1		(sample used for QC only; not part of login JB40351)
14:18	MP72940-SD1	5		
14:24	ZZZZZZ	1		
14:30	ZZZZZZ	1		
14:36	ZZZZZZ	1		
14:42	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:53	MA31593-CCV5	1		
14:59	MA31593-CCB5	1		
15:05	ZZZZZZ	1		
15:11	MP72952-MB1	1		
15:16	MP72952-B1	1		
15:22	MP72952-S1	1		Fe high
15:28	MP72952-S2	1		Fe high
15:34	JB40687-3	1		(sample used for QC only; not part of login JB40351)
15:40	MP72952-SD1	5		Fe high
15:46	ZZZZZZ	1		
15:52	ZZZZZZ	1		
15:58	ZZZZZZ	1		
16:03	MA31593-CCV6	1		
16:09	MA31593-CCB6	1		
16:15	ZZZZZZ	1		
16:21	ZZZZZZ	1		
16:27	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:33	ZZZZZZ	1		
16:38	ZZZZZZ	1		
16:44	ZZZZZZ	1		
16:50	ZZZZZZ	1		
16:56	ZZZZZZ	1		
17:02	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:13	MA31593-CCV7	1		
17:19	MA31593-CCB7	1		
17:25	ZZZZZZ	1		
17:31	ZZZZZZ	1		
17:36	ZZZZZZ	1		
17:42	ZZZZZZ	1		
17:48	ZZZZZZ	1		
17:54	ZZZZZZ	1		
17:59	ZZZZZZ	1		
18:05	MP72853-MB1	1		
18:11	MP72853-B1	1		empty
18:17	MA31593-CCV8	1		
18:23	MA31593-CCB8	1		
18:29	MA31593-CRI2	1		
18:35	MA31593-CRID3	1		
18:41	MA31593-CRIA2	1		
18:46	MA31593-CRID4	1		
18:52	MA31593-ICSA2	1		
18:58	MA31593-ICSAB2	1		
19:04	MA31593-CCV9	1		
19:10	MA31593-CCB9	1		
19:16	MP72853-S1	1		
19:22	MP72853-S2	1		
19:27	JB40350-4	1		(sample used for QC only; not part of login JB40351)
19:33	MP72853-SD1	5		
19:39	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	19:45	ZZZZZZ	1		
	19:50	ZZZZZZ	1		
	19:56	ZZZZZZ	1		
	20:02	ZZZZZZ	1		
	20:08	JB40351-1	1		FE high
	20:14	MA31593-CCV10	1		
	20:19	MA31593-CCB10	1		
	20:25	JB40351-2	1		
	20:31	JB40351-3	1		
	20:37	JB40351-4	1		
	20:43	JB40351-5	1		
---------->	Last reportable sample/prep for job JB40351				
	20:49	MP72792-MB1	1		
	20:55	MP72792-MB2	1		
	21:00	MP72792-LC1	1		
	21:06	MP72792-LC2	1		
	21:12	MP72792-B1	1		
	21:18	MA31593-CCV11	1		
	21:23	MA31593-CCB11	1		
	21:29	MP72792-S1	1		Si high
	21:35	MP72792-S2	1		Si high. Rerun straight for Cd and Mn , high RSD-s
	21:41	MP72792-S3	1		
	21:46	MP72792-S4	1		
	21:52	JB40213-1	1		(sample used for QC only; not part of login JB40351)
	21:58	MP72792-SD1	5		
	22:04	JB40213-1F	1		(sample used for QC only; not part of login JB40351)
	22:10	MP72792-SD2	5		
	22:15	ZZZZZZ	1		
	22:21	ZZZZZZ	1		
	22:27	MA31593-CCV12	1		
	22:33	MA31593-CCB12	1		
	22:39	ZZZZZZ	1		
	22:45	ZZZZZZ	1		
	22:51	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:57	ZZZZZZ	1		
23:03	ZZZZZZ	1		
23:08	ZZZZZZ	1		
23:14	ZZZZZZ	1		
23:20	ZZZZZZ	1		
23:26	ZZZZZZ	1		
23:32	ZZZZZZ	1		
23:38	MA31593-CCV13	1		
23:43	MA31593-CCB13	1		
23:49	ZZZZZZ	10		
23:55	ZZZZZZ	10		
00:01	ZZZZZZ	10		
00:07	ZZZZZZ	10		
00:13	ZZZZZZ	10		
00:18	ZZZZZZ	10		
00:24	ZZZZZZ	10		
00:30	ZZZZZZ	10		
00:36	ZZZZZZ	1		
00:42	ZZZZZZ	1		
00:48	MA31593-CCV14	1		
00:53	MA31593-CCB14	1		
00:59	ZZZZZZ	10		
01:05	ZZZZZZ	10		
01:11	ZZZZZZ	2		
01:17	MP72965-S1	10		
01:22	MP72965-S2	10		empty
01:28	JB41084-9A	10		(sample used for QC only; not part of login JB40351)
01:34	MP72965-SD1	50		
01:40	ZZZZZZ	1		
01:46	ZZZZZZ	1		
01:52	MA31593-CCV15	1		
01:57	MA31593-CCB15	1		
02:03	MA31593-CRI3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	02:09	MA31593-CRID5	1		
	02:15	MA31593-CRIA3	1		
	02:21	MA31593-CRID6	1		
	02:27	MA31593-ICSA3	1		
	02:33	MA31593-ICSAB3	1		
	02:39	MA31593-CCV16	1		
	02:44	MA31593-CCB16	1		
---------->	Last reportable CCB for job JB40351				
	02:50	MP72876-MB1	1		No bracketing CCB
	02:56	MP72876-LC1	1		No bracketing CCB
	03:02	MP72876-S1	1		No bracketing CCB
	03:08	MP72876-S2	1		No bracketing CCB
	03:14	JB40373-3	1		(sample used for QC only; not part of login JB40351)
	03:20	MP72876-SD1	5		No bracketing CCB
	03:25	ZZZZZZ	1		
	03:31	ZZZZZZ	1		
	03:37	ZZZZZZ	1		
	03:43	ZZZZZZ	1		
	03:49	MA31593-CCV17	1		No bracketing CCB
	03:54	ZZZZZZ	1		
	04:00	ZZZZZZ	1		
	04:06	ZZZZZZ	1		
	04:12	ZZZZZZ	1		
	04:18	ZZZZZZ	1		
	04:24	ZZZZZZ	1		
	04:30	ZZZZZZ	1		
	04:36	ZZZZZZ	1		
	04:42	ZZZZZZ	1		
	04:48	ZZZZZZ	1		
	04:54	MA31593-CCV18	1		
	04:59	MA31593-CCB17	1		
	05:05	ZZZZZZ	1		
	05:11	ZZZZZZ	1		
	05:17	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:23	ZZZZZZ	1		
05:29	ZZZZZZ	1		
05:34	ZZZZZZ	1		
05:40	ZZZZZZ	1		
05:46	ZZZZZZ	1		
05:52	ZZZZZZ	1		
05:58	ZZZZZZ	1		
06:04	MA31593-CCV19	1		
06:09	MA31593-CCB18	1		
06:17	MA31593-CCV20	1		
06:23	MA31593-CCB19	1		
06:29	MP72876-MB1	1		
06:34	MP72876-LC1	1		
06:40	MP72876-S1	1		
06:46	MP72876-S2	1		
06:52	JB40373-3	1		(sample used for QC only; not part of login JB40351)
06:58	MP72876-SD1	5		
07:04	ZZZZZZ	1		
07:09	ZZZZZZ	1		
07:15	ZZZZZZ	1		
07:21	ZZZZZZ	1		
07:27	MA31593-CCV21	1		
07:33	MA31593-CCB20	1		
07:38	ZZZZZZ	1		
07:44	ZZZZZZ	1		
07:50	ZZZZZZ	1		
07:56	ZZZZZZ	1		
08:02	ZZZZZZ	1		
08:08	ZZZZZZ	1		
08:14	ZZZZZZ	1		
08:20	ZZZZZZ	1		
08:26	ZZZZZZ	1		
08:32	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:38	MA31593-CCV22	1		
08:44	MA31593-CCB21	1		
08:49	MA31593-CRI4	1		
08:55	MA31593-CRID7	1		
09:01	MA31593-ICSA4	1		
09:07	MA31593-ICSAB4	1		
09:13	MA31593-CCV23	1		
09:19	MA31593-CCB22	1		
09:25	ZZZZZZ	1		
09:31	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:08	MA31593-STD1	1060 R	66511 R	16908 R	1701 R
10:14	MA31593-STD2	1012	61436	16701	1703
10:20	ZZZZZZ	1042	63650	16870	1720
10:26	ZZZZZZ	1057	65805	16841	1692
10:32	MA31593-ICV1	1026	63467	17244	1700
10:37	MA31593-ICB1	1059	66242	16987	1698
10:43	MA31593-CCV1	1037	63826	16901	1718
10:49	MA31593-CCB1	1064	66585	16972	1708
10:55	MA31593-CRI1	1059	64572	17081	1708
11:01	MA31593-CRID1	No results reported for the elements associated with this internal standard.			
11:07	MA31593-CRIA1	1068	67038	17192	1718
11:13	MA31593-CRID2	1068	66830	17113	1713
11:18	MA31593-ICSA1	916	56443	15771	1615
11:24	MA31593-ICSAB1	922	57904	16149	1630
11:30	MA31593-CCV2	1032	62586	16709	1706
11:36	MA31593-CCB2	1065	66556	17056	1710
11:42	MP73020-MB1	1052	66728	17030	1690
11:48	MP73020-LC1	1024	64722	17001	1674
11:53	MP73020-B1	1015	63504	16763	1677
11:59	MP73020-S1	No results reported for the elements associated with this internal standard.			
12:05	MP73020-S2	No results reported for the elements associated with this internal standard.			
12:11	JB41214-1	No results reported for the elements associated with this internal standard.			
12:17	MP73020-SD1	No results reported for the elements associated with this internal standard.			
12:23	ZZZZZZ	1005	62247	16966	1664
12:28	ZZZZZZ	1013	63957	17449	1681
12:34	ZZZZZZ	1009	63162	17082	1675
12:40	MA31593-CCV3	1022	62329	16636	1694
12:46	MA31593-CCB3	1049	66001	16845	1684
12:52	ZZZZZZ	1064	68737	18055	1715
12:57	MP72964-MB1	1052	67017	17283	1690
13:03	MP72964-LC1	1018	64142	16816	1655
13:09	MP72964-S1	1009	62726	16811	1657
13:15	MP72964-S2	996	61315	16511	1638

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:20	JB40787-6	1014	62650	16831	1657
13:26	MP72964-SD1	1050	65160	17002	1697
13:32	ZZZZZZ	1049	66679	17216	1683
13:38	MP72940-MB1	1059	67931	17406	1697
13:44	MA31593-CCV4	1035	63907	17031	1714
13:50	MA31593-CCB4	1053	67751	17243	1690
13:55	MP72940-B1	1035	64829	17045	1707
14:01	MP72940-S1	1045	65590	17609	1723
14:07	MP72940-S2	1054	66199	17860	1734
14:13	JB40946-11	1082	67256	17586	1752
14:18	MP72940-SD1	1065	66934	17295	1717
14:24	ZZZZZZ	1079	67022	17790	1742
14:30	ZZZZZZ	1079	67548	18049	1743
14:36	ZZZZZZ	1096	68585	17971	1750
14:42	ZZZZZZ	1049	66112	17440	1715
14:47	ZZZZZZ	1057	66690	17510	1708
14:53	MA31593-CCV5	1029	62772	17070	1707
14:59	MA31593-CCB5	1057	66856	17106	1698
15:05	ZZZZZZ	1056	66836	17696	1708
15:11	MP72952-MB1	1055	67274	17252	1696
15:16	MP72952-B1	1031	64998	17198	1703
15:22	MP72952-S1	1060	66453	18541	1770
15:28	MP72952-S2	1050	65785	18299	1757
15:34	JB40687-3	1064	66427	18234	1752
15:40	MP72952-SD1	1054	65410	17147	1719
15:46	ZZZZZZ	1018	63406	17325	1692
15:52	ZZZZZZ	1092	68233	18013	1728
15:58	ZZZZZZ	1076	68080	17689	1721
16:03	MA31593-CCV6	1037	64145	17042	1718
16:09	MA31593-CCB6	1052	67986	17087	1693
16:15	ZZZZZZ	1088	68322	18137	1709
16:21	ZZZZZZ	1084	64145	17419	1737
16:27	ZZZZZZ	1057	67358	17391	1715

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:33	ZZZZZZ	1037	65537	16963	1716
16:38	ZZZZZZ	1035	66185	16833	1675
16:44	ZZZZZZ	1068	67996	17812	1740
16:50	ZZZZZZ	1064	67102	17473	1746
16:56	ZZZZZZ	1054	66546	17284	1726
17:02	ZZZZZZ	970	60071	16612	1643
17:07	ZZZZZZ	1058	66055	17600	1738
17:13	MA31593-CCV7	1013	62275	16520	1684
17:19	MA31593-CCB7	1040	65860	17222	1674
17:25	ZZZZZZ	1063	68817	17973	1726
17:31	ZZZZZZ	1059	67509	17750	1716
17:36	ZZZZZZ	1051	66271	17174	1721
17:42	ZZZZZZ	1053	67471	17656	1717
17:48	ZZZZZZ	1090	70049	18653	1749
17:54	ZZZZZZ	1048	66667	17536	1723
17:59	ZZZZZZ	1064	67584	17420	1734
18:05	MP72853-MB1	1067	67831	17473	1716
18:11	MP72853-B1	No results reported for the elements associated with this internal standard.			
18:17	MA31593-CCV8	1030	63740	16901	1707
18:23	MA31593-CCB8	1054	66712	16961	1693
18:29	MA31593-CRI2	1040	62790	16674	1681
18:35	MA31593-CRID3	1045	65665	16645	1685
18:41	MA31593-CRIA2	1071	67724	17169	1720
18:46	MA31593-CRID4	1065	66698	17088	1715
18:52	MA31593-ICSA2	924	57317	15951	1630
18:58	MA31593-ICSAB2	927	57653	15962	1638
19:04	MA31593-CCV9	1038	63987	16927	1720
19:10	MA31593-CCB9	1048	67791	17279	1685
19:16	MP72853-S1	1017	64395	17222	1728
19:22	MP72853-S2	1030	65417	17562	1743
19:27	JB40350-4	1047	66292	17539	1740
19:33	MP72853-SD1	1043	66331	17051	1698
19:39	ZZZZZZ	1013	64176	17264	1692

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:45	ZZZZZZ	1050	66747	17716	1712
19:50	ZZZZZZ	1047	67266	17410	1720
19:56	ZZZZZZ	1045	66139	17469	1732
20:02	ZZZZZZ	1050	67361	17546	1742
20:08	JB40351-1	1052	65626	17311	1798
20:14	MA31593-CCV10	1041	62914	16143	1722
20:19	MA31593-CCB10	1048	67788	17202	1686
20:25	JB40351-2	1050	66239	17360	1742
20:31	JB40351-3	1056	67291	17013	1747
20:37	JB40351-4	1055	66465	17215	1735
20:43	JB40351-5	1059	66107	17384	1760
20:49	MP72792-MB1	1040	67204	17153	1678
20:55	MP72792-MB2	1046	65936	16930	1684
21:00	MP72792-LC1	1043	65672	16970	1695
21:06	MP72792-LC2	1047	65760	16918	1699
21:12	MP72792-B1	1023	63488	16730	1674
21:18	MA31593-CCV11	1017	62508	16588	1689
21:23	MA31593-CCB11	1078	65220	17503	1729
21:29	MP72792-S1	978	61898	16905	1705
21:35	MP72792-S2	982	999999 !	17380	1709
21:41	MP72792-S3	997	60728	16292	1642
21:46	MP72792-S4	1026	62717	16671	1684
21:52	JB40213-1	1000	63395	17247	1722
21:58	MP72792-SD1	1036	65478	17086	1703
22:04	JB40213-1F	1025	62321	16538	1676
22:10	MP72792-SD2	1057	65316	16925	1714
22:15	ZZZZZZ	1035	62470	16776	1694
22:21	ZZZZZZ	950	51219	15721	1536
22:27	MA31593-CCV12	1037	63133	16788	1720
22:33	MA31593-CCB12	1053	65503	17143	1696
22:39	ZZZZZZ	1048	66327	16841	1690
22:45	ZZZZZZ	1025	61754	16600	1680
22:51	ZZZZZZ	936	49941	15520	1516

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:57	ZZZZZZ	1029	62673	16719	1682
23:03	ZZZZZZ	1047	65960	17093	1685
23:08	ZZZZZZ	1051	65618	17286	1756
23:14	ZZZZZZ	1050	65978	17329	1768
23:20	ZZZZZZ	1094	68046	17937	1768
23:26	ZZZZZZ	1070	63563	17951	1775
23:32	ZZZZZZ	1053	66239	16929	1743
23:38	MA31593-CCV13	1029	63013	16578	1709
23:43	MA31593-CCB13	1074	67269	17101	1724
23:49	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:55	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:01	ZZZZZZ	979	63279	16844	1677
00:07	ZZZZZZ	982	62775	16546	1686
00:13	ZZZZZZ	991	60979	16933	1701
00:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:24	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:30	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:36	ZZZZZZ	1069	66775	17727	1770
00:42	ZZZZZZ	1086	67674	17780	1771
00:48	MA31593-CCV14	1028	62695	16518	1705
00:53	MA31593-CCB14	1064	67139	17020	1715
00:59	ZZZZZZ	998	64302	16686	1691
01:05	ZZZZZZ	1009	65322	17068	1714
01:11	ZZZZZZ	981	63422	16905	1708
01:17	MP72965-S1	983	64808	17032	1673
01:22	MP72965-S2	No results reported for the elements associated with this internal standard.			
01:28	JB41084-9A	1007	64280	16885	1710
01:34	MP72965-SD1	1035	61446	16973	1697
01:40	ZZZZZZ	1051	66459	17585	1767
01:46	ZZZZZZ	1081	68870	17150	1740
01:52	MA31593-CCV15	1045	63572	16957	1733
01:57	MA31593-CCB15	1078	67418	17142	1729
02:03	MA31593-CRI3	1082	67067	16912	1744

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:09	MA31593-CRID5	1068	66883	17194	1720
02:15	MA31593-CRIA3	1088	68184	17190	1745
02:21	MA31593-CRID6	1074	67106	17038	1727
02:27	MA31593-ICSA3	935	57580	15968	1647
02:33	MA31593-ICSAB3	944	58461	16045	1665
02:39	MA31593-CCV16	1040	63840	16870	1727
02:44	MA31593-CCB16	1076	68688	16724	1727
02:50	MP72876-MB1	No results reported for the elements associated with this internal standard.			
02:56	MP72876-LC1	No results reported for the elements associated with this internal standard.			
03:02	MP72876-S1	No results reported for the elements associated with this internal standard.			
03:08	MP72876-S2	No results reported for the elements associated with this internal standard.			
03:14	JB40373-3	No results reported for the elements associated with this internal standard.			
03:20	MP72876-SD1	No results reported for the elements associated with this internal standard.			
03:25	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:31	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:37	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:43	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:49	MA31593-CCV17	No results reported for the elements associated with this internal standard.			
03:54	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:00	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:06	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:12	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:24	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:30	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:36	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:42	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:48	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:54	MA31593-CCV18	1042	63714	16843	1730
04:59	MA31593-CCB17	1092	68443	17113	1751
05:05	ZZZZZZ	1037	62279	16830	1701
05:11	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:17	ZZZZZZ	1080	68768	17586	1734

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
05:23	ZZZZZZ	1098	68062	17688	1788
05:29	ZZZZZZ	1060	64339	17470	1758
05:34	ZZZZZZ	1132	70006	18517	1807
05:40	ZZZZZZ	1066	65853	17772	1818
05:46	ZZZZZZ	1122	69939	18631	1802
05:52	ZZZZZZ	1053	66525	17889	1801
05:58	ZZZZZZ	1103	67492	17926	1832
06:04	MA31593-CCV19	1050	64423	16953	1741
06:09	MA31593-CCB18	1089	999999 !a	16592	1750
06:17	MA31593-CCV20	1056	64576	16990	1749
06:23	MA31593-CCB19	1090	68459	17345	1748
06:29	MP72876-MB1	1060	69960	17623	1707
06:34	MP72876-LC1	1058	65828	17001	1720
06:40	MP72876-S1	1021	59079	16727	1674
06:46	MP72876-S2	1030	60421	16812	1691
06:52	JB40373-3	1063	62331	17106	1730
06:58	MP72876-SD1	1075	65231	17066	1746
07:04	ZZZZZZ	1074	67245	17668	1775
07:09	ZZZZZZ	1057	65847	17273	1775
07:15	ZZZZZZ	1036	65522	17240	1740
07:21	ZZZZZZ	1062	67004	17577	1776
07:27	MA31593-CCV21	1047	64138	16852	1734
07:33	MA31593-CCB20	1086	68756	17462	1746
07:38	ZZZZZZ	1103	69581	17651	1772
07:44	ZZZZZZ	1047	61186	16852	1711
07:50	ZZZZZZ	1042	59972	16806	1707
07:56	ZZZZZZ	1066	67672	17270	1719
08:02	ZZZZZZ	1029	60144	16750	1688
08:08	ZZZZZZ	1062	61558	16996	1740
08:14	ZZZZZZ	1043	62265	17158	1702
08:20	ZZZZZZ	998	58757	16652	1651
08:26	ZZZZZZ	1051	63729	16754	1727
08:32	ZZZZZZ	1086	64588	17221	1774

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
08:38	MA31593-CCV22	1069	64971	16982	1767
08:44	MA31593-CCB21	1108	69583	17391	1777
08:49	MA31593-CRI4	1089	68407	17400	1755
08:55	MA31593-CRID7	1084	67409	17130	1746
09:01	MA31593-ICSA4	969	59829	16457	1697
09:07	MA31593-ICSAB4	961	58767	15933	1691
09:13	MA31593-CCV23	1067	64283	16935	1768
09:19	MA31593-CCB22	1096	68619	17139	1763
09:25	ZZZZZZ	1084	67148	16980	1791
09:31	ZZZZZZ	1075	69038	17524	1776

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			10:37		10:49		11:36		12:46	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	-3.8	<200	-7.2	<200	-2.0	<200	-1.2	<200
Antimony	6.0	1.8	-0.30	<6.0	1.2	<6.0	0.50	<6.0	1.2	<6.0
Arsenic	3.0	1.7	0.80	<3.0	0.40	<3.0	1.2	<3.0	-0.30	<3.0
Barium	200	.23	-0.20	<200	-0.20	<200	0.0	<200	0.0	<200
Beryllium	1.0	.09	0.10	<1.0	0.0	<1.0	0.10	<1.0	0.10	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.30	<3.0	0.30	<3.0	0.30	<3.0	0.20	<3.0
Calcium	5000	64	4.1	<5000	3.2	<5000	6.7	<5000	10.1	<5000
Chromium	10	.79	0.30	<10	0.50	<10	0.70	<10	0.30	<10
Cobalt	50	.4	0.30	<50	-0.10	<50	0.30	<50	0.10	<50
Copper	10	.68	0.40	<10	0.10	<10	0.0	<10	0.40	<10
Iron	100	5.2	0.60	<100	1.2	<100	4.3	<100	4.1	<100
Lead	3.0	1.5	-0.80	<3.0	-0.10	<3.0	0.60	<3.0	0.20	<3.0
Lithium	20	1.1								
Magnesium	5000	26	12.8	<5000	14.3	<5000	18.5	<5000	15.7	<5000
Manganese	15	.17	0.10	<15	0.10	<15	0.10	<15	0.20	<15
Molybdenum	20	.35								
Nickel	10	.61	0.40	<10	0.90	<10	0.60	<10	0.20	<10
Palladium	50	2.1								
Potassium	10000	51	0.70	<10000	16.1	<10000	7.3	<10000	-15	<10000
Selenium	10	3.1	0.80	<10	1.5	<10	2.6	<10	1.1	<10
Silicon	200	2.8								
Silver	10	.46	-0.70	<10	-0.10	<10	-0.80	<10	-0.40	<10
Sodium	10000	14	9.9	<10000	6.5	<10000	7.9	<10000	13.3	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-1.6	<2.0	-0.90	<2.0	0.50	<2.0	-0.30	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.80	<50	0.50	<50	0.70	<50	0.20	<50
Zinc	20	8.9	0.30	<20	0.40	<20	0.50	<20	0.40	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.29

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			13:50		14:59		16:09		17:19	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	-6.2	<200	-6.9	<200	1.3	<200	-6.9	<200
Antimony	6.0	1.8	0.50	<6.0	-0.10	<6.0	-0.60	<6.0	2.2	<6.0
Arsenic	3.0	1.7	0.10	<3.0	-0.10	<3.0	1.3	<3.0	0.0	<3.0
Barium	200	.23	-0.20	<200	0.10	<200	0.30	<200	0.20	<200
Beryllium	1.0	.09	0.0	<1.0	0.10	<1.0	0.10	<1.0	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	-0.10	<3.0	0.40	<3.0	0.40	<3.0	0.50	<3.0
Calcium	5000	64	3.6	<5000	4.4	<5000	4.8	<5000	4.7	<5000
Chromium	10	.79	0.20	<10	0.20	<10	-0.10	<10	0.30	<10
Cobalt	50	.4	0.40	<50	-0.10	<50	0.20	<50	0.40	<50
Copper	10	.68	-0.10	<10	-0.10	<10	0.10	<10	0.0	<10
Iron	100	5.2	0.30	<100	4.0	<100	2.6	<100	3.5	<100
Lead	3.0	1.5	-0.70	<3.0	0.60	<3.0	-1.6	<3.0	-1.1	<3.0
Lithium	20	1.1								
Magnesium	5000	26	4.1	<5000	11.9	<5000	21.3	<5000	7.6	<5000
Manganese	15	.17	0.0	<15	0.10	<15	0.10	<15	0.10	<15
Molybdenum	20	.35								
Nickel	10	.61	0.30	<10	0.30	<10	0.30	<10	0.60	<10
Palladium	50	2.1								
Potassium	10000	51	5.1	<10000	3.8	<10000	5.8	<10000	0.90	<10000
Selenium	10	3.1	2.0	<10	1.1	<10	-0.20	<10	0.90	<10
Silicon	200	2.8								
Silver	10	.46	-0.40	<10	-0.70	<10	-0.80	<10	-0.60	<10
Sodium	10000	14	13.1	<10000	23.0	<10000	29.2	<10000	33.6	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-0.40	<2.0	-1.3	<2.0	-0.40	<2.0	-3.0	<2.0**(a
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.60	<50	0.60	<50	0.50	<50	0.10	<50
Zinc	20	8.9	0.40	<20	0.30	<20	0.50	<20	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.29

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			18:23		19:10		20:19		21:23	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	0.80	<200	-0.30	<200	2.1	<200	-2.9	<200
Antimony	6.0	1.8	1.2	<6.0	1.6	<6.0	0.60	<6.0	2.3	<6.0
Arsenic	3.0	1.7	0.80	<3.0	-0.20	<3.0	-0.20	<3.0	-0.30	<3.0
Barium	200	.23	0.30	<200	0.30	<200	0.20	<200	0.30	<200
Beryllium	1.0	.09	0.10	<1.0	0.20	<1.0	0.0	<1.0	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.30	<3.0	0.40	<3.0	0.40	<3.0	0.50	<3.0
Calcium	5000	64	4.9	<5000	6.9	<5000	5.7	<5000	2.2	<5000
Chromium	10	.79	0.40	<10	-0.10	<10	-0.30	<10	0.60	<10
Cobalt	50	.4	-0.10	<50	0.10	<50	0.0	<50	0.0	<50
Copper	10	.68	-0.30	<10	-0.10	<10	-0.40	<10	0.10	<10
Iron	100	5.2	3.4	<100	6.1	<100	3.9	<100	1.7	<100
Lead	3.0	1.5	-0.10	<3.0	-0.40	<3.0	-1.7	<3.0	-0.90	<3.0
Lithium	20	1.1								
Magnesium	5000	26	28.0	<5000	32.4	<5000	21.1	<5000	8.6	<5000
Manganese	15	.17	0.20	<15	0.10	<15	0.0	<15	0.20	<15
Molybdenum	20	.35								
Nickel	10	.61	0.70	<10	0.20	<10	0.60	<10	0.50	<10
Palladium	50	2.1								
Potassium	10000	51	2.3	<10000	-23	<10000	10.1	<10000	23.4	<10000
Selenium	10	3.1	2.9	<10	0.60	<10	3.1	<10	2.0	<10
Silicon	200	2.8								
Silver	10	.46	-0.40	<10	-0.80	<10	-0.50	<10	-1.0	<10
Sodium	10000	14	23.7	<10000	34.8	<10000	38.0	<10000	39.0	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-0.90	<2.0	0.30	<2.0	-0.50	<2.0	0.40	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.50	<50	0.50	<50	0.70	<50	0.50	<50
Zinc	20	8.9	0.30	<20	0.30	<20	0.10	<20	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.29

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			22:33		23:43		00:53		01:57	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	-0.20	<200	2.5	<200	10.7	<200	3.8	<200
Antimony	6.0	1.8	1.4	<6.0	0.50	<6.0	-0.30	<6.0	3.0	<6.0
Arsenic	3.0	1.7	-0.30	<3.0	1.5	<3.0	0.20	<3.0	0.50	<3.0
Barium	200	.23	0.10	<200	0.20	<200	0.40	<200	0.20	<200
Beryllium	1.0	.09	0.10	<1.0	0.10	<1.0	0.10	<1.0	0.20	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.60	<3.0	0.30	<3.0	0.40	<3.0	0.10	<3.0
Calcium	5000	64	6.8	<5000	4.7	<5000	6.5	<5000	10.3	<5000
Chromium	10	.79	0.10	<10	0.30	<10	0.0	<10	-0.10	<10
Cobalt	50	.4	0.0	<50	0.40	<50	0.40	<50	0.0	<50
Copper	10	.68	0.10	<10	0.30	<10	0.40	<10	0.20	<10
Iron	100	5.2	4.3	<100	5.3	<100	16.5	<100	2.9	<100
Lead	3.0	1.5	-0.20	<3.0	-0.70	<3.0	-0.70	<3.0	0.10	<3.0
Lithium	20	1.1								
Magnesium	5000	26	16.5	<5000	17.6	<5000	9.7	<5000	9.7	<5000
Manganese	15	.17	0.20	<15	0.10	<15	0.10	<15	0.20	<15
Molybdenum	20	.35								
Nickel	10	.61	0.80	<10	0.90	<10	0.60	<10	0.80	<10
Palladium	50	2.1								
Potassium	10000	51	45.2	<10000	17.5	<10000	19.0	<10000	9.8	<10000
Selenium	10	3.1	1.5	<10	1.6	<10	1.8	<10	2.6	<10
Silicon	200	2.8								
Silver	10	.46	-0.20	<10	-0.50	<10	-0.40	<10	-0.50	<10
Sodium	10000	14	66.1	<10000	53.8	<10000	50.7	<10000	49.7	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-0.70	<2.0	-0.60	<2.0	-1.5	<2.0	-0.70	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.70	<50	0.50	<50	0.70	<50	0.50	<50
Zinc	20	8.9	0.40	<20	0.40	<20	0.40	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.29

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			02:44	
Sample ID:			CCB16	
Metal	RL	IDL	raw	final
Aluminum	200	6.3	1.3	<200
Antimony	6.0	1.8	2.2	<6.0
Arsenic	3.0	1.7	-0.60	<3.0
Barium	200	.23	0.10	<200
Beryllium	1.0	.09	0.0	<1.0
Bismuth	20	2.3		
Boron	100	.94	anr	
Cadmium	3.0	.24	0.20	<3.0
Calcium	5000	64	4.6	<5000
Chromium	10	.79	-0.10	<10
Cobalt	50	.4	0.0	<50
Copper	10	.68	-0.40	<10
Iron	100	5.2	2.0	<100
Lead	3.0	1.5	-1.7	<3.0
Lithium	20	1.1		
Magnesium	5000	26	23.6	<5000
Manganese	15	.17	0.0	<15
Molybdenum	20	.35		
Nickel	10	.61	0.30	<10
Palladium	50	2.1		
Potassium	10000	51	1.6	<10000
Selenium	10	3.1	1.3	<10
Silicon	200	2.8		
Silver	10	.46	-0.60	<10
Sodium	10000	14	50.2	<10000
Sulfur	50	4.9		
Strontium	10	.13		
Thallium	2.0	1.8	-0.20	<2.0
Tin	10	.58		
Titanium	10	.41		
Tungsten	50	5.1		
Vanadium	50	.56	0.40	<50
Zinc	20	8.9	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.29

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		10:32			10:43			11:30	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	40300	100.8	40000	41100	102.8
Antimony	2000	2010	100.5	2000	1970	98.5	2000	1980	99.0
Arsenic	2000	2010	100.5	2000	1980	99.0	2000	1990	99.5
Barium	2000	2020	101.0	2000	2040	102.0	2000	2080	104.0
Beryllium	2000	2030	101.5	2000	2050	102.5	2000	2090	104.5
Bismuth									
Boron	anr								
Cadmium	2000	2010	100.5	2000	1980	99.0	2000	2000	100.0
Calcium	40000	40200	100.5	40000	40800	102.0	40000	41500	103.8
Chromium	2000	2030	101.5	2000	2060	103.0	2000	2060	103.0
Cobalt	2000	2030	101.5	2000	1990	99.5	2000	2010	100.5
Copper	2000	1960	98.0	2000	1940	97.0	2000	1980	99.0
Iron	40000	40500	101.3	40000	41000	102.5	40000	41700	104.3
Lead	2000	2050	102.5	2000	2020	101.0	2000	2040	102.0
Lithium									
Magnesium	40000	39700	99.3	40000	40400	101.0	40000	41000	102.5
Manganese	2000	2050	102.5	2000	2060	103.0	2000	2070	103.5
Molybdenum									
Nickel	2000	2070	103.5	2000	2030	101.5	2000	2050	102.5
Palladium									
Potassium	40000	40100	100.3	40000	40500	101.3	40000	41300	103.3
Selenium	2000	2010	100.5	2000	1980	99.0	2000	1990	99.5
Silicon									
Silver	250	245	98.0	250	245	98.0	250	250	100.0
Sodium	40000	40300	100.8	40000	40900	102.3	40000	41600	104.0
Sulfur									
Strontium									
Thallium	2000	2050	102.5	2000	2020	101.0	2000	2030	101.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2040	102.0	2000	2050	102.5	2000	2070	103.5
Zinc	2000	2050	102.5	2000	2020	101.0	2000	2030	101.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		12:40			13:44			14:53	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	41400	103.5	40000	40000	100.0	40000	40100	100.3
Antimony	2000	2020	101.0	2000	1990	99.5	2000	2000	100.0
Arsenic	2000	2030	101.5	2000	2000	100.0	2000	2010	100.5
Barium	2000	2110	105.5	2000	2030	101.5	2000	2050	102.5
Beryllium	2000	2110	105.5	2000	2030	101.5	2000	2040	102.0
Bismuth									
Boron	anr								
Cadmium	2000	2030	101.5	2000	1990	99.5	2000	2000	100.0
Calcium	40000	41800	104.5	40000	40600	101.5	40000	40600	101.5
Chromium	2000	2080	104.0	2000	2040	102.0	2000	2060	103.0
Cobalt	2000	2040	102.0	2000	2030	101.5	2000	2040	102.0
Copper	2000	2020	101.0	2000	1950	97.5	2000	1990	99.5
Iron	40000	42000	105.0	40000	40700	101.8	40000	40700	101.8
Lead	2000	2070	103.5	2000	2040	102.0	2000	2040	102.0
Lithium									
Magnesium	40000	41100	102.8	40000	39900	99.8	40000	39700	99.3
Manganese	2000	2100	105.0	2000	2030	101.5	2000	2070	103.5
Molybdenum									
Nickel	2000	2080	104.0	2000	2050	102.5	2000	2050	102.5
Palladium									
Potassium	40000	41700	104.3	40000	40400	101.0	40000	40500	101.3
Selenium	2000	2030	101.5	2000	2000	100.0	2000	2010	100.5
Silicon									
Silver	250	251	100.4	250	246	98.4	250	248	99.2
Sodium	40000	42100	105.3	40000	40800	102.0	40000	41100	102.8
Sulfur									
Strontium									
Thallium	2000	2070	103.5	2000	2040	102.0	2000	2040	102.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2090	104.5	2000	2040	102.0	2000	2080	104.0
Zinc	2000	2070	103.5	2000	2020	101.0	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		16:03			17:13			18:17	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	40900	102.3	40000	39800	99.5
Antimony	2000	1970	98.5	2000	2020	101.0	2000	1980	99.0
Arsenic	2000	1990	99.5	2000	2030	101.5	2000	2000	100.0
Barium	2000	2030	101.5	2000	2100	105.0	2000	2040	102.0
Beryllium	2000	2020	101.0	2000	2080	104.0	2000	2030	101.5
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	2030	101.5	2000	1980	99.0
Calcium	40000	40400	101.0	40000	41400	103.5	40000	40400	101.0
Chromium	2000	2030	101.5	2000	2080	104.0	2000	2030	101.5
Cobalt	2000	2020	101.0	2000	2060	103.0	2000	2030	101.5
Copper	2000	1930	96.5	2000	1990	99.5	2000	1930	96.5
Iron	40000	40500	101.3	40000	41500	103.8	40000	40500	101.3
Lead	2000	2030	101.5	2000	2080	104.0	2000	2040	102.0
Lithium									
Magnesium	40000	39600	99.0	40000	40500	101.3	40000	39500	98.8
Manganese	2000	2030	101.5	2000	2090	104.5	2000	2030	101.5
Molybdenum									
Nickel	2000	2030	101.5	2000	2080	104.0	2000	2040	102.0
Palladium									
Potassium	40000	40200	100.5	40000	41400	103.5	40000	40400	101.0
Selenium	2000	1980	99.0	2000	2020	101.0	2000	1990	99.5
Silicon									
Silver	250	244	97.6	250	250	100.0	250	246	98.4
Sodium	40000	40900	102.3	40000	42200	105.5	40000	41200	103.0
Sulfur									
Strontium									
Thallium	2000	2020	101.0	2000	2060	103.0	2000	2020	101.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2030	101.5	2000	2090	104.5	2000	2030	101.5
Zinc	2000	2000	100.0	2000	2050	102.5	2000	2000	100.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		19:04			20:14			21:18	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	42100	105.3	40000	41000	102.5
Antimony	2000	1980	99.0	2000	1990	99.5	2000	2050	102.5
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	2060	103.0
Barium	2000	2040	102.0	2000	2160	108.0	2000	2090	104.5
Beryllium	2000	2030	101.5	2000	2140	107.0	2000	2070	103.5
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	1990	99.5	2000	2050	102.5
Calcium	40000	40500	101.3	40000	42800	107.0	40000	41600	104.0
Chromium	2000	2020	101.0	2000	2090	104.5	2000	2110	105.5
Cobalt	2000	2020	101.0	2000	2040	102.0	2000	2090	104.5
Copper	2000	1930	96.5	2000	1990	99.5	2000	2010	100.5
Iron	40000	40600	101.5	40000	42800	107.0	40000	41500	103.8
Lead	2000	2030	101.5	2000	2050	102.5	2000	2100	105.0
Lithium									
Magnesium	40000	39600	99.0	40000	41900	104.8	40000	40800	102.0
Manganese	2000	2030	101.5	2000	2090	104.5	2000	2100	105.0
Molybdenum									
Nickel	2000	2040	102.0	2000	2050	102.5	2000	2100	105.0
Palladium									
Potassium	40000	40400	101.0	40000	42600	106.5	40000	41400	103.5
Selenium	2000	1980	99.0	2000	1990	99.5	2000	2050	102.5
Silicon									
Silver	250	244	97.6	250	251	100.4	250	254	101.6
Sodium	40000	41100	102.8	40000	43500	108.8	40000	42200	105.5
Sulfur									
Strontium									
Thallium	2000	2030	101.5	2000	2040	102.0	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2030	101.5	2000	2090	104.5	2000	2100	105.0
Zinc	2000	2000	100.0	2000	2010	100.5	2000	2070	103.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		22:27			23:38			00:48	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40800	102.0	40000	40900	102.3	40000	41200	103.0
Antimony	2000	2010	100.5	2000	2020	101.0	2000	2030	101.5
Arsenic	2000	2010	100.5	2000	2030	101.5	2000	2040	102.0
Barium	2000	2090	104.5	2000	2090	104.5	2000	2110	105.5
Beryllium	2000	2070	103.5	2000	2080	104.0	2000	2090	104.5
Bismuth									
Boron	anr								
Cadmium	2000	2010	100.5	2000	2030	101.5	2000	2040	102.0
Calcium	40000	41300	103.3	40000	41600	104.0	40000	41700	104.3
Chromium	2000	2080	104.0	2000	2080	104.0	2000	2090	104.5
Cobalt	2000	2040	102.0	2000	2060	103.0	2000	2060	103.0
Copper	2000	2000	100.0	2000	1990	99.5	2000	2010	100.5
Iron	40000	41200	103.0	40000	41500	103.8	40000	41500	103.8
Lead	2000	2060	103.0	2000	2080	104.0	2000	2070	103.5
Lithium									
Magnesium	40000	40400	101.0	40000	40900	102.3	40000	40800	102.0
Manganese	2000	2080	104.0	2000	2080	104.0	2000	2100	105.0
Molybdenum									
Nickel	2000	2060	103.0	2000	2080	104.0	2000	2090	104.5
Palladium									
Potassium	40000	40800	102.0	40000	41400	103.5	40000	41700	104.3
Selenium	2000	2000	100.0	2000	2020	101.0	2000	2020	101.0
Silicon									
Silver	250	251	100.4	250	251	100.4	250	252	100.8
Sodium	40000	41200	103.0	40000	42100	105.3	40000	42500	106.3
Sulfur									
Strontium									
Thallium	2000	2050	102.5	2000	2060	103.0	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2080	104.0	2000	2080	104.0	2000	2100	105.0
Zinc	2000	2030	101.5	2000	2050	102.5	2000	2050	102.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

10.2.3
10

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		01:52			02:39	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	40200	100.5
Antimony	2000	1970	98.5	2000	1990	99.5
Arsenic	2000	1980	99.0	2000	2010	100.5
Barium	2000	2030	101.5	2000	2050	102.5
Beryllium	2000	2010	100.5	2000	2040	102.0
Bismuth						
Boron	anr					
Cadmium	2000	1980	99.0	2000	2000	100.0
Calcium	40000	40200	100.5	40000	40800	102.0
Chromium	2000	2050	102.5	2000	2050	102.5
Cobalt	2000	2000	100.0	2000	2040	102.0
Copper	2000	1970	98.5	2000	1970	98.5
Iron	40000	39900	99.8	40000	40500	101.3
Lead	2000	2020	101.0	2000	2050	102.5
Lithium						
Magnesium	40000	39400	98.5	40000	39900	99.8
Manganese	2000	2050	102.5	2000	2050	102.5
Molybdenum						
Nickel	2000	2030	101.5	2000	2050	102.5
Palladium						
Potassium	40000	40100	100.3	40000	40500	101.3
Selenium	2000	1960	98.0	2000	2000	100.0
Silicon						
Silver	250	247	98.8	250	248	99.2
Sodium	40000	41000	102.5	40000	41500	103.8
Sulfur						
Strontium						
Thallium	2000	2020	101.0	2000	2040	102.0
Tin						
Titanium						
Tungsten						
Vanadium	2000	2050	102.5	2000	2060	103.0
Zinc	2000	1990	99.5	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

10.2.3
10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				10:55		11:07		11:13	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	200	100.0	511	102.2	96.1	96.1
Antimony	6.0	20	3.0	5.9	98.3	19.6	98.0		
Arsenic	8.0	20	3.0	9.2	115.0	19.4	97.0	3.3	110.0
Barium	200		4.0	197	98.5			4.0	100.0
Beryllium	2.0		1.0	2.2	110.0			1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.3	110.0				
Calcium	5000		1000	5290	105.8			1040	104.0
Chromium	10		2.0	11.0	110.0			2.3	115.0
Cobalt	50		3.0	50.6	101.2			3.1	103.3
Copper	10		2.0	11.1	111.0			2.5	125.0
Iron	100	500		104	104.0	524	104.8		
Lead	3.0	20	2.5	3.0	100.0	20.1	100.5		
Lithium	20								
Magnesium	5000		100	5250	105.0				
Manganese	15		3.0	16.2	108.0			3.3	110.0
Molybdenum	20		4.0						
Nickel	10		4.0	11.8	118.0			4.6	115.0
Palladium	50								
Potassium	5000		2000	5220	104.4			2040	102.0
Selenium	10	20	5.0	12.7	127.0	22.1	110.5		
Silicon	200								
Silver	5.0		1.0	4.3	86.0				
Sodium	5000		1000	5350	107.0			1050	105.0
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	9.1	91.0			1.5	75.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	53.2	106.4				
Zinc	20		10	22.1	110.5			10.8	108.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				18:29		18:35		18:41	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	205	102.5	97.2	97.2	508	101.6
Antimony	6.0	20	3.0	7.4	123.3			19.4	97.0
Arsenic	8.0	20	3.0	8.6	107.5	2.4	80.0	17.2	86.0
Barium	200		4.0	203	101.5	4.1	102.5		
Beryllium	2.0		1.0	2.2	110.0	1.0	100.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.4	113.3				
Calcium	5000		1000	5420	108.4	1060	106.0		
Chromium	10		2.0	11.3	113.0	2.0	100.0		
Cobalt	50		3.0	52.1	104.2	3.3	110.0		
Copper	10		2.0	10.7	107.0	1.7	85.0		
Iron	100	500		108	108.0			518	103.6
Lead	3.0	20	2.5	2.2	73.3			19.2	96.0
Lithium	20								
Magnesium	5000		100	5360	107.2				
Manganese	15		3.0	17.1	114.0	3.3	110.0		
Molybdenum	20		4.0						
Nickel	10		4.0	11.2	112.0	4.5	112.5		
Palladium	50								
Potassium	5000		2000	5320	106.4	2090	104.5		
Selenium	10	20	5.0	12.7	127.0			21.2	106.0
Silicon	200								
Silver	5.0		1.0	4.3	86.0				
Sodium	5000		1000	5580	111.6	1100	110.0		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	7.8	78.0	1.8	90.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	55.1	110.2				
Zinc	20		10	22.7	113.5	11.5	115.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				18:46		02:03		02:09	
Sample ID:	CRI	CRIA	CRID	CRID4		CRI3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	109	109.0	208	104.0	96.6	96.6
Antimony	6.0	20	3.0			5.8	96.7		
Arsenic	8.0	20	3.0	2.2	73.3	9.7	121.3	2.5	83.3
Barium	200		4.0	4.2	105.0	196	98.0	4.2	105.0
Beryllium	2.0		1.0	1.0	100.0	2.2	110.0	1.0	100.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0			3.0	100.0		
Calcium	5000		1000	1040	104.0	5270	105.4	1020	102.0
Chromium	10		2.0	2.4	120.0	10.2	102.0	2.3	115.0
Cobalt	50		3.0	3.5	116.7	49.9	99.8	2.8	93.3
Copper	10		2.0	2.0	100.0	10.1	101.0	2.3	115.0
Iron	100	500				105	105.0		
Lead	3.0	20	2.5			2.5	83.3		
Lithium	20								
Magnesium	5000		100			5190	103.8		
Manganese	15		3.0	3.2	106.7	15.6	104.0	3.2	106.7
Molybdenum	20		4.0						
Nickel	10		4.0	4.6	115.0	11.5	115.0	4.4	110.0
Palladium	50								
Potassium	5000		2000	2030	101.5	5140	102.8	2030	101.5
Selenium	10	20	5.0			12.1	121.0		
Silicon	200								
Silver	5.0		1.0			4.4	88.0		
Sodium	5000		1000	1080	108.0	5430	108.6	1070	107.0
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	1.5	75.0	8.3	83.0	2.1	105.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0			51.5	103.0		
Zinc	20		10	11.3	113.0	21.7	108.5	11.4	114.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				02:15		02:21	
Sample ID:	CRI	CRIA	CRID	CRIA3		CRID6	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	500	100.0	100	100.0
Antimony	6.0	20	3.0	20.4	102.0		
Arsenic	8.0	20	3.0	17.1	85.5	3.2	106.7
Barium	200		4.0			4.4	110.0
Beryllium	2.0		1.0			1.1	110.0
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0				
Calcium	5000		1000			1040	104.0
Chromium	10		2.0			2.2	110.0
Cobalt	50		3.0			2.9	96.7
Copper	10		2.0			2.0	100.0
Iron	100	500		510	102.0		
Lead	3.0	20	2.5	19.6	98.0		
Lithium	20						
Magnesium	5000		100				
Manganese	15		3.0			3.2	106.7
Molybdenum	20		4.0				
Nickel	10		4.0			4.6	115.0
Palladium	50						
Potassium	5000		2000			2060	103.0
Selenium	10	20	5.0	21.6	108.0		
Silicon	200						
Silver	5.0		1.0				
Sodium	5000		1000			1100	110.0
Sulfur	50	50	50				
Strontium	10						
Thallium	10		2.0			0.50U	0.0* (a)
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0				
Zinc	20		10			11.2	112.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31593 Units: ug/l

Time:			11:18		11:24		18:52		18:58	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	543000	108.6	517000	103.4	531000	106.2	511000	102.2
Antimony		1000	2.7		1110	111.0	6.4		1100	110.0
Arsenic		1000	0.30		1020	102.0	1.8		1020	102.0
Barium		500	-1.3		533	106.6	-0.80		539	107.8
Beryllium		500	0.60		495	99.0	0.60		495	99.0
Bismuth		500	-16		-16	0.0	-17		-17	0.0*
Boron			0.60		-6.5		1.2		-8.4	
Cadmium		1000	0.80		1090	109.0	0.40		1070	107.0
Calcium	400000	400000	389000	97.3	379000	94.8	376000	94.0	380000	95.0
Chromium		500	0.40		478	95.6	0.30		487	97.4
Cobalt		500	-2.2		527	105.4	-2.4		529	105.8
Copper		500	-5.0		511	102.2	-4.4		513	102.6
Iron	200000	200000	194000	97.0	198000	99.0	189000	94.5	198000	99.0
Lead		1000	2.4		988	98.8	2.3		983	98.3
Lithium		500	3.5		3.8	0.8	3.6		3.7	0.7*
Magnesium	500000	500000	525000	105.0	511000	102.2	506000	101.2	509000	101.8
Manganese		500	0.90		485	97.0	0.0		490	98.0
Molybdenum		500	-1.9		544	108.8	-2.1		544	108.8
Nickel		1000	-1.5		950	95.0	-1.3		944	94.4
Palladium		500	-12		531	106.2	-11		529	105.8
Potassium			174		154		178		156	
Selenium		1000	1.7		1130	113.0	-5.3		1120	112.0
Silicon			15.5		6.7		15.5		7.6	
Silver		1000	8.1		972	97.2	4.9		979	97.9
Sodium			-12		3.5		0.30		10.6	
Sulfur		500	-6.8		-6.4	0.0*	-6.2		-7.1	0.0*
Strontium			3.5		3.3		3.5		3.3	
Thallium		1000	-1.6		1060	106.0	-1.3		1050	105.0
Tin			-4.2		-3.9		-4.3		-3.8	
Titanium			2.6		2.2		2.0		1.6	
Tungsten		500	7.5		27.2	5.4*	1.3		19.7	3.9*
Vanadium		500	0.30		479	95.8	0.60		487	97.4
Zinc		1000	-4.6		1030	103.0	-3.9		1010	101.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31593 Units: ug/l

Time:							
Sample ID:							
Metal							
Zirconium	500	-1.8	-1.0	0.0*	-2.3	-2.0	0.0*

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31593 Units: ug/l

Time:			02:27		02:33	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	523000	104.6	507000	101.4
Antimony		1000	3.0		1070	107.0
Arsenic		1000	-0.10		991	99.1
Barium		500	-0.80		526	105.2
Beryllium		500	0.70		484	96.8
Bismuth		500	-15		-19	0.0*
Boron			-0.60		-7.1	
Cadmium		1000	0.50		1060	106.0
Calcium	400000	400000	378000	94.5	370000	92.5
Chromium		500	0.0		477	95.4
Cobalt		500	-2.2		517	103.4
Copper		500	-4.8		506	101.2
Iron	200000	200000	187000	93.5	192000	96.0
Lead		1000	1.4		972	97.2
Lithium		500	2.2		2.1	0.4*
Magnesium	500000	500000	503000	100.6	499000	99.8
Manganese		500	0.30		484	96.8
Molybdenum		500	-1.6		531	106.2
Nickel		1000	-1.3		927	92.7
Palladium		500	-13		522	104.4
Potassium			151		157	
Selenium		1000	-0.40		1090	109.0
Silicon			17.7		8.3	
Silver		1000	5.5		962	96.2
Sodium			26.4		39.1	
Sulfur		500	-11		-7.9	0.0*
Strontium			3.5		3.4	
Thallium		1000	-1.7		1030	103.0
Tin			-3.8		-4.1	
Titanium			1.7		1.9	
Tungsten		500	2.8		18.5	3.7*
Vanadium		500	0.10		478	95.6
Zinc		1000	-3.8		991	99.1

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31593 Units: ug/l

Time:				
Sample ID:				
Metal				
Zirconium	500	-2.4	-2.0	0.0*

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:46	MA31602-STD1	1		STDA
07:52	MA31602-STD2	1		STDD
07:58	ZZZZZZ	1		
08:03	ZZZZZZ	1		
08:10	MA31602-ICV1	1		
08:24	MA31602-ICB1	1		
08:32	MA31602-ICV2	1		
08:44	MA31602-ICB2	1		
08:49	MA31602-ICCV1	1		
08:58	MA31602-CCB1	1		
09:03	MA31602-CRI1	1		
09:09	MA31602-CRID1	1		
09:15	MA31602-CRIA1	1		
09:21	MA31602-CRID2	1		
09:27	MA31602-ICSA1	1		
09:33	MA31602-ICSAB1	1		
09:39	ZZZZZZ	1		
09:45	ZZZZZZ	1		
09:51	ZZZZZZ	1		
09:57	ZZZZZZ	1		
10:03	MA31602-CCV1	1		
10:09	MA31602-CCB2	1		
10:15	ZZZZZZ	1		
10:20	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:32	ZZZZZZ	1		
10:38	ZZZZZZ	1		
10:44	ZZZZZZ	1		
10:49	MP72952-S1	3		
10:55	MP72952-S2	3		
11:01	JB40687-3	3		(sample used for QC only; not part of login JB40351)
11:07	MA31602-CCV2	1		
11:12	MA31602-CCB3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:18	MP72952-SD1	15		
11:24	ZZZZZZ	1		
11:30	ZZZZZZ	2		
11:36	ZZZZZZ	5		
11:41	ZZZZZZ	1		
11:47	ZZZZZZ	1		
11:53	ZZZZZZ	1		
11:59	ZZZZZZ	1		
12:05	ZZZZZZ	1		
12:11	MA31602-CCV3	1		
12:17	MA31602-CCB4	1		
12:23	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:35	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:48	MP72775-B1	1		
12:53	ZZZZZZ	5		
12:59	ZZZZZZ	1		
13:05	ZZZZZZ	2		
13:11	ZZZZZZ	1		
13:17	MA31602-CCV4	1		
13:23	MA31602-CCB5	1		
13:28	ZZZZZZ	1		
13:34	ZZZZZZ	50		
13:40	ZZZZZZ	1		
13:46	MA31602-CCV5	1		
13:52	MA31602-CCB6	1		
13:58	MA31602-CRI2	1		
14:16	MA31602-CRID3	1		
14:22	MA31602-CRIA2	1		
14:28	MA31602-CRID4	1		
14:34	MA31602-CCV6	1		
14:40	MA31602-CCB7	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:46	MA31602-ICSA2	1		
14:52	MA31602-ICSAB2	1		
14:57	MP72792-S1	1		
15:03	MP72792-S1	5		
15:09	MP72792-S2	1		
15:14	MP72792-S2	5		
15:20	JB40213-1	1		(sample used for QC only; not part of login JB40351)
15:26	MP72792-SD1	5		
15:32	JB40213-1	5		(sample used for QC only; not part of login JB40351)
15:38	MP72792-SD1	25		
15:43	MA31602-CCV7	1		
15:49	MA31602-CCB8	1		
15:55	ZZZZZZ	3		
16:01	ZZZZZZ	10		
16:07	ZZZZZZ	3		
16:13	ZZZZZZ	10		
16:19	ZZZZZZ	1		
16:25	MP72853-B1	1		
16:30	ZZZZZZ	1		
16:36	JB40351-1	3		
---------->	Last reportable sample/prep for job JB40351			
16:42	MP72856-MB1	1		
16:48	MP72856-LC1	1		
16:54	MA31602-CCV8	1		
16:59	MA31602-CCB9	1		
17:05	ZZZZZZ	1		
17:11	MP72971-MB2	1		
17:17	MP72971-LC1	1		
17:23	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:35	MP72958-MB1	1		
17:40	MP72958-B1	1		
17:46	MP72958-S1	1		high RSD-s
17:52	MP72958-S2	1		high RSD-s

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:58	MA31602-CCV9	1		
18:03	MA31602-CCB10	1		
18:09	JB41043-10	1		(sample used for QC only; not part of login JB40351)
18:15	MP72958-SD1	5		high RSD-s
18:21	ZZZZZZ	1		
18:27	ZZZZZZ	1		
18:33	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:44	ZZZZZZ	1		
18:50	ZZZZZZ	1		
18:56	ZZZZZZ	1		
19:02	ZZZZZZ	1		
19:08	MA31602-CCV10	1		
19:13	MA31602-CCB11	1		
19:19	ZZZZZZ	1		
19:25	ZZZZZZ	1		
19:31	ZZZZZZ	1		
19:37	ZZZZZZ	1		
19:43	ZZZZZZ	1		
19:48	ZZZZZZ	1		
19:54	ZZZZZZ	1		
20:00	ZZZZZZ	1		
20:06	ZZZZZZ	1		
20:12	ZZZZZZ	1		
20:18	MA31602-CCV11	1		
20:23	MA31602-CCB12	1		
20:29	ZZZZZZ	1		
20:35	MP72882-MB1	1		
20:41	MP72882-B1	1		
20:47	MP72882-S1	1		
20:52	MP72882-S2	1		
20:58	JB40471-1	1		(sample used for QC only; not part of login JB40351)
21:04	MP72882-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:10	ZZZZZZ	1		
21:15	ZZZZZZ	1		
21:21	MA31602-CCV12	1		
21:27	MA31602-CCB13	1		
21:33	MA31602-CRI3	1		
21:39	ZZZZZZ	1		
21:45	MA31602-CRIA3	1		
21:51	MA31602-CRID5	1		
21:57	MA31602-ICSA3	1		
22:03	MA31602-ICSAB3	1		
22:09	ZZZZZZ	1		
22:14	ZZZZZZ	1		
22:20	MA31602-CCV13	1		
22:26	MA31602-CCB14	1		
---------->	Last reportable CCB for job JB40351			
22:32	ZZZZZZ	1		
22:38	ZZZZZZ	1		
22:44	ZZZZZZ	1		
22:49	ZZZZZZ	1		
22:55	ZZZZZZ	1		
23:01	ZZZZZZ	1		
23:07	ZZZZZZ	1		
23:12	ZZZZZZ	1		
23:18	ZZZZZZ	1		
23:24	ZZZZZZ	1		
23:30	MA31602-CCV14	1		
23:36	MA31602-CCB15	1		
23:41	ZZZZZZ	1		
23:47	ZZZZZZ	1		
23:53	MP72871-MB1	1		
23:59	MP72871-LC1	1		
00:05	MP72871-S1	1		
00:10	MP72871-S2	1		
00:16	JB40356-4	1		(sample used for QC only; not part of login JB40351)

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:22	MP72871-SD1	5		
00:28	ZZZZZZ	1		
00:34	ZZZZZZ	1		
00:40	MA31602-CCV15	1		
00:45	MA31602-CCB16	1		
00:51	ZZZZZZ	1		
00:57	ZZZZZZ	1		
01:03	ZZZZZZ	1		
01:09	ZZZZZZ	1		
01:15	ZZZZZZ	1		
01:21	ZZZZZZ	1		
01:27	MP72985-MB1	1		
01:32	MP72985-B1	1		
01:38	MP72985-S1	1		
01:44	MP72985-S2	1		
01:49	MA31602-CCV16	1		
01:55	MA31602-CCB17	1		
02:01	JB40638-2	1		(sample used for QC only; not part of login JB40351)
02:07	MP72985-SD1	5		
02:13	ZZZZZZ	1		
02:18	MP73023-MB1	1		
02:24	MP73023-LC1	1		
02:30	MP73023-B1	1		
02:36	MP73023-S1	1		
02:41	MP73023-S2	1		
02:47	JB41201-10	1		(sample used for QC only; not part of login JB40351)
02:53	MP73023-SD1	5		
02:59	MA31602-CCV17	1		
03:04	MA31602-CCB18	1		
03:10	ZZZZZZ	1		
03:16	ZZZZZZ	1		
03:22	ZZZZZZ	1		
03:28	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:33	ZZZZZZ	1		
03:39	ZZZZZZ	1		
03:45	ZZZZZZ	1		
03:51	ZZZZZZ	1		
03:57	ZZZZZZ	1		
04:03	ZZZZZZ	1		
04:09	MA31602-CCV18	1		
04:14	MA31602-CCB19	1		
04:20	ZZZZZZ	1		
04:26	ZZZZZZ	1		
04:32	ZZZZZZ	1		
04:38	ZZZZZZ	1		
04:44	ZZZZZZ	1		
04:49	ZZZZZZ	1		
04:55	ZZZZZZ	1		
05:01	ZZZZZZ	1		
05:07	ZZZZZZ	1		
05:12	MA31602-CCV19	1		
05:18	MA31602-CCB20	1		
05:24	ZZZZZZ	1		
05:30	ZZZZZZ	1		
05:36	ZZZZZZ	1		
05:42	MA31602-CCV20	1		
05:48	MA31602-CCB21	1		
05:53	MA31602-CRI4	1		
05:59	MA31602-CRID6	1		
06:05	MA31602-CRIA4	1		
06:11	MA31602-CRID7	1		
06:17	MA31602-ICSA4	1		
06:23	MA31602-ICSAB4	1		
06:29	MA31602-CCV21	1		
06:35	MA31602-CCB22	1		
06:41	MA31602-CRID8	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:47	ZZZZZZ	1		
06:52	ZZZZZZ	1		
06:58	ZZZZZZ	1		
07:04	ZZZZZZ	1		
07:11	ZZZZZZ	1		
07:16	MA31602-CCV22	1		
07:22	MA31602-CCB23	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
07:46	MA31602-STD1	1541 R	63127 R	14764 R	2977 R
07:52	MA31602-STD2	1426	57669	14535	2507
07:58	ZZZZZZ	1478	60048	14397	2641
08:03	ZZZZZZ	1536	62600	14562	2963
08:10	MA31602-ICV1	No results reported for the elements associated with this internal standard.			
08:24	MA31602-ICB1	No results reported for the elements associated with this internal standard.			
08:32	MA31602-ICV2	1478	59372	14606	2640
08:44	MA31602-ICB2	1540	63063	14835	2976
08:49	MA31602-ICCV1	1478	60052	14687	2637
08:58	MA31602-CCB1	1549	62399	14714	2981
09:03	MA31602-CRI1	1522	62395	14999	2893
09:09	MA31602-CRID1	1562	64249	14981	2993
09:15	MA31602-CRIA1	1543	63441	14711	2964
09:21	MA31602-CRID2	1516	61899	14320	2908
09:27	MA31602-ICSA1	1346	54232	13904	2277
09:33	MA31602-ICSAB1	1351	54096	13694	2290
09:39	ZZZZZZ	6055 !	192270 !	33374 !	10743 !
09:45	ZZZZZZ	6037 !	197770 !	31832 !	10748 !
09:51	ZZZZZZ	1552	63538	14606	3040
09:57	ZZZZZZ	1462	62989	14783	2916
10:03	MA31602-CCV1	1484	59891	14476	2648
10:09	MA31602-CCB2	1546	63288	14478	2990
10:15	ZZZZZZ	1421	59310	14257	2570
10:20	ZZZZZZ	1319	54152	14065	2365
10:26	ZZZZZZ	1531	63399	14673	2970
10:32	ZZZZZZ	1503	62680	15198	2575
10:38	ZZZZZZ	1544	63411	15402	2662
10:44	ZZZZZZ	1590	63979	15180	2693
10:49	MP72952-S1	1528	62863	15038	2635
10:55	MP72952-S2	1542	62811	15499	2645
11:01	JB40687-3	1537	62063	15071	2671
11:07	MA31602-CCV2	1476	60140	14294	2637
11:12	MA31602-CCB3	1542	63215	14763	2979

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:18	MP72952-SD1	1530	61951	14518	2825
11:24	ZZZZZZ	1552	63120	15026	2716
11:30	ZZZZZZ	1530	61866	14986	2725
11:36	ZZZZZZ	1545	63013	14739	2839
11:41	ZZZZZZ	1139	46335	13569	1906 !
11:47	ZZZZZZ	1206	48178	13945	2022 !
11:53	ZZZZZZ	1156	45887	13675	1928 !
11:59	ZZZZZZ	1169	46970	13879	1955 !
12:05	ZZZZZZ	1532	63444	14682	2959
12:11	MA31602-CCV3	1480	62074	14626	2636
12:17	MA31602-CCB4	1558	65108	14988	2998
12:23	ZZZZZZ	1384	58922	14729	2567
12:29	ZZZZZZ	1378	58611	14672	2557
12:35	ZZZZZZ	1334	54679	14717	2328
12:41	ZZZZZZ	6525 !	999999 !	37525 !	11531 !
12:48	MP72775-B1	1438	60530	14600	2660
12:53	ZZZZZZ	1466	59760	14861	2717
12:59	ZZZZZZ	1363	54886	14323	2421
13:05	ZZZZZZ	1370	56543	14399	2440
13:11	ZZZZZZ	1553	64578	14794	3008
13:17	MA31602-CCV4	1468	59685	14209	2610
13:23	MA31602-CCB5	1534	64360	14923	2958
13:28	ZZZZZZ	1402	57173	14102	2537
13:34	ZZZZZZ	1451	59121	13987	2664
13:40	ZZZZZZ	1530	63259	14191	2962
13:46	MA31602-CCV5	1468	60311	14212	2616
13:52	MA31602-CCB6	1534	63853	14388	2956
13:58	MA31602-CRI2	1516	61669	14166	2874
14:16	MA31602-CRID3	1545	60986	13543	2956
14:22	MA31602-CRIA2	1564	62885	14182	3002
14:28	MA31602-CRID4	1564	64312	14683	2993
14:34	MA31602-CCV6	1480	59241	14064	2635
14:40	MA31602-CCB7	1536	63447	14693	2958

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:46	MA31602-ICSA2	1369	53589	13153	2312
14:52	MA31602-ICSAB2	1374	54710	13514	2324
14:57	MP72792-S1	No results reported for the elements associated with this internal standard.			
15:03	MP72792-S1	1504	60971	13998	2731
15:09	MP72792-S2	1474	60017	14126	2553
15:14	MP72792-S2	1515	60450	14092	2759
15:20	JB40213-1	No results reported for the elements associated with this internal standard.			
15:26	MP72792-SD1	No results reported for the elements associated with this internal standard.			
15:32	JB40213-1	1545	63320	13876	2840
15:38	MP72792-SD1	1561	62668	14206	2952
15:43	MA31602-CCV7	1473	60972	13835	2626
15:49	MA31602-CCB8	1516	62620	14628	2916
15:55	ZZZZZZ	1341	52963	14027	2329
16:01	ZZZZZZ	1456	57930	14119	2604
16:07	ZZZZZZ	1329	53812	14124	2303
16:13	ZZZZZZ	1414	56315	14038	2527
16:19	ZZZZZZ	1539	62996	14074	2976
16:25	MP72853-B1	1498	61477	14085	2737
16:30	ZZZZZZ	1581	63100	14422	2739
16:36	JB40351-1	1509	61821	14092	2821
16:42	MP72856-MB1	1541	64049	14354	2983
16:48	MP72856-LC1	1544	61086	14352	2885
16:54	MA31602-CCV8	1504	60587	14352	2673
16:59	MA31602-CCB9	1546	65468	14331	2979
17:05	ZZZZZZ	1537	63249	14250	2966
17:11	MP72971-MB2	1326	52378	14276	2275
17:17	MP72971-LC1	1518	63842	14029	2845
17:23	ZZZZZZ	1278	53450	13758	2164
17:29	ZZZZZZ	1317	52358	13891	2227
17:35	MP72958-MB1	1541	65868	14461	2984
17:40	MP72958-B1	1515	62161	14353	2772
17:46	MP72958-S1	1565	60824	13977	2783
17:52	MP72958-S2	1612	60893	14002	2858

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:58	MA31602-CCV9	1500	60107	13564	2660
18:03	MA31602-CCB10	1586	64080	14332	3024
18:09	JB41043-10	1592	61374	13115	2916
18:15	MP72958-SD1	1627	65079	14059	3059
18:21	ZZZZZZ	1650	67760	14999	3012
18:27	ZZZZZZ	1588	65954	14417	2957
18:33	ZZZZZZ	1604	65192	14804	2982
18:38	ZZZZZZ	1615	66829	15105	2954
18:44	ZZZZZZ	1648	65783	14890	2948
18:50	ZZZZZZ	1472	59397	13399	2717
18:56	ZZZZZZ	1571	65930	14599	2897
19:02	ZZZZZZ	1535	66176	14753	2878
19:08	MA31602-CCV10	1561	60803	14023	2760
19:13	MA31602-CCB11	1584	65033	14340	3024
19:19	ZZZZZZ	1584	65009	14421	2979
19:25	ZZZZZZ	1640	64588	14306	2968
19:31	ZZZZZZ	1563	66079	14506	2847
19:37	ZZZZZZ	1517	59577	13144	2737
19:43	ZZZZZZ	1543	59977	13845	2782
19:48	ZZZZZZ	1600	65444	14346	2995
19:54	ZZZZZZ	1602	61957	13602	2950
20:00	ZZZZZZ	1591	64635	14454	2893
20:06	ZZZZZZ	1614	66648	14993	2939
20:12	ZZZZZZ	1641	66048	14862	2970
20:18	MA31602-CCV11	1501	61698	14627	2664
20:23	MA31602-CCB12	1577	65780	14899	3008
20:29	ZZZZZZ	1545	62234	14684	2767
20:35	MP72882-MB1	1578	60892	14588	3029
20:41	MP72882-B1	1579	64702	15142	2867
20:47	MP72882-S1	1583	65003	14566	2783
20:52	MP72882-S2	1481	60833	14068	2625
20:58	JB40471-1	1519	62826	14935	2771
21:04	MP72882-SD1	1550	62919	14894	2941

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:10	ZZZZZZ	1519	64185	15460	2639
21:15	ZZZZZZ	1309	55256	14505	2193
21:21	MA31602-CCV12	1478	59479	14993	2647
21:27	MA31602-CCB13	1533	64897	15176	2974
21:33	MA31602-CRI3	1534	65014	15239	2931
21:39	ZZZZZZ	1513	63479	14752	2924
21:45	MA31602-CRIA3	1519	64451	14959	2939
21:51	MA31602-CRID5	1548	64553	15084	2991
21:57	MA31602-ICSA3	1363	55593	13955	2317
22:03	MA31602-ICSAB3	1345	55988	14325	2288
22:09	ZZZZZZ	1185	48950	14291	1978 !
22:14	ZZZZZZ	1141	45695	14368	1931 !
22:20	MA31602-CCV13	1462	61260	13904	2623
22:26	MA31602-CCB14	1534	64386	15062	2973
22:32	ZZZZZZ	1531	63230	15348	2694
22:38	ZZZZZZ	1529	65227	15151	2649
22:44	ZZZZZZ	1522	63079	15107	2664
22:49	ZZZZZZ	1542	61996	15313	2693
22:55	ZZZZZZ	1573	62815	15539	2703
23:01	ZZZZZZ	1523	63871	15723	2661
23:07	ZZZZZZ	1476	63085	15376	2706
23:12	ZZZZZZ	1470	60979	14819	2552
23:18	ZZZZZZ	1463	60195	14891	2460
23:24	ZZZZZZ	1513	63419	14883	2813
23:30	MA31602-CCV14	1463	59686	14507	2620
23:36	MA31602-CCB15	1529	65321	14924	2956
23:41	ZZZZZZ	1464	60831	14880	2547
23:47	ZZZZZZ	1490	62350	15274	2678
23:53	MP72871-MB1	1551	67916	14323	3007
23:59	MP72871-LC1	1511	63063	14744	2841
00:05	MP72871-S1	1443	60302	15017	2643
00:10	MP72871-S2	1440	61295	14841	2637
00:16	JB40356-4	1485	62418	14803	2810

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:22	MP72871-SD1	1547	64207	14514	2982
00:28	ZZZZZZ	1487	62117	14735	2827
00:34	ZZZZZZ	1476	62920	14697	2792
00:40	MA31602-CCV15	1484	60553	14385	2657
00:45	MA31602-CCB16	1552	64702	14621	3004
00:51	ZZZZZZ	1503	62251	14671	2865
00:57	ZZZZZZ	1427	57250	14571	2465
01:03	ZZZZZZ	1516	63111	14667	2922
01:09	ZZZZZZ	1460	59923	14573	2684
01:15	ZZZZZZ	1443	59497	14268	2627
01:21	ZZZZZZ	1479	60921	14742	2534
01:27	MP72985-MB1	1542	64025	14733	3015
01:32	MP72985-B1	1505	62279	14587	2775
01:38	MP72985-S1	1527	63353	15006	2649
01:44	MP72985-S2	1515	63098	14993	2626
01:49	MA31602-CCV16	1473	60420	14382	2641
01:55	MA31602-CCB17	1558	64310	14768	3024
02:01	JB40638-2	1566	65104	14870	2748
02:07	MP72985-SD1	1561	65124	14772	2916
02:13	ZZZZZZ	1494	62085	14921	2696
02:18	MP73023-MB1	1531	64296	14717	2997
02:24	MP73023-LC1	1530	64370	15034	2737
02:30	MP73023-B1	1502	61358	14840	2771
02:36	MP73023-S1	1555	62717	14923	2667
02:41	MP73023-S2	1562	62881	14793	2688
02:47	JB41201-10	1580	64434	15030	2754
02:53	MP73023-SD1	1548	63825	14744	2895
02:59	MA31602-CCV17	1459	60100	14339	2617
03:04	MA31602-CCB18	1529	63760	14543	2975
03:10	ZZZZZZ	1631	67908	15988	2742
03:16	ZZZZZZ	1630	66700	15828	2741
03:22	ZZZZZZ	1682	68939	16614	2627
03:28	ZZZZZZ	1645	67559	15700	2750

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:33	ZZZZZZ	1412	58149	14408	2277
03:39	ZZZZZZ	1498	62206	15648	2229
03:45	ZZZZZZ	1353	54816	13929	2199
03:51	ZZZZZZ	1382	57044	14490	2122
03:57	ZZZZZZ	1420	58033	14463	2329
04:03	ZZZZZZ	1416	58554	14409	2300
04:09	MA31602-CCV18	1479	59889	14243	2653
04:14	MA31602-CCB19	1547	63671	14571	3003
04:20	ZZZZZZ	1479	57591	14085	2415
04:26	ZZZZZZ	1441	57393	13853	2349
04:32	ZZZZZZ	1640	64956	14796	2795
04:38	ZZZZZZ	1547	62895	14297	2745
04:44	ZZZZZZ	1551	62761	14570	2736
04:49	ZZZZZZ	1558	63244	14333	2799
04:55	ZZZZZZ	1567	64553	14508	2771
05:01	ZZZZZZ	1590	64413	14631	2812
05:07	ZZZZZZ	1566	64197	14383	2765
05:12	MA31602-CCV19	1465	59700	13888	2616
05:18	MA31602-CCB20	1547	62919	14095	2982
05:24	ZZZZZZ	1325	51702	13711	2262
05:30	ZZZZZZ	1329	51817	13970	2261
05:36	ZZZZZZ	1278	50956	13684	2167
05:42	MA31602-CCV20	1473	59550	13821	2631
05:48	MA31602-CCB21	1547	62662	14145	2989
05:53	MA31602-CRI4	1521	63011	14162	2895
05:59	MA31602-CRID6	1548	63865	14109	2981
06:05	MA31602-CRIA4	1552	64080	14316	2996
06:11	MA31602-CRID7	1543	62703	13899	2968
06:17	MA31602-ICSA4	1359	54878	13357	2304
06:23	MA31602-ICSAB4	1346	54145	13105	2287
06:29	MA31602-CCV21	1479	60241	14091	2638
06:35	MA31602-CCB22	1534	63543	14117	2966
06:41	MA31602-CRID8	1523	62499	14156	2932

INTERNAL STANDARD SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:47	ZZZZZZ	1490	61779	14170	2887
06:52	ZZZZZZ	1612	62300	13810	2660
06:58	ZZZZZZ	1556	63674	14386	2997
07:04	ZZZZZZ	1575	64255	14479	3046
07:11	ZZZZZZ	1537	62808	14029	2966
07:16	MA31602-CCV22	1468	59607	13855	2627
07:22	MA31602-CCB23	1556	63828	14315	3005

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			08:44		08:58		10:09		11:12	
Sample ID:			ICB2		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	-6.4	<200	3.2	<200	8.5	<200	8.1	<200
Antimony	6.0	1.8	0.20	<6.0	0.60	<6.0	-0.10	<6.0	0.40	<6.0
Arsenic	3.0	1.7	0.50	<3.0	0.20	<3.0	-0.30	<3.0	-0.50	<3.0
Barium	200	.23	0.10	<200	0.10	<200	0.20	<200	0.10	<200
Beryllium	1.0	.09	0.0	<1.0	0.0	<1.0	0.0	<1.0	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.20	<3.0	0.10	<3.0	0.10	<3.0	0.20	<3.0
Calcium	5000	64	3.0	<5000	3.4	<5000	-0.60	<5000	2.5	<5000
Chromium	10	.79	-0.60	<10	-0.20	<10	-0.60	<10	-0.60	<10
Cobalt	50	.4	-0.30	<50	-0.10	<50	-0.10	<50	0.10	<50
Copper	10	.68	0.40	<10	-0.20	<10	0.40	<10	0.50	<10
Iron	100	5.2	-0.20	<100	-0.40	<100	-0.80	<100	1.3	<100
Lead	3.0	1.5	-0.40	<3.0	-0.30	<3.0	-0.40	<3.0	-1.4	<3.0
Lithium	20	1.1								
Magnesium	5000	26	-9.1	<5000	-12	<5000	-3.8	<5000	-7.2	<5000
Manganese	15	.17	0.0	<15	0.10	<15	0.10	<15	0.10	<15
Molybdenum	20	.35								
Nickel	10	.61	0.30	<10	0.40	<10	0.20	<10	0.30	<10
Palladium	50	2.1								
Potassium	10000	51	7.2	<10000	19.4	<10000	-5.1	<10000	-18	<10000
Selenium	10	3.1	0.70	<10	0.30	<10	0.40	<10	0.40	<10
Silicon	200	2.8								
Silver	10	.46	-0.20	<10	0.0	<10	-0.20	<10	-0.10	<10
Sodium	10000	14	11.0	<10000	12.1	<10000	2.7	<10000	13.0	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	0.70	<2.0	-0.10	<2.0	-0.30	<2.0	0.40	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.10	<50	0.0	<50	-0.30	<50	-0.20	<50
Zinc	20	8.9	0.20	<20	0.20	<20	0.10	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.29

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			12:17		13:23		13:52		14:40	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	7.8	<200	-6.7	<200	23.2	<200	-0.20	<200
Antimony	6.0	1.8	1.6	<6.0	0.20	<6.0	2.9	<6.0	-0.80	<6.0
Arsenic	3.0	1.7	-0.10	<3.0	0.20	<3.0	0.70	<3.0	-0.20	<3.0
Barium	200	.23	0.20	<200	0.10	<200	1.1	<200	0.10	<200
Beryllium	1.0	.09	0.10	<1.0	0.10	<1.0	1.1	* (a)	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.20	<3.0	0.40	<3.0	1.1	<3.0	0.0	<3.0
Calcium	5000	64	-1.4	<5000	0.40	<5000	18.4	<5000	-0.10	<5000
Chromium	10	.79	-0.50	<10	-0.30	<10	0.80	<10	-0.40	<10
Cobalt	50	.4	-0.10	<50	-0.20	<50	0.80	<50	-0.20	<50
Copper	10	.68	-0.40	<10	-0.10	<10	0.90	<10	-0.30	<10
Iron	100	5.2	-0.30	<100	0.90	<100	25.6	<100	-0.20	<100
Lead	3.0	1.5	-0.20	<3.0	-1.0	<3.0	-0.70	<3.0	0.50	<3.0
Lithium	20	1.1								
Magnesium	5000	26	-19	<5000	-11	<5000	14.8	<5000	-9.6	<5000
Manganese	15	.17	0.10	<15	0.10	<15	1.5	<15	0.0	<15
Molybdenum	20	.35								
Nickel	10	.61	-0.10	<10	-0.10	<10	1.1	<10	0.20	<10
Palladium	50	2.1								
Potassium	10000	51	-36	<10000	-63	<10000	-63	<10000	-89	<10000
Selenium	10	3.1	0.90	<10	1.2	<10	1.6	<10	-0.40	<10
Silicon	200	2.8								
Silver	10	.46	-0.30	<10	-0.10	<10	0.10	<10	-0.20	<10
Sodium	10000	14	78.7	<10000	44.6	<10000	60.6	<10000	27.0	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-0.50	<2.0	0.20	<2.0	1.2	<2.0	-0.90	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	-0.10	<50	0.0	<50	1.1	<50	-0.20	<50
Zinc	20	8.9	0.30	<20	0.20	<20	2.9	<20	0.40	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.29

(*) Outside of QC limits
(anr) Analyte not requested
(a) No AQ samples reported for this element in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			15:49		16:59		18:03		19:13	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	2.1	<200	5.8	<200	-1.9	<200	-5.2	<200
Antimony	6.0	1.8	0.30	<6.0	2.0	<6.0	0.70	<6.0	1.3	<6.0
Arsenic	3.0	1.7	-0.60	<3.0	-0.10	<3.0	0.20	<3.0	0.90	<3.0
Barium	200	.23	0.10	<200	0.0	<200	0.0	<200	0.10	<200
Beryllium	1.0	.09	0.10	<1.0	0.0	<1.0	-0.10	<1.0	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.50	<3.0	0.10	<3.0	0.20	<3.0	0.30	<3.0
Calcium	5000	64	-0.60	<5000	-2.5	<5000	-4.2	<5000	-1.1	<5000
Chromium	10	.79	-0.60	<10	-0.10	<10	-0.40	<10	-0.30	<10
Cobalt	50	.4	-0.10	<50	0.0	<50	0.0	<50	0.10	<50
Copper	10	.68	-0.20	<10	-0.60	<10	-0.60	<10	-0.40	<10
Iron	100	5.2	-0.50	<100	1.6	<100	0.70	<100	1.8	<100
Lead	3.0	1.5	-0.60	<3.0	0.20	<3.0	-0.30	<3.0	-0.20	<3.0
Lithium	20	1.1								
Magnesium	5000	26	2.7	<5000	-3.5	<5000	-11	<5000	-19	<5000
Manganese	15	.17	0.0	<15	0.20	<15	0.10	<15	0.10	<15
Molybdenum	20	.35								
Nickel	10	.61	0.50	<10	0.30	<10	0.10	<10	0.0	<10
Palladium	50	2.1								
Potassium	10000	51	-97	<10000	-120	<10000	-110	<10000	-140	<10000
Selenium	10	3.1	0.80	<10	0.60	<10	-0.30	<10	1.4	<10
Silicon	200	2.8								
Silver	10	.46	-0.50	<10	-0.60	<10	-0.50	<10	-0.20	<10
Sodium	10000	14	34.1	<10000	36.6	<10000	58.1	<10000	41.7	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	0.60	<2.0	-0.20	<2.0	1.4	<2.0	0.0	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	-0.10	<50	-0.10	<50	0.0	<50	0.20	<50
Zinc	20	8.9	0.60	<20	0.60	<20	0.40	<20	0.60	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:
Sample ID:
Metal

Zirconium	10	.29

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			20:23		21:27		22:26	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	6.3	-4.1	<200	0.60	<200	-4.1	<200
Antimony	6.0	1.8	1.4	<6.0	1.4	<6.0	1.3	<6.0
Arsenic	3.0	1.7	-0.70	<3.0	-0.70	<3.0	0.10	<3.0
Barium	200	.23	-0.10	<200	0.0	<200	0.0	<200
Beryllium	1.0	.09	0.10	<1.0	0.0	<1.0	0.0	<1.0
Bismuth	20	2.3						
Boron	100	.94	anr					
Cadmium	3.0	.24	0.30	<3.0	0.40	<3.0	0.30	<3.0
Calcium	5000	64	-1.8	<5000	7.3	<5000	0.50	<5000
Chromium	10	.79	-0.60	<10	-0.60	<10	-0.40	<10
Cobalt	50	.4	0.10	<50	-0.30	<50	0.0	<50
Copper	10	.68	-0.90	<10	0.10	<10	0.0	<10
Iron	100	5.2	2.2	<100	2.7	<100	0.40	<100
Lead	3.0	1.5	-0.60	<3.0	0.40	<3.0	-1.3	<3.0
Lithium	20	1.1						
Magnesium	5000	26	-0.50	<5000	1.6	<5000	-2.9	<5000
Manganese	15	.17	0.10	<15	0.20	<15	0.10	<15
Molybdenum	20	.35						
Nickel	10	.61	-0.20	<10	0.0	<10	0.10	<10
Palladium	50	2.1						
Potassium	10000	51	-150	<10000	-120	<10000	-140	<10000
Selenium	10	3.1	-1.3	<10	0.70	<10	0.80	<10
Silicon	200	2.8						
Silver	10	.46	-0.20	<10	-0.50	<10	0.10	<10
Sodium	10000	14	44.3	<10000	37.8	<10000	118	<10000
Sulfur	50	4.9						
Strontium	10	.13						
Thallium	2.0	1.8	0.10	<2.0	0.90	<2.0	0.80	<2.0
Tin	10	.58						
Titanium	10	.41						
Tungsten	50	5.1						
Vanadium	50	.56	0.10	<50	0.10	<50	-0.10	<50
Zinc	20	8.9	0.20	<20	0.20	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	.29

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		08:49	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	39200	98.0
Antimony	2000	1980	99.0
Arsenic	2000	1960	98.0
Barium	2000	1960	98.0
Beryllium	2000	1990	99.5
Bismuth			
Boron	anr		
Cadmium	2000	1990	99.5
Calcium	40000	39800	99.5
Chromium	2000	2010	100.5
Cobalt	2000	2040	102.0
Copper	2000	1930	96.5
Iron	40000	39900	99.8
Lead	2000	2030	101.5
Lithium			
Magnesium	40000	39600	99.0
Manganese	2000	2020	101.0
Molybdenum			
Nickel	2000	2010	100.5
Palladium			
Potassium	40000	39200	98.0
Selenium	2000	1970	98.5
Silicon			
Silver	250	242	96.8
Sodium	40000	39600	99.0
Sulfur			
Strontium			
Thallium	2000	2060	103.0
Tin			
Titanium			
Tungsten			
Vanadium	2000	1960	98.0
Zinc	2000	2040	102.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		08:32			10:03			11:07	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	39800	99.5	40000	40600	101.5
Antimony	2000	1980	99.0	2000	1980	99.0	2000	2000	100.0
Arsenic	2000	1970	98.5	2000	1970	98.5	2000	2000	100.0
Barium	2000	1990	99.5	2000	1990	99.5	2000	2040	102.0
Beryllium	2000	2030	101.5	2000	2020	101.0	2000	2060	103.0
Bismuth									
Boron	anr								
Cadmium	2000	1990	99.5	2000	1990	99.5	2000	2010	100.5
Calcium	40000	40200	100.5	40000	40200	100.5	40000	41200	103.0
Chromium	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0
Cobalt	2000	2030	101.5	2000	2040	102.0	2000	2070	103.5
Copper	2000	1940	97.0	2000	1950	97.5	2000	1950	97.5
Iron	40000	40400	101.0	40000	40200	100.5	40000	41300	103.3
Lead	2000	2030	101.5	2000	2040	102.0	2000	2060	103.0
Lithium									
Magnesium	40000	39900	99.8	40000	40000	100.0	40000	40900	102.3
Manganese	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0
Molybdenum									
Nickel	2000	2000	100.0	2000	2010	100.5	2000	2030	101.5
Palladium									
Potassium	40000	39800	99.5	40000	39800	99.5	40000	40500	101.3
Selenium	2000	1970	98.5	2000	1970	98.5	2000	2000	100.0
Silicon									
Silver	250	244	97.6	250	244	97.6	250	245	98.0
Sodium	40000	40000	100.0	40000	40400	101.0	40000	41300	103.3
Sulfur									
Strontium									
Thallium	2000	2040	102.0	2000	2060	103.0	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1990	99.5	2000	1980	99.0	2000	1990	99.5
Zinc	2000	2020	101.0	2000	2050	102.5	2000	2070	103.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		12:11			13:17			13:46	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39100	97.8	40000	39900	99.8	40000	39900	99.8
Antimony	2000	1980	99.0	2000	2000	100.0	2000	2010	100.5
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	2010	100.5
Barium	2000	1960	98.0	2000	1970	98.5	2000	1990	99.5
Beryllium	2000	1980	99.0	2000	2000	100.0	2000	2010	100.5
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	2000	100.0	2000	2000	100.0
Calcium	40000	39900	99.8	40000	40400	101.0	40000	40600	101.5
Chromium	2000	1970	98.5	2000	2070	103.5	2000	2040	102.0
Cobalt	2000	2070	103.5	2000	2090	104.5	2000	2100	105.0
Copper	2000	1900	95.0	2000	1960	98.0	2000	1970	98.5
Iron	40000	40100	100.3	40000	40300	100.8	40000	40700	101.8
Lead	2000	2040	102.0	2000	2070	103.5	2000	2060	103.0
Lithium									
Magnesium	40000	39600	99.0	40000	40000	100.0	40000	40100	100.3
Manganese	2000	1970	98.5	2000	2070	103.5	2000	2040	102.0
Molybdenum									
Nickel	2000	2020	101.0	2000	2040	102.0	2000	2030	101.5
Palladium									
Potassium	40000	38900	97.3	40000	39400	98.5	40000	39500	98.8
Selenium	2000	1990	99.5	2000	2000	100.0	2000	2010	100.5
Silicon									
Silver	250	235	94.0	250	246	98.4	250	244	97.6
Sodium	40000	39000	97.5	40000	40400	101.0	40000	40900	102.3
Sulfur									
Strontium									
Thallium	2000	2080	104.0	2000	2110	105.5	2000	2110	105.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1920	96.0	2000	2010	100.5	2000	2000	100.0
Zinc	2000	2080	104.0	2000	2100	105.0	2000	2110	105.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		14:34			15:43			16:54	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	40300	100.8	40000	38500	96.3
Antimony	2000	1980	99.0	2000	1990	99.5	2000	1940	97.0
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	1960	98.0
Barium	2000	1970	98.5	2000	2010	100.5	2000	1910	95.5
Beryllium	2000	2000	100.0	2000	2040	102.0	2000	1930	96.5
Bismuth									
Boron	anr								
Cadmium	2000	1990	99.5	2000	1990	99.5	2000	1930	96.5
Calcium	40000	40400	101.0	40000	41100	102.8	40000	39300	98.3
Chromium	2000	2080	104.0	2000	2010	100.5	2000	2040	102.0
Cobalt	2000	2070	103.5	2000	2090	104.5	2000	2060	103.0
Copper	2000	1960	98.0	2000	1900	95.0	2000	1940	97.0
Iron	40000	40200	100.5	40000	41100	102.8	40000	39200	98.0
Lead	2000	2070	103.5	2000	2070	103.5	2000	2030	101.5
Lithium									
Magnesium	40000	40200	100.5	40000	40500	101.3	40000	38500	96.3
Manganese	2000	2070	103.5	2000	2000	100.0	2000	2020	101.0
Molybdenum									
Nickel	2000	2030	101.5	2000	2040	102.0	2000	1990	99.5
Palladium									
Potassium	40000	39300	98.3	40000	39900	99.8	40000	38100	95.3
Selenium	2000	1990	99.5	2000	2000	100.0	2000	1950	97.5
Silicon									
Silver	250	246	98.4	250	238	95.2	250	241	96.4
Sodium	40000	40300	100.8	40000	41400	103.5	40000	39800	99.5
Sulfur									
Strontium									
Thallium	2000	2090	104.5	2000	2110	105.5	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2020	101.0	2000	1970	98.5	2000	1980	99.0
Zinc	2000	2100	105.0	2000	2130	106.5	2000	2090	104.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		17:58			19:08			20:18	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	38900	97.3	40000	37300	93.3
Antimony	2000	1920	96.0	2000	1840	92.0	2000	1940	97.0
Arsenic	2000	1960	98.0	2000	1880	94.0	2000	1980	99.0
Barium	2000	1940	97.0	2000	1930	96.5	2000	1860	93.0
Beryllium	2000	1970	98.5	2000	1940	97.0	2000	1860	93.0
Bismuth									
Boron	anr								
Cadmium	2000	1940	97.0	2000	1860	93.0	2000	1940	97.0
Calcium	40000	40800	102.0	40000	39700	99.3	40000	38300	95.8
Chromium	2000	2080	104.0	2000	2020	101.0	2000	2010	100.5
Cobalt	2000	2090	104.5	2000	1980	99.0	2000	2100	105.0
Copper	2000	1910	95.5	2000	1860	93.0	2000	1870	93.5
Iron	40000	40200	100.5	40000	39200	98.0	40000	37800	94.5
Lead	2000	2070	103.5	2000	1980	99.0	2000	2070	103.5
Lithium									
Magnesium	40000	40400	101.0	40000	39100	97.8	40000	37400	93.5
Manganese	2000	2060	103.0	2000	2010	100.5	2000	2000	100.0
Molybdenum									
Nickel	2000	2020	101.0	2000	1940	97.0	2000	2030	101.5
Palladium									
Potassium	40000	38900	97.3	40000	38300	95.8	40000	37000	92.5
Selenium	2000	1940	97.0	2000	1870	93.5	2000	1980	99.0
Silicon									
Silver	250	241	96.4	250	235	94.0	250	235	94.0
Sodium	40000	40500	101.3	40000	39800	99.5	40000	38600	96.5
Sulfur									
Strontium									
Thallium	2000	2100	105.0	2000	2000	100.0	2000	2110	105.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2000	100.0	2000	1960	98.0	2000	1950	97.5
Zinc	2000	2150	107.5	2000	2040	102.0	2000	2160	108.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		21:21			22:20	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38300	95.8	40000	42000	105.0
Antimony	2000	1970	98.5	2000	1990	99.5
Arsenic	2000	1980	99.0	2000	1990	99.5
Barium	2000	1920	96.0	2000	2090	104.5
Beryllium	2000	1920	96.0	2000	2120	106.0
Bismuth						
Boron	anr					
Cadmium	2000	1950	97.5	2000	1970	98.5
Calcium	40000	38200	95.5	40000	41700	104.3
Chromium	2000	2060	103.0	2000	1970	98.5
Cobalt	2000	2060	103.0	2000	2050	102.5
Copper	2000	2010	100.5	2000	1910	95.5
Iron	40000	38100	95.3	40000	41500	103.8
Lead	2000	2000	100.0	2000	2010	100.5
Lithium						
Magnesium	40000	37100	92.8	40000	40600	101.5
Manganese	2000	2050	102.5	2000	1980	99.0
Molybdenum						
Nickel	2000	1980	99.0	2000	1990	99.5
Palladium						
Potassium	40000	37500	93.8	40000	40100	100.3
Selenium	2000	1980	99.0	2000	1990	99.5
Silicon						
Silver	250	247	98.8	250	238	95.2
Sodium	40000	39600	99.0	40000	40200	100.5
Sulfur						
Strontium						
Thallium	2000	2050	102.5	2000	2050	102.5
Tin						
Titanium						
Tungsten						
Vanadium	2000	2020	101.0	2000	1940	97.0
Zinc	2000	2030	101.5	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:	
Sample ID:	
Metal	
Zirconium	

(*) Outside of QC limits
(anr) Analyte not requested

10.3.4
10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				09:03		09:09		09:15	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	213	106.5	105	105.0	518	103.6
Antimony	6.0	20	3.0	7.6	126.7	3.2	106.7	20.4	102.0
Arsenic	8.0	20	3.0	8.9	111.3	2.8	93.3	17.6	88.0
Barium	200		4.0	187	93.5	3.9	97.5		
Beryllium	2.0		1.0	2.1	105.0	1.1	110.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.4	113.3	1.3	130.0		
Calcium	5000		1000	4990	99.8	1000	100.0		
Chromium	10		2.0	10.1	101.0				
Cobalt	50		3.0	54.8	109.6	3.2	106.7		
Copper	10		2.0	10.1	101.0	1.8	90.0		
Iron	100	500		103	103.0			518	103.6
Lead	3.0	20	2.5	3.5	116.7			20.1	100.5
Lithium	20								
Magnesium	5000		100	5020	100.4	104	104.0		
Manganese	15		3.0	16.1	107.3	3.2	106.7		
Molybdenum	20		4.0						
Nickel	10		4.0	10.8	108.0	4.3	107.5		
Palladium	50								
Potassium	5000		2000	4660	93.2	1940	97.0		
Selenium	10	20	5.0	12.4	124.0	5.8	116.0	21.3	106.5
Silicon	200								
Silver	5.0		1.0	4.7	94.0				
Sodium	5000		1000	4930	98.6	988	98.8		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	12.5	125.0	2.6	130.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	51.2	102.4	1.9	95.0		
Zinc	20		10	22.0	110.0	11.4	114.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				09:21		13:58		14:16	
Sample ID:	CRI	CRIA	CRID	CRID2		CRI2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	118	118.0	224	112.0	108	108.0
Antimony	6.0	20	3.0	3.1	103.3	6.9	115.0	3.3	110.0
Arsenic	8.0	20	3.0	2.5	83.3	8.5	106.3	2.6	86.7
Barium	200		4.0	4.3	107.5	189	94.5	4.2	105.0
Beryllium	2.0		1.0	1.1	110.0	2.4	120.0	1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	1.3	130.0	3.8	126.7	1.3	130.0
Calcium	5000		1000	1070	107.0	5140	102.8	1090	109.0
Chromium	10		2.0			10.4	104.0		
Cobalt	50		3.0	3.3	110.0	55.9	111.8	3.1	103.3
Copper	10		2.0	2.4	120.0	10.7	107.0	2.1	105.0
Iron	100	500				111	111.0		
Lead	3.0	20	2.5			3.2	106.7		
Lithium	20								
Magnesium	5000		100	115	115.0	5100	102.0	89.9	89.9
Manganese	15		3.0	3.3	110.0	16.9	112.7	3.3	110.0
Molybdenum	20		4.0						
Nickel	10		4.0	4.1	102.5	11.2	112.0	3.7	92.5
Palladium	50								
Potassium	5000		2000	2060	103.0	4640	92.8	2040	102.0
Selenium	10	20	5.0	5.5	110.0	10.3	103.0	5.4	108.0
Silicon	200								
Silver	5.0		1.0			4.6	92.0		
Sodium	5000		1000	1070	107.0	5140	102.8	1120	112.0
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.0	100.0	11.0	110.0	2.2	110.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	1.8	90.0	53.0	106.0	1.7	85.0
Zinc	20		10	11.5	115.0	25.2	126.0	11.6	116.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				14:22		14:28		21:33	
Sample ID:	CRI	CRIA	CRID	CRIA2		CRID4		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	518	103.6	97.3	97.3	202	101.0
Antimony	6.0	20	3.0	20.1	100.5	2.2	73.3	6.7	111.7
Arsenic	8.0	20	3.0	17.3	86.5	2.6	86.7	8.5	106.3
Barium	200		4.0			4.0	100.0	182	91.0
Beryllium	2.0		1.0			1.0	100.0	2.2	110.0
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0			1.3	130.0	3.5	116.7
Calcium	5000		1000			986	98.6	4790	95.8
Chromium	10		2.0					10.1	101.0
Cobalt	50		3.0			3.3	110.0	54.2	108.4
Copper	10		2.0			1.5	75.0	10.0	100.0
Iron	100	500		521	104.2			104	104.0
Lead	3.0	20	2.5	20.0	100.0			2.6	86.7
Lithium	20								
Magnesium	5000		100			100	100.0	4670	93.4
Manganese	15		3.0			3.1	103.3	15.7	104.7
Molybdenum	20		4.0						
Nickel	10		4.0			4.0	100.0	10.8	108.0
Palladium	50								
Potassium	5000		2000			1830	91.5	4310	86.2
Selenium	10	20	5.0	20.9	104.5	5.0	100.0	9.4	94.0
Silicon	200								
Silver	5.0		1.0					4.2	84.0
Sodium	5000		1000			1020	102.0	4960	99.2
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0			1.9	95.0	11.6	116.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0			1.8	90.0	49.8	99.6
Zinc	20		10			11.2	112.0	23.9	119.5

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				21:45		21:51	
Sample ID:	CRI	CRIA	CRID	CRIA3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	497	99.4	98.7	98.7
Antimony	6.0	20	3.0	21.1	105.5	3.6	120.0
Arsenic	8.0	20	3.0	18.0	90.0	2.6	86.7
Barium	200		4.0			4.0	100.0
Beryllium	2.0		1.0			1.1	110.0
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0			1.3	130.0
Calcium	5000		1000			978	97.8
Chromium	10		2.0				
Cobalt	50		3.0			3.1	103.3
Copper	10		2.0			1.8	90.0
Iron	100	500		502	100.4		
Lead	3.0	20	2.5	19.2	96.0		
Lithium	20						
Magnesium	5000		100			74.5	74.5
Manganese	15		3.0			3.2	106.7
Molybdenum	20		4.0				
Nickel	10		4.0			3.8	95.0
Palladium	50						
Potassium	5000		2000			1770	88.5
Selenium	10	20	5.0	21.9	109.5	5.9	118.0
Silicon	200						
Silver	5.0		1.0				
Sodium	5000		1000			1050	105.0
Sulfur	50	50	50				
Strontium	10						
Thallium	10		2.0			2.2	110.0
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0			2.0	100.0
Zinc	20		10			11.4	114.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:		
Sample ID:		
Metal		
Zirconium	10	5.0

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31602 Units: ug/l

Time:			09:27		09:33		14:46		14:52	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	513000	102.6	530000	106.0	522000	104.4	506000	101.2
Antimony		1000	1.9		1010	101.0	3.2		977	97.7
Arsenic		1000	-1.5		959	95.9	0.20		942	94.2
Barium		500	-0.90		531	106.2	-1.1		497	99.4
Beryllium		500	0.50		494	98.8	0.60		465	93.0
Bismuth		500	-18		415	83.0	-18		409	81.8
Boron			-1.2		-1.6		-0.50		-0.60	
Cadmium		1000	0.60		1010	101.0	0.30		980	98.0
Calcium	400000	400000	391000	97.8	400000	100.0	395000	98.8	379000	94.8
Chromium		500	-0.60		473	94.6	-0.30		476	95.2
Cobalt		500	-2.5		469	93.8	-2.6		470	94.0
Copper		500	-1.7		508	101.6	-1.6		499	99.8
Iron	200000	200000	209000	104.5	210000	105.0	208000	104.0	200000	100.0
Lead		1000	0.80		945	94.5	1.9		937	93.7
Lithium		500	4.2		521	104.2	3.2		501	100.2
Magnesium	500000	500000	516000	103.2	528000	105.6	518000	103.6	506000	101.2
Manganese		500	1.8		483	96.6	1.2		480	96.0
Molybdenum		500	-1.5		484	96.8	-1.3		480	96.0
Nickel		1000	-0.70		930	93.0	-0.50		918	91.8
Palladium		500	-11		531	106.2	-12		504	100.8
Potassium			151		167		77.6		76.8	
Selenium		1000	1.7		980	98.0	0.20		953	95.3
Silicon			5.8		6.3		8.8		5.0	
Silver		1000	5.5		985	98.5	3.4		967	96.7
Sodium			-15		-8.2		31.5		46.7	
Sulfur		500	-27		441	88.2	-21		442	88.4
Strontium			3.7		3.5		3.3		3.2	
Thallium		1000	-0.20		944	94.4	1.1		951	95.1
Tin			-3.0		-2.7		-3.3		-2.8	
Titanium			1.7		1.6		2.0		2.1	
Tungsten		500	13.0		526	105.2	5.8		520	104.0
Vanadium		500	0.20		470	94.0	0.0		463	92.6
Zinc		1000	0.50		944	94.4	0.40		962	96.2

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31602 Units: ug/l

Time:							
Sample ID:							
Metal							
Zirconium	500	-1.7	475	95.0	-1.8	459	91.8

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31602 Units: ug/l

Time:			21:57		22:03	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	510000	102.0	494000	98.8
Antimony		1000	3.6		1000	100.0
Arsenic		1000	0.30		957	95.7
Barium		500	-1.1		506	101.2
Beryllium		500	0.60		465	93.0
Bismuth		500	-17		424	84.8
Boron			-2.1		-1.6	
Cadmium		1000	0.50		993	99.3
Calcium	400000	400000	382000	95.5	368000	92.0
Chromium		500	0.10		451	90.2
Cobalt		500	-2.2		469	93.8
Copper		500	-1.5		499	99.8
Iron	200000	200000	199000	99.5	193000	96.5
Lead		1000	2.9		924	92.4
Lithium		500	2.4		498	99.6
Magnesium	500000	500000	487000	97.4	479000	95.8
Manganese		500	1.0		458	91.6
Molybdenum		500	-1.8		485	97.0
Nickel		1000	-0.60		913	91.3
Palladium		500	-9.6		508	101.6
Potassium			14.5		17.0	
Selenium		1000	-1.7		979	97.9
Silicon			6.8		4.7	
Silver		1000	2.9		948	94.8
Sodium			37.5		55.4	
Sulfur		500	-25		442	88.4
Strontium			3.6		3.7	
Thallium		1000	-1.4		943	94.3
Tin			-3.0		-2.6	
Titanium			1.3		2.0	
Tungsten		500	4.1		517	103.4
Vanadium		500	-0.30		451	90.2
Zinc		1000	0.10		929	92.9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31602 Units: ug/l

Time:				
Sample ID:				
Metal				
Zirconium	500	-2.0	452	90.4

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.63	1.5	0.46	<50
Antimony	2.0	.18	.24	-0.13	<2.0
Arsenic	2.0	.17	.23	0.070	<2.0
Barium	20	.023	.054	0.0	<20
Beryllium	0.20	.009	.015	0.0	<0.20
Bismuth	2.0	.23	.14		
Boron	10	.094	.14		
Cadmium	0.50	.024	.071	-0.010	<0.50
Calcium	500	6.4	8.4	0.28	<500
Chromium	1.0	.079	.074	0.040	<1.0
Cobalt	5.0	.04	.042	0.030	<5.0
Copper	2.5	.068	.083	-0.010	<2.5
Iron	50	.52	2.9	0.62	<50
Lead	2.0	.15	.21	-0.13	<2.0
Lithium	2.0	.11	.14		
Magnesium	500	2.6	9.3	1.7	<500
Manganese	1.5	.017	.054	0.010	<1.5
Molybdenum	2.0	.035	.14		
Nickel	4.0	.061	.079	0.070	<4.0
Palladium	5.0	.21	.26		
Potassium	1000	5.1	6.1	-0.58	<1000
Selenium	2.0	.31	.26	-0.090	<2.0
Silicon	20	.28	3.7		
Silver	0.50	.046	.1	-0.080	<0.50
Sodium	1000	1.4	2	2.8	<1000
Strontium	1.0	.013	.024		
Sulfur	5.0	.49	.34		
Thallium	1.0	.18	.29	-0.010	<1.0
Tin	5.0	.058	.77		
Titanium	1.0	.041	.093		
Tungsten	5.0	.51	1.7		
Vanadium	5.0	.056	.073	0.040	<5.0
Zinc	2.0	.89	.23	0.36	<2.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal			
Zirconium	2.0	.029	.057

Associated samples MP72853: JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	JB40350-4 Original	MS	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	17400	25600	5920	138.5N(a	75-125
Antimony	0.29	59.7	110	54.2N(a)	75-125
Arsenic	2.6	399	439	90.4	75-125
Barium	53.1	489	439	99.4	75-125
Beryllium	0.51	11.3	11	98.4	75-125
Bismuth					
Boron					
Cadmium	0.056	11.1	11	100.7	75-125
Calcium	1400	2700	1370	94.8	75-125
Chromium	18.1	59.2	43.9	93.7	75-125
Cobalt	5.0	117	110	102.1	75-125
Copper	9.3	62.4	54.8	96.9	75-125
Iron	14000	19200	5700	91.2	75-125
Lead	127	178	110	46.5N(a)	75-125
Lithium					
Magnesium	589	2100	1370	110.2	75-125
Manganese	144	260	110	105.8	75-125
Molybdenum					
Nickel	10.3	118	110	98.2	75-125
Palladium					
Potassium	453	1830	1370	100.5	75-125
Selenium	0.0	412	439	93.9	75-125
Silicon					
Silver	0.60	10.9	11	93.9	75-125
Sodium	67.8	1410	1370	97.9	75-125
Strontium					
Sulfur					
Thallium	0.49	439	439	100.0	75-125
Tin					
Titanium					
Tungsten					
Vanadium	15.9	118	110	93.1	75-125
Zinc	185	318	110	121.3	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal

Zirconium

Associated samples MP72853: JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	JB40350-4 Original	MSD	Spikelot MPIRS1	% Rec	MSD RPD	QC Limit
Aluminum	17400	25500	6100	132.7N(a	0.4	20
Antimony	0.29	56.8	113	50.0N(a)	5.0	20
Arsenic	2.6	392	452	86.1	1.8	20
Barium	53.1	481	452	94.6	1.6	20
Beryllium	0.51	11.2	11.3	94.6	0.9	20
Bismuth						
Boron						
Cadmium	0.056	10.8	11.3	95.0	2.7	20
Calcium	1400	2670	1410	89.9	1.1	20
Chromium	18.1	67.0	45.2	108.1	12.4	20
Cobalt	5.0	119	113	100.8	1.7	20
Copper	9.3	61.7	56.5	92.7	1.1	20
Iron	14000	18300	5880	73.2N(a)	4.8	20
Lead	127	150	113	20.3N(a)	17.1	20
Lithium						
Magnesium	589	1950	1410	96.3	7.4	20
Manganese	144	275	113	115.9	5.6	20
Molybdenum						
Nickel	10.3	120	113	97.0	1.7	20
Palladium						
Potassium	453	1770	1410	93.2	3.3	20
Selenium	0.0	406	452	89.8	1.5	20
Silicon						
Silver	0.60	10.7	11.3	89.3	1.9	20
Sodium	67.8	1370	1410	92.2	2.9	20
Strontium						
Sulfur						
Thallium	0.49	433	452	95.7	1.4	20
Tin						
Titanium						
Tungsten						
Vanadium	15.9	116	113	88.6	1.7	20
Zinc	185	269	113	74.3N(a)	16.7	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal

Zirconium

Associated samples MP72853: JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	BSP Result	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	5330	5400	98.7	80-120
Antimony	97.2	100	97.2	80-120
Arsenic	359	400	89.8	80-120
Barium	386	400	96.5	80-120
Beryllium	9.9	10	99.0	80-120
Bismuth				
Boron				
Cadmium	9.6	10	96.0	80-120
Calcium	1220	1250	97.6	80-120
Chromium	41.1	40	102.8	80-120
Cobalt	107	100	107.0	80-120
Copper	48.6	50	97.2	80-120
Iron	5120	5200	98.5	80-120
Lead	102	100	102.0	80-120
Lithium				
Magnesium	1210	1250	96.8	80-120
Manganese	102	100	102.0	80-120
Molybdenum				
Nickel	99.0	100	99.0	80-120
Palladium				
Potassium	1180	1250	94.4	80-120
Selenium	377	400	94.3	80-120
Silicon				
Silver	9.5	10	95.0	80-120
Sodium	1230	1250	98.4	80-120
Strontium				
Sulfur				
Thallium	409	400	102.3	80-120
Tin				
Titanium				
Tungsten				
Vanadium	94.3	100	94.3	80-120
Zinc	106	100	106.0	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:

Metal

Zirconium

Associated samples MP72853: JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/26/13

Metal	JB40350-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum	156000	160000	2.7	0-10
Antimony	2.60	17.1	557.7(a)	0-10
Arsenic	23.2	19.2	17.2 (a)	0-10
Barium	475	493	3.8	0-10
Beryllium	4.60	4.70	2.2	0-10
Bismuth				
Boron				
Cadmium	0.500	0.00	100.0(a)	0-10
Calcium	12500	13300	6.0	0-10
Chromium	162	177	9.5	0-10
Cobalt	44.5	54.6	22.7*(b)	0-10
Copper	82.7	91.7	10.9*(b)	0-10
Iron	125000	132000	5.6	0-10
Lead	1140	1170	2.5	0-10
Lithium				
Magnesium	5270	5560	5.6	0-10
Manganese	1290	1350	4.7	0-10
Molybdenum				
Nickel	92.5	96.9	4.8	0-10
Palladium				
Potassium	4050	4100	1.2	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	5.40	3.80	29.6 (a)	0-10
Sodium	606	1060	75.4 (a)	0-10
Strontium				
Sulfur				
Thallium	4.40	0.00	100.0(a)	0-10
Tin				
Titanium				
Tungsten				
Vanadium	143	154	8.3	0-10
Zinc	1650	2250	36.1*(b)	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date:

Metal

Zirconium

Associated samples MP72853: JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73021 | Methods: SW846 7471B
Matrix Type: SOLID | Units: mg/kg

Prep Date: 07/03/13

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0068	.0063	-0.013	<0.033

Associated samples MP73021: JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73021 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/03/13

Metal	JB40350-5 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.0	0.31	0.318	97.5	75-125

Associated samples MP73021: JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73021 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/03/13

Metal	JB40350-5 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.35	0.354	98.8	12.1	20

Associated samples MP73021: JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40351
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73021
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/03/13

Metal	LCS Result	Spikelot HGLCS54079	% Rec	QC Limits
Mercury	8.0	9.25	86.5	72-129

Associated samples MP73021: JB40351-1, JB40351-2, JB40351-3, JB40351-4, JB40351-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

New Jersey

ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: JB40351
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: JB40351-1 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P-6

Wet Weight (Total)	29.31	g
Tare Weight	21.22	g
Dry Weight (Total)	28.7	g
Solids, Percent	92.5	%

Sample: JB40351-2 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P-7

Wet Weight (Total)	36.05	g
Tare Weight	27.92	g
Dry Weight (Total)	35.44	g
Solids, Percent	92.5	%

Sample: JB40351-3 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P-8

Wet Weight (Total)	26.68	g
Tare Weight	19.84	g
Dry Weight (Total)	26.06	g
Solids, Percent	90.9	%

Sample: JB40351-4 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P-9

Wet Weight (Total)	28.16	g
Tare Weight	20.26	g
Dry Weight (Total)	27.36	g
Solids, Percent	89.9	%

Sample: JB40351-5 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P-10

Wet Weight (Total)	27.21	g
Tare Weight	18.78	g
Dry Weight (Total)	26.82	g
Solids, Percent	95.4	%

New Jersey
ACCUTEST LABORATORIES

06/17/14

Technical Report for

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Accutest Job Number: JB40350

Sampling Date: 06/21/13

Report to:

EnviroTrac

sarahd@envirotrac.com

ATTN: Sarah Dyson

Total number of pages in report: **326**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Kevin Dovedytis 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

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Accutest LabLink@800250 12:17 17-Jun-2014

Sample Summary

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Job No: JB40350

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JB40350-1	06/21/13	12:53	JP	06/21/13	SO	Soil	P2
JB40350-2	06/21/13	12:06	JP	06/21/13	SO	Soil	P3
JB40350-3	06/21/13	11:19	JP	06/21/13	SO	Soil	P4
JB40350-4	06/21/13	10:36	JP	06/21/13	SO	Soil	P5
JB40350-5	06/21/13	09:42	JP	06/21/13	SO	Soil	P11

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	EnviroTrac, Ltd.	**Job No**	JB40350
Site:	Hess QC Lab, 835 West Avenue, Port Reading, NJ	**Report Date**	7/8/2013 9:32:18 AM

On 06/21/2013, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 4.2 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB40350 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** VA7396

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40368-4MS, JB40368-4MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** F:OP47524

- The data for SW846 8270D meets quality control requirements.
- JB40350-2: Analysis performed at Accutest Laboratories, Orlando FL.
- JB40350-1: Analysis performed at Accutest Laboratories, Orlando FL.

Matrix: SO **Batch ID:** F:OP47527

- The data for SW846 8270D meets quality control requirements.
- JB40350-5: Analysis performed at Accutest Laboratories, Orlando FL.
- JB40350-4: Analysis performed at Accutest Laboratories, Orlando FL.
- JB40350-3: Analysis performed at Accutest Laboratories, Orlando FL.

Matrix: SO **Batch ID:** OP66969

- All samples were extracted within the recommended method holding time.
- Sample(s) JB40350-2MS, JB40350-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method NJDEP EPH

Matrix: SO **Batch ID:** OP67011

- All samples were extracted within the recommended method holding time.
- Sample(s) JB40294-1MS, JB40294-1MSD, JB40350-2DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP72853

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40350-4MS, JB40350-4MSD, JB40350-4SDL were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Aluminum, Antimony, Lead are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Antimony, Iron, Lead, Zinc are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- RPD(s) for Serial Dilution for Antimony, Arsenic, Cadmium, Silver, Sodium, Thallium, Cobalt, Copper, Zinc are outside control limits for sample MP72853-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP72853-SD1 for Zinc: Serial dilution indicates possible matrix interference.
- MP72853-SD1 for Cobalt: Serial dilution indicates possible matrix interference.
- MP72853-SD1 for Copper: Serial dilution indicates possible matrix interference.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP73021

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40350-5MS, JB40350-5MSD were used as the QC samples for metals.

Matrix: SO **Batch ID:** MP73022

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB40240-2MS, JB40240-2MSD were used as the QC samples for metals.
- Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference.

Wet Chemistry By Method SM2540 G-97

Matrix: SO **Batch ID:** GN87312

- The data for SM2540 G-97 meets quality control requirements.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Accutest New Jersey **Job:** JB40350

Site: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ **Report Date:** 7/3/2013 3:00:03 PM

5 Sample(s) were collected on 06/21/2013 and were received at Accutest SE on 06/26/2013 properly preserved, at 2.6 Deg. C and intact. These Samples received an Accutest job number of JB40350. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP47524

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JB40280-1MS, JB40280-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s)/Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix: SO **Batch ID:** OP47527

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA5921-2MS, FA5921-2MSD were used as the QC samples indicated.

RPD(s) for MSD for Dibenzo(a,h)anthracene are outside control limits for sample OP47527-MSD. Probable cause is due to sample non-homogeneity.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: July 3, 2013

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: JB40350
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/21/13

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB40350-1	**P2**					
Toluene		0.00041 J	0.0011	0.00011	mg/kg	SW846 8260B
Acenaphthene [a]		0.0256 J	0.18	0.022	mg/kg	SW846 8270D
Anthracene [a]		0.0969 J	0.18	0.018	mg/kg	SW846 8270D
Benzo(a)anthracene [a]		0.593	0.18	0.018	mg/kg	SW846 8270D
Benzo(a)pyrene [a]		0.595	0.18	0.018	mg/kg	SW846 8270D
Benzo(b)fluoranthene [a]		0.888	0.18	0.018	mg/kg	SW846 8270D
Benzo(g,h,i)perylene [a]		0.451	0.18	0.018	mg/kg	SW846 8270D
Benzo(k)fluoranthene [a]		0.321	0.18	0.022	mg/kg	SW846 8270D
Carbazole [a]		0.0853 J	0.18	0.021	mg/kg	SW846 8270D
Chrysene [a]		0.704	0.18	0.018	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene [a]		0.105 J	0.18	0.018	mg/kg	SW846 8270D
Di-n-butyl phthalate [a]		0.462	0.37	0.037	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate [a]		2.33	0.37	0.037	mg/kg	SW846 8270D
Fluoranthene [a]		1.58	0.18	0.018	mg/kg	SW846 8270D
Fluorene [a]		0.0306 J	0.18	0.020	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene [a]		0.520	0.18	0.018	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.0423 J	0.066	0.029	mg/kg	SW846 8270D
Phenanthrene [a]		0.789	0.18	0.018	mg/kg	SW846 8270D
Pyrene [a]		1.11	0.18	0.018	mg/kg	SW846 8270D
Total TIC, Semi-Volatile		2.92 J			mg/kg	
Aluminum		15100	55		mg/kg	SW846 6010C
Arsenic		2.5	2.2		mg/kg	SW846 6010C
Barium		50.1	22		mg/kg	SW846 6010C
Beryllium		0.51	0.22		mg/kg	SW846 6010C
Calcium		3010	550		mg/kg	SW846 6010C
Chromium		13.2	1.1		mg/kg	SW846 6010C
Cobalt		10.1	5.5		mg/kg	SW846 6010C
Copper		12.8	2.7		mg/kg	SW846 6010C
Iron		10300	55		mg/kg	SW846 6010C
Lead		14.5	2.2		mg/kg	SW846 6010C
Magnesium		579	550		mg/kg	SW846 6010C
Manganese		331	1.6		mg/kg	SW846 6010C
Nickel		9.6	4.4		mg/kg	SW846 6010C
Silver		0.56	0.55		mg/kg	SW846 6010C
Vanadium		15.3	5.5		mg/kg	SW846 6010C
Zinc		90.3	2.2		mg/kg	SW846 6010C
JB40350-2	**P3**					
Acetone		0.0199	0.011	0.0019	mg/kg	SW846 8260B
Benzene		0.00048 J	0.0011	0.00013	mg/kg	SW846 8260B
Methyl Tert Butyl Ether		0.00080 J	0.0011	0.00026	mg/kg	SW846 8260B
bis(2-Ethylhexyl)phthalate [a]		0.143 J	0.37	0.037	mg/kg	SW846 8270D

Summary of Hits

Job Number: JB40350
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/21/13

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
bis(2-Ethylhexyl)phthalate	0.113	0.071	0.032	mg/kg	SW846 8270D
Total TIC, Semi-Volatile	1.98 J			mg/kg	
Aluminum	13700	56		mg/kg	SW846 6010C
Arsenic	2.5	2.2		mg/kg	SW846 6010C
Barium	48.8	22		mg/kg	SW846 6010C
Beryllium	0.58	0.22		mg/kg	SW846 6010C
Chromium	16.0	1.1		mg/kg	SW846 6010C
Copper	4.8	2.8		mg/kg	SW846 6010C
Iron	14300	56		mg/kg	SW846 6010C
Lead	5.8	2.2		mg/kg	SW846 6010C
Manganese	93.5	1.7		mg/kg	SW846 6010C
Nickel	10.8	4.5		mg/kg	SW846 6010C
Silver	0.56	0.56		mg/kg	SW846 6010C
Vanadium	16.1	5.6		mg/kg	SW846 6010C
Zinc	21.2	2.2		mg/kg	SW846 6010C
JB40350-3 P4					
Acetone	0.0853	0.011	0.0018	mg/kg	SW846 8260B
2-Butanone (MEK)	0.0063 J	0.011	0.0025	mg/kg	SW846 8260B
Carbon disulfide	0.0018 J	0.0053	0.00012	mg/kg	SW846 8260B
Methylene chloride	0.0027 J	0.0053	0.0013	mg/kg	SW846 8260B
Toluene	0.00033 J	0.0011	0.00011	mg/kg	SW846 8260B
Total TIC, Volatile	0.0095 J			mg/kg	
Total Alkanes	0.0128 J			mg/kg	
Chrysene [a]	0.0222 J	0.18	0.018	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate [a]	0.151 J	0.36	0.036	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.150	0.068	0.030	mg/kg	SW846 8270D
Phenanthrene [a]	0.0207 J	0.18	0.018	mg/kg	SW846 8270D
Pyrene [a]	0.0208 J	0.18	0.018	mg/kg	SW846 8270D
Total TIC, Semi-Volatile	0.84 J			mg/kg	
Total TIC, Semi-Volatile	0.52 J			mg/kg	
Total Alkanes	3.17 J			mg/kg	
Total Alkanes	0.3 J			mg/kg	
EPH (C9-C28)	20.7	7.1	2.6	mg/kg	NJDEP EPH
EPH (> C28-C40)	26.1	7.1	3.1	mg/kg	NJDEP EPH
Total EPH (C9-C40)	46.8	7.1	2.6	mg/kg	NJDEP EPH
Aluminum	17100	54		mg/kg	SW846 6010C
Arsenic	4.4	2.2		mg/kg	SW846 6010C
Barium	69.2	22		mg/kg	SW846 6010C
Beryllium	0.66	0.22		mg/kg	SW846 6010C
Calcium	1110	540		mg/kg	SW846 6010C
Chromium	58.1	1.1		mg/kg	SW846 6010C
Cobalt	7.1	5.4		mg/kg	SW846 6010C
Copper	14.1	2.7		mg/kg	SW846 6010C

Summary of Hits

Job Number: JB40350
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/21/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Iron		19900	54		mg/kg	SW846 6010C
Lead		13.3	2.2		mg/kg	SW846 6010C
Magnesium		2180	540		mg/kg	SW846 6010C
Manganese		351	1.6		mg/kg	SW846 6010C
Nickel		32.3	4.3		mg/kg	SW846 6010C
Potassium		1120	1100		mg/kg	SW846 6010C
Silver		1.0	0.54		mg/kg	SW846 6010C
Vanadium		25.1	5.4		mg/kg	SW846 6010C
Zinc		34.3	2.2		mg/kg	SW846 6010C
JB40350-4	**P5**					
Acetone		0.0165	0.011	0.0018	mg/kg	SW846 8260B
Methylene chloride		0.0034 J	0.0054	0.0014	mg/kg	SW846 8260B
Toluene		0.00040 J	0.0011	0.00011	mg/kg	SW846 8260B
Total TIC, Volatile		0.0248 J			mg/kg	
bis(2-Ethylhexyl)phthalate [a]		0.638	0.36	0.036	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.332	0.067	0.029	mg/kg	SW846 8270D
Total TIC, Semi-Volatile		0.35 J			mg/kg	
Total TIC, Semi-Volatile		1.66 J			mg/kg	
EPH (> C28-C40)		31.0	7.3	3.2	mg/kg	NJDEP EPH
Total EPH (C9-C40)		31.0	7.3	2.6	mg/kg	NJDEP EPH
Aluminum		17400	56		mg/kg	SW846 6010C
Arsenic		2.6	2.2		mg/kg	SW846 6010C
Barium		53.1	22		mg/kg	SW846 6010C
Beryllium		0.51	0.22		mg/kg	SW846 6010C
Calcium		1400	560		mg/kg	SW846 6010C
Chromium		18.1	1.1		mg/kg	SW846 6010C
Copper		9.3	2.8		mg/kg	SW846 6010C
Iron		14000	56		mg/kg	SW846 6010C
Lead		127	2.2		mg/kg	SW846 6010C
Magnesium		589	560		mg/kg	SW846 6010C
Manganese		144	1.7		mg/kg	SW846 6010C
Nickel		10.3	4.5		mg/kg	SW846 6010C
Silver		0.60	0.56		mg/kg	SW846 6010C
Vanadium		15.9	5.6		mg/kg	SW846 6010C
Zinc		185	2.2		mg/kg	SW846 6010C
JB40350-5	**P11**					
Acetone		0.0150	0.012	0.0020	mg/kg	SW846 8260B
Toluene		0.00048 J	0.0012	0.00012	mg/kg	SW846 8260B
Total TIC, Volatile		0.0152 J			mg/kg	
bis(2-Ethylhexyl)phthalate [a]		2.10	0.36	0.036	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.201	0.067	0.030	mg/kg	SW846 8270D

Summary of Hits

Job Number: JB40350
Account: EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Collected: 06/21/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Aluminum		4830	55		mg/kg	SW846 6010C
Arsenic		6.2	2.2		mg/kg	SW846 6010C
Barium		22.2	22		mg/kg	SW846 6010C
Beryllium		0.56	0.22		mg/kg	SW846 6010C
Calcium		1110	550		mg/kg	SW846 6010C
Chromium		28.9	1.1		mg/kg	SW846 6010C
Cobalt		5.5	5.5		mg/kg	SW846 6010C
Copper		8.6	2.7		mg/kg	SW846 6010C
Iron		23800	55		mg/kg	SW846 6010C
Lead		7.9	2.2		mg/kg	SW846 6010C
Magnesium		2040	550		mg/kg	SW846 6010C
Manganese		121	1.6		mg/kg	SW846 6010C
Nickel		15.0	4.4		mg/kg	SW846 6010C
Potassium		1100	1100		mg/kg	SW846 6010C
Silver		0.92	0.55		mg/kg	SW846 6010C
Vanadium		27.5	5.5		mg/kg	SW846 6010C
Zinc		31.4	2.2		mg/kg	SW846 6010C

(a) Analysis performed at Accutest Laboratories, Orlando FL.

New Jersey

ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P2		
Lab Sample ID:	JB40350-1	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	90.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A196006.D	1	06/26/13	OTR	06/22/13 09:00	n/a	VA7396
Run #2							

	Initial Weight
Run #1	5.1 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.011	0.0018	mg/kg	
71-43-2	Benzene	ND	0.0011	0.00013	mg/kg	
74-97-5	Bromochloromethane	ND	0.0054	0.00029	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0054	0.00011	mg/kg	
75-25-2	Bromoform	ND	0.0054	0.00016	mg/kg	
74-83-9	Bromomethane	ND	0.0054	0.00029	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0026	mg/kg	
75-15-0	Carbon disulfide	ND	0.0054	0.00013	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0054	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0054	0.00012	mg/kg	
75-00-3	Chloroethane	ND	0.0054	0.00025	mg/kg	
67-66-3	Chloroform	ND	0.0054	0.000089	mg/kg	
74-87-3	Chloromethane	ND	0.0054	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0054	0.00013	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0054	0.00018	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0054	0.00020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0054	0.00020	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0054	0.00019	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0054	0.00025	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0054	0.00015	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00015	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0054	0.00028	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0054	0.00020	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0054	0.00026	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0054	0.00017	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0054	0.00015	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0054	0.00017	mg/kg	
100-41-4	Ethylbenzene	ND	0.0011	0.00028	mg/kg	
76-13-1	Freon 113	ND	0.0054	0.00046	mg/kg	
591-78-6	2-Hexanone	ND	0.0054	0.00067	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0054	0.000080	mg/kg	
79-20-9	Methyl Acetate	ND	0.0054	0.0028	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P2		
Lab Sample ID:	JB40350-1	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	90.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0054	0.00018	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0011	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0054	0.00081	mg/kg	
75-09-2	Methylene chloride	ND	0.0054	0.0014	mg/kg	
100-42-5	Styrene	ND	0.0054	0.000099	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0054	0.00014	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0054	0.00019	mg/kg	
108-88-3	Toluene	0.00041	0.0011	0.00011	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0054	0.00018	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0054	0.00015	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0054	0.00011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0054	0.00019	mg/kg	
79-01-6	Trichloroethene	ND	0.0054	0.00019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0054	0.00032	mg/kg	
75-01-4	Vinyl chloride	ND	0.0054	0.00016	mg/kg	
	m,p-Xylene	ND	0.0011	0.00019	mg/kg	
95-47-6	o-Xylene	ND	0.0011	0.00015	mg/kg	
1330-20-7	Xylene (total)	ND	0.0011	0.00015	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		65-131%
17060-07-0	1,2-Dichloroethane-D4	86%		70-121%
2037-26-5	Toluene-D8	102%		80-128%
460-00-4	4-Bromofluorobenzene	95%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P2		
Lab Sample ID:	JB40350-1	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	90.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z81852.D	1	06/25/13	KH	06/24/13	OP66969	EZ4142
Run #2							

	Initial Weight	Final Volume
Run #1	33.2 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.033	0.0096	mg/kg	
208-96-8	Acenaphthylene	ND	0.033	0.011	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0058	mg/kg	
120-12-7	Anthracene	ND	0.033	0.012	mg/kg	
1912-24-9	Atrazine	ND	0.17	0.0065	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.033	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.033	0.010	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.033	0.011	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.033	0.012	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.033	0.012	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.066	0.012	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.066	0.019	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.066	0.0038	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0076	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.066	0.010	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.011	mg/kg	
86-74-8	Carbazole	ND	0.066	0.015	mg/kg	
105-60-2	Caprolactam	ND	0.066	0.010	mg/kg	
218-01-9	Chrysene	ND	0.033	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.066	0.013	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.066	0.010	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.066	0.0099	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.066	0.010	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.066	0.014	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.066	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.17	0.0084	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.033	0.011	mg/kg	
132-64-9	Dibenzofuran	ND	0.066	0.0099	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.066	0.0074	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.066	0.016	mg/kg	
84-66-2	Diethyl phthalate	ND	0.066	0.011	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.066	0.012	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P2		
Lab Sample ID:	JB40350-1	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	90.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.0423	0.066	0.029	mg/kg	J
206-44-0	Fluoranthene	ND	0.033	0.015	mg/kg	
86-73-7	Fluorene	ND	0.033	0.011	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.066	0.011	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.033	0.0092	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.33	0.034	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.0092	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.033	0.012	mg/kg	
78-59-1	Isophorone	ND	0.066	0.0089	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.066	0.019	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.015	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.013	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.013	mg/kg	
91-20-3	Naphthalene	ND	0.033	0.0091	mg/kg	
98-95-3	Nitrobenzene	ND	0.066	0.0096	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.066	0.0081	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.020	mg/kg	
85-01-8	Phenanthrene	ND	0.033	0.015	mg/kg	
129-00-0	Pyrene	ND	0.033	0.013	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	33%		11-119%
321-60-8	2-Fluorobiphenyl	39%		17-115%
1718-51-0	Terphenyl-d14	70%		30-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.62	.16	mg/kg	J
	system artifact/aldol-condensation	3.94	1.3	mg/kg	J
	unknown	15.83	.67	mg/kg	JB
	Total TIC, Semi-Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P2		
Lab Sample ID:	JB40350-1	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	90.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	U039379.D	1	07/01/13	AFL	06/26/13	F:OP47524	F:SU1839
Run #2							

	Initial Weight	Final Volume
Run #1	29.8 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.0256	0.18	0.022	mg/kg	J
208-96-8	Acenaphthylene	ND	0.18	0.021	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.022	mg/kg	
120-12-7	Anthracene	0.0969	0.18	0.018	mg/kg	J
1912-24-9	Atrazine	ND	0.18	0.018	mg/kg	
100-52-7	Benzaldehyde	ND	0.92	0.18	mg/kg	
56-55-3	Benzo(a)anthracene	0.593	0.18	0.018	mg/kg	
50-32-8	Benzo(a)pyrene	0.595	0.18	0.018	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.888	0.18	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.451	0.18	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.321	0.18	0.022	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.18	0.024	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.18	0.037	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.18	0.025	mg/kg	
105-60-2	Caprolactam	ND	0.18	0.020	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.18	0.024	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.028	mg/kg	
86-74-8	Carbazole	0.0853	0.18	0.021	mg/kg	J
218-01-9	Chrysene	0.704	0.18	0.018	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.18	0.026	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.18	0.025	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.18	0.021	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.18	0.019	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.18	0.019	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.18	0.022	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.18	0.031	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.105	0.18	0.018	mg/kg	J
132-64-9	Dibenzofuran	ND	0.18	0.019	mg/kg	
84-74-2	Di-n-butyl phthalate	0.462	0.37	0.037	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.18	0.037	mg/kg	
84-66-2	Diethyl phthalate	ND	0.37	0.037	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.18	0.037	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P2		
Lab Sample ID:	JB40350-1	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	90.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	2.33	0.37	0.037	mg/kg	
206-44-0	Fluoranthene	1.58	0.18	0.018	mg/kg	
86-73-7	Fluorene	0.0306	0.18	0.020	mg/kg	J
118-74-1	Hexachlorobenzene	ND	0.18	0.018	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.18	0.020	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.18	0.026	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.021	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.520	0.18	0.018	mg/kg	
78-59-1	Isophorone	ND	0.18	0.020	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.18	0.021	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.027	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.026	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.040	mg/kg	
91-20-3	Naphthalene	ND	0.18	0.019	mg/kg	
98-95-3	Nitrobenzene	ND	0.18	0.027	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.18	0.020	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.037	mg/kg	
85-01-8	Phenanthrene	0.789	0.18	0.018	mg/kg	
129-00-0	Pyrene	1.11	0.18	0.018	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		40-105%
321-60-8	2-Fluorobiphenyl	76%		43-107%
1718-51-0	Terphenyl-d14	82%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	3.19	.56	mg/kg	JB
	unknown	6.51	.43	mg/kg	J
84-65-1	9,10-Anthracenedione	11.50	.33	mg/kg	JN
	unknown	14.42	.97	mg/kg	J
	unknown PAH substance	17.18	.49	mg/kg	J
	unknown	20.17	.2	mg/kg	J
	unknown PAH substance	20.68	.22	mg/kg	J
	unknown PAH substance	20.78	.28	mg/kg	J
	Total TIC, Semi-Volatile		2.92	mg/kg	J
	Total Alkanes		0	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P2		
Lab Sample ID:	JB40350-1	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	90.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) Analysis performed at Accutest Laboratories, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P2		
Lab Sample ID:	JB40350-1	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	90.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y12917.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	7.2	2.6	mg/kg	
	EPH (> C28-C40)	ND	7.2	3.2	mg/kg	
	Total EPH (C9-C40)	ND	7.2	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		40-140%
3386-33-2	1-Chlorooctadecane	86%		40-140%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P2		
Lab Sample ID:	JB40350-1	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	90.8
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	15100	55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	2.5	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	50.1	22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.51	0.22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.55	0.55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	3010	550	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	13.2	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	10.1	5.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	12.8	2.7	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	10300	55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	14.5	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	579	550	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	331	1.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.035	0.035	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.6	4.4	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	0.56	0.55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	15.3	5.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	90.3	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Prep QC Batch: MP72853
(4) Prep QC Batch: MP73022

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P3		
Lab Sample ID:	JB40350-2	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	89.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A196007.D	1	06/26/13	OTR	06/22/13 09:00	n/a	VA7396
Run #2							

	Initial Weight
Run #1	5.1 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0199	0.011	0.0019	mg/kg	
71-43-2	Benzene	0.00048	0.0011	0.00013	mg/kg	J
74-97-5	Bromochloromethane	ND	0.0055	0.00029	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0055	0.00012	mg/kg	
75-25-2	Bromoform	ND	0.0055	0.00017	mg/kg	
74-83-9	Bromomethane	ND	0.0055	0.00030	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0026	mg/kg	
75-15-0	Carbon disulfide	ND	0.0055	0.00013	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0055	0.00015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0055	0.00012	mg/kg	
75-00-3	Chloroethane	ND	0.0055	0.00025	mg/kg	
67-66-3	Chloroform	ND	0.0055	0.000091	mg/kg	
74-87-3	Chloromethane	ND	0.0055	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0055	0.00014	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0055	0.00018	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0055	0.00021	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0055	0.00021	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0055	0.00019	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0055	0.00025	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0055	0.00015	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00015	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0055	0.00028	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0055	0.00020	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0055	0.00026	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0055	0.00017	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0055	0.00015	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0055	0.00017	mg/kg	
100-41-4	Ethylbenzene	ND	0.0011	0.00029	mg/kg	
76-13-1	Freon 113	ND	0.0055	0.00047	mg/kg	
591-78-6	2-Hexanone	ND	0.0055	0.00068	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0055	0.000081	mg/kg	
79-20-9	Methyl Acetate	ND	0.0055	0.0029	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P3		
Lab Sample ID:	JB40350-2	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	89.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0055	0.00019	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	0.00080	0.0011	0.00026	mg/kg	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0055	0.00082	mg/kg	
75-09-2	Methylene chloride	ND	0.0055	0.0014	mg/kg	
100-42-5	Styrene	ND	0.0055	0.00010	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0055	0.00014	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0055	0.00019	mg/kg	
108-88-3	Toluene	ND	0.0011	0.00012	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0055	0.00018	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0055	0.00015	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0055	0.00012	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0055	0.00019	mg/kg	
79-01-6	Trichloroethene	ND	0.0055	0.00019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0055	0.00033	mg/kg	
75-01-4	Vinyl chloride	ND	0.0055	0.00016	mg/kg	
	m,p-Xylene	ND	0.0011	0.00019	mg/kg	
95-47-6	o-Xylene	ND	0.0011	0.00015	mg/kg	
1330-20-7	Xylene (total)	ND	0.0011	0.00015	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		65-131%
17060-07-0	1,2-Dichloroethane-D4	84%		70-121%
2037-26-5	Toluene-D8	101%		80-128%
460-00-4	4-Bromofluorobenzene	95%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P3		
Lab Sample ID:	JB40350-2	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	89.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z81848.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142
Run #2							

	Initial Weight	Final Volume
Run #1	31.3 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.036	0.010	mg/kg	
208-96-8	Acenaphthylene	ND	0.036	0.011	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.0063	mg/kg	
120-12-7	Anthracene	ND	0.036	0.013	mg/kg	
1912-24-9	Atrazine	ND	0.18	0.0070	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.036	0.012	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.036	0.011	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.036	0.012	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.036	0.013	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.036	0.013	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.071	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.071	0.021	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.071	0.0041	mg/kg	
100-52-7	Benzaldehyde	ND	0.18	0.0082	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.071	0.011	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.011	mg/kg	
86-74-8	Carbazole	ND	0.071	0.017	mg/kg	
105-60-2	Caprolactam	ND	0.071	0.011	mg/kg	
218-01-9	Chrysene	ND	0.036	0.012	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.071	0.014	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.071	0.011	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.071	0.011	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.071	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.071	0.016	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.071	0.014	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.18	0.0091	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.036	0.012	mg/kg	
132-64-9	Dibenzofuran	ND	0.071	0.011	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.071	0.0079	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.071	0.017	mg/kg	
84-66-2	Diethyl phthalate	ND	0.071	0.012	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.071	0.013	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P3		
Lab Sample ID:	JB40350-2	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	89.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.113	0.071	0.032	mg/kg	
206-44-0	Fluoranthene	ND	0.036	0.016	mg/kg	
86-73-7	Fluorene	ND	0.036	0.012	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.071	0.012	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.036	0.0099	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.36	0.036	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.0099	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.036	0.012	mg/kg	
78-59-1	Isophorone	ND	0.071	0.0096	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.071	0.020	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.016	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.014	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.014	mg/kg	
91-20-3	Naphthalene	ND	0.036	0.0098	mg/kg	
98-95-3	Nitrobenzene	ND	0.071	0.010	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.071	0.0087	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.021	mg/kg	
85-01-8	Phenanthrene	ND	0.036	0.016	mg/kg	
129-00-0	Pyrene	ND	0.036	0.014	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	55%		11-119%
321-60-8	2-Fluorobiphenyl	58%		17-115%
1718-51-0	Terphenyl-d14	90%		30-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.62	.25	mg/kg	J
	system artifact/aldol-condensation	4.01	1.7	mg/kg	J
	unknown	15.84	2.5	mg/kg	JB
	Total TIC, Semi-Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P3		
Lab Sample ID:	JB40350-2	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	U039380.D	1	07/01/13	AFL	06/26/13	F:OP47524	F:SU1839
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.19	0.022	mg/kg	
208-96-8	Acenaphthylene	ND	0.19	0.022	mg/kg	
98-86-2	Acetophenone	ND	0.19	0.022	mg/kg	
120-12-7	Anthracene	ND	0.19	0.019	mg/kg	
1912-24-9	Atrazine	ND	0.19	0.019	mg/kg	
100-52-7	Benzaldehyde	ND	0.94	0.19	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.19	0.019	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.19	0.019	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.19	0.019	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.019	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.022	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.19	0.024	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.19	0.037	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.19	0.025	mg/kg	
105-60-2	Caprolactam	ND	0.19	0.021	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.19	0.024	mg/kg	
106-47-8	4-Chloroaniline	ND	0.19	0.028	mg/kg	
86-74-8	Carbazole	ND	0.19	0.021	mg/kg	
218-01-9	Chrysene	ND	0.19	0.019	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.19	0.026	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.19	0.025	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.19	0.021	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.19	0.020	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.19	0.019	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.19	0.023	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.19	0.031	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.019	mg/kg	
132-64-9	Dibenzofuran	ND	0.19	0.019	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.37	0.037	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.19	0.037	mg/kg	
84-66-2	Diethyl phthalate	ND	0.37	0.037	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.19	0.037	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P3		
Lab Sample ID:	JB40350-2	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.143	0.37	0.037	mg/kg	J
206-44-0	Fluoranthene	ND	0.19	0.019	mg/kg	
86-73-7	Fluorene	ND	0.19	0.021	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.19	0.019	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.19	0.021	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.19	0.026	mg/kg	
67-72-1	Hexachloroethane	ND	0.19	0.021	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.019	mg/kg	
78-59-1	Isophorone	ND	0.19	0.020	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.19	0.022	mg/kg	
88-74-4	2-Nitroaniline	ND	0.19	0.028	mg/kg	
99-09-2	3-Nitroaniline	ND	0.19	0.026	mg/kg	
100-01-6	4-Nitroaniline	ND	0.19	0.040	mg/kg	
91-20-3	Naphthalene	ND	0.19	0.019	mg/kg	
98-95-3	Nitrobenzene	ND	0.19	0.027	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.19	0.021	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.19	0.037	mg/kg	
85-01-8	Phenanthrene	ND	0.19	0.019	mg/kg	
129-00-0	Pyrene	ND	0.19	0.019	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.19	0.024	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		40-105%
321-60-8	2-Fluorobiphenyl	83%		43-107%
1718-51-0	Terphenyl-d14	100%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	3.19	.47	mg/kg	JB
10544-50-0	Cyclic octaatomic sulfur	12.16	.34	mg/kg	JN
	unknown	12.96	.71	mg/kg	J
123-95-5	Octadecanoic acid, butyl ester	14.32	.67	mg/kg	JN
	unknown	19.58	.26	mg/kg	J
	Total TIC, Semi-Volatile		1.98	mg/kg	J
	Total Alkanes		0	mg/kg	

(a) Analysis performed at Accutest Laboratories, Orlando FL.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P3		
Lab Sample ID:	JB40350-2	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	89.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y12918.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	7.3	2.6	mg/kg	
	EPH (> C28-C40)	ND	7.3	3.2	mg/kg	
	Total EPH (C9-C40)	ND	7.3	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		40-140%
3386-33-2	1-Chlorooctadecane	87%		40-140%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P3		
Lab Sample ID:	JB40350-2	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	89.4
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13700	56	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Antimony	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Arsenic	2.5	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Barium	48.8	22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.58	0.22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Cadmium	< 0.56	0.56	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Calcium	< 560	560	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Chromium	16.0	1.1	mg/kg	1	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Cobalt	< 5.6	5.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Copper	4.8	2.8	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Iron	14300	56	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Lead	5.8	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Magnesium	< 560	560	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Manganese	93.5	1.7	mg/kg	1	06/26/13	07/06/13	ND	SW846 6010C [3]	SW846 3050B [4]
Mercury	< 0.033	0.033	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [5]
Nickel	10.8	4.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Potassium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Selenium	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Silver	0.56	0.56	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Sodium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Thallium	< 1.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Vanadium	16.1	5.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]
Zinc	21.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Instrument QC Batch: MA31602
(4) Prep QC Batch: MP72853
(5) Prep QC Batch: MP73022

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P4		
Lab Sample ID:	JB40350-3	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	91.1
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A196008.D	1	06/26/13	OTR	06/22/13 09:00	n/a	VA7396
Run #2							

	Initial Weight
Run #1	5.2 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0853	0.011	0.0018	mg/kg	
71-43-2	Benzene	ND	0.0011	0.00013	mg/kg	
74-97-5	Bromochloromethane	ND	0.0053	0.00028	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0053	0.00011	mg/kg	
75-25-2	Bromoform	ND	0.0053	0.00016	mg/kg	
74-83-9	Bromomethane	ND	0.0053	0.00029	mg/kg	
78-93-3	2-Butanone (MEK)	0.0063	0.011	0.0025	mg/kg	J
75-15-0	Carbon disulfide	0.0018	0.0053	0.00012	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0053	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0053	0.00011	mg/kg	
75-00-3	Chloroethane	ND	0.0053	0.00024	mg/kg	
67-66-3	Chloroform	ND	0.0053	0.000087	mg/kg	
74-87-3	Chloromethane	ND	0.0053	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0053	0.00013	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0053	0.00017	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0053	0.00020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0053	0.00020	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0053	0.00019	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0053	0.00024	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0053	0.00014	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00014	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0053	0.00027	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0053	0.00019	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0053	0.00025	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0053	0.00016	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0053	0.00015	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0053	0.00016	mg/kg	
100-41-4	Ethylbenzene	ND	0.0011	0.00028	mg/kg	
76-13-1	Freon 113	ND	0.0053	0.00045	mg/kg	
591-78-6	2-Hexanone	ND	0.0053	0.00066	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0053	0.000078	mg/kg	
79-20-9	Methyl Acetate	ND	0.0053	0.0027	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P4		
Lab Sample ID:	JB40350-3	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	91.1
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0053	0.00018	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0011	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0053	0.00079	mg/kg	
75-09-2	Methylene chloride	0.0027	0.0053	0.0013	mg/kg	J
100-42-5	Styrene	ND	0.0053	0.000097	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0053	0.00014	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0053	0.00018	mg/kg	
108-88-3	Toluene	0.00033	0.0011	0.00011	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0053	0.00017	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0053	0.00015	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0053	0.00011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0053	0.00018	mg/kg	
79-01-6	Trichloroethene	ND	0.0053	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0053	0.00031	mg/kg	
75-01-4	Vinyl chloride	ND	0.0053	0.00015	mg/kg	
	m,p-Xylene	ND	0.0011	0.00018	mg/kg	
95-47-6	o-Xylene	ND	0.0011	0.00015	mg/kg	
1330-20-7	Xylene (total)	ND	0.0011	0.00015	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		65-131%
17060-07-0	1,2-Dichloroethane-D4	87%		70-121%
2037-26-5	Toluene-D8	101%		80-128%
460-00-4	4-Bromofluorobenzene	93%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4 alkyl benzene	18.08	.0095	mg/kg	J
	Total TIC, Volatile		.0095	mg/kg	J
	Total Alkanes		.0128	mg/kg	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P4		
Lab Sample ID:	JB40350-3	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	91.1
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z81849.D	1	06/25/13	KH	06/24/13	OP66969	EZ4142
Run #2							

	Initial Weight	Final Volume
Run #1	32.2 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.034	0.0099	mg/kg	
208-96-8	Acenaphthylene	ND	0.034	0.011	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0060	mg/kg	
120-12-7	Anthracene	ND	0.034	0.012	mg/kg	
1912-24-9	Atrazine	ND	0.17	0.0067	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.034	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.034	0.010	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.034	0.011	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.034	0.013	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.034	0.013	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.068	0.012	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.068	0.020	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.068	0.0040	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0078	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.068	0.011	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.011	mg/kg	
86-74-8	Carbazole	ND	0.068	0.016	mg/kg	
105-60-2	Caprolactam	ND	0.068	0.011	mg/kg	
218-01-9	Chrysene	ND	0.034	0.012	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.068	0.014	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.068	0.010	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.068	0.010	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.068	0.010	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.068	0.015	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.068	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.17	0.0087	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.034	0.012	mg/kg	
132-64-9	Dibenzofuran	ND	0.068	0.010	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.068	0.0076	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.068	0.017	mg/kg	
84-66-2	Diethyl phthalate	ND	0.068	0.012	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.068	0.012	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P4		
Lab Sample ID:	JB40350-3	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	91.1
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.150	0.068	0.030	mg/kg	
206-44-0	Fluoranthene	ND	0.034	0.015	mg/kg	
86-73-7	Fluorene	ND	0.034	0.011	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.068	0.011	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.034	0.0095	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.34	0.035	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.0095	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.034	0.012	mg/kg	
78-59-1	Isophorone	ND	0.068	0.0092	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.068	0.019	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.015	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.014	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.013	mg/kg	
91-20-3	Naphthalene	ND	0.034	0.0093	mg/kg	
98-95-3	Nitrobenzene	ND	0.068	0.0099	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.068	0.0083	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.020	mg/kg	
85-01-8	Phenanthrene	ND	0.034	0.016	mg/kg	
129-00-0	Pyrene	ND	0.034	0.013	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	39%		11-119%
321-60-8	2-Fluorobiphenyl	59%		17-115%
1718-51-0	Terphenyl-d14	93%		30-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.63	.19	mg/kg	J
	system artifact/aldol-condensation	3.95	1.3	mg/kg	J
	unknown	4.68	.54	mg/kg	J
	unknown	15.83	.19	mg/kg	JB
	unknown	22.73	.3	mg/kg	J
	Total TIC, Semi-Volatile		.84	mg/kg	J
	Total Alkanes		.3	mg/kg	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P4		
Lab Sample ID:	JB40350-3	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	91.1
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L064477.D	1	07/02/13	AFL	06/27/13	F:OP47527	F:SL3252
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.18	0.021	mg/kg	
208-96-8	Acenaphthylene	ND	0.18	0.021	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.021	mg/kg	
120-12-7	Anthracene	ND	0.18	0.018	mg/kg	
1912-24-9	Atrazine	ND	0.18	0.018	mg/kg	
100-52-7	Benzaldehyde	ND	0.90	0.18	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.18	0.018	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.18	0.018	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.18	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.18	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.18	0.022	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.18	0.023	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.18	0.036	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.18	0.024	mg/kg	
105-60-2	Caprolactam	ND	0.18	0.020	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.18	0.023	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.027	mg/kg	
86-74-8	Carbazole	ND	0.18	0.020	mg/kg	
218-01-9	Chrysene	0.0222	0.18	0.018	mg/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	0.18	0.025	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.18	0.024	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.18	0.020	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.18	0.019	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.18	0.019	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.18	0.022	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.18	0.030	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.18	0.018	mg/kg	
132-64-9	Dibenzofuran	ND	0.18	0.018	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.36	0.036	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.18	0.036	mg/kg	
84-66-2	Diethyl phthalate	ND	0.36	0.036	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.18	0.036	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P4		
Lab Sample ID:	JB40350-3	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	91.1
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.151	0.36	0.036	mg/kg	J
206-44-0	Fluoranthene	ND	0.18	0.018	mg/kg	
86-73-7	Fluorene	ND	0.18	0.020	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.18	0.018	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.18	0.020	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.18	0.025	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.020	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.18	0.018	mg/kg	
78-59-1	Isophorone	ND	0.18	0.020	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.18	0.021	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.027	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.025	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.039	mg/kg	
91-20-3	Naphthalene	ND	0.18	0.018	mg/kg	
98-95-3	Nitrobenzene	ND	0.18	0.026	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.18	0.020	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.036	mg/kg	
85-01-8	Phenanthrene	0.0207	0.18	0.018	mg/kg	J
129-00-0	Pyrene	0.0208	0.18	0.018	mg/kg	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	51%		40-105%
321-60-8	2-Fluorobiphenyl	64%		43-107%
1718-51-0	Terphenyl-d14	73%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
10544-50-0	Cyclic octaatomic sulfur	9.06	.52	mg/kg	JN
	Total TIC, Semi-Volatile		.52	mg/kg	J
	Total Alkanes		3.17	mg/kg	J

(a) Analysis performed at Accutest Laboratories, Orlando FL.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P4		
Lab Sample ID:	JB40350-3	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	91.1
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y12919.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	20.7	7.1	2.6	mg/kg	
	EPH (> C28-C40)	26.1	7.1	3.1	mg/kg	
	Total EPH (C9-C40)	46.8	7.1	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	68%		40-140%
3386-33-2	1-Chlorooctadecane	74%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P4		
Lab Sample ID:	JB40350-3	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	91.1
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	17100	54	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	4.4	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	69.2	22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.66	0.22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.54	0.54	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	1110	540	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	58.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	7.1	5.4	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	14.1	2.7	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	19900	54	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	13.3	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	2180	540	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	351	1.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [4]
Nickel	32.3	4.3	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	1120	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	1.0	0.54	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	25.1	5.4	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	34.3	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Prep QC Batch: MP72853
(4) Prep QC Batch: MP73022

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P5		
Lab Sample ID:	JB40350-4	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	91.2
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A196009.D	1	06/26/13	OTR	06/22/13 09:00	n/a	VA7396
Run #2							

	Initial Weight
Run #1	5.1 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0165	0.011	0.0018	mg/kg	
71-43-2	Benzene	ND	0.0011	0.00013	mg/kg	
74-97-5	Bromochloromethane	ND	0.0054	0.00028	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0054	0.00011	mg/kg	
75-25-2	Bromoform	ND	0.0054	0.00016	mg/kg	
74-83-9	Bromomethane	ND	0.0054	0.00029	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0026	mg/kg	
75-15-0	Carbon disulfide	ND	0.0054	0.00013	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0054	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0054	0.00012	mg/kg	
75-00-3	Chloroethane	ND	0.0054	0.00024	mg/kg	
67-66-3	Chloroform	ND	0.0054	0.000089	mg/kg	
74-87-3	Chloromethane	ND	0.0054	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0054	0.00013	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0054	0.00018	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0054	0.00020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0054	0.00020	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0054	0.00019	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0054	0.00025	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0054	0.00015	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00015	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0054	0.00028	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0054	0.00020	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0054	0.00026	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0054	0.00017	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0054	0.00015	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0054	0.00017	mg/kg	
100-41-4	Ethylbenzene	ND	0.0011	0.00028	mg/kg	
76-13-1	Freon 113	ND	0.0054	0.00046	mg/kg	
591-78-6	2-Hexanone	ND	0.0054	0.00067	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0054	0.000080	mg/kg	
79-20-9	Methyl Acetate	ND	0.0054	0.0028	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P5		
Lab Sample ID:	JB40350-4	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	91.2
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0054	0.00018	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0011	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0054	0.00081	mg/kg	
75-09-2	Methylene chloride	0.0034	0.0054	0.0014	mg/kg	J
100-42-5	Styrene	ND	0.0054	0.000099	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0054	0.00014	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0054	0.00018	mg/kg	
108-88-3	Toluene	0.00040	0.0011	0.00011	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0054	0.00018	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0054	0.00015	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0054	0.00011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0054	0.00019	mg/kg	
79-01-6	Trichloroethene	ND	0.0054	0.00019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0054	0.00032	mg/kg	
75-01-4	Vinyl chloride	ND	0.0054	0.00015	mg/kg	
	m,p-Xylene	ND	0.0011	0.00019	mg/kg	
95-47-6	o-Xylene	ND	0.0011	0.00015	mg/kg	
1330-20-7	Xylene (total)	ND	0.0011	0.00015	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		65-131%
17060-07-0	1,2-Dichloroethane-D4	84%		70-121%
2037-26-5	Toluene-D8	102%		80-128%
460-00-4	4-Bromofluorobenzene	95%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	7.76	.0061	mg/kg	J
	unknown	8.73	.012	mg/kg	J
	unknown	9.50	.0067	mg/kg	J
	Total TIC, Volatile		.0248	mg/kg	J
	Total Alkanes		0	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P5		
Lab Sample ID:	JB40350-4	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	91.2
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z81850.D	1	06/25/13	KH	06/24/13	OP66969	EZ4142
Run #2							

	Initial Weight	Final Volume
Run #1	32.9 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.033	0.0097	mg/kg	
208-96-8	Acenaphthylene	ND	0.033	0.011	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0059	mg/kg	
120-12-7	Anthracene	ND	0.033	0.012	mg/kg	
1912-24-9	Atrazine	ND	0.17	0.0066	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.033	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.033	0.010	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.033	0.011	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.033	0.012	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.033	0.013	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.067	0.012	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.067	0.019	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.067	0.0039	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0077	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.067	0.010	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.011	mg/kg	
86-74-8	Carbazole	ND	0.067	0.015	mg/kg	
105-60-2	Caprolactam	ND	0.067	0.010	mg/kg	
218-01-9	Chrysene	ND	0.033	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.067	0.013	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.067	0.010	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.067	0.0099	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.067	0.010	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.067	0.015	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.067	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.17	0.0085	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.033	0.011	mg/kg	
132-64-9	Dibenzofuran	ND	0.067	0.0099	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.067	0.0074	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.067	0.016	mg/kg	
84-66-2	Diethyl phthalate	ND	0.067	0.011	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.067	0.012	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P5		
Lab Sample ID:	JB40350-4	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	91.2
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.332	0.067	0.029	mg/kg	
206-44-0	Fluoranthene	ND	0.033	0.015	mg/kg	
86-73-7	Fluorene	ND	0.033	0.011	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.067	0.011	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.033	0.0093	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.33	0.034	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.0093	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.033	0.012	mg/kg	
78-59-1	Isophorone	ND	0.067	0.0090	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.067	0.019	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.015	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.013	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.013	mg/kg	
91-20-3	Naphthalene	ND	0.033	0.0091	mg/kg	
98-95-3	Nitrobenzene	ND	0.067	0.0096	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.067	0.0081	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.020	mg/kg	
85-01-8	Phenanthrene	ND	0.033	0.015	mg/kg	
129-00-0	Pyrene	ND	0.033	0.013	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	40%		11-119%
321-60-8	2-Fluorobiphenyl	54%		17-115%
1718-51-0	Terphenyl-d14	95%		30-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.62	.14	mg/kg	J
	system artifact/aldol-condensation	3.94	1.3	mg/kg	J
	unknown	4.68	.35	mg/kg	J
	unknown	15.84	4.1	mg/kg	JB
	Total TIC, Semi-Volatile		.35	mg/kg	J
	Total Alkanes		0	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P5		
Lab Sample ID:	JB40350-4	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	91.2
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L064478.D	1	07/02/13	AFL	06/27/13	F:OP47527	F:SL3252
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.18	0.022	mg/kg	
208-96-8	Acenaphthylene	ND	0.18	0.021	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.021	mg/kg	
120-12-7	Anthracene	ND	0.18	0.018	mg/kg	
1912-24-9	Atrazine	ND	0.18	0.018	mg/kg	
100-52-7	Benzaldehyde	ND	0.91	0.18	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.18	0.018	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.18	0.018	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.18	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.18	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.18	0.022	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.18	0.023	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.18	0.036	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.18	0.024	mg/kg	
105-60-2	Caprolactam	ND	0.18	0.020	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.18	0.024	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.027	mg/kg	
86-74-8	Carbazole	ND	0.18	0.020	mg/kg	
218-01-9	Chrysene	ND	0.18	0.018	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.18	0.026	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.18	0.025	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.18	0.021	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.18	0.019	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.18	0.019	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.18	0.022	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.18	0.030	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.18	0.018	mg/kg	
132-64-9	Dibenzofuran	ND	0.18	0.018	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.36	0.036	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.18	0.036	mg/kg	
84-66-2	Diethyl phthalate	ND	0.36	0.036	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.18	0.036	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P5		
Lab Sample ID:	JB40350-4	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	91.2
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.638	0.36	0.036	mg/kg	
206-44-0	Fluoranthene	ND	0.18	0.018	mg/kg	
86-73-7	Fluorene	ND	0.18	0.020	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.18	0.018	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.18	0.020	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.18	0.025	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.021	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.18	0.018	mg/kg	
78-59-1	Isophorone	ND	0.18	0.020	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.18	0.021	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.027	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.026	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.039	mg/kg	
91-20-3	Naphthalene	ND	0.18	0.018	mg/kg	
98-95-3	Nitrobenzene	ND	0.18	0.026	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.18	0.020	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.036	mg/kg	
85-01-8	Phenanthrene	ND	0.18	0.018	mg/kg	
129-00-0	Pyrene	ND	0.18	0.018	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	80%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	10.13	.2	mg/kg	J
	unknown	10.22	.39	mg/kg	J
	unknown	10.26	.45	mg/kg	J
	unknown	10.29	.41	mg/kg	J
	unknown	10.34	.21	mg/kg	J
	Total TIC, Semi-Volatile		1.66	mg/kg	J
	Total Alkanes		0	mg/kg	

(a) Analysis performed at Accutest Laboratories, Orlando FL.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P5		
Lab Sample ID:	JB40350-4	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	91.2
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Z9291.D	1	06/27/13	KD	06/26/13	OP67011	G5Z312
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	7.3	2.6	mg/kg	
	EPH (> C28-C40)	31.0	7.3	3.2	mg/kg	
	Total EPH (C9-C40)	31.0	7.3	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		40-140%
3386-33-2	1-Chlorooctadecane	78%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P5		
Lab Sample ID:	JB40350-4	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	91.2
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	17400	56	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	2.6	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	53.1	22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.51	0.22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.56	0.56	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	1400	560	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	18.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.6	5.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	9.3	2.8	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	14000	56	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	127	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	589	560	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	144	1.7	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.033	0.033	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.3	4.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	0.60	0.56	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	15.9	5.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	185	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Prep QC Batch: MP72853
(4) Prep QC Batch: MP73022

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P11		
Lab Sample ID:	JB40350-5	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	93.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A196010.D	1	06/26/13	OTR	06/22/13 09:00	n/a	VA7396
Run #2							

	Initial Weight
Run #1	4.6 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0150	0.012	0.0020	mg/kg	
71-43-2	Benzene	ND	0.0012	0.00014	mg/kg	
74-97-5	Bromochloromethane	ND	0.0058	0.00031	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0058	0.00012	mg/kg	
75-25-2	Bromoform	ND	0.0058	0.00018	mg/kg	
74-83-9	Bromomethane	ND	0.0058	0.00032	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.012	0.0028	mg/kg	
75-15-0	Carbon disulfide	ND	0.0058	0.00014	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0058	0.00015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0058	0.00013	mg/kg	
75-00-3	Chloroethane	ND	0.0058	0.00026	mg/kg	
67-66-3	Chloroform	ND	0.0058	0.000096	mg/kg	
74-87-3	Chloromethane	ND	0.0058	0.00022	mg/kg	
110-82-7	Cyclohexane	ND	0.0058	0.00014	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0058	0.00019	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0058	0.00022	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0058	0.00022	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0058	0.00020	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0058	0.00027	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0058	0.00016	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0012	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0058	0.00030	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0058	0.00021	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0058	0.00028	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0058	0.00018	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0058	0.00016	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0058	0.00018	mg/kg	
100-41-4	Ethylbenzene	ND	0.0012	0.00031	mg/kg	
76-13-1	Freon 113	ND	0.0058	0.00050	mg/kg	
591-78-6	2-Hexanone	ND	0.0058	0.00072	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0058	0.000086	mg/kg	
79-20-9	Methyl Acetate	ND	0.0058	0.0030	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P11		
Lab Sample ID:	JB40350-5	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	93.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
108-87-2	Methylcyclohexane	ND	0.0058	0.00020	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0012	0.00027	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0058	0.00087	mg/kg	
75-09-2	Methylene chloride	ND	0.0058	0.0015	mg/kg	
100-42-5	Styrene	ND	0.0058	0.00011	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0058	0.00015	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0058	0.00020	mg/kg	
108-88-3	Toluene	0.00048	0.0012	0.00012	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0058	0.00019	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0058	0.00016	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0058	0.00012	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0058	0.00020	mg/kg	
79-01-6	Trichloroethene	ND	0.0058	0.00020	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0058	0.00035	mg/kg	
75-01-4	Vinyl chloride	ND	0.0058	0.00017	mg/kg	
	m,p-Xylene	ND	0.0012	0.00020	mg/kg	
95-47-6	o-Xylene	ND	0.0012	0.00016	mg/kg	
1330-20-7	Xylene (total)	ND	0.0012	0.00016	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		65-131%
17060-07-0	1,2-Dichloroethane-D4	84%		70-121%
2037-26-5	Toluene-D8	103%		80-128%
460-00-4	4-Bromofluorobenzene	95%		67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	7.79	.0062	mg/kg	J
	unknown	9.51	.009	mg/kg	J
	Total TIC, Volatile		.0152	mg/kg	J
	Total Alkanes		0	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P11		
Lab Sample ID:	JB40350-5	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z81851.D	1	06/25/13	KH	06/24/13	OP66969	EZ4142
Run #2							

	Initial Weight	Final Volume
Run #1	31.9 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.034	0.0097	mg/kg	
208-96-8	Acenaphthylene	ND	0.034	0.011	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0059	mg/kg	
120-12-7	Anthracene	ND	0.034	0.012	mg/kg	
1912-24-9	Atrazine	ND	0.17	0.0066	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.034	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.034	0.010	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.034	0.011	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.034	0.012	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.034	0.013	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.067	0.012	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.067	0.019	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.067	0.0039	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0077	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.067	0.010	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.011	mg/kg	
86-74-8	Carbazole	ND	0.067	0.016	mg/kg	
105-60-2	Caprolactam	ND	0.067	0.011	mg/kg	
218-01-9	Chrysene	ND	0.034	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.067	0.014	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.067	0.010	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.067	0.010	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.067	0.010	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.067	0.015	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.067	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.17	0.0085	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.034	0.011	mg/kg	
132-64-9	Dibenzofuran	ND	0.067	0.010	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.067	0.0074	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.067	0.016	mg/kg	
84-66-2	Diethyl phthalate	ND	0.067	0.011	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.067	0.012	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P11		
Lab Sample ID:	JB40350-5	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	0.201	0.067	0.030	mg/kg	
206-44-0	Fluoranthene	ND	0.034	0.015	mg/kg	
86-73-7	Fluorene	ND	0.034	0.011	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.067	0.011	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.034	0.0093	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.34	0.034	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.0093	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.034	0.012	mg/kg	
78-59-1	Isophorone	ND	0.067	0.0090	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.067	0.019	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.015	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.013	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.013	mg/kg	
91-20-3	Naphthalene	ND	0.034	0.0092	mg/kg	
98-95-3	Nitrobenzene	ND	0.067	0.0097	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.067	0.0082	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.020	mg/kg	
85-01-8	Phenanthrene	ND	0.034	0.015	mg/kg	
129-00-0	Pyrene	ND	0.034	0.013	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		11-119%
321-60-8	2-Fluorobiphenyl	65%		17-115%
1718-51-0	Terphenyl-d14	92%		30-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	2.77	.16	mg/kg	J
	system artifact	3.63	.25	mg/kg	J
	system artifact/aldol-condensation	4.05	2.7	mg/kg	J
	unknown	15.84	3.3	mg/kg	JB
	Total TIC, Semi-Volatile		0	mg/kg	
	Total Alkanes		0	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P11		
Lab Sample ID:	JB40350-5	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	93.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L064479.D	1	07/02/13	AFL	06/27/13	F:OP47527	F:SL3252
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	1.0 ml
Run #2		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.18	0.021	mg/kg	
208-96-8	Acenaphthylene	ND	0.18	0.021	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.021	mg/kg	
120-12-7	Anthracene	ND	0.18	0.018	mg/kg	
1912-24-9	Atrazine	ND	0.18	0.018	mg/kg	
100-52-7	Benzaldehyde	ND	0.89	0.18	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.18	0.018	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.18	0.018	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.18	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.18	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.18	0.021	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.18	0.023	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.18	0.036	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.18	0.024	mg/kg	
105-60-2	Caprolactam	ND	0.18	0.020	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.18	0.023	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.027	mg/kg	
86-74-8	Carbazole	ND	0.18	0.020	mg/kg	
218-01-9	Chrysene	ND	0.18	0.018	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.18	0.025	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.18	0.024	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.18	0.020	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.18	0.019	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.18	0.019	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.18	0.022	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.18	0.030	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.18	0.018	mg/kg	
132-64-9	Dibenzofuran	ND	0.18	0.018	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.36	0.036	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.18	0.036	mg/kg	
84-66-2	Diethyl phthalate	ND	0.36	0.036	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.18	0.036	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P11		
Lab Sample ID:	JB40350-5	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	93.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	2.10	0.36	0.036	mg/kg	
206-44-0	Fluoranthene	ND	0.18	0.018	mg/kg	
86-73-7	Fluorene	ND	0.18	0.020	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.18	0.018	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.18	0.020	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.18	0.025	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.020	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.18	0.018	mg/kg	
78-59-1	Isophorone	ND	0.18	0.020	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.18	0.021	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.026	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.025	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.038	mg/kg	
91-20-3	Naphthalene	ND	0.18	0.018	mg/kg	
98-95-3	Nitrobenzene	ND	0.18	0.026	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.18	0.020	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.036	mg/kg	
85-01-8	Phenanthrene	ND	0.18	0.018	mg/kg	
129-00-0	Pyrene	ND	0.18	0.018	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		40-105%
321-60-8	2-Fluorobiphenyl	74%		43-107%
1718-51-0	Terphenyl-d14	78%		45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [b]		0	mg/kg	
	Total Alkanes		0	mg/kg	

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) No TICs detected.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P11		
Lab Sample ID:	JB40350-5	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
Method:	NJDEP EPH SW846 3546	**Percent Solids:**	93.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y12920.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	2.0 ml
Run #2		

NJDEP EPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	7.1	2.5	mg/kg	
	EPH (> C28-C40)	ND	7.1	3.1	mg/kg	
	Total EPH (C9-C40)	ND	7.1	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		40-140%
3386-33-2	1-Chlorooctadecane	89%		40-140%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P11		
Lab Sample ID:	JB40350-5	**Date Sampled:**	06/21/13
Matrix:	SO - Soil	**Date Received:**	06/21/13
		Percent Solids:	93.5
Project:	Hess QC Lab, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4830	55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	6.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	22.2	22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.56	0.22	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.55	0.55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	1110	550	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	28.9	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	5.5	5.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	8.6	2.7	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	23800	55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	7.9	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	2040	550	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	121	1.6	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.033	0.033	mg/kg	1	07/03/13	07/04/13	JW	SW846 7471B [1]	SW846 7471B [4]
Nickel	15.0	4.4	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	0.92	0.55	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	27.5	5.5	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	31.4	2.2	mg/kg	1	06/26/13	07/04/13	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA31589
(2) Instrument QC Batch: MA31593
(3) Prep QC Batch: MP72853
(4) Prep QC Batch: MP73021

RL = Reporting Limit

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST LABORATORIES

SLL

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE ___ OF ___

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JB40350

Client / Reporting Information

Company Name: EnviroTrac
Street Address: 400 Corporate Ct
City / State / Zip: S. Plainfield, NJ 07080
Project Contact: Drew Daley
E-mail:
Phone #: 908-757-1900
Fax #:
Sampler(s) Name(s): Justin P. Mike B.
Phone #:

Project Information

Project Name: Hess QC Lab
Street: 835 West Ave
City / State: Port Reading, NJ
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name: Hess Corp.
Street Address: 1 Hess Plaza
City / State / Zip: Woodbridge, NJ
Attention: Mike Matri

Requested Analysis (see TEST CODE sheet)

EPH cat + 2
VO + 15
SVO + TICs
TAL metals
* 3 (mercury acid preserved) 6/24/13

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	EPH cat + 2	VO + 15	SVO + TICs	TAL metals		* 3 (mercury acid preserved) 6/24/13				LAB USE ONLY
-1	P2		6/21	12:53	JP	SO	5					2			3	✓	✓	✓	✓		*				D20
-2	P3		6/21	12:06	JP	SO	5					2			3	✓	✓	✓	✓		↓				M34 T2
-3	P4		6/21	11:19	JP	SO	5					2			3	✓	✓	✓	✓						14E3
-4	P5		6/21	10:36	JP	SO	5					2			3	✓	✓	✓	✓						4003
-5	P11		6/21	9:42	JP	SO	5					2			3	✓	✓	✓	✓		✓				

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] other _____

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format _____
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Do not fractionate Samples
Hold pending results

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/21/13 15:00	1	2	6/24/13 16:45	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable [ ]

On Ice [x] Cooler Temp. 6.2°C

JB40350: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB40350 **Client:** **Project:**

Date / Time Received: 6/21/2013 **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (4.2/4.2); 0

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB40350: Chain of Custody
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Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Job No: JB40350

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40350-1 P2	Collected: 21-JUN-13 12:53 By: JP		Received: 21-JUN-13 By: AS			
JB40350-1	SW846 8270D	25-JUN-13 01:54	KH	24-JUN-13	TM	B8270TCL11+
JB40350-1	SW846 8260B	26-JUN-13 05:34	OTR			V8260NJPTCL11+
JB40350-1	NJDEP EPH	26-JUN-13 20:34	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40350-1	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40350-1	SW846 8270D	01-JUL-13 20:11	AFL	26-JUN-13	AFL	B8270TCL11+
JB40350-1	SW846 7471B	04-JUL-13 10:45	JW	03-JUL-13	JW	HG
JB40350-1	SW846 6010C	04-JUL-13 19:45	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JB40350-2 P3	Collected: 21-JUN-13 12:06 By: JP		Received: 21-JUN-13 By: AS			
JB40350-2	SW846 8270D	24-JUN-13 23:44	KH	24-JUN-13	TM	B8270TCL11+
JB40350-2	SW846 8260B	26-JUN-13 06:04	OTR			V8260NJPTCL11+
JB40350-2	NJDEP EPH	26-JUN-13 20:56	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40350-2	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40350-2	SW846 8270D	01-JUL-13 20:38	AFL	26-JUN-13	AFL	B8270TCL11+
JB40350-2	SW846 7471B	04-JUL-13 10:46	JW	03-JUL-13	JW	HG
JB40350-2	SW846 6010C	04-JUL-13 19:50	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CU, FE,K,MG,NA,NI,PB,SB,SE,TL, V,ZN
JB40350-2	SW846 6010C	06-JUL-13 16:30	ND	26-JUN-13	RP	CR,MN
JB40350-3 P4	Collected: 21-JUN-13 11:19 By: JP		Received: 21-JUN-13 By: AS			
JB40350-3	SW846 8270D	25-JUN-13 00:16	KH	24-JUN-13	TM	B8270TCL11+
JB40350-3	SW846 8260B	26-JUN-13 06:33	OTR			V8260NJPTCL11+
JB40350-3	NJDEP EPH	26-JUN-13 21:17	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40350-3	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40350-3	SW846 8270D	02-JUL-13 17:10	AFL	27-JUN-13	AFL	B8270TCL11+
JB40350-3	SW846 7471B	04-JUL-13 10:48	JW	03-JUL-13	JW	HG
JB40350-3	SW846 6010C	04-JUL-13 19:56	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Hess QC Lab, 835 West Avenue, Port Reading, NJ

Job No: JB40350

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40350-4 P5	Collected: 21-JUN-13 10:36 By: JP		Received: 21-JUN-13 By: AS			
JB40350-4	SW846 8270D	25-JUN-13 00:49	KH	24-JUN-13	TM	B8270TCL11+
JB40350-4	SW846 8260B	26-JUN-13 07:03	OTR			V8260NJPTCL11+
JB40350-4	NJDEP EPH	27-JUN-13 11:18	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40350-4	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40350-4	SW846 8270D	02-JUL-13 17:35	AFL	27-JUN-13	AFL	B8270TCL11+
JB40350-4	SW846 7471B	04-JUL-13 10:49	JW	03-JUL-13	JW	HG
JB40350-4	SW846 6010C	04-JUL-13 19:27	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JB40350-5 P11	Collected: 21-JUN-13 09:42 By: JP		Received: 21-JUN-13 By: AS			
JB40350-5	SW846 8270D	25-JUN-13 01:22	KH	24-JUN-13	TM	B8270TCL11+
JB40350-5	SW846 8260B	26-JUN-13 07:47	OTR			V8260NJPTCL11+
JB40350-5	NJDEP EPH	26-JUN-13 21:39	KD	26-JUN-13	KS	BNJEPHCAT2NF
JB40350-5	SM2540 G-97	27-JUN-13 15:00	PD			%SOL
JB40350-5	SW846 8270D	02-JUL-13 18:00	AFL	27-JUN-13	AFL	B8270TCL11+
JB40350-5	SW846 7471B	04-JUL-13 09:40	JW	03-JUL-13	JW	HG
JB40350-5	SW846 6010C	04-JUL-13 20:02	GT	26-JUN-13	RP	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN

Accutest Internal Chain of Custody

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40350-1.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40350-1.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40350-1.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40350-1.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40350-1.1	Darnell Brown		07/29/13 15:52	Disposed
JB40350-1.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40350-1.1
JB40350-1.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40350-1.1
JB40350-1.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40350-1.1.1	Extract Storage		08/05/13 09:00	Disposed
JB40350-1.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40350-1.1
JB40350-1.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40350-1.1
JB40350-1.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40350-1.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40350-1.1.2	Gwendolyn Dymowski	GC5Y	06/26/13 18:23	Load on Instrument
JB40350-1.1.2	GC5Y	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40350-1.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40350-1.1.2	Extract Freezer		08/06/13 09:00	Disposed
JB40350-1.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40350-1.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40350-1.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40350-1.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40350-1.2	Darnell Brown		07/29/13 15:52	Disposed
JB40350-1.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40350-1.2
JB40350-1.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40350-1.2
JB40350-1.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40350-1.2.1	Metals Digestate Storage		09/02/13 09:00	Disposed
JB40350-1.4	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-1.4	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-1.4	Darnell Brown		07/29/13 15:52	Disposed
JB40350-1.5	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-1.5	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-1.5	Secured Storage	Oksana Treglazova	06/25/13 15:16	Retrieve from Storage
JB40350-1.5	Oksana Treglazova	GCMSA	06/25/13 15:16	Load on Instrument
JB40350-1.5	GCMSA	Oksana Treglazova	06/26/13 11:23	Unload from Instrument
JB40350-1.5	Oksana Treglazova	Secured Storage	06/26/13 11:23	Return to Storage
JB40350-1.5	Darnell Brown		07/29/13 15:52	Disposed
JB40350-1.6	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40350-1.6	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-1.6	Darnell Brown		07/29/13 15:52	Disposed
JB40350-1.7	Secured Storage	Robert Lofrano	06/25/13 13:50	Retrieve from Storage
JB40350-1.7	Robert Lofrano		06/25/13 13:51	Subcontract
JB40350-2.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40350-2.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40350-2.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40350-2.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40350-2.1	Darnell Brown		07/29/13 15:52	Disposed
JB40350-2.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40350-2.1
JB40350-2.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40350-2.1
JB40350-2.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40350-2.1.1	Extract Storage		08/05/13 09:00	Disposed
JB40350-2.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40350-2.1
JB40350-2.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40350-2.1
JB40350-2.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40350-2.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40350-2.1.2	Gwendolyn Dymowski	GC5Y	06/26/13 18:23	Load on Instrument
JB40350-2.1.2	GC5Y	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40350-2.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40350-2.1.2	Extract Freezer		08/06/13 09:00	Disposed
JB40350-2.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40350-2.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40350-2.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40350-2.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40350-2.2	Darnell Brown		07/29/13 15:52	Disposed
JB40350-2.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40350-2.2
JB40350-2.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40350-2.2
JB40350-2.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40350-2.2.1	Metals Digestate Storage		09/02/13 09:00	Disposed
JB40350-2.4	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-2.4	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-2.4	Darnell Brown		07/29/13 15:52	Disposed
JB40350-2.5	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-2.5	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-2.5	Secured Storage	Oksana Treglazova	06/25/13 15:16	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40350-2.5	Oksana Treglazova	GCMSA	06/25/13 15:16	Load on Instrument
JB40350-2.5	GCMSA	Oksana Treglazova	06/26/13 11:23	Unload from Instrument
JB40350-2.5	Oksana Treglazova	Secured Storage	06/26/13 11:23	Return to Storage
JB40350-2.5	Darnell Brown		07/29/13 15:52	Disposed
JB40350-2.6	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-2.6	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-2.6	Darnell Brown		07/29/13 15:52	Disposed
JB40350-2.7	Secured Storage	Robert Lofrano	06/25/13 13:50	Retrieve from Storage
JB40350-2.7	Robert Lofrano		06/25/13 13:51	Subcontract
JB40350-3.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40350-3.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40350-3.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40350-3.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40350-3.1	Darnell Brown		07/29/13 15:52	Disposed
JB40350-3.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40350-3.1
JB40350-3.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40350-3.1
JB40350-3.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40350-3.1.1	Extract Storage		08/05/13 09:00	Disposed
JB40350-3.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40350-3.1
JB40350-3.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40350-3.1
JB40350-3.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40350-3.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40350-3.1.2	Gwendolyn Dymowski	GC5Y	06/26/13 18:23	Load on Instrument
JB40350-3.1.2	GC5Y	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40350-3.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40350-3.1.2	Extract Freezer		08/06/13 09:00	Disposed
JB40350-3.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40350-3.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40350-3.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40350-3.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40350-3.2	Darnell Brown		07/29/13 15:52	Disposed
JB40350-3.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40350-3.2
JB40350-3.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40350-3.2
JB40350-3.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40350-3.2.1	Metals Digestate Storage		09/02/13 09:00	Disposed
JB40350-3.4	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40350-3.4	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-3.4	Darnell Brown		07/29/13 15:52	Disposed
JB40350-3.5	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-3.5	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-3.5	Secured Storage	Oksana Treglazova	06/25/13 15:16	Retrieve from Storage
JB40350-3.5	Oksana Treglazova	GCMSA	06/25/13 15:16	Load on Instrument
JB40350-3.5	GCMSA	Oksana Treglazova	06/26/13 11:23	Unload from Instrument
JB40350-3.5	Oksana Treglazova	Secured Storage	06/26/13 11:23	Return to Storage
JB40350-3.5	Darnell Brown		07/29/13 15:52	Disposed
JB40350-3.6	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-3.6	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-3.6	Darnell Brown		07/29/13 15:52	Disposed
JB40350-3.7	Secured Storage	Robert Lofrano	06/25/13 13:50	Retrieve from Storage
JB40350-3.7	Robert Lofrano		06/25/13 13:51	Subcontract
JB40350-4.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40350-4.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40350-4.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40350-4.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40350-4.1	Darnell Brown		07/29/13 15:52	Disposed
JB40350-4.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40350-4.1
JB40350-4.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40350-4.1
JB40350-4.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40350-4.1.1	Extract Storage		08/05/13 09:00	Disposed
JB40350-4.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40350-4.1
JB40350-4.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40350-4.1
JB40350-4.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40350-4.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40350-4.1.2	Gwendolyn Dymowski	GC5Z	06/26/13 18:23	Load on Instrument
JB40350-4.1.2	GC5Z	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40350-4.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40350-4.1.2	Extract Freezer		08/06/13 09:00	Disposed
JB40350-4.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40350-4.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40350-4.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40350-4.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40350-4.2	Darnell Brown		07/29/13 15:52	Disposed

Accutest Internal Chain of Custody

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40350-4.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40350-4.2
JB40350-4.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40350-4.2
JB40350-4.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40350-4.2.1	Metals Digestate Storage		09/02/13 09:00	Disposed
JB40350-4.4	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-4.4	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-4.4	Darnell Brown		07/29/13 15:52	Disposed
JB40350-4.5	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-4.5	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-4.5	Secured Storage	Oksana Treglazova	06/25/13 15:16	Retrieve from Storage
JB40350-4.5	Oksana Treglazova	GCMSA	06/25/13 15:16	Load on Instrument
JB40350-4.5	GCMSA	Oksana Treglazova	06/26/13 11:23	Unload from Instrument
JB40350-4.5	Oksana Treglazova	Secured Storage	06/26/13 11:23	Return to Storage
JB40350-4.5	Darnell Brown		07/29/13 15:52	Disposed
JB40350-4.6	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-4.6	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-4.6	Darnell Brown		07/29/13 15:52	Disposed
JB40350-4.7	Secured Storage	Robert Lofrano	06/25/13 13:50	Retrieve from Storage
JB40350-4.7	Robert Lofrano		06/25/13 13:51	Subcontract
JB40350-5.1	Secured Storage	Max Ponce	06/24/13 09:20	Retrieve from Storage
JB40350-5.1	Max Ponce	Secured Storage	06/24/13 09:46	Return to Storage
JB40350-5.1	Secured Storage	Khusbu Shah	06/26/13 07:45	Retrieve from Storage
JB40350-5.1	Khusbu Shah	Secured Storage	06/26/13 08:56	Return to Storage
JB40350-5.1	Darnell Brown		07/29/13 15:52	Disposed
JB40350-5.1.1	Max Ponce	Organics Prep	06/24/13 09:22	Extract from JB40350-5.1
JB40350-5.1.1	Organics Prep	Tin Marlar	06/24/13 15:43	Extract from JB40350-5.1
JB40350-5.1.1	Tin Marlar	Extract Storage	06/24/13 15:43	Return to Storage
JB40350-5.1.1	Extract Storage		08/05/13 09:00	Disposed
JB40350-5.1.2	Khusbu Shah	Organics Prep	06/26/13 07:47	Extract from JB40350-5.1
JB40350-5.1.2	Organics Prep	Gwendolyn Dymowski	06/26/13 13:50	Extract from JB40350-5.1
JB40350-5.1.2	Gwendolyn Dymowski	Extract Storage	06/26/13 13:50	Return to Storage
JB40350-5.1.2	Extract Storage	Gwendolyn Dymowski	06/26/13 18:23	Retrieve from Storage
JB40350-5.1.2	Gwendolyn Dymowski	GC5Y	06/26/13 18:23	Load on Instrument
JB40350-5.1.2	GC5Y	Gwendolyn Dymowski	07/01/13 09:32	Unload from Instrument
JB40350-5.1.2	Gwendolyn Dymowski	Extract Freezer	07/01/13 09:32	Return to Storage
JB40350-5.1.2	Extract Freezer		08/06/13 09:00	Disposed

Accutest Internal Chain of Custody

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Received: 06/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB40350-5.2	Secured Storage	Rinku Patel	06/26/13 10:20	Retrieve from Storage
JB40350-5.2	Rinku Patel	Secured Storage	06/26/13 12:24	Return to Storage
JB40350-5.2	Secured Storage	Pratik Doshi	06/27/13 14:42	Retrieve from Storage
JB40350-5.2	Pratik Doshi	Secured Storage	06/27/13 16:59	Return to Storage
JB40350-5.2	Darnell Brown		07/29/13 15:52	Disposed
JB40350-5.2.1	Rinku Patel	Metals Digestion	06/26/13 11:44	Digestate from JB40350-5.2
JB40350-5.2.1	Metals Digestion	Rinku Patel	06/26/13 11:44	Digestate from JB40350-5.2
JB40350-5.2.1	Rinku Patel	Metals Digestate Storage	06/26/13 11:44	Return to Storage
JB40350-5.2.1	Metals Digestate Storage		09/02/13 09:00	Disposed
JB40350-5.4	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-5.4	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-5.4	Darnell Brown		07/29/13 15:52	Disposed
JB40350-5.5	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-5.5	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-5.5	Secured Storage	Oksana Treglazova	06/25/13 15:16	Retrieve from Storage
JB40350-5.5	Oksana Treglazova	GCMSA	06/25/13 15:16	Load on Instrument
JB40350-5.5	GCMSA	Oksana Treglazova	06/26/13 11:23	Unload from Instrument
JB40350-5.5	Oksana Treglazova	Secured Storage	06/26/13 11:23	Return to Storage
JB40350-5.5	Darnell Brown		07/29/13 15:52	Disposed
JB40350-5.6	Secured Storage	Harrison Tsai	06/22/13 11:41	Retrieve from Storage
JB40350-5.6	Harrison Tsai	Secured Storage	06/22/13 11:45	Return to Storage
JB40350-5.6	Darnell Brown		07/29/13 15:52	Disposed
JB40350-5.7	Secured Storage	Robert Lofrano	06/25/13 13:50	Retrieve from Storage
JB40350-5.7	Robert Lofrano		06/25/13 13:51	Subcontract

New Jersey
ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7396-MB	A195994.D	1	06/25/13	OTR	n/a	n/a	VA7396

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	1.7	ug/kg	
71-43-2	Benzene	ND	1.0	0.12	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.27	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.11	ug/kg	
75-25-2	Bromoform	ND	5.0	0.15	ug/kg	
74-83-9	Bromomethane	ND	5.0	0.27	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	2.4	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.12	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.13	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.11	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.23	ug/kg	
67-66-3	Chloroform	ND	5.0	0.083	ug/kg	
74-87-3	Chloromethane	ND	5.0	0.19	ug/kg	
110-82-7	Cyclohexane	ND	5.0	0.12	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.18	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.23	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.14	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.14	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.0	0.26	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	0.18	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	0.24	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.15	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.14	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.16	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.26	ug/kg	
76-13-1	Freon 113	ND	5.0	0.43	ug/kg	
591-78-6	2-Hexanone	ND	5.0	0.62	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.074	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	2.6	ug/kg	
108-87-2	Methylcyclohexane	ND	5.0	0.17	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.24	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	0.75	ug/kg	
75-09-2	Methylene chloride	ND	5.0	1.3	ug/kg	

Method Blank Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7396-MB	A195994.D	1	06/25/13	OTR	n/a	n/a	VA7396

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Result	RL	MDL	Units	Q
100-42-5	Styrene	ND	5.0	0.092	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.13	ug/kg	
127-18-4	Tetrachloroethene	ND	5.0	0.17	ug/kg	
108-88-3	Toluene	ND	1.0	0.11	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.16	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.14	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.11	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.17	ug/kg	
79-01-6	Trichloroethene	ND	5.0	0.17	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.30	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	0.14	ug/kg	
	m,p-Xylene	ND	1.0	0.17	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.14	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.14	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	65-131%
17060-07-0	1,2-Dichloroethane-D4	87%	70-121%
2037-26-5	Toluene-D8	102%	80-128%
460-00-4	4-Bromofluorobenzene	95%	67-131%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7396-BS	A195995.D	1	06/25/13	OTR	n/a	n/a	VA7396

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	44.1	88	49-150
71-43-2	Benzene	50	44.5	89	79-121
74-97-5	Bromochloromethane	50	49.3	99	81-127
75-27-4	Bromodichloromethane	50	46.0	92	78-129
75-25-2	Bromoform	50	45.8	92	73-135
74-83-9	Bromomethane	50	47.9	96	58-145
78-93-3	2-Butanone (MEK)	50	42.1	84	66-138
75-15-0	Carbon disulfide	50	44.1	88	69-134
56-23-5	Carbon tetrachloride	50	45.6	91	73-140
108-90-7	Chlorobenzene	50	43.8	88	81-119
75-00-3	Chloroethane	50	48.4	97	65-138
67-66-3	Chloroform	50	45.4	91	79-124
74-87-3	Chloromethane	50	42.3	85	53-136
110-82-7	Cyclohexane	50	45.6	91	71-133
124-48-1	Dibromochloromethane	50	45.6	91	77-127
95-50-1	1,2-Dichlorobenzene	50	40.0	80	78-120
541-73-1	1,3-Dichlorobenzene	50	40.2	80	77-120
106-46-7	1,4-Dichlorobenzene	50	38.6	77	74-118
75-71-8	Dichlorodifluoromethane	50	36.9	74	33-144
75-34-3	1,1-Dichloroethane	50	47.6	95	77-131
107-06-2	1,2-Dichloroethane	50	45.4	91	73-132
75-35-4	1,1-Dichloroethene	50	44.1	88	72-131
156-59-2	cis-1,2-Dichloroethene	50	46.4	93	77-125
156-60-5	trans-1,2-Dichloroethene	50	44.2	88	74-126
78-87-5	1,2-Dichloropropane	50	46.8	94	78-125
10061-01-5	cis-1,3-Dichloropropene	50	41.4	83	76-122
10061-02-6	trans-1,3-Dichloropropene	50	43.6	87	78-126
100-41-4	Ethylbenzene	50	41.4	83	78-119
76-13-1	Freon 113	50	45.7	91	61-138
591-78-6	2-Hexanone	50	42.1	84	64-134
98-82-8	Isopropylbenzene	50	41.3	83	75-122
79-20-9	Methyl Acetate	50	38.7	77	53-134
108-87-2	Methylcyclohexane	50	41.8	84	62-134
1634-04-4	Methyl Tert Butyl Ether	100	90.7	91	73-122
108-10-1	4-Methyl-2-pentanone(MIBK)	50	43.1	86	69-136
75-09-2	Methylene chloride	50	43.2	86	72-124

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA7396-BS	A195995.D	1	06/25/13	OTR	n/a	n/a	VA7396

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
100-42-5	Styrene	50	42.9	86	78-121
79-34-5	1,1,2,2-Tetrachloroethane	50	40.6	81	71-118
127-18-4	Tetrachloroethene	50	43.1	86	71-130
108-88-3	Toluene	50	41.8	84	78-121
87-61-6	1,2,3-Trichlorobenzene	50	40.6	81	66-134
120-82-1	1,2,4-Trichlorobenzene	50	36.2	72	70-135
71-55-6	1,1,1-Trichloroethane	50	45.8	92	76-132
79-00-5	1,1,2-Trichloroethane	50	46.5	93	79-124
79-01-6	Trichloroethene	50	45.6	91	81-127
75-69-4	Trichlorofluoromethane	50	41.7	83	63-144
75-01-4	Vinyl chloride	50	40.0	80	58-137
	m,p-Xylene	100	83.9	84	78-120
95-47-6	o-Xylene	50	42.9	86	79-122
1330-20-7	Xylene (total)	150	127	85	79-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	65-131%
17060-07-0	1,2-Dichloroethane-D4	84%	70-121%
2037-26-5	Toluene-D8	102%	80-128%
460-00-4	4-Bromofluorobenzene	93%	67-131%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40368-4MS	A195996.D	1	06/26/13	OTR	n/a	n/a	VA7396
JB40368-4MSD	A195997.D	1	06/26/13	OTR	n/a	n/a	VA7396
JB40368-4	A195999.D	1	06/26/13	OTR	n/a	n/a	VA7396

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	JB40368-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		58.1	65.1	112	58.1	61.0	105	7	10-189/35
71-43-2	Benzene	ND		58.1	40.3	69	58.1	37.3	64	8	47-130/22
74-97-5	Bromochloromethane	ND		58.1	54.6	94	58.1	50.2	86	8	51-136/21
75-27-4	Bromodichloromethane	ND		58.1	52.6	91	58.1	49.8	86	5	45-138/22
75-25-2	Bromoform	ND		58.1	47.5	82	58.1	45.0	77	5	37-141/23
74-83-9	Bromomethane	ND		58.1	51.5	89	58.1	47.8	82	7	10-155/31
78-93-3	2-Butanone (MEK)	ND		58.1	40.8	70	58.1	39.0	67	5	23-173/30
75-15-0	Carbon disulfide	ND		58.1	52.4	90	58.1	48.0	83	9	34-143/27
56-23-5	Carbon tetrachloride	ND		58.1	53.9	93	58.1	50.1	86	7	36-150/25
108-90-7	Chlorobenzene	ND		58.1	45.3	78	58.1	43.2	74	5	36-138/24
75-00-3	Chloroethane	ND		58.1	52.3	90	58.1	49.1	85	6	29-144/29
67-66-3	Chloroform	ND		58.1	52.3	90	58.1	48.3	83	8	50-131/22
74-87-3	Chloromethane	ND		58.1	50.0	86	58.1	46.7	80	7	40-142/24
110-82-7	Cyclohexane	ND		58.1	45.7	79	58.1	43.0	74	6	25-150/27
124-48-1	Dibromochloromethane	ND		58.1	48.9	84	58.1	45.9	79	6	42-139/22
95-50-1	1,2-Dichlorobenzene	ND		58.1	36.8	63	58.1	35.0	60	5	24-142/27
541-73-1	1,3-Dichlorobenzene	ND		58.1	37.0	64	58.1	35.5	61	4	23-142/27
106-46-7	1,4-Dichlorobenzene	ND		58.1	36.5	63	58.1	35.1	60	4	22-141/27
75-71-8	Dichlorodifluoromethane	ND		58.1	46.6	80	58.1	42.2	73	10	24-164/28
75-34-3	1,1-Dichloroethane	ND		58.1	54.5	94	58.1	50.9	88	7	50-134/23
107-06-2	1,2-Dichloroethane	ND		58.1	49.4	85	58.1	46.6	80	6	46-135/21
75-35-4	1,1-Dichloroethene	ND		58.1	52.1	90	58.1	48.0	83	8	39-143/26
156-59-2	cis-1,2-Dichloroethene	ND		58.1	53.4	92	58.1	48.8	84	9	47-133/22
156-60-5	trans-1,2-Dichloroethene	ND		58.1	53.1	91	58.1	48.2	83	10	44-135/25
78-87-5	1,2-Dichloropropane	ND		58.1	51.9	89	58.1	48.8	84	6	50-131/21
10061-01-5	cis-1,3-Dichloropropene	ND		58.1	47.1	81	58.1	44.6	77	5	42-135/23
10061-02-6	trans-1,3-Dichloropropene	ND		58.1	44.6	77	58.1	43.0	74	4	38-138/23
100-41-4	Ethylbenzene	ND		58.1	42.5	73	58.1	40.4	70	5	30-139/25
76-13-1	Freon 113	ND		58.1	52.5	90	58.1	49.6	85	6	29-154/27
591-78-6	2-Hexanone	ND		58.1	28.1	48	58.1	25.4	44	10	20-162/29
98-82-8	Isopropylbenzene	ND		58.1	40.4	70	58.1	38.4	66	5	30-140/27
79-20-9	Methyl Acetate	ND		58.1	96.0	165	58.1	88.8	153	8	24-175/29
108-87-2	Methylcyclohexane	ND		58.1	32.5	56	58.1	31.2	54	4	15-153/29
1634-04-4	Methyl Tert Butyl Ether	ND		58.1	49.8	86	58.1	47.7	82	4	50-127/21
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		58.1	34.7	60	58.1	33.1	57	5	37-141/24
75-09-2	Methylene chloride	ND		58.1	49.2	85	58.1	46.3	80	6	50-127/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB40368-4MS	A195996.D	1	06/26/13	OTR	n/a	n/a	VA7396
JB40368-4MSD	A195997.D	1	06/26/13	OTR	n/a	n/a	VA7396
JB40368-4	A195999.D	1	06/26/13	OTR	n/a	n/a	VA7396

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	JB40368-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
100-42-5	Styrene	ND		58.1	40.3	69	58.1	37.5	65	7	30-143/26
79-34-5	1,1,2,2-Tetrachloroethane	ND		58.1	40.6	70	58.1	38.4	66	6	35-132/26
127-18-4	Tetrachloroethene	ND		58.1	77.3	133	58.1	69.2	119	11	20-175/26
108-88-3	Toluene	ND		58.1	40.8	70	58.1	38.0	65	7	38-136/24
87-61-6	1,2,3-Trichlorobenzene	ND		58.1	25.4	44	58.1	24.2	42	5	10-160/33
120-82-1	1,2,4-Trichlorobenzene	ND		58.1	23.7	41	58.1	22.9	39	3	10-157/33
71-55-6	1,1,1-Trichloroethane	ND		58.1	54.9	95	58.1	50.6	87	8	44-142/24
79-00-5	1,1,2-Trichloroethane	ND		58.1	48.8	84	58.1	45.7	79	7	43-135/22
79-01-6	Trichloroethene	ND		58.1	54.7	94	58.1	50.5	87	8	31-158/25
75-69-4	Trichlorofluoromethane	ND		58.1	51.8	89	58.1	47.3	81	9	31-156/28
75-01-4	Vinyl chloride	ND		58.1	53.7	92	58.1	49.5	85	8	38-151/25
	m,p-Xylene	ND		116	83.1	72	116	76.1	66	9	30-140/26
95-47-6	o-Xylene	ND		58.1	45.8	79	58.1	43.1	74	6	33-139/25
1330-20-7	Xylene (total)	ND		174	129	74	174	119	68	8	31-140/26

CAS No.	Surrogate Recoveries	MS	MSD	JB40368-4	Limits
1868-53-7	Dibromofluoromethane	93%	91%	94%	65-131%
17060-07-0	1,2-Dichloroethane-D4	79%	77%	81%	70-121%
2037-26-5	Toluene-D8	100%	101%	100%	80-128%
460-00-4	4-Bromofluorobenzene	93%	94%	95%	67-131%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VA7389-BFB
Lab File ID: A195856.D
Instrument ID: GCMSA
Injection Date: 06/20/13
Injection Time: 11:34

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	8376	19.1		Pass
75	30.0 - 60.0% of mass 95	20885	47.6		Pass
95	Base peak, 100% relative abundance	43893	100.0		Pass
96	5.0 - 9.0% of mass 95	2952	6.73		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	34437	78.5		Pass
175	5.0 - 9.0% of mass 174	2627	5.99	(7.63) [a]	Pass
176	95.0 - 101.0% of mass 174	34117	77.7	(99.1) [a]	Pass
177	5.0 - 9.0% of mass 176	2333	5.32	(6.84) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA7389-IC7389	A195857.D	06/20/13	12:07	00:33	Initial cal 0.5
VA7389-IC7389	A195858.D	06/20/13	12:44	01:10	Initial cal 1
VA7389-IC7389	A195859.D	06/20/13	13:16	01:42	Initial cal 2
VA7389-IC7389	A195860.D	06/20/13	13:48	02:14	Initial cal 5
VA7389-IC7389	A195861.D	06/20/13	14:20	02:46	Initial cal 10
VA7389-IC7389	A195862.D	06/20/13	14:52	03:18	Initial cal 20
VA7389-ICC7389	A195863.D	06/20/13	15:25	03:51	Initial cal 50
VA7389-IC7389	A195864.D	06/20/13	15:58	04:24	Initial cal 100
VA7389-IC7389	A195865.D	06/20/13	16:33	04:59	Initial cal 200
VA7389-ICV7389	A195868.D	06/20/13	18:08	06:34	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VA7396-BFB
Lab File ID: A195991.D
Instrument ID: GCMSA
Injection Date: 06/25/13
Injection Time: 21:26

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.95 - 40.0% of mass 95	10673	17.8		Pass
75	30.0 - 60.0% of mass 95	28301	47.1		Pass
95	Base peak, 100% relative abundance	60077	100.0		Pass
96	5.0 - 9.0% of mass 95	3974	6.61		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	48712	81.1		Pass
175	5.0 - 9.0% of mass 174	3733	6.21	(7.66) [a]	Pass
176	95.0 - 101.0% of mass 174	48149	80.1	(98.8) [a]	Pass
177	5.0 - 9.0% of mass 176	3126	5.20	(6.49) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA7396-CC7389	A195992.D	06/25/13	21:56	00:30	Continuing cal 50
VA7396-MB	A195994.D	06/25/13	22:55	01:29	Method Blank
VA7396-BS	A195995.D	06/25/13	23:24	01:58	Blank Spike
JB40368-4MS	A195996.D	06/26/13	00:09	02:43	Matrix Spike
JB40368-4MSD	A195997.D	06/26/13	00:38	03:12	Matrix Spike Duplicate
JB40368-4	A195999.D	06/26/13	01:37	04:11	(used for QC only; not part of job JB40350)
ZZZZZZ	A196000.D	06/26/13	02:22	04:56	(unrelated sample)
ZZZZZZ	A196001.D	06/26/13	02:51	05:25	(unrelated sample)
ZZZZZZ	A196002.D	06/26/13	03:21	05:55	(unrelated sample)
ZZZZZZ	A196003.D	06/26/13	03:51	06:25	(unrelated sample)
ZZZZZZ	A196004.D	06/26/13	04:20	06:54	(unrelated sample)
ZZZZZZ	A196005.D	06/26/13	05:04	07:38	(unrelated sample)
JB40350-1	A196006.D	06/26/13	05:34	08:08	P2
JB40350-2	A196007.D	06/26/13	06:04	08:38	P3
JB40350-3	A196008.D	06/26/13	06:33	09:07	P4
JB40350-4	A196009.D	06/26/13	07:03	09:37	P5
JB40350-5	A196010.D	06/26/13	07:47	10:21	P11

Volatile Internal Standard Area Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	VA7396-CC7389	**Injection Date:**	06/25/13
Lab File ID:	A195992.D	**Injection Time:**	21:56
Instrument ID:	GCMSA	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	68936	7.57	207946	9.91	315557	10.86	285388	14.31	171972	16.94
Upper Limit [a]	137872	8.07	415892	10.41	631114	11.36	570776	14.81	343944	17.44
Lower Limit [b]	34468	7.07	103973	9.41	157779	10.36	142694	13.81	85986	16.44

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VA7396-MB	75020	7.56	209942	9.91	314861	10.86	290471	14.31	165057	16.94
VA7396-BS	70640	7.57	212647	9.91	320917	10.87	296525	14.31	171975	16.94
JB40368-4MS	64695	7.56	219169	9.90	331320	10.86	293061	14.31	168063	16.94
JB40368-4MSD	63132	7.56	221571	9.91	331424	10.87	297273	14.31	168911	16.94
JB40368-4	68626	7.57	218678	9.91	327634	10.87	294871	14.31	164372	16.94
ZZZZZZ	72580	7.57	219781	9.91	329592	10.87	300709	14.31	170618	16.94
ZZZZZZ	71452	7.56	215797	9.90	324780	10.86	292754	14.31	164877	16.94
ZZZZZZ	76658	7.57	243428	9.91	364152	10.87	337957	14.31	188111	16.94
ZZZZZZ	69167	7.57	214308	9.91	319966	10.87	292595	14.31	163436	16.94
ZZZZZZ	66663	7.56	216056	9.91	328225	10.87	299200	14.31	167729	16.94
ZZZZZZ	66224	7.56	214584	9.91	323932	10.87	295196	14.31	164285	16.94
JB40350-1	69529	7.56	211525	9.91	320057	10.86	291654	14.31	163788	16.94
JB40350-2	68436	7.56	216128	9.91	326284	10.86	299190	14.31	165778	16.94
JB40350-3	71963	7.56	211909	9.90	324846	10.86	293630	14.31	166601	16.94
JB40350-4	71742	7.57	216598	9.91	323910	10.86	297621	14.30	166183	16.94
JB40350-5	73280	7.56	216196	9.90	323138	10.86	297970	14.30	165756	16.94

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB40350-1	A196006.D	94	86	102	95
JB40350-2	A196007.D	94	84	101	95
JB40350-3	A196008.D	95	87	101	93
JB40350-4	A196009.D	91	84	102	95
JB40350-5	A196010.D	91	84	103	95
JB40368-4MS	A195996.D	93	79	100	93
JB40368-4MSD	A195997.D	91	77	101	94
VA7396-BS	A195995.D	93	84	102	93
VA7396-MB	A195994.D	94	87	102	95

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	65-131%
S2 = 1,2-Dichloroethane-D4	70-121%
S3 = Toluene-D8	80-128%
S4 = 4-Bromofluorobenzene	67-131%

Initial Calibration Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VA7389-ICC7389
Lab FileID: A195863.D

Response Factor Report MSA

```
Method       : C:\HPCHEM\1\METHODS\MA7389.M (RTE Integrator)
Title        : SW 846  8260bB ZB624 60m x 0.25mm x 1.4um
Last Update  : Thu Jun 20 17:37:31 2013
Response via : Initial Calibration

Calibration Files
5   =A195860.D   2   =A195859.D   20  =A195862.D   50  =A195863.D
100 =A195864.D   1   =A195858.D   200 =A195865.D   0.5 =A195857.D
10  =A195861.D       =
```

Compound	5	2	20	50	100	1	200	0.5	10	Avg	%RSD
1) I Tert Butyl Alcohol-d9 ----------ISTD----------											
2) 1,4-dioxane	0.083		0.081	0.079	0.087		0.083		0.081	0.082	3.59
3) ethanol										0.000#	-1.00
4) tertiary butyl alcohol	1.121	0.911	1.027	1.013	1.047	1.376	0.981		1.069	1.068	12.99
5) I pentafluorobenzene ----------ISTD----------											
6) chlorotrifluoroethene										0.000#	-1.00
7) chlorodifluoromethane	0.429	0.473	0.529	0.450	0.455		0.450		0.516	0.472	7.91
8) dichlorodifluoromethane	0.481	0.460	0.576	0.464	0.475	0.567	0.460		0.503	0.498	9.52
9) chloromethane	0.788	0.747	0.828	0.694	0.721	0.959	0.718	0.623	0.744	0.758	12.52
10) vinyl chloride	0.693	0.603	0.783	0.661	0.687	0.772	0.665	0.492	0.685	0.671	12.94
11) bromomethane	0.367	0.329	0.386	0.318	0.311	0.428		0.292	0.348	0.347	12.86
12) chloroethane	0.310	0.268	0.336	0.278	0.285	0.332	0.261		0.304	0.297	9.56
13) vinyl bromide										0.000#	-1.00
14) trichlorofluoromethane	0.608	0.581	0.687	0.561	0.579	0.733	0.567	0.458	0.596	0.597	13.09
15) pentane	0.765	0.831	0.775	0.668	0.656		0.651		0.773	0.731	9.81
16) ethyl ether	0.208	0.180	0.192	0.191	0.190	0.213	0.190	0.236	0.201	0.200	8.50
17) Freon 123a										0.000#	-1.00
18) acrolein	0.049	0.051	0.056	0.057	0.067	0.053			0.059	0.056	10.72
19) 1,1-dichloroethene	0.336	0.336	0.367	0.338	0.344	0.357	0.335		0.381	0.349	4.90
20) acetone	0.029		0.030	0.026	0.024		0.023		0.039	0.028	20.85
----- Linear regression ----- Coefficient = 0.9905											
Response Ratio = 0.00166 + 0.02309 *A											
21) allyl chloride	0.221	0.200	0.254	0.236	0.238	0.199	0.237		0.221	0.226	8.60

Initial Calibration Summary

Job Number: JB40350 **Sample:** VA7389-ICC7389
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** A195863.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
22)  acetonitrile
           0.033 0.034 0.029 0.027 0.027       0.026       0.030   0.030   10.62
23)  iodomethane
           0.640 0.559 0.674 0.655 0.661 0.604 0.658       0.692   0.643    6.58
24)  iso-butyl alcohol
           0.014 0.013 0.012 0.012 0.012       0.012       0.012   0.012    5.58
25)  carbon disulfide
           1.323 1.267 1.460 1.374 1.380 1.380 1.351 1.211 1.482   1.359    6.27
26)  methylene chloride
           0.694       0.494 0.435 0.421       0.410       0.614   0.511   22.89
            ----- Linear regression -----  Coefficient =  0.9999
              Response Ratio = 0.03643 + 0.40080 *A

27)  methyl acetate
           0.278 0.269 0.268 0.249 0.225       0.220       0.256   0.252    8.86
28)  methyl tert butyl ether
           1.065 0.956 1.051 1.074 1.032 1.068 1.038 0.904 1.060   1.028    5.68
29)  trans-1,2-dichloroethene
           0.384 0.366 0.402 0.377 0.380 0.417 0.371       0.412   0.389    4.90
30)  di-isopropyl ether
           1.477 1.289 1.542 1.483 1.503 1.718 1.488 1.321 1.509   1.481    8.40
31)  t-butyl formate
           0.304 0.256 0.324 0.330 0.329 0.310 0.335       0.311   0.312    8.15
32)  3,3-dimethyl-1-butanol
           0.036 0.031 0.037 0.040 0.038       0.038       0.036   0.036    7.39
33)  ethyl tert-butyl ether
           1.310 1.152 1.363 1.358 1.369 1.451 1.376 0.995 1.317   1.299   10.76
34)  2-butanone
           0.032       0.034 0.035 0.033       0.032       0.041   0.035    9.95
35)  1,1-dichloroethane
           0.758 0.687 0.806 0.772 0.776 0.769 0.766 0.567 0.831   0.748   10.49
36)  chloroprene
           0.544 0.482 0.631 0.581 0.592 0.672 0.590       0.595   0.586    9.60
37)  acrylonitrile
           0.110 0.093 0.104 0.107 0.101 0.103 0.100       0.103   0.103    4.90
38)  vinyl acetate
           0.038       0.048 0.050 0.050       0.050       0.047   0.047    9.90
39)  ethyl acetate
           0.044       0.044 0.045 0.042       0.042       0.046   0.044    3.56
40)  ethyl acrylate
           0.408       0.375 0.417 0.388       0.407       0.410   0.401    4.01
41)  2,2-dichloropropane
           0.580 0.563 0.634 0.602 0.598 0.625 0.581 0.524 0.655   0.596    6.65
42)  cis-1,2-dichloroethene
           0.416 0.397 0.432 0.419 0.423 0.416 0.419 0.352 0.444   0.413    6.32
43)  propionitrile
           0.043 0.036 0.041 0.042 0.040 0.049 0.040       0.041   0.042    8.98
44)  bromochloromethane
           0.170 0.157 0.179 0.177 0.181 0.135 0.182       0.180   0.170    9.72
45)  tetrahydrofuran
           0.137 0.135 0.122 0.122 0.111 0.130 0.108       0.126   0.124    8.34
46)  chloroform
           0.689 0.637 0.717 0.683 0.690 0.725 0.687 0.689 0.726   0.694    3.96
47)  dibromofluoromethane (s)
           0.344 0.333 0.366 0.342 0.359 0.446 0.365 0.415 0.384   0.373    9.90
48)  1,2-dichloroethane-d4 (s)
           0.384 0.359 0.377 0.367 0.374 0.482 0.379 0.426 0.395   0.394    9.72
49)  freon 113
           0.216 0.204 0.279 0.250 0.257 0.272 0.248       0.255   0.248   10.40
50)  methacrylonitrile
```

Initial Calibration Summary

Job Number: JB40350 **Sample:** VA7389-ICC7389
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** A195863.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
            0.213 0.201 0.192 0.197 0.187       0.185       0.196   0.196    4.75
51)  cyclohexane
            0.549 0.516 0.633 0.601 0.600 0.601 0.584 0.485 0.636   0.578    8.95
52)  1,1,1-trichloroethane
            0.535 0.513 0.612 0.582 0.594 0.592 0.590 0.449 0.625   0.566    9.97
53)  tert-amyl methyl ether
            1.139 0.989 1.169 1.184 1.192 1.399 1.209 1.053 1.144   1.164    9.73

54) I   1,4-difluorobenzene   ----------------ISTD---------------------
55)  Di-isobutylene
                                                                    0.000#  -1.00
56)  epichlorohydrin
            0.019 0.016 0.020 0.020 0.019       0.019       0.019   0.019    6.49
57)  n-butyl alcohol
            0.006 0.005 0.007 0.007 0.006       0.006       0.006   0.006#   6.89
58)  carbon tetrachloride
            0.305 0.285 0.349 0.328 0.335 0.319 0.331       0.347   0.325    6.62
59)  1,1-dichloropropene
            0.353 0.334 0.385 0.358 0.366 0.354 0.357 0.316 0.390   0.357    6.37
60)  hexane
            0.401 0.432 0.410 0.358 0.357       0.337       0.394   0.384    8.92
61)  benzene
            1.100 1.045 1.124 1.070 1.075 1.139 1.053 0.988 1.147   1.082    4.71
62)  Iso-octane
            1.193 1.127 1.388 1.279 1.294 1.456 1.250       1.270   1.282    8.06
63)  heptane
            0.219 0.222 0.248 0.221 0.225 0.275 0.215       0.234   0.232    8.63
64)  tert amyl alcohol
            0.009 0.008 0.009 0.009 0.008 0.008 0.008       0.009   0.008#   7.25
65)  isopropyl acetate
            0.648 0.638 0.653 0.657 0.656       0.506       0.653   0.630    8.73
66)  1,2-dichloroethane
            0.320 0.267 0.312 0.307 0.304 0.280 0.304 0.274 0.315   0.298    6.49
67)  trichloroethene
            0.258 0.239 0.273 0.257 0.263 0.263 0.260 0.200 0.281   0.255    9.31
68)  2-nitropropane
                        0.004 0.004 0.004       0.004               0.004#   2.28
69)  tert-amyl ethyl ether
            0.350 0.289 0.321 0.336 0.331 0.303 0.352       0.360   0.330    7.53
70)  methylcyclohexane
            0.426 0.418 0.506 0.458 0.462 0.541 0.450 0.360 0.468   0.454   11.41
71)  2-chloroethyl vinyl ether
            0.132 0.112 0.136 0.139 0.136 0.157 0.136       0.132   0.135    9.17
72)  methyl methacrylate
            0.144 0.131 0.141 0.145 0.138 0.164 0.140 0.126 0.139   0.141    7.54
73)  1,2-dichloropropane
            0.299 0.275 0.302 0.300 0.302 0.299 0.297 0.259 0.315   0.294    5.76
74)  dibromomethane
            0.139 0.119 0.140 0.140 0.137 0.140 0.138       0.137   0.136    5.14
75)  bromodichloromethane
            0.341 0.306 0.341 0.340 0.349 0.364 0.352 0.295 0.351   0.338    6.66
76)  cis-1,3-dichloropropene
            0.444 0.416 0.444 0.447 0.451 0.437 0.450 0.354 0.458   0.433    7.41
77)  toluene-d8 (s)
            0.896 0.865 0.967 0.894 0.937 1.171 0.939 1.008 1.020   0.966    9.59
78)  4-methyl-2-pentanone
            0.089 0.072 0.085 0.091 0.083 0.106 0.083       0.082   0.087   11.19
79)  toluene
            0.668 0.698 0.675 0.652 0.666 0.788 0.664 0.826 0.707   0.705    8.67
80)  3-methyl-1-butanol
```

Initial Calibration Summary

Job Number: JB40350 **Sample:** VA7389-ICC7389
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** A195863.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
            0.011 0.009 0.011 0.011 0.010       0.010       0.010   0.010    6.63
 81)  trans-1,3-dichloropropene
            0.383 0.344 0.376 0.377 0.380 0.390 0.380 0.356 0.383   0.374    3.91
 82)  ethyl methacrylate
            0.302 0.265 0.290 0.301 0.291 0.353 0.295 0.323 0.289   0.301    8.18
 83)  1,1,2-trichloroethane
            0.177 0.162 0.172 0.173 0.173 0.198 0.174 0.149 0.176   0.173    7.53
 84)  2-hexanone
            0.081 0.075 0.080 0.084 0.079 0.104 0.081       0.088   0.084   10.72

 85) I   chlorobenzene-d5      ----------------ISTD---------------------
 86)  tetrachloroethene
            0.232 0.222 0.247 0.236 0.238 0.229 0.238 0.170 0.250   0.229   10.39
 87)  1,3-dichloropropane
            0.423 0.386 0.403 0.402 0.398 0.437 0.394 0.391 0.404   0.404    3.98
 88)  butyl acetate
            0.176 0.146 0.169 0.173 0.167       0.165       0.170   0.166    5.92
 89)  dibromochloromethane
            0.276 0.244 0.269 0.275 0.278 0.307 0.278 0.236 0.270   0.270    7.59
 90)  1,2-dibromoethane
            0.231 0.207 0.216 0.223 0.219 0.234 0.216 0.182 0.224   0.217    7.15
 91)  n-butyl ether
                                                                    0.000#  -1.00
 92)  chlorobenzene
            0.860 0.781 0.852 0.832 0.839 0.894 0.821 0.830 0.875   0.843    3.91
 93)  1,1,1,2-tetrachloroethane
            0.307 0.269 0.308 0.309 0.317 0.315 0.318 0.288 0.314   0.305    5.32
 94)  ethylbenzene
            1.504 1.470 1.524 1.449 1.489 1.621 1.455 1.521 1.546   1.509    3.54
 95)  m,p-xylene
            0.563 0.552 0.577 0.556 0.561 0.609 0.552 0.534 0.583   0.565    3.85
 96)  o-xylene
            0.570 0.523 0.576 0.552 0.572 0.616 0.564 0.497 0.581   0.561    6.12
 97)  styrene
            0.973 0.888 0.957 0.924 0.975 1.053 0.956 0.971 0.965   0.962    4.61
 98)  bromoform
            0.178 0.162 0.169 0.182 0.181 0.182 0.183       0.168   0.176    4.45

 99) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
100)  isopropylbenzene
            2.573 2.469 2.704 2.477 2.588 2.851 2.583 2.623 2.699   2.618    4.57
101)  cyclohexanone
            0.062 0.057 0.080 0.065 0.059 0.094 0.046       0.099   0.070   26.68
        ----- Quadratic regression -----                Coefficient =  1.0044
            Response Ratio = 0.00133 + 0.07596 *A + -0.00077 *A^2

102)  4-bromofluorobenzene (s)
            0.782 0.834 0.773 0.704 0.757       0.782       0.807   0.777    5.27
103)  bromobenzene
            0.646 0.612 0.631 0.610 0.638 0.736 0.650 0.732 0.649   0.656    7.11
104)  1,1,2,2-tetrachloroethane
            0.622 0.582 0.577 0.571 0.558 0.729 0.559 0.681 0.574   0.606    9.95
105)  trans-1,4-dichloro-2-butene
            0.194 0.143 0.176 0.176 0.175 0.202 0.176 0.175 0.181   0.177    8.98
106)  1,2,3-trichloropropane
            0.139 0.111 0.126 0.122 0.125 0.140 0.126       0.121   0.126    7.50
107)  n-propylbenzene
            3.226 3.139 3.349 3.091 3.179 3.501 3.125 3.201 3.376   3.243    4.21
108)  2-chlorotoluene
            0.641 0.621 0.660 0.621 0.651 0.716 0.653 0.618 0.664   0.649    4.68
```

Initial Calibration Summary

Job Number: JB40350 **Sample:** VA7389-ICC7389
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** A195863.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

109)	4-chlorotoluene										
	2.053	1.962	2.040	1.925	2.017	2.383	2.027	2.236	2.109	2.084	6.86
110)	p-ethyltoluene										
	2.623	2.296	2.450	2.380	2.371	2.492	2.450	2.032	2.649	2.416	7.61
111)	1,3,5-trimethylbenzene										
	2.277	2.160	2.381	2.218	2.349	2.457	2.323	2.325	2.353	2.316	3.81
112)	tert-butylbenzene										
	1.885	1.736	2.036	1.901	1.974	2.104	1.949	1.932	2.016	1.948	5.40
113)	pentachloroethane										
	0.406	0.377	0.425	0.405	0.431	0.432	0.433	0.398	0.411	0.413	4.61
114)	1,2,4-trimethylbenzene										
	2.424	2.339	2.459	2.307	2.409	2.691	2.371	2.596	2.475	2.452	5.03
115)	sec-butylbenzene										
	3.047	2.880	3.244	3.003	3.087	3.285	2.983	2.986	3.264	3.087	4.68
116)	1,3-dichlorobenzene										
	1.386	1.297	1.351	1.287	1.322	1.558	1.306	1.490	1.372	1.374	6.75
117)	p-isopropyltoluene										
	2.540	2.364	2.655	2.458	2.543	2.702	2.420	2.454	2.642	2.531	4.61
118)	1,2,3-trimethylbenzene										
										0.000#	-1.00
119)	1,4-dichlorobenzene										
	1.441	1.327	1.384	1.323	1.346	1.655	1.319	1.711	1.398	1.434	10.29
120)	p-diethylbenzene										
	1.642	1.403	1.523	1.486	1.467	1.536	1.445	1.273	1.655	1.492	7.89
121)	1,2-dichlorobenzene										
	1.312	1.251	1.275	1.220	1.222	1.518	1.176	1.475	1.266	1.302	9.03
122)	n-butylbenzene										
	1.510	1.409	1.585	1.458	1.500	1.610	1.418	1.490	1.609	1.510	5.08
123)	1,2,4,5-tetramethylbenzene										
	2.688	2.276	2.484	2.398	2.244	2.565	2.266	2.173	2.691	2.420	8.10
124)	1,2-dibromo-3-chloropropane										
	0.120	0.116	0.107	0.100	0.089		0.091		0.107	0.104	11.35
125)	1,3,5-trichlorobenzene										
	1.085	1.015	1.085	1.004	0.982	1.224	0.984	1.168	1.111	1.073	7.92
126)	1,2,4-trichlorobenzene										
	0.911	0.847	0.855	0.807	0.780	1.018	0.799	1.136	0.882	0.893	13.00
127)	hexachlorobutadiene										
	0.526	0.501	0.553	0.489	0.465	0.557	0.486	0.534	0.558	0.519	6.71
128)	naphthalene										
	1.744	1.639	1.566	1.475	1.314		1.341		1.601	1.526	10.33
129)	1,2,3-trichlorobenzene										
	0.772	0.725	0.736	0.660	0.581	0.876	0.589		0.763	0.713	13.91
130)	hexachloroethane										
	0.413	0.388	0.445	0.422	0.439	0.430	0.433	0.345	0.431	0.416	7.60
131)	Ethylenimine										
										0.000#	-1.00
132)	Bis(chloromethyl)ether										
										0.000#	-1.00
133)	2-methylnaphthalene										
										0.000#	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

MA7389.M Thu Jun 20 18:48:34 2013 MSA

6.7.1

6

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: VA7389-ICV7389
Lab FileID: A195868.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\A195868.D Vial: 13
Acq On : 20 Jun 2013 6:08 pm Operator: Oksanat
Sample : icv7389-50 Inst : MSA
Misc : MS49927,VA7389,5,,,,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\MA7389.M (RTE Integrator)
Title : SW 846 8260bB ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Jun 20 17:37:31 2013
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	85	0.00	7.54
2	M	1,4-dioxane	0.082	0.093	-13.4	101	0.00	11.62
3	M	ethanol		----------NA----------				
4	M	tertiary butyl alcohol	1.068	1.110	-3.9	94	0.02	7.68
5	I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	9.89
6		chlorotrifluoroethene		----------NA----------				
7	M	chlorodifluoromethane	0.472	0.426	9.7	99	0.00	3.98
8	M	dichlorodifluoromethane	0.498	0.457	8.2	103	0.00	3.95
9	M	chloromethane	0.758	0.747	1.5	112	0.00	4.28
10	M	vinyl chloride	0.671	0.651	3.0	103	0.00	4.55
11	M	bromomethane	0.347	0.378	-8.9	124	0.00	5.25
12	M	chloroethane	0.297	0.334	-12.5	125	0.00	5.42
13		vinyl bromide		----------NA----------				
14	M	trichlorofluoromethane	0.597	0.600	-0.5	112	0.00	5.89
15	m	pentane	0.731	0.711	2.7	111	0.00	5.97
16	M	ethyl ether	0.200	0.193	3.5	106	0.00	6.33
17		Freon 123a		----------NA----------				
18	M	acrolein	0.056	0.053	5.4	97	0.00	6.64
19	M	1,1-dichloroethene	0.349	0.320	8.3	99	0.00	6.78
		----------	True	Calc.	% Drift	----------		
20	M	acetone	50.000	48.700	2.6	99	0.00	6.88
		----------	AvgRF	CCRF	% Dev	----------		
21	M	allyl chloride	0.226	0.231	-2.2	102	0.00	7.36
22	M	acetonitrile	0.030	0.028	6.7	107	0.00	7.36
23	M	iodomethane	0.643	0.625	2.8	100	0.00	7.09
24	M	iso-butyl alcohol	0.012	0.012	0.0	102	0.00	10.21
25	M	carbon disulfide	1.359	1.270	6.5	97	0.00	7.21
		----------	True	Calc.	% Drift	----------		
26	M	methylene chloride	50.000	48.256	3.5	102	0.00	7.58
		----------	AvgRF	CCRF	% Dev	----------		
27	M	methyl acetate	0.252	0.228	9.5	96	0.00	7.35
28	M	methyl tert butyl ether	1.028	1.000	2.7	97	0.00	7.90
29	M	trans-1,2-dichloroethene	0.389	0.359	7.7	100	0.00	7.96
30	M	di-isopropyl ether	1.481	1.535	-3.6	108	0.00	8.52
31	m	t-butyl formate	0.312	0.337	-8.0	107	0.00	9.77
32	m	3,3-dimethyl-1-butanol	0.036	0.036	0.0	96	0.00	13.54
33	M	ethyl tert-butyl ether	1.299	1.341	-3.2	103	0.00	9.02

Initial Calibration Verification

Job Number: JB40350 **Sample:** VA7389-ICV7389
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** A195868.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

34	M	2-butanone	0.035	0.031	11.4	92	0.00	9.32
35	M	1,1-dichloroethane	0.748	0.752	-0.5	102	0.00	8.57
36	M	chloroprene	0.586	0.577	1.5	104	0.00	8.67
37	M	acrylonitrile	0.103	0.098	4.9	95	0.00	7.94
38	M	vinyl acetate	0.047	0.048	-2.1	99	0.00	8.55
39	M	ethyl acetate	0.044	0.041	6.8	97	0.00	9.34
40		ethyl acrylate	0.401	0.376	6.2	94	0.00	11.21
41	M	2,2-dichloropropane	0.596	0.550	7.7	95	0.00	9.34
42	M	cis-1,2-dichloroethene	0.413	0.404	2.2	101	0.00	9.35
43	M	propionitrile	0.042	0.038	9.5	93	0.00	9.46
44	M	bromochloromethane	0.170	0.170	0.0	100	0.00	9.68
45	M	tetrahydrofuran	0.124	0.108	12.9	92	0.00	9.71
46	M	chloroform	0.694	0.659	5.0	101	0.00	9.74
47	S	dibromofluoromethane (s)	0.373	0.347	7.0	106	0.00	9.95
48	S	1,2-dichloroethane-d4 (s)	0.394	0.361	8.4	103	0.00	10.40
49	M	freon 113	0.248	0.261	-5.2	109	0.00	6.74
50	M	methacrylonitrile	0.196	0.172	12.2	92	0.00	9.63
51		cyclohexane	0.578	0.578	0.0	100	0.00	10.05
52	M	1,1,1-trichloroethane	0.566	0.554	2.1	99	0.00	9.98
53	M	tert-amyl methyl ether	1.164	1.172	-0.7	103	0.00	10.47
54	I	1,4-difluorobenzene	1.000	1.000	0.0	105	0.00	10.85
55	M	Di-isobutylene		----------NA----------				
56	M	epichlorohydrin	0.019	0.019	0.0	100	0.00	12.21
57	M	n-butyl alcohol	0.006	0.006#	0.0	98	0.00	11.00
58	M	carbon tetrachloride	0.325	0.314	3.4	100	0.00	10.19
59	M	1,1-dichloropropene	0.357	0.324	9.2	95	0.00	10.17
60	M	hexane	0.384	0.320	16.7	94	0.00	8.25
61	M	benzene	1.082	1.032	4.6	101	0.00	10.46
62	M	Iso-octane	1.282	1.052	17.9	86	0.00	10.42
63	M	heptane	0.232	0.195	15.9	92	0.00	10.60
64	m	tert amyl alcohol	0.008	0.008	6.3	92	0.00	10.34
65	M	isopropyl acetate	0.630	0.625	0.8	100	0.00	10.37
66	M	1,2-dichloroethane	0.298	0.291	2.3	99	0.00	10.49
67	M	trichloroethene	0.255	0.247	3.1	100	0.00	11.20
68	M	2-nitropropane	0.004	0.004#	0.0	102	0.00	12.06
69	m	tert-amyl ethyl ether	0.330	0.372	-12.7	116	0.00	11.35
70	m	methylcyclohexane	0.454	0.449	1.1	102	0.00	11.41
71	M	2-chloroethyl vinyl ether	0.135	0.137	-1.5	103	0.00	12.06
72	M	methyl methacrylate	0.141	0.129	8.5	93	0.00	11.49
73	M	1,2-dichloropropane	0.294	0.290	1.4	101	0.00	11.50
74	M	dibromomethane	0.136	0.130	4.4	97	0.00	11.67
75	M	bromodichloromethane	0.338	0.328	3.0	101	0.00	11.81
76	M	cis-1,3-dichloropropene	0.433	0.390	9.9	91	0.00	12.30
77	S	toluene-d8 (s)	0.966	0.891	7.8	104	0.00	12.60
78	M	4-methyl-2-pentanone	0.087	0.075	13.8	87	0.00	12.40
79	M	toluene	0.705	0.619	12.2	99	0.00	12.68
80	M	3-methyl-1-butanol	0.010	0.010	0.0	98	0.00	12.43
81	M	trans-1,3-dichloropropene	0.374	0.351	6.1	97	0.00	12.91
82	M	ethyl methacrylate	0.301	0.263	12.6	91	0.00	12.89
83	M	1,1,2-trichloroethane	0.173	0.162	6.4	98	0.00	13.16
84	M	2-hexanone	0.084	0.072	14.3	89	0.00	13.34
85	I	chlorobenzene-d5	1.000	1.000	0.0	104	0.00	14.29
86	M	tetrachloroethene	0.229	0.223	2.6	98	0.00	13.32
87	M	1,3-dichloropropane	0.404	0.374	7.4	97	0.00	13.36
88	M	butyl acetate	0.166	0.166	0.0	100	0.00	13.41
89	M	dibromochloromethane	0.270	0.260	3.7	98	0.00	13.66
90	M	1,2-dibromoethane	0.217	0.204	6.0	95	0.00	13.82
91	M	n-butyl ether		----------NA----------				

Initial Calibration Verification

Job Number: JB40350 **Sample:** VA7389-ICV7389
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** A195868.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

92	M	chlorobenzene	0.843	0.798	5.3	100	0.00	14.33
93	M	1,1,1,2-tetrachloroethane	0.305	0.293	3.9	99	0.00	14.40
94	M	ethylbenzene	1.509	1.398	7.4	100	0.00	14.38
95	M	m,p-xylene	0.565	0.530	6.2	99	0.00	14.49
96	M	o-xylene	0.561	0.537	4.3	101	0.00	14.97
97	M	styrene	0.962	0.915	4.9	103	0.00	14.99
98	M	bromoform	0.176	0.162	8.0	93	0.00	15.31
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	16.92
100	M	isopropylbenzene	2.618	2.429	7.2	100	0.00	15.35
		----------	True	Calc.	% Drift	----------		
101	m	cyclohexanone	500.000	243.173	51.4#	56	0.00	15.58
		----------	AvgRF	CCRF	% Dev	----------		
102	S	4-bromofluorobenzene (s)	0.777	0.721	7.2	105	0.00	15.60
103	M	bromobenzene	0.656	0.601	8.4	100	0.00	15.82
104	M	1,1,2,2-tetrachloroethane	0.606	0.513	15.3	92	0.00	15.73
105	M	trans-1,4-dichloro-2-bute	0.177	0.161	9.0	94	0.00	15.77
106	M	1,2,3-trichloropropane	0.126	0.113	10.3	95	0.00	15.82
107	M	n-propylbenzene	3.243	3.080	5.0	102	0.00	15.82
108	M	2-chlorotoluene	0.649	0.614	5.4	101	0.00	15.99
109	M	4-chlorotoluene	2.084	1.868	10.4	99	0.00	16.11
110	m	p-ethyltoluene	2.416	2.386	1.2	102	0.00	15.93
111	M	1,3,5-trimethylbenzene	2.316	2.190	5.4	101	0.00	15.98
112	M	tert-butylbenzene	1.948	1.824	6.4	98	0.00	16.38
113	M	pentachloroethane	0.413	0.394	4.6	99	0.00	16.50
114	M	1,2,4-trimethylbenzene	2.452	2.279	7.1	101	0.00	16.44
115	M	sec-butylbenzene	3.087	2.900	6.1	98	0.00	16.63
116	M	1,3-dichlorobenzene	1.374	1.270	7.6	101	0.00	16.86
117	M	p-isopropyltoluene	2.531	2.483	1.9	103	0.00	16.76
118	M	1,2,3-trimethylbenzene		----------NA----------				
119	M	1,4-dichlorobenzene	1.434	1.270	11.4	98	0.00	16.95
120	m	p-diethylbenzene	1.492	1.507	-1.0	103	0.00	17.19
121	M	1,2-dichlorobenzene	1.302	1.167	10.4	98	0.00	17.40
122	M	n-butylbenzene	1.510	1.443	4.4	101	0.00	17.23
123	m	1,2,4,5-tetramethylbenzen	2.420	2.406	0.6	102	0.00	18.07
124	M	1,2-dibromo-3-chloropropa	0.104	0.087	16.3	89	0.00	18.27
125	M	1,3,5-trichlorobenzene	1.073	0.954	11.1	97	0.00	18.45
126	M	1,2,4-trichlorobenzene	0.893	0.771	13.7	97	0.00	19.18
127	M	hexachlorobutadiene	0.519	0.478	7.9	100	0.00	19.29
128	M	naphthalene	1.526	1.361	10.8	94	0.00	19.51
129	M	1,2,3-trichlorobenzene	0.713	0.634	11.1	98	0.00	19.79
130	M	hexachloroethane	0.416	0.414	0.5	100	0.00	17.68
131		Ethylenimine		----------NA----------				
132		Bis(chloromethyl)ether		----------NA----------				
133		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A195863.D MA7389.M Thu Jun 20 18:49:13 2013 MSA

6.7.2

6

Continuing Calibration Summary

Job Number: JB40350 **Sample:** VA7396-CC7389
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** A195992.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\A195992.D                    Vial: 100
Acq On    : 25 Jun 2013   9:56 pm                    Operator: Oksanat
Sample    : cc7389-50                                Inst    : MSA
Misc      : MS50430,VA7396,5,,,,1                    Multiplr: 1.00
MS Integration Params: LSCINT.P

Method       : C:\HPCHEM\1\METHODS\MA7389.M (RTE Integrator)
Title        : SW 846  8260bB ZB624 60m x 0.25mm x 1.4um
Last Update  : Tue Jun 25 12:24:42 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.010  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	114	0.03	7.57
2	M	1,4-dioxane	0.082	0.085	-3.7	124	0.02	11.63
3	M	ethanol		----------NA----------				
4	M	tertiary butyl alcohol	1.068	1.055	1.2	119	0.03	7.69
5	I	pentafluorobenzene	1.000	1.000	0.0	126	0.02	9.91
6		chlorotrifluoroethene		----------NA----------				
7	M	chlorodifluoromethane	0.472	0.409	13.3	114	0.02	4.00
8	M	dichlorodifluoromethane	0.498	0.452	9.2	123	0.02	3.97
9	M	chloromethane	0.758	0.722	4.7	131	0.02	4.31
10	M	vinyl chloride	0.671	0.664	1.0	127	0.02	4.57
11	M	bromomethane	0.347	0.350	-0.9	139	0.02	5.26
12	M	chloroethane	0.297	0.294	1.0	133	0.03	5.45
13		vinyl bromide		----------NA----------				
14	M	trichlorofluoromethane	0.597	0.575	3.7	129	0.03	5.92
15	m	pentane		----------NA----------				
16	M	ethyl ether	0.200	0.203	-1.5	134	0.02	6.35
17		Freon 123a		----------NA----------				
18	M	acrolein	0.056	0.056	0.0	122	0.02	6.66
19	M	1,1-dichloroethene	0.349	0.353	-1.1	131	0.02	6.81
		----------	True	Calc.	% Drift	----------		
20	M	acetone	50.000	52.658	-5.3	128	0.02	6.89
		----------	AvgRF	CCRF	% Dev	----------		
21	M	allyl chloride	0.226	0.229	-1.3	122	0.02	7.38
22	M	acetonitrile	0.030	0.027	10.0	124	0.02	7.39
23	M	iodomethane	0.643	0.709	-10.3	137	0.02	7.11
24	M	iso-butyl alcohol	0.012	0.011	8.3	118	0.02	10.23
25	M	carbon disulfide	1.359	1.413	-4.0	130	0.03	7.23
		----------	True	Calc.	% Drift	----------		
26	M	methylene chloride	50.000	51.677	-3.4	130	0.03	7.60
		----------	AvgRF	CCRF	% Dev	----------		
27	M	methyl acetate	0.252	0.230	8.7	116	0.02	7.38
28	M	methyl tert butyl ether	1.028	1.126	-9.5	132	0.02	7.92
29	M	trans-1,2-dichloroethene	0.389	0.391	-0.5	131	0.02	7.98
30	M	di-isopropyl ether	1.481	1.519	-2.6	129	0.02	8.54
31	m	t-butyl formate	0.312	0.335	-7.4	128	0.02	9.78
32	m	3,3-dimethyl-1-butanol	0.036	0.037	-2.8	118	0.02	13.55
33	M	ethyl tert-butyl ether	1.299	1.415	-8.9	131	0.02	9.04

Continuing Calibration Summary

Job Number: JB40350 **Sample:** VA7396-CC7389
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** A195992.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

34	M	2-butanone	0.035	0.033	5.7	119	0.02	9.34
35	M	1,1-dichloroethane	0.748	0.801	-7.1	131	0.02	8.59
36	M	chloroprene	0.586	0.575	1.9	125	0.02	8.69
37	M	acrylonitrile	0.103	0.107	-3.9	126	0.02	7.97
38	M	vinyl acetate	0.047	0.051	-8.5	129	0.02	8.57
39	M	ethyl acetate	0.044	0.044	0.0	124	0.03	9.35
40		ethyl acrylate		----------NA----------				
41	M	2,2-dichloropropane	0.596	0.569	4.5	119	0.02	9.36
42	M	cis-1,2-dichloroethene	0.413	0.439	-6.3	132	0.02	9.37
43	M	propionitrile	0.042	0.041	2.4	122	0.02	9.47
44	M	bromochloromethane	0.170	0.193	-13.5	138	0.02	9.71
45	M	tetrahydrofuran	0.124	0.116	6.5	120	0.02	9.73
46	M	chloroform	0.694	0.710	-2.3	131	0.02	9.76
47	S	dibromofluoromethane (s)	0.373	0.354	5.1	131	0.02	9.97
48	S	1,2-dichloroethane-d4 (s)	0.394	0.338	14.2	116	0.02	10.41
49	M	freon 113	0.248	0.263	-6.0	132	0.02	6.76
50	M	methacrylonitrile	0.196	0.186	5.1	119	0.02	9.65
51		cyclohexane	0.578	0.607	-5.0	127	0.02	10.06
52	M	1,1,1-trichloroethane	0.566	0.593	-4.8	128	0.02	10.01
53	M	tert-amyl methyl ether	1.164	1.244	-6.9	132	0.02	10.49
54	I	1,4-difluorobenzene	1.000	1.000	0.0	127	0.02	10.86
55	M	Di-isobutylene		----------NA----------				
56	M	epichlorohydrin	0.019	0.019	0.0	118	0.02	12.23
57	M	n-butyl alcohol	0.006	0.006#	0.0	115	0.02	11.02
58	M	carbon tetrachloride	0.325	0.333	-2.5	128	0.02	10.21
59	M	1,1-dichloropropene	0.357	0.357	0.0	126	0.02	10.19
60	M	hexane	0.384	0.360	6.3	128	0.02	8.26
61	M	benzene	1.082	1.097	-1.4	130	0.02	10.47
62	M	Iso-octane	1.282	1.285	-0.2	127	0.02	10.44
63	M	heptane	0.232	0.223	3.9	128	0.02	10.62
64	m	tert amyl alcohol		----------NA----------				
65	M	isopropyl acetate	0.630	0.613	2.7	118	0.02	10.39
66	M	1,2-dichloroethane	0.298	0.314	-5.4	130	0.02	10.51
67	M	trichloroethene	0.255	0.259	-1.6	127	0.02	11.22
68	M	2-nitropropane	0.004	0.004#	0.0	130	0.02	12.08
69	m	tert-amyl ethyl ether		----------NA----------				
70	m	methylcyclohexane	0.454	0.466	-2.6	129	0.02	11.43
71	M	2-chloroethyl vinyl ether	0.135	0.140	-3.7	127	0.02	12.08
72	M	methyl methacrylate	0.141	0.144	-2.1	125	0.02	11.51
73	M	1,2-dichloropropane	0.294	0.309	-5.1	131	0.02	11.51
74	M	dibromomethane	0.136	0.144	-5.9	130	0.02	11.69
75	M	bromodichloromethane	0.338	0.359	-6.2	134	0.02	11.83
76	M	cis-1,3-dichloropropene	0.433	0.458	-5.8	130	0.02	12.31
77	S	toluene-d8 (s)	0.966	0.985	-2.0	140	0.02	12.62
78	M	4-methyl-2-pentanone	0.087	0.086	1.1	119	0.02	12.42
79	M	toluene	0.705	0.665	5.7	129	0.02	12.69
80	M	3-methyl-1-butanol	0.010	0.010	0.0	114	0.02	12.44
81	M	trans-1,3-dichloropropene	0.374	0.390	-4.3	131	0.02	12.94
82	M	ethyl methacrylate	0.301	0.304	-1.0	128	0.02	12.90
83	M	1,1,2-trichloroethane	0.173	0.183	-5.8	134	0.02	13.18
84	M	2-hexanone	0.084	0.082	2.4	124	0.02	13.35
85	I	chlorobenzene-d5	1.000	1.000	0.0	131	0.02	14.31
86	M	tetrachloroethene	0.229	0.233	-1.7	130	0.02	13.34
87	M	1,3-dichloropropane	0.404	0.411	-1.7	135	0.02	13.37
88	M	butyl acetate	0.166	0.175	-5.4	133	0.02	13.42
89	M	dibromochloromethane	0.270	0.284	-5.2	136	0.02	13.67
90	M	1,2-dibromoethane	0.217	0.231	-6.5	136	0.02	13.84
91	M	n-butyl ether		----------NA----------				

Continuing Calibration Summary

Job Number: JB40350 **Sample:** VA7396-CC7389
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** A195992.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

92	M	chlorobenzene	0.843	0.845	-0.2	133	0.02	14.34
93	M	1,1,1,2-tetrachloroethane	0.305	0.309	-1.3	131	0.02	14.42
94	M	ethylbenzene	1.509	1.443	4.4	131	0.02	14.39
95	M	m,p-xylene	0.565	0.555	1.8	131	0.02	14.51
96	M	o-xylene	0.561	0.560	0.2	133	0.02	14.99
97	M	styrene	0.962	0.963	-0.1	137	0.02	15.01
98	M	bromoform	0.176	0.189	-7.4	136	0.02	15.33
99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	133	0.02	16.94
100	M	isopropylbenzene	2.618	2.414	7.8	129	0.02	15.37
		----------	True	Calc.	% Drift	----------		
101	m	cyclohexanone	500.000	160.483	67.9#	49	0.02	15.60
		----------	AvgRF	CCRF	% Dev	----------		
102	S	4-bromofluorobenzene (s)	0.777	0.709	8.8	134	0.02	15.62
103	M	bromobenzene	0.656	0.632	3.7	137	0.02	15.84
104	M	1,1,2,2-tetrachloroethane	0.606	0.571	5.8	133	0.02	15.75
105	M	trans-1,4-dichloro-2-bute	0.177	0.160	9.6	120	0.02	15.80
106	M	1,2,3-trichloropropane	0.126	0.129	-2.4	141	0.02	15.84
107	M	n-propylbenzene	3.243	3.011	7.2	129	0.02	15.83
108	M	2-chlorotoluene	0.649	0.621	4.3	133	0.02	16.01
109	M	4-chlorotoluene	2.084	1.919	7.9	132	0.02	16.13
110	m	p-ethyltoluene		----------NA----------				
111	M	1,3,5-trimethylbenzene	2.316	2.180	5.9	130	0.02	16.01
112	M	tert-butylbenzene	1.948	1.799	7.6	126	0.02	16.40
113	M	pentachloroethane	0.413	0.410	0.7	134	0.02	16.51
114	M	1,2,4-trimethylbenzene	2.452	2.266	7.6	130	0.02	16.45
115	M	sec-butylbenzene	3.087	2.884	6.6	127	0.02	16.64
116	M	1,3-dichlorobenzene	1.374	1.284	6.6	132	0.02	16.87
117	M	p-isopropyltoluene	2.531	2.361	6.7	127	0.02	16.77
118	M	1,2,3-trimethylbenzene		----------NA----------				
119	M	1,4-dichlorobenzene	1.434	1.304	9.1	131	0.02	16.97
120	m	p-diethylbenzene		----------NA----------				
121	M	1,2-dichlorobenzene	1.302	1.236	5.1	134	0.02	17.41
122	M	n-butylbenzene	1.510	1.349	10.7	123	0.02	17.24
123	m	1,2,4,5-tetramethylbenzen		----------NA----------				
124	M	1,2-dibromo-3-chloropropa	0.104	0.099	4.8	131	0.02	18.29
125	M	1,3,5-trichlorobenzene	1.073	0.997	7.1	132	0.02	18.47
126	M	1,2,4-trichlorobenzene	0.893	0.822	8.0	135	0.02	19.20
127	M	hexachlorobutadiene	0.519	0.498	4.0	135	0.02	19.31
128	M	naphthalene	1.526	1.537	-0.7	138	0.02	19.53
129	M	1,2,3-trichlorobenzene	0.713	0.699	2.0	141	0.02	19.81
130	M	hexachloroethane	0.416	0.422	-1.4	133	0.02	17.69
131		Ethylenimine		----------NA----------				
132		Bis(chloromethyl)ether		----------NA----------				
133		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A195863.D MA7389.M Wed Jun 26 13:24:37 2013 MSA

New Jersey
ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66969-MB	Z81840.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	29	8.3	ug/kg	
208-96-8	Acenaphthylene	ND	29	9.1	ug/kg	
98-86-2	Acetophenone	ND	140	5.0	ug/kg	
120-12-7	Anthracene	ND	29	10	ug/kg	
1912-24-9	Atrazine	ND	140	5.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	29	9.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	29	8.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	29	9.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	29	11	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	29	11	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	57	10	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	57	17	ug/kg	
92-52-4	1,1'-Biphenyl	ND	57	3.3	ug/kg	
100-52-7	Benzaldehyde	ND	140	6.6	ug/kg	
91-58-7	2-Chloronaphthalene	ND	57	8.9	ug/kg	
106-47-8	4-Chloroaniline	ND	140	9.1	ug/kg	
86-74-8	Carbazole	ND	57	13	ug/kg	
105-60-2	Caprolactam	ND	57	9.0	ug/kg	
218-01-9	Chrysene	ND	29	9.7	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	57	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	57	8.6	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	57	8.5	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	57	8.6	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	57	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	57	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	140	7.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	29	9.7	ug/kg	
132-64-9	Dibenzofuran	ND	57	8.5	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	57	6.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	57	14	ug/kg	
84-66-2	Diethyl phthalate	ND	57	9.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	57	10	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	57	25	ug/kg	
206-44-0	Fluoranthene	ND	29	13	ug/kg	
86-73-7	Fluorene	ND	29	9.4	ug/kg	
118-74-1	Hexachlorobenzene	ND	57	9.3	ug/kg	

Method Blank Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66969-MB	Z81840.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	29	7.9	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	290	29	ug/kg	
67-72-1	Hexachloroethane	ND	140	7.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	29	9.9	ug/kg	
78-59-1	Isophorone	ND	57	7.7	ug/kg	
91-57-6	2-Methylnaphthalene	ND	57	16	ug/kg	
88-74-4	2-Nitroaniline	ND	140	13	ug/kg	
99-09-2	3-Nitroaniline	ND	140	11	ug/kg	
100-01-6	4-Nitroaniline	ND	140	11	ug/kg	
91-20-3	Naphthalene	ND	29	7.8	ug/kg	
98-95-3	Nitrobenzene	ND	57	8.3	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	57	7.0	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	140	17	ug/kg	
85-01-8	Phenanthrene	ND	29	13	ug/kg	
129-00-0	Pyrene	ND	29	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	140	8.8	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	63%	12-109%
4165-62-2	Phenol-d5	63%	14-108%
118-79-6	2,4,6-Tribromophenol	90%	20-138%
4165-60-0	Nitrobenzene-d5	74%	11-119%
321-60-8	2-Fluorobiphenyl	82%	17-115%
1718-51-0	Terphenyl-d14	105%	30-141%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	2.78	250	ug/kg	J
	system artifact	3.63	240	ug/kg	J
	system artifact/aldol-condensation	4.02	2900	ug/kg	J
	unknown	15.83	140	ug/kg	J
	Total TIC, Semi-Volatile		140	ug/kg	J

Blank Spike Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66969-BS1	Z81841.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1430	938	66	52-113
208-96-8	Acenaphthylene	1430	947	66	49-105
98-86-2	Acetophenone	1430	907	63	49-122
120-12-7	Anthracene	1430	1250	88	59-121
1912-24-9	Atrazine	1430	1490	104	62-162
56-55-3	Benzo(a)anthracene	1430	1330	93	57-120
50-32-8	Benzo(a)pyrene	1430	1360	95	59-124
205-99-2	Benzo(b)fluoranthene	1430	1310	92	53-135
191-24-2	Benzo(g,h,i)perylene	1430	1130	79	56-128
207-08-9	Benzo(k)fluoranthene	1430	1290	90	50-133
101-55-3	4-Bromophenyl phenyl ether	1430	1150	81	57-126
85-68-7	Butyl benzyl phthalate	1430	1530	107	56-131
92-52-4	1,1'-Biphenyl	1430	1050	74	54-125
100-52-7	Benzaldehyde	1430	824	58	36-134
91-58-7	2-Chloronaphthalene	1430	905	63	49-113
106-47-8	4-Chloroaniline	1430	822	58	41-99
86-74-8	Carbazole	1430	1340	94	56-119
105-60-2	Caprolactam	1430	1060	74	47-148
218-01-9	Chrysene	1430	1280	90	57-121
111-91-1	bis(2-Chloroethoxy)methane	1430	714	50	49-120
111-44-4	bis(2-Chloroethyl)ether	1430	592	41	40-112
108-60-1	bis(2-Chloroisopropyl)ether	1430	701	49	37-113
7005-72-3	4-Chlorophenyl phenyl ether	1430	1020	71	53-120
121-14-2	2,4-Dinitrotoluene	1430	1660	116	58-129
606-20-2	2,6-Dinitrotoluene	1430	1470	103	56-131
91-94-1	3,3'-Dichlorobenzidine	1430	1460	102	47-122
53-70-3	Dibenzo(a,h)anthracene	1430	1220	85	57-131
132-64-9	Dibenzofuran	1430	1030	72	53-110
84-74-2	Di-n-butyl phthalate	1430	1370	96	58-131
117-84-0	Di-n-octyl phthalate	1430	1560	109	56-143
84-66-2	Diethyl phthalate	1430	1250	88	53-124
131-11-3	Dimethyl phthalate	1430	1160	81	56-117
117-81-7	bis(2-Ethylhexyl)phthalate	1430	1380	97	57-134
206-44-0	Fluoranthene	1430	1250	88	56-125
86-73-7	Fluorene	1430	1150	81	56-119
118-74-1	Hexachlorobenzene	1430	1240	87	54-125

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66969-BS1	Z81841.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	1430	758	53	38-127
77-47-4	Hexachlorocyclopentadiene	2860	1240	43	28-141
67-72-1	Hexachloroethane	1430	611	43	36-114
193-39-5	Indeno(1,2,3-cd)pyrene	1430	1480	104	58-131
78-59-1	Isophorone	1430	765	54	49-118
91-57-6	2-Methylnaphthalene	1430	746	52	46-109
88-74-4	2-Nitroaniline	1430	1100	77	44-138
99-09-2	3-Nitroaniline	1430	1270	89	45-112
100-01-6	4-Nitroaniline	1430	1300	91	51-124
91-20-3	Naphthalene	1430	752	53	46-110
98-95-3	Nitrobenzene	1430	702	49	42-121
621-64-7	N-Nitroso-di-n-propylamine	1430	685	48	39-118
86-30-6	N-Nitrosodiphenylamine	1430	1310	92	55-119
85-01-8	Phenanthrene	1430	1240	87	57-117
129-00-0	Pyrene	1430	1350	95	57-121
95-94-3	1,2,4,5-Tetrachlorobenzene	1430	771	54	33-136

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	58%	12-109%
4165-62-2	Phenol-d5	62%	14-108%
118-79-6	2,4,6-Tribromophenol	103%	20-138%
4165-60-0	Nitrobenzene-d5	56%	11-119%
321-60-8	2-Fluorobiphenyl	72%	17-115%
1718-51-0	Terphenyl-d14	106%	30-141%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66969-MS	Z81846.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142
OP66969-MSD	Z81847.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142
JB40350-2	Z81848.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	JB40350-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		1750	1230	70	1680	1360	81	10	22-120/35
208-96-8	Acenaphthylene	ND		1750	1250	71	1680	1400	83	11	20-112/34
98-86-2	Acetophenone	ND		1750	1280	73	1680	1400	83	9	19-128/38
120-12-7	Anthracene	ND		1750	1420	81	1680	1530	91	7	25-134/36
1912-24-9	Atrazine	ND		1750	1640	94	1680	1710	102	4	38-158/35
56-55-3	Benzo(a)anthracene	ND		1750	1400	80	1680	1520	91	8	20-135/39
50-32-8	Benzo(a)pyrene	ND		1750	1380	79	1680	1550	92	12	20-137/39
205-99-2	Benzo(b)fluoranthene	ND		1750	1390	79	1680	1530	91	10	17-149/43
191-24-2	Benzo(g,h,i)perylene	ND		1750	1170	67	1680	1310	78	11	20-138/39
207-08-9	Benzo(k)fluoranthene	ND		1750	1350	77	1680	1530	91	13	17-134/45
101-55-3	4-Bromophenyl phenyl ether	ND		1750	1260	72	1680	1420	85	12	27-132/36
85-68-7	Butyl benzyl phthalate	ND		1750	1640	94	1680	1760	105	7	27-139/38
92-52-4	1,1'-Biphenyl	ND		1750	1460	83	1680	1600	95	9	25-127/34
100-52-7	Benzaldehyde	ND		1750	1210	69	1680	1310	78	8	10-140/38
91-58-7	2-Chloronaphthalene	ND		1750	1250	71	1680	1400	83	11	22-116/35
106-47-8	4-Chloroaniline	ND		1750	1050	60	1680	1140	68	8	15-105/36
86-74-8	Carbazole	ND		1750	1450	83	1680	1540	92	6	28-128/34
105-60-2	Caprolactam	ND		1750	1330	76	1680	1220	73	9	12-154/40
218-01-9	Chrysene	ND		1750	1340	76	1680	1470	88	9	21-134/39
111-91-1	bis(2-Chloroethoxy)methane	ND		1750	977	56	1680	1090	65	11	20-125/36
111-44-4	bis(2-Chloroethyl)ether	ND		1750	923	53	1680	969	58	5	13-114/40
108-60-1	bis(2-Chloroisopropyl)ether	ND		1750	1080	62	1680	1200	71	11	13-112/36
7005-72-3	4-Chlorophenyl phenyl ether	ND		1750	1290	74	1680	1410	84	9	25-125/34
121-14-2	2,4-Dinitrotoluene	ND		1750	1870	107	1680	1990	118	6	21-133/35
606-20-2	2,6-Dinitrotoluene	ND		1750	1760	100	1680	1900	113	8	23-134/34
91-94-1	3,3'-Dichlorobenzidine	ND		1750	1540	88	1680	1690	101	9	12-130/39
53-70-3	Dibenzo(a,h)anthracene	ND		1750	1270	72	1680	1380	82	8	23-141/39
132-64-9	Dibenzofuran	ND		1750	1300	74	1680	1460	87	12	21-120/35
84-74-2	Di-n-butyl phthalate	ND		1750	1490	85	1680	1590	95	6	30-134/34
117-84-0	Di-n-octyl phthalate	ND		1750	1620	92	1680	1810	108	11	21-150/39
84-66-2	Diethyl phthalate	ND		1750	1470	84	1680	1570	93	7	30-125/33
131-11-3	Dimethyl phthalate	ND		1750	1390	79	1680	1500	89	8	30-124/32
117-81-7	bis(2-Ethylhexyl)phthalate	113		1750	1750	93	1680	1860	104	6	25-146/39
206-44-0	Fluoranthene	ND		1750	1380	79	1680	1460	87	6	17-139/43
86-73-7	Fluorene	ND		1750	1400	80	1680	1560	93	11	24-127/36
118-74-1	Hexachlorobenzene	ND		1750	1310	75	1680	1430	85	9	24-129/36

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP66969-MS	Z81846.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142
OP66969-MSD	Z81847.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142
JB40350-2	Z81848.D	1	06/24/13	KH	06/24/13	OP66969	EZ4142

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	JB40350-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		1750	1140	65	1680	1380	82	19	10-125/40
77-47-4	Hexachlorocyclopentadiene	ND		3510	1680	48	3360	2050	61	20	10-115/51
67-72-1	Hexachloroethane	ND		1750	932	53	1680	1090	65	16	10-106/40
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1750	1520	87	1680	1650	98	8	21-141/39
78-59-1	Isophorone	ND		1750	1030	59	1680	1110	66	7	22-121/35
91-57-6	2-Methylnaphthalene	ND		1750	1080	62	1680	1200	71	11	14-119/39
88-74-4	2-Nitroaniline	ND		1750	1250	71	1680	1410	84	12	19-141/34
99-09-2	3-Nitroaniline	ND		1750	1280	73	1680	1490	89	15	20-119/35
100-01-6	4-Nitroaniline	ND		1750	1450	83	1680	1580	94	9	23-123/36
91-20-3	Naphthalene	ND		1750	1090	62	1680	1220	73	11	14-115/38
98-95-3	Nitrobenzene	ND		1750	980	56	1680	1110	66	12	13-125/36
621-64-7	N-Nitroso-di-n-propylamine	ND		1750	932	53	1680	1040	62	11	12-125/38
86-30-6	N-Nitrosodiphenylamine	ND		1750	1420	81	1680	1520	91	7	21-139/35
85-01-8	Phenanthrene	ND		1750	1380	79	1680	1470	88	6	16-139/41
129-00-0	Pyrene	ND		1750	1470	84	1680	1570	93	7	15-143/41
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		1750	1100	63	1680	1240	74	12	13-128/37

CAS No.	Surrogate Recoveries	MS	MSD	JB40350-2	Limits
367-12-4	2-Fluorophenol	64%	76%		12-109%
4165-62-2	Phenol-d5	63%	71%		14-108%
118-79-6	2,4,6-Tribromophenol	96%	109%		20-138%
4165-60-0	Nitrobenzene-d5	62%	72%	55%	11-119%
321-60-8	2-Fluorobiphenyl	82%	95%	58%	17-115%
1718-51-0	Terphenyl-d14	90%	105%	90%	30-141%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4104-DFTPP
Lab File ID: Z80706.D
Instrument ID: GCMSZ
Injection Date: 05/29/13
Injection Time: 13:56

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	13497	37.9		Pass
68	Less than 2.0% of mass 69	205	0.58	(1.53) [a]	Pass
69	Mass 69 relative abundance	13406	37.6		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	17150	48.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	35629	100.0		Pass
199	5.0 - 9.0% of mass 198	2184	6.13		Pass
275	10.0 - 30.0% of mass 198	7384	20.7		Pass
365	1.0 - 100.0% of mass 198	935	2.62		Pass
441	Present, but less than mass 443	4187	11.8	(83.6) [b]	Pass
442	40.0 - 100.0% of mass 198	24555	68.9		Pass
443	17.0 - 23.0% of mass 442	5010	14.1	(20.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ4104-ICC4104	Z80707.D	05/29/13	14:08	00:12	Initial cal 50
EZ4104-IC4104	Z80708.D	05/29/13	14:41	00:45	Initial cal 100
EZ4104-IC4104	Z80709.D	05/29/13	15:13	01:17	Initial cal 1
EZ4104-IC4104	Z80710.D	05/29/13	15:46	01:50	Initial cal 25
EZ4104-IC4104	Z80711.D	05/29/13	16:19	02:23	Initial cal 5
EZ4104-IC4104	Z80712.D	05/29/13	16:52	02:56	Initial cal 80
EZ4104-IC4104	Z80713.D	05/29/13	19:03	05:07	Initial cal 2
EZ4104-IC4104	Z80714.D	05/29/13	19:35	05:39	Initial cal 10

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4106-DFTPP
Lab File ID: Z80733.D
Instrument ID: GCMSZ
Injection Date: 05/30/13
Injection Time: 08:16

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	15372	33.9		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	16791	37.0		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	21048	46.4		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	45352	100.0		Pass
199	5.0 - 9.0% of mass 198	2989	6.59		Pass
275	10.0 - 30.0% of mass 198	10145	22.4		Pass
365	1.0 - 100.0% of mass 198	1088	2.40		Pass
441	Present, but less than mass 443	5325	11.7	(80.1) [b]	Pass
442	40.0 - 100.0% of mass 198	34235	75.5		Pass
443	17.0 - 23.0% of mass 442	6650	14.7	(19.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ4106-IC4106	Z80734.D	05/30/13	08:30	00:14	Initial cal 100
EZ4106-IC4106	Z80735.D	05/30/13	09:02	00:46	Initial cal 80
EZ4106-ICC4106	Z80736.D	05/30/13	09:34	01:18	Initial cal 50
EZ4106-IC4106	Z80737.D	05/30/13	10:06	01:50	Initial cal 25
EZ4106-IC4106	Z80738.D	05/30/13	10:39	02:23	Initial cal 10
EZ4106-IC4106	Z80739.D	05/30/13	11:11	02:55	Initial cal 5
EZ4106-IC4106	Z80740.D	05/30/13	11:44	03:28	Initial cal 2
EZ4106-IC4106	Z80741.D	05/30/13	12:16	04:00	Initial cal 1
EZ4106-ICV4104	Z80742.D	05/30/13	12:49	04:33	Initial cal verification 50
EZ4106-ICV4104	Z80743.D	05/30/13	13:22	05:06	Initial cal verification 50
EZ4106-ICV4106	Z80744A.D	05/30/13	13:55	05:39	Initial cal verification 50
EZ4106-ICV4104	Z80744.D	05/30/13	13:55	05:39	Initial cal verification 50
EZ4106-ICV4104	Z80745.D	05/30/13	14:27	06:11	Initial cal verification 50
EZ4106-ICV4106	Z80745A.D	05/30/13	14:27	06:11	Initial cal verification 50
EZ4106-ICV4104	Z80746.D	05/30/13	15:00	06:44	Initial cal verification 50
EZ4106-ICV4106	Z80747A.D	05/30/13	15:32	07:16	Initial cal verification 50
EZ4106-ICV4104	Z80747.D	05/30/13	15:32	07:16	Initial cal verification 50
EZ4106-ICV4106	Z80748.D	05/30/13	16:05	07:49	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4142-DFTPP
Lab File ID: Z81834.D
Instrument ID: GCMSZ
Injection Date: 06/24/13
Injection Time: 16:18

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	39908	30.8		Pass
68	Less than 2.0% of mass 69	569	0.44	(1.13) [a]	Pass
69	Mass 69 relative abundance	50383	38.8		Pass
70	Less than 2.0% of mass 69	382	0.29	(0.76) [a]	Pass
127	40.0 - 60.0% of mass 198	68941	53.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	129768	100.0		Pass
199	5.0 - 9.0% of mass 198	8584	6.61		Pass
275	10.0 - 30.0% of mass 198	28843	22.2		Pass
365	1.0 - 100.0% of mass 198	4656	3.59		Pass
441	Present, but less than mass 443	14011	10.8	(73.2) [b]	Pass
442	40.0 - 100.0% of mass 198	93026	71.7		Pass
443	17.0 - 23.0% of mass 442	19151	14.8	(20.6) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ4142-CC4104	Z81835.D	06/24/13	16:35	00:17	Continuing cal 25
EZ4142-CC4106	Z81839.D	06/24/13	18:48	02:30	Continuing cal 25
OP66969-MB	Z81840.D	06/24/13	19:21	03:03	Method Blank
OP66969-BS1	Z81841.D	06/24/13	19:54	03:36	Blank Spike
ZZZZZZ	Z81842.D	06/24/13	20:27	04:09	(unrelated sample)
OP66840-MB1	Z81843.D	06/24/13	21:00	04:42	Method Blank
ZZZZZZ	Z81844.D	06/24/13	21:33	05:15	(unrelated sample)
ZZZZZZ	Z81845.D	06/24/13	22:05	05:47	(unrelated sample)
OP66969-MS	Z81846.D	06/24/13	22:38	06:20	Matrix Spike
OP66969-MSD	Z81847.D	06/24/13	23:11	06:53	Matrix Spike Duplicate
JB40350-2	Z81848.D	06/24/13	23:44	07:26	P3
JB40350-3	Z81849.D	06/25/13	00:16	07:58	P4
JB40350-4	Z81850.D	06/25/13	00:49	08:31	P5
JB40350-5	Z81851.D	06/25/13	01:22	09:04	P11
JB40350-1	Z81852.D	06/25/13	01:54	09:36	P2
ZZZZZZ	Z81853.D	06/25/13	02:26	10:08	(unrelated sample)
ZZZZZZ	Z81854.D	06/25/13	02:59	10:41	(unrelated sample)
ZZZZZZ	Z81855.D	06/25/13	03:31	11:13	(unrelated sample)

Semivolatile Internal Standard Area Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	EZ4142-CC4104	**Injection Date:**	06/24/13
Lab File ID:	Z81835.D	**Injection Time:**	16:35
Instrument ID:	GCMSZ	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	174847	5.17	627200	6.35	380451	8.77	597988	11.43	527611	16.61	426500	19.24
Upper Limit [a]	349694	5.67	1254400	6.85	760902	9.27	1195976	11.93	1055222	17.11	853000	19.74
Lower Limit [b]	87424	4.67	313600	5.85	190226	8.27	298994	10.93	263806	16.11	213250	18.74

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP66969-MB	171679	5.17	634336	6.35	367099	8.76	534338	11.42	430387	16.60	357412	19.23
OP66969-BS1	165407	5.17	655602	6.35	332158	8.77	502107	11.43	424864	16.61	342466	19.23
ZZZZZZ	163666	5.17	596479	6.35	356974	8.76	561431	11.42	478273	16.60	411129	19.23
OP66840-MB1	184044	5.17	650914	6.35	373813	8.76	575353	11.42	509987	16.60	428638	19.24
ZZZZZZ	174283	5.17	609951	6.35	352794	8.77	532466	11.42	486517	16.60	432914	19.23
ZZZZZZ	177026	5.16	570128	6.35	289351	8.79	452899	11.45	386829	16.61	385488	19.24
OP66969-MS	147442	5.17	603694	6.35	309719	8.77	494304	11.43	432089	16.61	338685	19.24
OP66969-MSD	157353	5.17	643491	6.35	325190	8.77	512725	11.42	432763	16.61	333093	19.24
JB40350-2	152267	5.16	557979	6.35	328203	8.77	501846	11.42	418582	16.60	333087	19.23
JB40350-3	141227	5.17	484066	6.35	259295	8.76	359507	11.42	297046	16.60	228789	19.23
JB40350-4	161929	5.16	569202	6.35	327879	8.77	496135	11.43	380393	16.61	288859	19.24
JB40350-5	139854	5.16	524915	6.35	305034	8.77	451257	11.43	351479	16.61	267970	19.24
JB40350-1	132447	5.16	482929	6.35	276490	8.77	439788	11.42	367755	16.61	290530	19.24
ZZZZZZ	113443	5.17	422177	6.35	242618	8.77	340394	11.43	315446	16.61	255774	19.24
ZZZZZZ	111842	5.17	383110	6.35	202777	8.78	430841	11.48	194650*	16.68	182634*	19.26
ZZZZZZ	109080	5.16	378178	6.35	220904	8.77	313096	11.43	266506	16.62	233309	19.25

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JB40350-1	Z81852.D	33	39	70
JB40350-2	Z81848.D	55	58	90
JB40350-3	Z81849.D	39	59	93
JB40350-4	Z81850.D	40	54	95
JB40350-5	Z81851.D	60	65	92
OP66969-BS1	Z81841.D	56	72	106
OP66969-MB	Z81840.D	74	82	105
OP66969-MS	Z81846.D	62	82	90
OP66969-MSD	Z81847.D	72	95	105

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	11-119%
S2 = 2-Fluorobiphenyl	17-115%
S3 = Terphenyl-d14	30-141%

Initial Calibration Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4104-ICC4104
Lab FileID: Z80707.D

Response Factor Report MSZ

Method : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Thu May 30 15:23:15 2013
Response via : Initial Calibration

Calibration Files
100 =Z80708.D 80 =Z80712.D 50 =Z80707.D 25 =Z80710.D
10 =Z80714.D 5 =Z80711.D 2 =Z80713.D 1 =Z80709.D

Compound	100	80	50	25	10	5	2	1	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane	0.611	0.625	0.612	0.606	0.529	0.619	0.524	0.740	0.608	10.95
3) Pyridine	1.523	1.582	1.526	1.486	1.361	1.474	1.457	1.810	1.527	8.57
4) N-Nitrosodim	0.982	1.011	0.977	0.959	0.849	0.977	0.842	0.888	0.936	7.02
5) 2-Fluorophen	1.308	1.339	1.298	1.302	1.263	1.301	1.293	1.328	1.304	1.75
6) Indene	2.361	2.452	2.459	2.515	2.311	2.690	2.427	2.736	2.494	6.00
7) Cumene	3.417	3.574	3.458	3.483	3.166	3.603	3.240	3.738	3.460	5.44
8) Phenol-d5	1.678	1.723	1.680	1.665	1.646	1.765	1.730	1.718	1.701	2.32
9) Phenol	1.866	1.927	1.894	1.890	1.743	1.969	1.792	2.059	1.892	5.21
10) Aniline	2.294	2.386	2.364	2.378	2.136	2.501	2.238	2.554	2.357	5.74
11) bis(2-Chloro	1.388	1.439	1.392	1.454	1.336	1.508	1.402	1.491	1.426	4.02
12) 2-Chlorophen	1.469	1.511	1.495	1.518	1.397	1.628	1.484	1.587	1.511	4.70
13) Decane	1.325	1.368	1.401	1.432	1.332	1.502	1.399	1.544	1.413	5.49
14) 1,3-Dichloro	1.695	1.752	1.722	1.762	1.588	1.847	1.600	1.930	1.737	6.62
15) 1,4-Dichloro	1.694	1.765	1.719	1.744	1.615	1.831	1.625	1.863	1.732	5.12
16) Benzyl alcoh	0.969	0.997	0.976	0.987	0.896	0.997	0.892	0.958	0.959	4.42
17) 1,2-Dichloro	1.558	1.623	1.603	1.631	1.503	1.707	1.525	1.705	1.607	4.73
18) Acetophenone	1.862	1.947	1.929	1.987	1.829	2.114	1.996	2.202	1.983	6.26
19) 2-Methylphen	1.332	1.362	1.362	1.402	1.306	1.450	1.211	1.459	1.361	5.93
20) 2,2'-oxybis(	0.470	0.485	0.491	0.500	0.463	0.502	0.489	0.520	0.490	3.66
21) 3&4-Methylph	1.405	1.461	1.452	1.480	1.360	1.504	1.275	1.450	1.423	5.25
22) n-Nitroso-di	0.963	0.991	1.001	1.024	0.986	1.093	1.096	1.135	1.036	6.09
23) Hexachloroet	0.540	0.550	0.548	0.551	0.483	0.562	0.471	0.492	0.525	6.94
24) I Naphthalene-d8	----------ISTD----------									
25) Nitrobenzene	0.320	0.322	0.320	0.319	0.331	0.342	0.330	0.369	0.332	5.13
26) Nitrobenzene	0.370	0.377	0.374	0.378	0.339	0.387	0.344	0.417	0.373	6.57
27) Quinoline	0.698	0.713	0.711	0.707	0.640	0.726	0.632	0.759	0.698	6.11
28) Isophorone	0.664	0.679	0.679	0.676	0.607	0.691	0.632	0.689	0.665	4.50
29) 2-Nitropheno	0.197	0.199	0.193	0.185	0.166	0.184	0.174	0.155	0.182	8.54
30) 2,4-Dimethyl	0.349	0.357	0.362	0.367	0.301	0.370	0.227	0.379	0.339	15.06
31) Benzoic Acid	0.233	0.222	0.218	0.172	0.135				0.196	21.05
----- Linear regression ----- Coefficient = 0.9986										
Response Ratio = -0.03561 + 0.24447 *A										
32) bis(2-Chloro	0.392	0.400	0.400	0.395	0.370	0.414	0.380	0.415	0.396	3.91
33) 2,4-Dichloro	0.297	0.303	0.303	0.296	0.262	0.299	0.270	0.277	0.288	5.58
34) 2,6-Dichloro	0.287	0.291	0.295	0.287	0.264	0.300	0.274	0.294	0.287	4.20
35) 1,3,5-Trichl	0.327	0.338	0.338	0.339	0.304	0.354	0.300	0.331	0.329	5.63
36) 1,2,4-Trichl	0.327	0.336	0.331	0.334	0.293	0.342	0.298	0.343	0.326	5.91
37) 1,2,3-Trichl	0.307	0.314	0.315	0.311	0.276	0.327	0.293	0.304	0.306	5.07
38) Naphthalene	1.054	1.081	1.088	1.086	1.022	1.138	1.055	1.170	1.087	4.38
39) 4-Chloroanil	0.452	0.464	0.458	0.456	0.401	0.475	0.399	0.496	0.450	7.51
40) 2,3-Dichloro	0.340	0.345	0.348	0.348	0.313	0.372	0.323	0.348	0.342	5.21
41) Caprolactam	0.112	0.114	0.111	0.107	0.098	0.109	0.095		0.107	6.87
42) Hexachlorobu	0.162	0.166	0.163	0.164	0.146	0.170	0.136	0.166	0.159	7.38

Initial Calibration Summary

Job Number: JB40350 **Sample:** EZ4104-ICC4104
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z80707.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

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43) 4-Chloro-3-m 0.304 0.309 0.309 0.298 0.273 0.303 0.278 0.339 0.302   6.75
44) 2-Methylnaph 0.637 0.654 0.652 0.654 0.602 0.678 0.623 0.705 0.651   4.88
45) 1-Methylnaph 0.604 0.617 0.622 0.612 0.563 0.634 0.591 0.645 0.611   4.17
46) Dimethylnaph 0.610 0.620 0.626 0.612 0.566 0.659 0.587 0.660 0.618   5.21

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.306 0.310 0.308 0.287 0.232 0.264 0.205 0.227 0.267  15.56
49) 2,4,6-Trichl 0.360 0.372 0.369 0.366 0.330 0.365 0.353 0.332 0.356   4.57
50) 2,4,5-Trichl 0.391 0.392 0.398 0.379 0.359 0.375 0.339 0.386 0.377   5.26
51) 2-Fluorobiph 1.176 1.231 1.200 1.228 1.266 1.241 1.281 1.256 1.235   2.79
52) 2-Chloronaph 1.138 1.190 1.181 1.183 1.090 1.240 1.079 1.319 1.178   6.65
53) Biphenyl     1.482 1.542 1.523 1.539 1.400 1.601 1.452 1.607 1.518   4.69
54) 2-Nitroanili 0.330 0.335 0.322 0.320 0.278 0.289 0.277 0.296 0.306   7.66
55) Dimethylphth 1.315 1.348 1.338 1.331 1.252 1.356 1.288 1.444 1.334   4.21
56) Acenaphthyle 1.875 1.939 1.952 1.956 1.830 2.023 1.919 2.009 1.938   3.30
57) 2,6-Dinitrot 0.270 0.279 0.257 0.247 0.211 0.220 0.203 0.217 0.238  12.26
58) 3-Nitroanili 0.342 0.347 0.328 0.319 0.281 0.286 0.266 0.284 0.307  10.10
59) Acenaphthene 1.145 1.185 1.183 1.189 1.132 1.214 1.137 1.296 1.185   4.52
60) 2,4-Dinitrop 0.114 0.111 0.091 0.069 0.037 0.030             0.075  48.37
         ----- Quadratic regression -----                Coefficient =  0.9984
              Response Ratio = -0.02188 + 0.08311 *A + 0.00737 *A^2

61) 4-Nitropheno 0.173 0.168 0.167 0.151 0.124 0.138 0.129       0.150  13.39
62) Dibenzofuran 1.616 1.673 1.663 1.674 1.568 1.786 1.612 1.796 1.674   4.85
63) 2,4-Dinitrot 0.369 0.374 0.346 0.319 0.268 0.260 0.251 0.250 0.304  17.56
64) 2,3,4,6-Tetr 0.289 0.290 0.288 0.277 0.232 0.271 0.247 0.236 0.266   9.21
65) Diethylphtha 1.313 1.342 1.333 1.329 1.214 1.370 1.284 1.463 1.331   5.34
66) Fluorene     1.292 1.331 1.318 1.345 1.235 1.372 1.293 1.454 1.330   4.87
67) 4-Chlorophen 0.593 0.613 0.615 0.623 0.561 0.647 0.597 0.671 0.615   5.48
68) 4-Nitroanili 0.336 0.337 0.324 0.304 0.283 0.299 0.272 0.243 0.300  11.05

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro- 0.111 0.109 0.095 0.076 0.048 0.040             0.080  37.89
            ----- Linear regression -----  Coefficient =  0.9964
              Response Ratio = -0.01821 + 0.11655 *A

71) n-Nitrosodip 0.587 0.616 0.604 0.608 0.563 0.609 0.551 0.658 0.599   5.54
72) 1,2-Diphenyl 0.801 0.833 0.831 0.841 0.744 0.869 0.747 0.915 0.823   7.08
73) 2,4,6-Tribro 0.077 0.077 0.078 0.075 0.066 0.067 0.064       0.072   8.04
74) 4-Bromopheny 0.207 0.212 0.208 0.206 0.189 0.207 0.183 0.223 0.205   6.22
75) Hexachlorobe 0.194 0.200 0.196 0.197 0.175 0.204 0.180 0.185 0.191   5.41
76) Pentachlorop 0.135 0.133 0.134 0.121 0.100 0.100 0.100 0.087 0.114  16.73
77) Phenanthrene 1.127 1.175 1.161 1.161 1.101 1.201 1.150 1.319 1.174   5.59
78) Anthracene   1.146 1.188 1.192 1.198 1.103 1.235 1.149 1.222 1.179   3.71
79) Carbazole    1.102 1.138 1.132 1.128 1.018 1.144 1.061 1.197 1.115   4.92
80) Di-n-butylph 1.432 1.481 1.451 1.449 1.288 1.434 1.359 1.467 1.420   4.56
81) Fluoranthene 1.232 1.280 1.239 1.261 1.160 1.279 1.242 1.362 1.257   4.53
82) Octadecane   0.511 0.532 0.533 0.532 0.469 0.539 0.494 0.605 0.527   7.51

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.382 1.419 1.395 1.426 1.327 1.469 1.432 1.466 1.415   3.29
85) Butyl steara 0.364 0.374 0.377 0.369 0.339 0.362 0.331 0.390 0.363   5.41
86) Terphenyl-d1 0.831 0.852 0.835 0.834 0.812 0.872 0.867 1.040 0.868   8.31
87) Butylbenzylp 0.695 0.706 0.692 0.687 0.605 0.681 0.619 0.688 0.672   5.63
88) Benzo[a]anth 1.162 1.200 1.177 1.180 1.081 1.235 1.264 1.353 1.207   6.64
89) 3,3'-Dichlor 0.377 0.392 0.383 0.384 0.365 0.374 0.349 0.387 0.376   3.75
90) Chrysene     1.061 1.093 1.062 1.075 1.020 1.125 1.165 1.190 1.099   5.21
91) bis(2-Ethylh 0.960 0.977 0.960 0.942 0.841 0.930 0.912 0.977 0.937   4.80

92) I   Perylene-d12          ----------------ISTD---------------------
```

Initial Calibration Summary

Job Number: JB40350 **Sample:** EZ4104-ICC4104
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z80707.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

93)	Di-n-octylph	1.954	1.996	1.945	1.905	1.683	1.789	1.627	1.793	1.836	7.34
94)	Benzo[b]fluo	1.323	1.381	1.332	1.319	1.226	1.344	1.365	1.510	1.350	5.89
95)	Benzo[k]fluo	1.186	1.220	1.185	1.216	1.128	1.235	1.383	1.343	1.237	6.87
96)	Benzo[a]pyre	1.182	1.214	1.174	1.183	1.071	1.203	1.161	1.276	1.183	4.87
97)	Indeno[1,2,3	1.166	1.169	1.116	1.118	0.985	1.094	1.166	1.228	1.130	6.38
98)	Dibenz(a,h)a	1.048	1.060	1.020	1.012	0.895	0.969	0.986	1.033	1.003	5.29
99)	Dibenz[a,h]a	1.164	1.190	1.149	1.155	0.959	1.036	1.241	1.224	1.140	8.41
100)	7,12-Dimethy	0.648	0.668	0.646	0.642	0.498	0.640	0.445	0.637	0.603	13.76
101)	Benzo[g,h,i]	1.156	1.196	1.129	1.140	1.052	1.141	1.343	1.345	1.188	8.80

(#) = Out of Range ### Number of calibration levels exceeded format ###

MZ4104.M Thu May 30 15:25:02 2013 RTE

7.7.1

7

Initial Calibration Summary

Job Number: JB40350 **Sample:** EZ4106-ICC4106
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z80736.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
                         Response Factor Report  MSZ

  Method       : C:\MSDCHEM\1\METHODS\MZ4106.M (RTE Integrator)
  Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
  Last Update  : Fri Jun 14 14:45:17 2013
  Response via : Initial Calibration

  Calibration Files
  100 =Z80734.D    80  =Z80735.D    50  =Z80736.D    25  =Z80737.D
  10  =Z80738.D    5   =Z80739.D    2   =Z80740.D    1   =Z80741.D

   Compound         100   80    50    25    10    5     2     1     Avg %RSD
  ---------------------------------------------------------------------------



102)     1,4-Dichlorobenzene-d ----------------ISTD---------------------
103) Benzaldehyde 0.928 0.960 0.911 1.055 1.318 1.311 1.195 1.154 1.104  14.95

104)     Phenanthrene-d10a     ----------------ISTD---------------------
105) Atrazine     0.114 0.129 0.108 0.117 0.131 0.115 0.102       0.117   8.99

106)     Chrysene-d12a         ----------------ISTD---------------------
107) Benzidine    0.374 0.461 0.465 0.296 0.496 0.323             0.403  20.70

108)     Acenaphthene-d10a     ----------------ISTD---------------------
109) 1,2,4,5-Tetr 0.542 0.581 0.471 0.522 0.595 0.577 0.503 0.573 0.546   8.01

110) I   Naphthalene-d8a       ----------------ISTD---------------------
111) Hydroquinone 0.304 0.330 0.278 0.273 0.278                   0.292   8.22
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MZ4104.M          Fri Jun 14 17:41:36 2013   RTE
```

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4106-ICV4104
Lab FileID: Z80742.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4106\Z80742.D          Vial: 10
Acq On    : 30 May 2013  12:49 pm                   Operator: katelynh
Sample    : icv4104-50                              Inst    : MSZ
Misc      : op65798,ez4106,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Thu May 30 12:46:07 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	112	0.00	5.37
5	S	2-Fluorophenol	1.304	1.214	6.9	105	0.00	4.39
8	S	Phenol-d5	1.701	1.494	12.2	100	0.00	5.06
24	I	Naphthalene-d8	1.000	1.000	0.0	112	0.00	6.60
25	S	Nitrobenzene-d5	0.332	0.307	7.5	108	0.00	5.85
47	I	Acenaphthene-d10	1.000	1.000	0.0	105	0.00	9.07
51	S	2-Fluorobiphenyl	1.235	1.277	-3.4	111	0.00	8.00
69	I	Phenanthrene-d10	1.000	1.000	0.0	95	0.00	11.75
73	S	2,4,6-Tribromophenol	0.072	0.067	6.9	82	0.00	10.45
83	I	Chrysene-d12	1.000	1.000	0.0	83	0.00	16.93
86	S	Terphenyl-d14	0.868	0.910	-4.8	90	0.00	14.91

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 Z80736.D   MZ4104.M         Thu May 30 13:36:36 2013   RTE
```

7.7.3

7

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4106-ICV4104
Lab FileID: Z80743.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4106\Z80743.D            Vial: 11
Acq On    : 30 May 2013   1:22 pm                    Operator: katelynh
Sample    : icv4104-50                               Inst    : MSZ
Misc      : op65798,ez4106,                          Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Thu May 30 12:46:07 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	84	0.00	5.37
9	t	Phenol	1.892	1.781	5.9	79	0.00	5.07
12	t	2-Chlorophenol	1.511	1.446	4.3	81	0.00	5.21
19	t	2-Methylphenol	1.361	1.258	7.6	77	0.00	5.57
21	t	3&4-Methylphenol	1.423	1.287	9.6	74	0.00	5.69
24	I	Naphthalene-d8	1.000	1.000	0.0	83	0.00	6.60
29	t	2-Nitrophenol	0.182	0.173	4.9	74	0.00	6.18
30	t	2,4-Dimethylphenol	0.339	0.314	7.4	72	0.00	6.20
		----------	True	Calc.	% Drift	----------		
31		Benzoic Acid	50.000	36.404	27.2	57	0.03	6.29
		----------	AvgRF	CCRF	% Dev	----------		
33	t	2,4-Dichlorophenol	0.288	0.290	-0.7	79	0.00	6.43
34		2,6-Dichlorophenol	0.287	0.276	3.8	77	0.00	6.68
43	t	4-Chloro-3-methylphenol	0.302	0.278	7.9	74	0.00	7.25
47	I	Acenaphthene-d10	1.000	1.000	0.0	78	0.00	9.07
49	t	2,4,6-Trichlorophenol	0.356	0.354	0.6	74	0.00	7.87
50	t	2,4,5-Trichlorophenol	0.377	0.370	1.9	72	0.00	7.92
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	100.000	72.936	27.1	40	0.00	9.17
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.150	0.118	21.3	55	0.00	9.29
64		2,3,4,6-Tetrachlorophenol	0.266	0.251	5.6	68	0.00	9.64
69	I	Phenanthrene-d10	1.000	1.000	0.0	73	0.00	11.75
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	50.000	36.399	27.2	54	0.00	10.12
		----------	AvgRF	CCRF	% Dev	----------		
76	t	Pentachlorophenol	0.114	0.120	-5.2	66	0.00	11.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z80736.D MZ4104.M Thu May 30 13:57:58 2013 RTE

7.7.4

7

Initial Calibration Verification

Job Number: JB40350 **Sample:** EZ4106-ICV4104
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z80744.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez4106\Z80744.D Vial: 12
Acq On : 30 May 2013 1:55 pm Operator: katelynh
Sample : icv4104-50 Inst : MSZ
Misc : op65798,ez4106, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Thu May 30 12:46:07 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 202%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	93	0.00	5.37
3	t	Pyridine	1.527	1.731	-13.4	105	0.00	3.32
4	t	N-Nitrosodimethylamine	0.936	0.894	4.5	85	0.01	3.29
11	t	bis(2-Chloroethyl)ether	1.426	1.465	-2.7	98	0.00	5.14
14	t	1,3-Dichlorobenzene	1.737	1.767	-1.7	95	0.00	5.33
15	t	1,4-Dichlorobenzene	1.732	1.741	-0.5	94	0.00	5.39
16	t	Benzyl alcohol	0.959	0.925	3.5	88	0.00	5.48
17	t	1,2-Dichlorobenzene	1.607	1.630	-1.4	94	0.00	5.52
20	t	2,2'-oxybis(1-Chloropropa	0.490	0.491	-0.2	93	0.00	5.59
22	t	n-Nitroso-di-n-propylamin	1.036	0.957	7.6	89	0.00	5.70
23	t	Hexachloroethane	0.525	0.548	-4.4	93	0.00	5.83
24	I	Naphthalene-d8	1.000	1.000	0.0	89	0.00	6.60
26	t	Nitrobenzene	0.373	0.349	6.4	83	0.00	5.87
28	t	Isophorone	0.665	0.657	1.2	86	0.00	6.09
32	t	bis(2-Chloroethoxy)methan	0.396	0.417	-5.3	93	0.00	6.30
36	t	1,2,4-Trichlorobenzene	0.326	0.346	-6.1	93	0.00	6.53
38	t	Naphthalene	1.087	1.105	-1.7	91	0.00	6.62
42	t	Hexachlorobutadiene	0.159	0.173	-8.8	95	0.00	6.77
44	t	2-Methylnaphthalene	0.651	0.607	6.8	83	0.00	7.48
47	I	Acenaphthene-d10	1.000	1.000	0.0	82	0.00	9.08
48	t	Hexachlorocyclopentadiene	0.267	0.292	-9.3	78	0.00	7.71
52	t	2-Chloronaphthalene	1.178	1.268	-7.6	88	0.00	8.18
54	t	2-Nitroaniline	0.306	0.267	12.7	68	0.00	8.33
55	t	Dimethylphthalate	1.334	1.309	1.9	80	0.00	8.64
56	t	Acenaphthylene	1.938	1.903	1.8	80	0.00	8.84
57	t	2,6-Dinitrotoluene	0.238	0.235	1.3	75	0.00	8.72
58	t	3-Nitroaniline	0.307	0.254	17.3	63	0.00	9.00
59	t	Acenaphthene	1.185	1.209	-2.0	83	0.00	9.13
62	t	Dibenzofuran	1.674	1.662	0.7	82	0.00	9.42
63	t	2,4-Dinitrotoluene	0.304	0.285	6.3	67	0.00	9.40
65	t	Diethylphthalate	1.331	1.258	5.5	77	0.00	9.86
66	t	Fluorene	1.330	1.358	-2.1	84	0.00	10.02
67	t	4-Chlorophenyl-phenylethe	0.615	0.606	1.5	80	0.00	10.04
68	t	4-Nitroaniline	0.300	0.258	14.0	65	0.01	10.06
69	I	Phenanthrene-d10	1.000	1.000	0.0	78	0.00	11.75
71	t	n-Nitrosodiphenylamine	0.599	0.568	5.2	73	0.00	10.25
72	t	1,2-Diphenylhydrazine	0.823	0.847	-2.9	80	0.00	10.33
74	t	4-Bromophenyl-phenylether	0.205	0.218	-6.3	82	0.00	10.93
75	t	Hexachlorobenzene	0.191	0.203	-6.3	81	0.00	11.04

Initial Calibration Verification

Job Number: JB40350 **Sample:** EZ4106-ICV4104
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z80744.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

77	t	Phenanthrene	1.174	1.206	-2.7	81	0.00	11.80
78	t	Anthracene	1.179	1.230	-4.3	80	0.00	11.89
79	t	Carbazole	1.115	1.085	2.7	75	0.00	12.22
80	t	Di-n-butylphthalate	1.420	1.379	2.9	74	0.00	13.00
81	t	Fluoranthene	1.257	1.217	3.2	77	0.00	14.10
83	I	Chrysene-d12	1.000	1.000	0.0	72	0.00	16.94
84	t	Pyrene	1.415	1.493	-5.5	77	0.00	14.54
87	t	Butylbenzylphthalate	0.672	0.673	-0.1	70	0.00	15.95
88	t	Benzo[a]anthracene	1.207	1.208	-0.1	73	0.00	16.92
90	t	Chrysene	1.099	1.113	-1.3	75	0.00	16.99
91	t	bis(2-Ethylhexyl)phthalat	0.937	0.925	1.3	69	0.00	17.14
92	I	Perylene-d12	1.000	1.000	0.0	69	0.00	19.56
93	t	Di-n-octylphthalate	1.836	1.876	-2.2	67	0.00	18.37
94	t	Benzo[b]fluoranthene	1.350	1.301	3.6	68	0.01	18.92
95	t	Benzo[k]fluoranthene	1.237	1.292	-4.4	76	0.00	18.96
96	t	Benzo[a]pyrene	1.183	1.225	-3.6	72	0.00	19.46
97	t	Indeno[1,2,3-cd]pyrene	1.130	1.149	-1.7	71	0.02	21.50
99	t	Dibenz[a,h]anthracene	1.140	1.199	-5.2	72	0.01	21.55
101	t	Benzo[g,h,i]perylene	1.188	1.223	-2.9	75	0.02	22.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z80736.D MZ4104.M Thu May 30 14:38:41 2013 RTE

7.7.5

7

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4106-ICV4106
Lab FileID: Z80744A.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4106\Z80744a.D          Vial: 12
Acq On    : 30 May 2013   1:55 pm                   Operator: katelynh
Sample    : icv4106-50                              Inst    : MSZ
Misc      : op65798,ez4106,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Tue Jun 11 06:57:45 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
110	Acenaphthene-d10a	1.000	1.000	0.0	82	0.10	9.08
111	1,2,4,5-Tetrachlorobenzen	0.546	0.548	-0.4	95	0.00	7.72

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z81272.D MZ4104.M Sun Jun 16 00:10:55 2013 RTE

7.7.6

7

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4106-ICV4104
Lab FileID: Z80745.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4106\Z80745.D          Vial: 13
Acq On    : 30 May 2013   2:27 pm                   Operator: katelynh
Sample    : icv4104-50                              Inst    : MSZ
Misc      : op65798,ez4106,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Thu May 30 15:23:15 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	117	0.00	5.37
2		1,4-Dioxane	0.608	0.520	14.5	100	0.01	3.01
6	t	Indene	2.494	2.412	3.3	115	0.00	5.59
7	t	Cumene	3.460	3.178	8.2	108	0.00	4.76
13	t	Decane	1.413	1.217	13.9	102	0.00	5.23
18	t	Acetophenone	1.983	1.771	10.7	108	0.00	5.71
24	I	Naphthalene-d8	1.000	1.000	0.0	132	0.00	6.60
27	t	Quinoline	0.698	0.561	19.6	104	0.00	7.01
40	t	2,3-Dichloroaniline	0.342	0.236	31.0#	89	0.00	7.87
41	t	Caprolactam	0.107	0.075	29.9	88	0.00	7.06
45	t	1-Methylnaphthalene	0.611	0.489	20.0	104	0.00	7.62
46	t	Dimethylnaphthalene	0.618	0.484	21.7	102	0.00	8.40
47	I	Acenaphthene-d10	1.000	1.000	0.0	106	0.00	9.07
53	t	Biphenyl	1.518	1.451	4.4	101	0.00	8.15
69	I	Phenanthrene-d10	1.000	1.000	0.0	97	0.00	11.75
82	t	Octadecane	0.527	0.485	8.0	89	0.00	11.68
92	I	Perylene-d12	1.000	1.000	0.0	80	0.00	19.56
100	t	7,12-Dimethylbenz(a)anthr	0.603	0.496	17.7	61	0.00	18.92

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z80707.D MZ4104.M Thu May 30 15:27:56 2013 RTE

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4106-ICV4106
Lab FileID: Z80745A.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4106\Z80745a.D          Vial: 13
Acq On    : 30 May 2013   2:27 pm                   Operator: katelynh
Sample    : icv4106-50                              Inst    : MSZ
Misc      : op65798,ez4106,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Fri May 31 13:03:48 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	117	0.00	5.37
103	Benzaldehyde	1.104	1.096	0.7	141	0.00	5.03
104	Phenanthrene-d10a	1.000	1.000	0.0	97	0.00	11.75
105	Atrazine	0.117	0.111	5.1	100	0.01	11.29

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z80707.D MZ4104.M Sat Jun 01 10:51:01 2013 RTE

7.7.8

7

Initial Calibration Verification

Job Number: JB40350 **Sample:** EZ4106-ICV4104
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z80746.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4106\Z80746.D          Vial: 14
Acq On    : 30 May 2013   3:00 pm                  Operator: katelynh
Sample    : icv4104-50                             Inst    : MSZ
Misc      : op65798,ez4106,                        Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Thu May 30 15:23:15 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	144	0.00	5.37
10	t	Aniline	2.357	2.130	9.6	130	0.00	5.11
24	I	Naphthalene-d8	1.000	1.000	0.0	149	0.00	6.60
39	t	4-Chloroaniline	0.450	0.417	7.3	136	0.00	6.67

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z80707.D MZ4104.M Thu May 30 15:29:07 2013 RTE

7.7.9

7

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4106-ICV4104
Lab FileID: Z80747.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4106\Z80747.D           Vial: 15
Acq On    : 30 May 2013   3:32 pm                   Operator: katelynh
Sample    : icv4104-50                              Inst    : MSZ
Misc      : op65798,ez4106,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Thu May 30 15:23:15 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83 I	Chrysene-d12	1.000	1.000	0.0	114	0.00	16.93
89 t	3,3'-Dichlorobenzidine	0.376	0.376	0.0	112	0.00	16.92

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z80707.D MZ4104.M Thu May 30 15:59:28 2013 RTE

7.7.10

7

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4106-ICV4106
Lab FileID: Z80747A.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4106\Z80747a.D          Vial: 15
Acq On    : 30 May 2013   3:32 pm                   Operator: katelynh
Sample    : icv4106-50                              Inst    : MSZ
Misc      : op65798,ez4106,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Fri May 31 13:03:48 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
107	Chrysene-d12a	1.000	1.000	0.0	114	0.00	16.93
109	Benzidine	0.403	0.713	-76.9#	175	0.00	14.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z80707.D MZ4104.M Sat Jun 01 10:51:03 2013 RTE

7.7.11

7

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: EZ4106-ICV4106
Lab FileID: Z80748.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4106\Z80748.D          Vial: 16
Acq On    : 30 May 2013   4:05 pm                  Operator: katelynh
Sample    : icv4106-50                             Inst    : MSZ
Misc      : op65798,ez4106,                        Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Fri May 31 13:03:48 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
112 I	Naphthalene-d8a	1.000	1.000	0.0	175	0.00	6.60
113	Hydroquinone	0.292	0.274	6.2	173	0.01	7.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z80707.D MZ4104.M Sat Jun 01 10:51:05 2013 RTE

7.7.12

7

Continuing Calibration Summary

Job Number: JB40350 **Sample:** EZ4142-CC4104
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z81835.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez4143\Z81835.D Vial: 2
Acq On : 24 Jun 2013 4:35 pm Operator: katelynh
Sample : cc4104-25 Inst : MSZ
Misc : op66935,ez4142, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Mon Jun 24 21:05:43 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 202%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	185	0.00	5.17
2		1,4-Dioxane	0.608	0.519	14.6	158	0.00	2.79
3	t	Pyridine	1.527	0.979	35.9#	122	0.00	3.12
4	t	N-Nitrosodimethylamine	0.936	0.682	27.1#	131	0.00	3.09
5	S	2-Fluorophenol	1.304	1.087	16.6	154	0.00	4.21
6	t	Indene	2.494	2.248	9.9	165	0.00	5.38
7	t	Cumene	3.460	3.308	4.4	175	0.00	4.57
8	S	Phenol-d5	1.701	1.398	17.8	155	0.00	4.89
9	t	Phenol	1.892	1.627	14.0	159	0.00	4.90
10	t	Aniline	2.357	1.513	35.8#	118	0.00	4.91
11	t	bis(2-Chloroethyl)ether	1.426	1.092	23.4#	139	0.00	4.95
12	t	2-Chlorophenol	1.511	1.384	8.4	168	0.00	5.01
13	t	Decane	1.413	1.008	28.7#	130	0.00	5.02
14	t	1,3-Dichlorobenzene	1.737	1.684	3.1	177	0.00	5.12
15	t	1,4-Dichlorobenzene	1.732	1.685	2.7	178	0.00	5.18
16	t	Benzyl alcohol	0.959	0.838	12.6	157	0.00	5.28
17	t	1,2-Dichlorobenzene	1.607	1.593	0.9	180	0.00	5.30
18	t	Acetophenone	1.983	1.816	8.4	169	0.00	5.50
19	t	2-Methylphenol	1.361	1.232	9.5	162	0.00	5.37
20	t	2,2'-oxybis(1-Chloropropa	0.490	0.446	9.0	165	0.00	5.37
21	t	3&4-Methylphenol	1.423	1.279	10.1	160	0.00	5.50
22	t	n-Nitroso-di-n-propylamin	1.036	0.818	21.0#	148	0.00	5.49
23	t	Hexachloroethane	0.525	0.527	-0.4	177	0.00	5.59
24	I	Naphthalene-d8	1.000	1.000	0.0	165	0.00	6.35
25	S	Nitrobenzene-d5	0.332	0.321	3.3	166	0.00	5.64
26	t	Nitrobenzene	0.373	0.365	2.1	159	0.00	5.65
27	t	Quinoline	0.698	0.735	-5.3	171	0.00	6.76
28	t	Isophorone	0.665	0.608	8.6	148	0.00	5.86
29	t	2-Nitrophenol	0.182	0.215	-18.1	191	0.00	5.95
30	t	2,4-Dimethylphenol	0.339	0.322	5.0	145	0.00	5.98
		----------	True	Calc.	% Drift	----------		
31		Benzoic Acid	25.000	28.242	-13.0	209	0.00	6.09
		----------	AvgRF	CCRF	% Dev	----------		
32	t	bis(2-Chloroethoxy)methan	0.396	0.318	19.7	133	0.00	6.06
33	t	2,4-Dichlorophenol	0.288	0.331	-14.9	184	0.00	6.20
34		2,6-Dichlorophenol	0.287	0.318	-10.8	182	0.00	6.44
35	t	1,3,5-Trichlorobenzene	0.329	0.361	-9.7	175	0.00	5.96
36	t	1,2,4-Trichlorobenzene	0.326	0.350	-7.4	172	0.00	6.28
37	t	1,2,3-Trichlorobenzene	0.306	0.325	-6.2	172	0.00	6.53

Continuing Calibration Summary

Job Number: JB40350 **Sample:** EZ4142-CC4104
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z81835.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

38	t	Naphthalene	1.087	1.132	-4.1	171	0.00	6.37
39	t	4-Chloroaniline	0.450	0.455	-1.1	164	0.00	6.43
40	t	2,3-Dichloroaniline	0.342	0.378	-10.5	179	0.00	7.60
41	t	Caprolactam	0.107	0.103	3.7	158	0.00	6.83
42	t	Hexachlorobutadiene	0.159	0.190	-19.5	190	0.00	6.51
43	t	4-Chloro-3-methylphenol	0.302	0.316	-4.6	174	0.00	7.02
44	t	2-Methylnaphthalene	0.651	0.689	-5.8	173	0.00	7.21
45	t	1-Methylnaphthalene	0.611	0.658	-7.7	177	0.00	7.34
46	t	Dimethylnaphthalene	0.618	0.659	-6.6	177	0.00	8.10
47	I	Acenaphthene-d10	1.000	1.000	0.0	180	0.00	8.77
48	t	Hexachlorocyclopentadiene	0.267	0.155	41.9#	98	0.00	7.42
49	t	2,4,6-Trichlorophenol	0.356	0.368	-3.4	181	0.00	7.61
50	t	2,4,5-Trichlorophenol	0.377	0.393	-4.2	187	0.00	7.68
51	S	2-Fluorobiphenyl	1.235	1.241	-0.5	182	0.00	7.71
52	t	2-Chloronaphthalene	1.178	1.151	2.3	175	0.00	7.89
53	t	Biphenyl	1.518	1.533	-1.0	179	0.00	7.86
54	t	2-Nitroaniline	0.306	0.297	2.9	167	0.00	8.06
55	t	Dimethylphthalate	1.334	1.364	-2.2	185	0.00	8.34
56	t	Acenaphthylene	1.938	1.961	-1.2	181	0.00	8.54
57	t	2,6-Dinitrotoluene	0.238	0.304	-27.7#	222#	0.00	8.44
58	t	3-Nitroaniline	0.307	0.348	-13.4	197	0.00	8.72
59	t	Acenaphthene	1.185	1.134	4.3	172	0.00	8.82
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	71.354	-42.7#	314	0.00	8.92
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.150	0.167	-11.3	200	0.00	9.09
62	t	Dibenzofuran	1.674	1.722	-2.9	185	0.00	9.11
63	t	2,4-Dinitrotoluene	0.304	0.436	-43.4#	246#	0.00	9.12
64		2,3,4,6-Tetrachlorophenol	0.266	0.239	10.2	155	0.00	9.35
65	t	Diethylphthalate	1.331	1.441	-8.3	195	0.00	9.55
66	t	Fluorene	1.330	1.389	-4.4	186	0.00	9.71
67	t	4-Chlorophenyl-phenylethe	0.615	0.590	4.1	171	0.00	9.72
68	t	4-Nitroaniline	0.300	0.343	-14.3	204#	0.00	9.78
69	I	Phenanthrene-d10	1.000	1.000	0.0	180	0.00	11.43
		----------	True	Calc.	% Drift	----------		
70	t	4,6-Dinitro-2-methylpheno	25.000	33.435	-33.7#	300	0.00	9.86
		----------	AvgRF	CCRF	% Dev	----------		
71	t	n-Nitrosodiphenylamine	0.599	0.630	-5.2	187	0.00	9.94
72	t	1,2-Diphenylhydrazine	0.823	0.710	13.7	152	0.00	10.01
73	S	2,4,6-Tribromophenol	0.072	0.079	-9.7	191	0.00	10.15
74	t	4-Bromophenyl-phenylether	0.205	0.203	1.0	177	0.00	10.61
75	t	Hexachlorobenzene	0.191	0.199	-4.2	182	0.00	10.73
76	t	Pentachlorophenol	0.114	0.074	35.1#	109	0.00	11.12
77	t	Phenanthrene	1.174	1.129	3.8	175	0.00	11.47
78	t	Anthracene	1.179	1.156	2.0	174	0.00	11.57
79	t	Carbazole	1.115	1.152	-3.3	184	0.00	11.91
80	t	Di-n-butylphthalate	1.420	1.486	-4.6	185	0.00	12.67
81	t	Fluoranthene	1.257	1.232	2.0	176	0.00	13.77
82	t	Octadecane	0.527	0.412	21.8#	139	0.00	11.35
83	I	Chrysene-d12	1.000	1.000	0.0	174	0.00	16.61
84	t	Pyrene	1.415	1.437	-1.6	175	0.00	14.20
85		Butyl stearate	0.363	0.303	16.5	142	0.00	15.82
86	S	Terphenyl-d14	0.868	0.868	0.0	181	0.00	14.58

Continuing Calibration Summary

Job Number: JB40350 **Sample:** EZ4142-CC4104
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z81835.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

87	t	Butylbenzylphthalate	0.672	0.777	-15.6	196	0.00	15.61
88	t	Benzo[a]anthracene	1.207	1.189	1.5	175	0.00	16.59
89	t	3,3'-Dichlorobenzidine	0.376	0.415	-10.4	187	0.00	16.59
90	t	Chrysene	1.099	1.045	4.9	169	0.00	16.66
91	t	bis(2-Ethylhexyl)phthalat	0.937	1.018	-8.6	188	0.00	16.80
92	I	Perylene-d12	1.000	1.000	0.0	164	0.00	19.24
93	t	Di-n-octylphthalate	1.836	2.187	-19.1	188	0.00	18.02
94	t	Benzo[b]fluoranthene	1.350	1.305	3.3	162	0.00	18.59
95	t	Benzo[k]fluoranthene	1.237	1.259	-1.8	169	0.00	18.64
96	t	Benzo[a]pyrene	1.183	1.190	-0.6	165	0.00	19.14
97	t	Indeno[1,2,3-cd]pyrene	1.130	1.275	-12.8	187	0.00	21.08
98	t	Dibenz(a,h)acridine	1.003	0.988	1.5	160	0.00	20.66
99	t	Dibenz[a,h]anthracene	1.140	1.084	4.9	153	0.00	21.12
100	t	7,12-Dimethylbenz(a)anthr	0.603	0.572	5.1	146	0.00	18.58
101	t	Benzo[g,h,i]perylene	1.188	1.070	9.9	153	0.00	21.60

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z81237.D MZ4104.M Mon Jun 24 21:12:30 2013 RTE

7.7.13

7

Continuing Calibration Summary

Job Number: JB40350 **Sample:** EZ4142-CC4106
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** Z81839.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4143\Z81839.D          Vial: 6
Acq On    : 24 Jun 2013   6:48 pm                   Operator: katelynh
Sample    : cc4106-25                               Inst    : MSZ
Misc      : op66935,ez4142,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4104.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Mon Jun 24 21:05:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
	1,4-Dichlorobenzene-d4a 1.000	1.000		0.0	179	0.00	5.16
103	Benzaldehyde	1.104	1.052	4.7	178	0.00	4.83
104	Phenanthrene-d10a	1.000	1.000	0.0	167	0.00	11.42
105	Atrazine	0.117	0.136	-16.2	193	0.00	10.97
106	Chrysene-d12a	1.000	1.000	0.0	160	0.00	16.60
107	Benzidine	0.403	0.958	-137.7#	520#	0.00	14.09
108	Acenaphthene-d10a	1.000	1.000	0.0	165	0.00	8.77
109	1,2,4,5-Tetrachlorobenzen	0.546	0.604	-10.6	191	0.00	7.44
110 I	Naphthalene-d8a	1.000	1.000	0.0	158	0.00	6.35
111	Hydroquinone	0.292	0.328	-12.3	189	0.00	6.83

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z81237.D MZ4104.M Mon Jun 24 21:12:33 2013 RTE

7.7.14

7

New Jersey
ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-MB1	5Z9253.D	1	06/26/13	KD	06/26/13	OP67011	G5Z311

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	5.3	2.4	mg/kg	
	EPH (> C28-C40)	ND	5.3	2.9	mg/kg	
	Total EPH (C9-C40)	ND	5.3	2.4	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	83%	40-140%
3386-33-2	1-Chlorooctadecane	93%	40-140%

Method Blank Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-MB1	5Y12911.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	EPH (C9-C28)	ND	6.7	2.4	mg/kg	
	EPH (> C28-C40)	ND	6.7	2.9	mg/kg	
	Total EPH (C9-C40)	ND	6.7	2.4	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	93%	40-140%
3386-33-2	1-Chlorooctadecane	100%	40-140%

Blank Spike Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-BS11	5Z9254.D	1	06/26/13	KD	06/26/13	OP67011	G5Z311

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	EPH (C9-C28)	33.3	27.4	82	40-140
	Total EPH (C9-C40)	33.3	27.4	82	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	79%	40-140%
3386-33-2	1-Chlorooctadecane	91%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-MS	5Y12927.D	1	06/27/13	KD	06/26/13	OP67011	G5Y385
OP67011-MSD	5Y12928.D	1	06/27/13	KD	06/26/13	OP67011	G5Y385
JB40294-1	5Y12913.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	JB40294-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	EPH (C9-C28)	ND		188	147	78	191	160	84	8	40-140/50
	EPH (> C28-C40)	ND		94.1	53.5	57	95.3	58.0	61	8	40-140/50
	Total EPH (C9-C40)	ND		282	200	71	286	218	76	9	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	JB40294-1	Limits
84-15-1	o-Terphenyl	85%	91%	81%	40-140%
3386-33-2	1-Chlorooctadecane	77%	83%	88%	40-140%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67011-DUP	5Y12926.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385
JB40350-2	5Y12918.D	1	06/26/13	KD	06/26/13	OP67011	G5Y385

The QC reported here applies to the following samples: **Method:** NJDEP EPH

JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	JB40350-2 mg/kg	Q	DUP mg/kg	Q	RPD	Limits
	EPH (C9-C28)	ND		ND		nc	25
	EPH (> C28-C40)	ND		ND		nc	25
	Total EPH (C9-C40)	ND		ND		nc	25

CAS No.	Surrogate Recoveries	DUP	JB40350-2	Limits
84-15-1	o-Terphenyl	74%	79%	40-140%
3386-33-2	1-Chlorooctadecane	80%	87%	40-140%

8.4.1

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* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: NJDEP EPH **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
JB40350-1	5Y12917.D	79	86
JB40350-2	5Y12918.D	79	87
JB40350-3	5Y12919.D	68	74
JB40350-4	5Z9291.D	75	78
JB40350-5	5Y12920.D	80	89
OP67011-BS11	5Z9254.D	79	91
OP67011-DUP	5Y12926.D	74	80
OP67011-MB1	5Z9253.D	83	93
OP67011-MB1	5Y12911.D	93	100
OP67011-MS	5Y12927.D	85	77
OP67011-MSD	5Y12928.D	91	83

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 1-Chlorooctadecane	40-140%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Y385-CC273	**Injection Date:**	06/26/13
Lab File ID:	5Y12910.D	**Injection Time:**	17:26
Instrument ID:	GC5Y	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.84	8.39

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP67011-MB1	5Y12911.D	06/26/13	18:22	7.85	8.40
ZZZZZZ	5Y12912.D	06/26/13	18:44	7.85	8.40
JB40294-1	5Y12913.D	06/26/13	19:06	7.85	8.40
ZZZZZZ	5Y12914.D	06/26/13	19:28	7.85	8.40
ZZZZZZ	5Y12915.D	06/26/13	19:50	7.85	8.40
ZZZZZZ	5Y12916.D	06/26/13	20:12	7.85	8.39
JB40350-1	5Y12917.D	06/26/13	20:34	7.85	8.40
JB40350-2	5Y12918.D	06/26/13	20:56	7.85	8.40
JB40350-3	5Y12919.D	06/26/13	21:17	7.85	8.39
JB40350-5	5Y12920.D	06/26/13	21:39	7.85	8.40
ZZZZZZ	5Y12921.D	06/26/13	22:01	7.85	8.40
ZZZZZZ	5Y12922.D	06/26/13	22:23	7.85	8.40
ZZZZZZ	5Y12923.D	06/26/13	22:45	7.85	8.40
ZZZZZZ	5Y12924.D	06/26/13	23:07	7.85	8.40
ZZZZZZ	5Y12925.D	06/26/13	23:29	7.85	8.39
OP67011-DUP	5Y12926.D	06/26/13	23:51	7.85	8.39
OP67011-MS	5Y12927.D	06/27/13	00:13	7.85	8.39
OP67011-MSD	5Y12928.D	06/27/13	00:34	7.85	8.40
OP66741-MS	5Y12929.D	06/27/13	00:56	7.85	8.39
OP66741-MSD	5Y12930.D	06/27/13	01:18	7.85	8.39

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Z311-CC249	**Injection Date:**	06/26/13
Lab File ID:	5Z9252.D	**Injection Time:**	13:24
Instrument ID:	GC5Z	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.78	8.38

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP67011-MB1	5Z9253.D	06/26/13	13:49	7.78	8.38
OP67011-BS11	5Z9254.D	06/26/13	14:11	7.78	8.38
ZZZZZZ	5Z9255.D	06/26/13	14:33	7.78	8.38
OP67034-MB1	5Z9256.D	06/26/13	14:55	7.78	8.38
JB40551-1	5Z9257.D	06/26/13	15:17	7.78	8.38
ZZZZZZ	5Z9258.D	06/26/13	15:38	7.78	8.38
ZZZZZZ	5Z9259.D	06/26/13	16:00	7.78	8.38
ZZZZZZ	5Z9260.D	06/26/13	16:22	7.78	8.38
JB40551-2	5Z9261.D	06/26/13	16:44	7.78	8.38

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	G5Z312-CC249	**Injection Date:**	06/27/13
Lab File ID:	5Z9287.D	**Injection Time:**	08:43
Instrument ID:	GC5Z	**Method:**	NJDEP EPH

	S1 [a] RT	S2 [a] RT
Check Std	7.78	8.38

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
ZZZZZZ	5Z9289.D	06/27/13	10:34	7.78	8.38
ZZZZZZ	5Z9290.D	06/27/13	10:56	7.70	8.35
JB40350-4	5Z9291.D	06/27/13	11:18	7.78	8.38
ZZZZZZ	5Z9292.D	06/27/13	11:40	7.78	8.38
ZZZZZZ	5Z9293.D	06/27/13	12:01	7.80	8.37
OP67034-DUP	5Z9294.D	06/27/13	12:23	7.78	8.38
OP67034-MS	5Z9295.D	06/27/13	12:45	7.78	8.38
OP67034-MSD	5Z9296.D	06/27/13	13:07	7.78	8.38
ZZZZZZ	5Z9299.D	06/27/13	18:21	7.78	8.38
ZZZZZZ	5Z9300.D	06/27/13	18:42	7.79	8.39
ZZZZZZ	5Z9301.D	06/27/13	19:04	7.78	8.38
ZZZZZZ	5Z9302.D	06/27/13	19:26	7.78	8.38
ZZZZZZ	5Z9303.D	06/27/13	19:48	7.78	8.38
ZZZZZZ	5Z9304.D	06/27/13	20:10	7.78	8.38
ZZZZZZ	5Z9305.D	06/27/13	20:32	7.78	8.38
ZZZZZZ	5Z9307.D	06/27/13	21:16	0.00	0.00
ZZZZZZ	5Z9308.D	06/27/13	21:38	7.78	8.38

Surrogate Compounds

S1 = o-Terphenyl
S2 = 1-Chlorooctadecane

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: JB40350 **Sample:** G5Y273-ICC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y8653.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Response Factor Report GC5Y5Z

Method : C:\msdchem\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title : NJDEP Extractable Petroleum Hydrocarbons
Last Update : Thu Jan 31 08:49:13 2013
Response via : Initial Calibration

Calibration Files
5 =5y8650.D 10 =5y8651.D 50 =5y8653.D 100 =5y8654.D
2 =5y8649.D 20 =5y8652.D =

Compound	5	10	50	100	2	20	Avg	%RSD
1)T C9	1.250	1.422	1.395	1.521	1.493	1.397	1.413 E6	6.74
2)T C10	1.314	1.538	1.416	1.532	1.539	1.424	1.461 E6	6.27
3)T C12	1.306	1.480	1.414	1.533	1.477	1.409	1.436 E6	5.50
4)T C14	1.308	1.482	1.426	1.540	1.482	1.420	1.443 E6	5.49
5)T C16	1.318	1.483	1.442	1.555	1.492	1.437	1.454 E6	5.45
6)T C18	1.323	1.496	1.454	1.565	1.495	1.451	1.464 E6	5.50
7)T C20	1.326	1.500	1.461	1.574	1.503	1.456	1.470 E6	5.59
8)T C21	1.450	1.616	1.524	1.637	1.623	1.566	1.569 E6	4.59
9)T C22	1.444	1.633	1.555	1.683	1.651	1.582	1.591 E6	5.40
10)T C24	1.313	1.487	1.426	1.548	1.485	1.441	1.450 E6	5.48
11)T C26	1.321	1.504	1.452	1.565	1.504	1.453	1.466 E6	5.63
12)T C28	1.310	1.494	1.449	1.567	1.495	1.442	1.460 E6	5.87
13)H EPH (C9-C28)	1.332	1.511	1.451	1.568	1.520	1.457	1.473 E6	5.55
14)T C30	1.300	1.492	1.445	1.569	1.487	1.439	1.455 E6	6.14
15)T C32	1.270	1.453	1.414	1.533	1.447	1.400	1.419 E6	6.11
16)T C34	1.308	1.508	1.474	1.599	1.496	1.455	1.473 E6	6.44
17)T C36	1.222	1.415	1.389	1.507	1.397	1.368	1.383 E6	6.68
18)T C38	1.161	1.349	1.333	1.447	1.326	1.307	1.320 E6	7.01
19)T C40	1.195	1.356	1.341	1.459	1.353	1.301	1.334 E6	6.46
20)H EPH (>C28-C40)	1.242	1.429	1.399	1.519	1.418	1.378	1.398 E6	6.44
21)H TOTAL PHC	1.302	1.484	1.434	1.552	1.486	1.430	1.448 E6	5.80
22)S o-Terphenyl (S)	1.459	1.645	1.604	1.732	1.648	1.597	1.614 E6	5.58
23)S 1-chlorooctadecan	1.156	1.316	1.338	1.445	1.313	1.280	1.308 E6	7.15
24)S 2-Fluorobiphenyl							0.000#	-1.00
25)S 2-Bromonaphthalen							0.000#	-1.00

(#) = Out of Range

EPH5Y273.M Thu Jan 31 08:54:17 2013

8.7.1

8

Initial Calibration Verification

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G5Y273-ICV273
Lab FileID: 5Y8655.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y273\5y8655.D          Vial: 8
Acq On    : 29 Jan 2013  12:14 pm                   Operator: gwend
Sample    : icv273-50                               Inst    : GC5Y5Z
Misc      : op63126,g5y273,15.0,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\msdchem\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Tue Jan 29 12:21:37 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.254 E6	11.3	90	0.00	3.24- 3.30
2	T	C10	1.461	1.456 E6	0.3	103	0.00	4.02- 4.08
3	T	C12	1.436	1.455 E6	-1.3	103	0.00	5.22- 5.28
4	T	C14	1.443	1.432 E6	0.8	100	0.00	6.17- 6.23
5	T	C16	1.454	1.430 E6	1.7	99	0.00	6.98- 7.04
6	T	C18	1.464	1.428 E6	2.5	98	0.00	7.72- 7.78
7	T	C20	1.470	1.447 E6	1.6	99	0.00	8.39- 8.45
8	T	C21	1.569	1.467 E6	6.5	96	0.00	8.70- 8.76
9	T	C22	1.591	1.404 E6	11.8	90	0.00	8.99- 9.05
10	T	C24	1.450	1.418 E6	2.2	99	0.00	9.52- 9.58
11	T	C26	1.466	1.442 E6	1.6	99	0.00	10.01-10.07
12	T	C28	1.460	1.457 E6	0.2	100	0.00	10.47-10.53
13	H	EPH (C9-C28)	1.473	1.424 E6	3.3	99	0.00	3.19-10.57
14	T	C30	1.455	1.469 E6	-1.0	102	0.00	10.92-10.98
15	T	C32	1.419	1.473 E6	-3.8	104	0.00	11.39-11.45
16	T	C34	1.473	1.452 E6	1.4	99	0.00	11.97-12.05
17	T	C36	1.383	1.413 E6	-2.2	102	0.00	12.73-12.79
18	T	C38	1.320	1.342 E6	-1.7	101	0.00	13.76-13.82
19	T	C40	1.334	1.285 E6	3.7	96	0.00	15.17-15.23
20	H	EPH (>C28-C40)	1.398	1.406 E6	-0.6	102	0.00	10.56-15.38
21	H	TOTAL PHC	1.210	1.418 E6	2.3	101	0.00	3.19-15.39

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5y8653.D   EPH5Y273.M       Tue Jan 29 12:43:12 2013
```

8.7.2

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Continuing Calibration Summary

Job Number: JB40350 **Sample:** G5Y385-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y12910.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y385\5y12910.D          Vial: 52
Acq On    : 26 Jun 2013   5:26 pm                   Operator: khaliahd
Sample    : cc273-20                                Inst    : GC5Y5Z
Misc      : op67034,g5y385,15.0,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jun 27 08:54:24 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.530 E6	-8.3	110	0.00	2.91- 2.97
2	T	C10	1.461	1.505 E6	-3.0	106	0.00	3.71- 3.77
3	T	C12	1.436	1.475 E6	-2.7	105	0.00	4.93- 4.99
4	T	C14	1.443	1.535 E6	-6.4	108	0.00	5.88- 5.94
5	T	C16	1.454	1.570 E6	-8.0	109	0.00	6.69- 6.75
6	T	C18	1.464	1.609 E6	-9.9	111	0.00	7.42- 7.48
7	T	C20	1.470	1.611 E6	-9.6	111	0.00	8.08- 8.14
8	T	C21	1.569	1.754 E6	-11.8	112	0.00	8.39- 8.45
9	T	C22	1.591	1.751 E6	-10.1	111	0.00	8.68- 8.74
10	T	C24	1.450	1.596 E6	-10.1	111	0.00	9.22- 9.28
11	T	C26	1.466	1.613 E6	-10.0	111	0.00	9.72- 9.78
12	T	C28	1.460	1.631 E6	-11.7	113	0.00	10.17-10.23
13	H	EPH (C9-C28)	1.473	1.598 E6	-8.5	114	0.00	3.19-10.57
14	T	C30	1.455	1.656 E6	-13.8	115	0.00	10.61-10.67
15	T	C32	1.419	1.661 E6	-17.1	119	0.00	11.04-11.10
16	T	C34	1.473	1.695 E6	-15.1	117	0.00	11.51-11.59
17	T	C36	1.383	1.645 E6	-18.9	120	0.00	12.11-12.17
18	T	C38	1.320	1.548 E6	-17.3	118	0.00	12.89-12.95
19	T	C40	1.334	1.591 E6	-19.3	122	0.00	13.95-14.01
20	H	EPH (>C28-C40)	1.398	1.633 E6	-16.8	119	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.610 E6	-11.2	117	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.812 E6	-12.3	113	0.00	7.81- 7.87
23	S	1-chlorooctadecane (S)	1.308	1.301 E6	0.5	102	0.00	8.36- 8.42

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5y12910.D EPH5Y273.M Thu Jun 27 12:05:36 2013

8.7.3

8

Continuing Calibration Summary

Job Number: JB40350 **Sample:** G5Y385-CC273
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Y12933.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Y385\5y12933.D          Vial: 53
Acq On    : 27 Jun 2013   2:23 am                   Operator: khaliahd
Sample    : cc273-50                                Inst    : GC5Y5Z
Misc      : op66741,g5y385,15.0,,,2,1               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Y273.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Thu Jun 27 08:54:24 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.413	1.591 E6	-12.6	114	0.00	2.90- 2.96
2	T	C10	1.461	1.586 E6	-8.6	112	0.00	3.71- 3.77
3	T	C12	1.436	1.578 E6	-9.9	112	0.00	4.93- 4.99
4	T	C14	1.443	1.623 E6	-12.5	114	0.00	5.88- 5.94
5	T	C16	1.454	1.664 E6	-14.4	115	0.00	6.69- 6.75
6	T	C18	1.464	1.684 E6	-15.0	116	0.00	7.42- 7.48
7	T	C20	1.470	1.689 E6	-14.9	116	0.00	8.08- 8.14
8	T	C21	1.569	1.721 E6	-9.7	113	0.00	8.39- 8.45
9	T	C22	1.591	1.836 E6	-15.4	118	0.00	8.69- 8.75
10	T	C24	1.450	1.645 E6	-13.4	115	0.00	9.23- 9.29
11	T	C26	1.466	1.685 E6	-14.9	116	0.00	9.72- 9.78
12	T	C28	1.460	1.689 E6	-15.7	117	0.00	10.18-10.24
13	H	EPH (C9-C28)	1.473	1.666 E6	-13.1	117	0.00	3.19-10.57
14	T	C30	1.455	1.700 E6	-16.8	118	0.00	10.61-10.67
15	T	C32	1.419	1.673 E6	-17.9	118	0.00	11.04-11.10
16	T	C34	1.473	1.742 E6	-18.3	118	0.00	11.50-11.58
17	T	C36	1.383	1.649 E6	-19.2	119	0.00	12.11-12.17
18	T	C38	1.320	1.589 E6	-20.4	119	0.00	12.89-12.95
19	T	C40	1.334	1.574 E6	-18.0	117	0.00	13.96-14.02
20	H	EPH (>C28-C40)	1.398	1.655 E6	-18.4	118	0.00	10.56-15.38
21	H	TOTAL PHC	1.448	1.662 E6	-14.8	118	0.00	3.19-15.39
22	S	o-Terphenyl (S)	1.614	1.895 E6	-17.4	118	0.00	7.82- 7.88
23	S	1-chlorooctadecane (S)	1.308	1.475 E6	-12.8	110	0.00	8.37- 8.43

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5y12526.D  EPH5Y273.M       Thu Jun 27 11:59:40 2013
```

8.7.4

8

Initial Calibration Summary

Job Number: JB40350 **Sample:** G5Z249-ICC249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z6979.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Response Factor Report GC5Y5Z

Method : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title : NJDEP Extractable Petroleum Hydrocarbons
Last Update : Sat Apr 06 06:28:34 2013
Response via : Initial Calibration

Calibration Files
5 =5z6976.D 10 =5z6977.D 50 =5z6979.D 100 =5z6980.D
2 =5z6975.D 20 =5z6978.D =

Compound	5	10	50	100	2	20	Avg	%RSD
1)T C9	1.485	1.697	1.662	1.966	1.720	1.731	1.710 E6	9.03
2)T C10	1.467	1.689	1.717	1.957	1.627	1.756	1.702 E6	9.44
3)T C12	1.473	1.712	1.720	1.857	1.594	1.732	1.681 E6	7.85
4)T C14	1.460	1.624	1.747	1.732	1.610	1.778	1.658 E6	7.16
5)T C16	1.383	1.440	1.745	1.724	1.498	1.764	1.592 E6	10.73
6)T C18	1.446	1.461	1.756	1.733	1.561	1.798	1.626 E6	9.58
7)T C20	1.426	1.432	1.759	1.718	1.605	1.787	1.621 E6	9.94
8)T C21	1.628	1.579	1.877	1.827	1.840	1.937	1.781 E6	8.07
9)T C22	1.528	1.523	1.901	1.832	1.702	1.917	1.734 E6	10.29
10)T C24	1.343	1.364	1.704	1.661	1.513	1.709	1.549 E6	10.79
11)T C26	1.393	1.436	1.682	1.733	1.552	1.700	1.583 E6	9.13
12)T C28	1.394	1.543	1.661	1.790	1.599	1.683	1.612 E6	8.41
13)H EPH (C9-C28)	1.452	1.542	1.744	1.794	1.618	1.774	1.654 E6	8.41
14)T C30	1.442	1.602	1.654	1.818	1.627	1.686	1.638 E6	7.46
15)T C32	1.547	1.783	1.656	1.780	1.780	1.674	1.703 E6	5.62
16)T C34	1.472	1.670	1.680	1.841	1.712	1.726	1.684 E6	7.13
17)T C36	1.393	1.577	1.583	1.717	1.631	1.646	1.591 E6	6.89
18)T C38	1.340	1.532	1.510	1.602	1.562	1.574	1.520 E6	6.18
19)T C40	1.265	1.462	1.449	1.545	1.455	1.552	1.455 E6	7.11
20)H EPH (>C28-C40)	1.410	1.604	1.589	1.717	1.628	1.643	1.598 E6	6.42
21)H TOTAL PHC	1.438	1.563	1.692	1.768	1.622	1.730	1.636 E6	7.46
22)S o-Terphenyl (S)	1.629	1.650	1.930	1.937	1.767	1.960	1.812 E6	8.31
23)S 1-chlorooctadecan	1.158	1.193	1.532	1.516	1.224	1.536	1.360 E6	13.64
24)S 2-Fluorobiphenyl							0.000#	-1.00
25)S 2-Bromonaphthalen							0.000#	-1.00

(#) = Out of Range

EPH5Z249.M Sat Apr 06 06:35:16 2013

8.7.5

8

Initial Calibration Verification

Job Number: JB40350 **Sample:** G5Z249-ICV249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z6981.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z249\5z6981.D            Vial: 58
Acq On    :  5 Apr 2013   9:29 pm                     Operator: gwend
Sample    : icv249-50                                 Inst    : GC5Y5Z
Misc      : op64993,g5z249,15.0,,,2,1                 Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Apr 06 06:28:34 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.633 E6	4.5	98	0.00	3.01- 3.07
2	T	C10	1.702	1.878 E6	-10.3	109	0.00	3.81- 3.87
3	T	C12	1.681	1.867 E6	-11.1	109	0.00	5.01- 5.07
4	T	C14	1.658	1.737 E6	-4.8	99	0.00	5.96- 6.02
5	T	C16	1.592	1.687 E6	-6.0	97	0.00	6.78- 6.84
6	T	C18	1.626	1.686 E6	-3.7	96	0.00	7.51- 7.57
7	T	C20	1.621	1.684 E6	-3.9	96	0.00	8.18- 8.24
8	T	C21	1.781	1.747 E6	1.9	93	0.00	8.49- 8.55
9	T	C22	1.734	1.662 E6	4.2	87	0.00	8.79- 8.85
10	T	C24	1.549	1.646 E6	-6.3	97	0.00	9.32- 9.38
11	T	C26	1.583	1.679 E6	-6.1	100	0.00	9.81- 9.87
12	T	C28	1.612	1.713 E6	-6.3	103	0.00	10.26-10.32
13	H	EPH (C9-C28)	1.654	1.718 E6	-3.9	96	0.00	2.97-10.41
14	T	C30	1.638	1.734 E6	-5.9	105	0.00	10.66-10.72
15	T	C32	1.703	1.749 E6	-2.7	106	0.00	11.05-11.11
16	T	C34	1.684	1.718 E6	-2.0	102	0.00	11.49-11.57
17	T	C36	1.591	1.674 E6	-5.2	106	0.00	12.08-12.14
18	T	C38	1.520	1.580 E6	-3.9	105	0.00	12.88-12.94
19	T	C40	1.455	1.467 E6	-0.8	101	0.00	14.00-14.06
20	H	EPH (>C28-C40)	1.598	1.654 E6	-3.5	102	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.697 E6	-3.7	102	0.00	2.97-14.21

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z6979.D EPH5Z249.M Sat Apr 06 06:33:14 2013

8.7.6

8

Continuing Calibration Summary

Job Number: JB40350 **Sample:** G5Z311-CC249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z9252.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z311\5z9252.D          Vial: 52
Acq On    : 26 Jun 2013   1:24 pm                   Operator: khaliahd
Sample    : cc249-20                                Inst    : GC5Y5Z
Misc      : op66967,g5z311,960,,,1,20               Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Jun 29 13:24:28 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.715 E6	-0.3	99	0.00	2.85- 2.91
2	T	C10	1.702	1.739 E6	-2.2	99	0.00	3.67- 3.73
3	T	C12	1.681	1.662 E6	1.1	96	0.00	4.89- 4.95
4	T	C14	1.658	1.714 E6	-3.4	96	0.00	5.84- 5.90
5	T	C16	1.592	1.712 E6	-7.5	97	0.00	6.66- 6.72
6	T	C18	1.626	1.686 E6	-3.7	94	0.00	7.39- 7.45
7	T	C20	1.621	1.679 E6	-3.6	94	0.00	8.06- 8.12
8	T	C21	1.781	1.773 E6	0.4	92	0.00	8.37- 8.43
9	T	C22	1.734	1.789 E6	-3.2	93	0.00	8.67- 8.73
10	T	C24	1.549	1.630 E6	-5.2	95	0.00	9.22- 9.28
11	T	C26	1.583	1.640 E6	-3.6	96	0.00	9.72- 9.78
12	T	C28	1.612	1.628 E6	-1.0	97	0.02	10.19-10.25
13	H	EPH (C9-C28)	1.654	1.697 E6	-2.6	98	0.00	2.97-10.41
14	T	C30	1.638	1.655 E6	-1.0	98	0.03	10.62-10.68
15	T	C32	1.703	1.643 E6	3.5	98	0.04	11.02-11.08
16	T	C34	1.684	1.707 E6	-1.4	99	0.05	11.44-11.52
17	T	C36	1.591	1.581 E6	0.6	96	0.05	11.99-12.05
18	T	C38	1.520	1.483 E6	2.4	94	0.05	12.72-12.78
19	T	C40	1.455	1.457 E6	-0.1	94	0.05	13.74-13.80
20	H	EPH (>C28-C40)	1.598	1.588 E6	0.7	95	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.661 E6	-1.5	95	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.855 E6	-2.4	95	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.375 E6	-1.1	90	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z9211.D EPH5Z249.M Sat Jun 29 17:20:39 2013

8.7.7

8

Continuing Calibration Summary

Job Number: JB40350 **Sample:** G5Z311-CC249
Account: ENVNJSP EnviroTrac, Ltd. **Lab FileID:** 5Z9262.D
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z311\5z9262.D          Vial: 53
Acq On    : 26 Jun 2013   5:26 pm                  Operator: khaliahd
Sample    : cc249-50                               Inst    : GC5Y5Z
Misc      : op67034,g5z311,15.0,,,2,1              Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Jun 29 13:24:28 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.734 E6	-1.4	104	0.00	2.85- 2.91
2	T	C10	1.702	1.708 E6	-0.4	100	0.00	3.67- 3.73
3	T	C12	1.681	1.692 E6	-0.7	98	0.00	4.89- 4.95
4	T	C14	1.658	1.719 E6	-3.7	98	0.00	5.84- 5.90
5	T	C16	1.592	1.716 E6	-7.8	98	0.00	6.66- 6.72
6	T	C18	1.626	1.687 E6	-3.8	96	0.00	7.40- 7.46
7	T	C20	1.621	1.668 E6	-2.9	95	0.00	8.06- 8.12
8	T	C21	1.781	1.734 E6	2.6	92	0.00	8.37- 8.43
9	T	C22	1.734	1.773 E6	-2.2	93	0.00	8.67- 8.73
10	T	C24	1.549	1.603 E6	-3.5	94	0.00	9.22- 9.28
11	T	C26	1.583	1.610 E6	-1.7	96	0.00	9.71- 9.77
12	T	C28	1.612	1.604 E6	0.5	97	0.00	10.17-10.23
13	H	EPH (C9-C28)	1.654	1.687 E6	-2.0	97	0.00	2.97-10.41
14	T	C30	1.638	1.617 E6	1.3	98	0.00	10.59-10.65
15	T	C32	1.703	1.585 E6	6.9	96	0.00	10.98-11.04
16	T	C34	1.684	1.668 E6	1.0	99	0.00	11.39-11.47
17	T	C36	1.591	1.583 E6	0.5	100	0.00	11.95-12.01
18	T	C38	1.520	1.517 E6	0.2	100	0.00	12.68-12.74
19	T	C40	1.455	1.514 E6	-4.1	105	0.00	13.69-13.75
20	H	EPH (>C28-C40)	1.598	1.581 E6	1.1	102	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.652 E6	-0.9	100	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.845 E6	-1.8	96	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.386 E6	-1.9	90	0.00	8.35- 8.41

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 5z8755.D   EPH5Z249.M       Sat Jun 29 17:30:01 2013
```

8.7.8

8

Continuing Calibration Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G5Z312-CC249
Lab FileID: 5Z9287.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z312\5z9287.D            Vial: 53
Acq On    : 27 Jun 2013   8:43 am                    Operator: khaliahd
Sample    : cc249-50                                 Inst    : GC5Y5Z
Misc      : op67034,g5z312,15.0,,,2,1                Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Jun 29 13:24:28 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.818 E6	-6.3	109	0.00	2.85- 2.91
2	T	C10	1.702	1.800 E6	-5.8	105	0.00	3.67- 3.73
3	T	C12	1.681	1.769 E6	-5.2	103	0.00	4.89- 4.95
4	T	C14	1.658	1.804 E6	-8.8	103	0.00	5.84- 5.90
5	T	C16	1.592	1.799 E6	-13.0	103	0.00	6.66- 6.72
6	T	C18	1.626	1.773 E6	-9.0	101	0.00	7.39- 7.45
7	T	C20	1.621	1.754 E6	-8.2	100	0.00	8.06- 8.12
8	T	C21	1.781	1.813 E6	-1.8	97	0.00	8.37- 8.43
9	T	C22	1.734	1.868 E6	-7.7	98	0.00	8.67- 8.73
10	T	C24	1.549	1.691 E6	-9.2	99	0.00	9.22- 9.28
11	T	C26	1.583	1.700 E6	-7.4	101	0.00	9.71- 9.77
12	T	C28	1.612	1.690 E6	-4.8	102	0.00	10.18-10.24
13	H	EPH (C9-C28)	1.654	1.773 E6	-7.2	103	0.00	2.97-10.41
14	T	C30	1.638	1.702 E6	-3.9	103	0.00	10.59-10.66
15	T	C32	1.703	1.670 E6	1.9	101	0.00	10.99-11.05
16	T	C34	1.684	1.750 E6	-3.9	104	0.00	11.40-11.48
17	T	C36	1.591	1.643 E6	-3.3	104	0.00	11.95-12.01
18	T	C38	1.520	1.554 E6	-2.2	103	0.00	12.68-12.74
19	T	C40	1.455	1.509 E6	-3.7	104	0.00	13.70-13.76
20	H	EPH (>C28-C40)	1.598	1.638 E6	-2.5	103	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.728 E6	-5.7	102	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.949 E6	-7.6	101	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.467 E6	-7.9	96	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z8755.D EPH5Z249.M Sat Jun 29 17:35:14 2013

8.7.9

8

Continuing Calibration Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: G5Z312-CC249
Lab FileID: 5Z9316.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\G5Z312\5z9316.D          Vial: 53
Acq On    : 28 Jun 2013  12:33 am                  Operator: khaliahd
Sample    : cc249-50                               Inst    : GC5Y5Z
Misc      : op66601,g5z312,15.5,,,2,1              Multiplr: 1.00
IntFile   : autoint1.e

Method       : C:\MSDCHEM\1\METHODS\EPH5Z249.M (ChemStation Integrator)
Title        : NJDEP Extractable Petroleum Hydrocarbons
Last Update  : Mon Jul 01 09:01:17 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.100  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT Window
1	T	C9	1.710	1.807 E6	-5.7	109	0.00	2.85- 2.91
2	T	C10	1.702	1.785 E6	-4.9	104	0.00	3.67- 3.73
3	T	C12	1.681	1.772 E6	-5.4	103	0.00	4.89- 4.95
4	T	C14	1.658	1.802 E6	-8.7	103	0.00	5.84- 5.90
5	T	C16	1.592	1.794 E6	-12.7	103	0.00	6.66- 6.72
6	T	C18	1.626	1.769 E6	-8.8	101	0.00	7.39- 7.45
7	T	C20	1.621	1.754 E6	-8.2	100	0.00	8.06- 8.12
8	T	C21	1.781	1.820 E6	-2.2	97	0.00	8.37- 8.43
9	T	C22	1.734	1.873 E6	-8.0	99	0.00	8.67- 8.73
10	T	C24	1.549	1.694 E6	-9.4	99	0.00	9.21- 9.27
11	T	C26	1.583	1.704 E6	-7.6	101	0.00	9.71- 9.77
12	T	C28	1.612	1.695 E6	-5.1	102	0.00	10.17-10.23
13	H	EPH (C9-C28)	1.654	1.772 E6	-7.1	101	0.00	2.97-10.41
14	T	C30	1.638	1.705 E6	-4.1	103	0.00	10.58-10.64
15	T	C32	1.703	1.671 E6	1.9	101	-0.01	10.97-11.03
16	T	C34	1.684	1.742 E6	-3.4	104	-0.01	11.38-11.46
17	T	C36	1.591	1.630 E6	-2.5	103	-0.01	11.93-11.99
18	T	C38	1.520	1.525 E6	-0.3	101	-0.01	12.66-12.72
19	T	C40	1.455	1.446 E6	0.6	100	-0.02	13.67-13.73
20	H	EPH (>C28-C40)	1.598	1.620 E6	-1.3	101	0.00	10.40-14.22
21	H	TOTAL PHC	1.636	1.721 E6	-5.3	101	0.00	2.97-14.21
22	S	o-Terphenyl (S)	1.812	1.929 E6	-6.5	100	0.00	7.75- 7.81
23	S	1-chlorooctadecane (S)	1.360	1.461 E6	-7.4	95	0.00	8.35- 8.41

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5z8755.D EPH5Z249.M Mon Jul 01 11:14:45 2013

8.7.10

8

New Jersey
ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
Analyst: JW Run ID: MA31589
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:54	MA31589-STD1	1		B=1.4552e-004,C=-6.4477e-002,R=0.9999048
07:55	MA31589-STD2	1		STDB
07:57	MA31589-STD3	1		STDC
07:58	MA31589-STD4	1		STDD
07:59	MA31589-STD5	1		STDE
08:01	MA31589-STD6	1		STDF
08:32	MA31589-ICV1	1		
08:33	MA31589-ICB1	1		
08:35	MA31589-CCV1	1		
08:36	MA31589-CCB1	1		
08:38	MA31589-CRI1	1		
08:39	ZZZZZZ	1		
08:40	ZZZZZZ	1		
08:46	MP73019-MB1	1		
08:47	MP73019-LC1	5		
08:59	MP73019-S1	1		
09:00	MP73019-S2	1		
09:02	JB40851-2	1		(sample used for QC only; not part of login JB40350)
09:03	ZZZZZZ	1		
09:05	ZZZZZZ	1		
09:06	MA31589-CCV2	1		
09:08	MA31589-CCB2	1		
09:09	ZZZZZZ	1		
09:11	ZZZZZZ	1		
09:12	ZZZZZZ	1		
09:14	ZZZZZZ	1		
09:15	ZZZZZZ	1		
09:17	ZZZZZZ	1		
09:19	ZZZZZZ	1		
09:21	ZZZZZZ	1		
09:22	ZZZZZZ	1		
09:24	ZZZZZZ	1		
09:25	MA31589-CCV3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
Analyst: JW Run ID: MA31589
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:26	MA31589-CCB3	1		
09:28	ZZZZZZ	1		
09:29	ZZZZZZ	1		
09:31	ZZZZZZ	1		
09:32	ZZZZZZ	1		
09:33	ZZZZZZ	1		
09:35	MP73021-MB1	1		
09:36	MP73021-LC1	5		
09:37	MP73021-S1	1		
09:39	MP73021-S2	1		
09:40	JB40350-5	1		
09:42	MA31589-CCV4	1		
09:43	MA31589-CCB4	1		
09:45	ZZZZZZ	1		
09:46	ZZZZZZ	1		
09:48	ZZZZZZ	1		
09:49	ZZZZZZ	1		
09:50	ZZZZZZ	1		
09:52	ZZZZZZ	1		
09:53	ZZZZZZ	1		
09:54	ZZZZZZ	1		
09:56	ZZZZZZ	1		
09:57	ZZZZZZ	1		
09:58	MA31589-CCV5	1		
10:00	MA31589-CCB5	1		
10:01	ZZZZZZ	1		
10:03	ZZZZZZ	1		
10:04	ZZZZZZ	1		
10:05	ZZZZZZ	1		
10:07	ZZZZZZ	1		
10:08	ZZZZZZ	1		
10:10	ZZZZZZ	1		
10:11	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
Analyst: JW Run ID: MA31589
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:12	ZZZZZZ	1		
10:14	MP73022-MB1	1		
10:15	MA31589-CCV6	1		
10:16	MA31589-CCB6	1		
10:18	MP73022-LC1	5		
10:19	MP73022-S1	1		Over range
10:21	MP73022-S2	1		Over range
10:22	JB40240-2	1		(sample used for QC only; not part of login JB40350)
10:24	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:27	ZZZZZZ	1		
10:29	ZZZZZZ	1		
10:31	ZZZZZZ	1		
10:32	ZZZZZZ	1		
10:34	MA31589-CCV7	1		
10:36	MA31589-CCB7	1		
10:37	ZZZZZZ	1		
10:39	ZZZZZZ	1		
10:41	ZZZZZZ	1		
10:42	ZZZZZZ	1		
10:44	ZZZZZZ	1		
10:45	JB40350-1	1		
10:46	JB40350-2	1		
10:48	JB40350-3	1		
10:49	JB40350-4	1		
10:50	MA31589-CCV8	1		
10:52	MA31589-CCB8	1		
11:38	ZZZZZZ	1		
11:39	ZZZZZZ	2		
11:40	ZZZZZZ	5		
11:42	ZZZZZZ	5		
11:43	ZZZZZZ	5		
11:45	ZZZZZZ	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
Analyst: JW Run ID: MA31589
Parameters: Hg

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	11:46	ZZZZZZ	20		
	11:48	MP73022-S1	2		
	11:49	MP73022-S2	2		
---------->	Last reportable sample/prep for job JB40350				
	11:51	JB40240-2	2		(sample used for QC only; not part of login JB40350)
	11:53	MA31589-CCV9	1		
	11:54	MA31589-CCB9	1		
	11:56	ZZZZZZ	5		
	11:57	ZZZZZZ	2		
	11:58	ZZZZZZ	2		
	12:00	ZZZZZZ	2		
	12:01	ZZZZZZ	10		
	12:03	ZZZZZZ	10		
	12:04	ZZZZZZ	10		
	12:06	ZZZZZZ	10		
	12:11	MA31589-CRI2	1		
	12:13	ZZZZZZ	1		
	12:14	MA31589-CCV10	1		
	12:15	MA31589-CCB10	1		
---------->	Last reportable CCB for job JB40350				

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA31589 Units: ug/l

Time:			08:33		08:36		09:08		09:26	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.041	0.022	<0.20	-0.029	<0.20	-0.059	<0.20	-0.12	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA31589 Units: ug/l

Time:			09:43		10:00		10:16		10:36	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.041	-0.19	<0.20	-0.19	<0.20	-0.063	<0.20	-0.058	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA31589 Units: ug/l

Time:			10:52		11:54		12:15	
Sample ID:			CCB8		CCB9		CCB10	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	0.20	.041	0.0012	<0.20	-0.057	<0.20	-0.010	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

9.1.1
9

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31589 Units: ug/l

Time:		08:32			08:35			09:06	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.2	106.7	2.5	2.6	104.0	2.5	2.4	96.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31589 Units: ug/l

Time:		09:25			09:42			09:58	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.7	108.0	2.5	2.6	104.0	2.5	2.6	104.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31589 Units: ug/l

Time:		10:15			10:34			10:50	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.7	108.0	2.5	2.7	108.0	2.5	2.8	112.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA31589 Units: ug/l

Time:		11:53			12:14	
Sample ID:	CCV	CCV9		CCV	CCV10	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.8	112.0	2.5	2.9	116.0

(*) Outside of QC limits
(anr) Analyte not requested

9.1.2
9

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: H5070413S1.CSV Date Analyzed: 07/04/13 Methods: SW846 7471B
QC Limits: 50 to 150 % Recovery Run ID: MA31589 Units: ug/l

Time:			08:38		12:11	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.22	110.0	0.24	120.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:08	MA31593-STD1	1		STDA
10:14	MA31593-STD2	1		STDD
10:20	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:32	MA31593-ICV1	1		
10:37	MA31593-ICB1	1		
10:43	MA31593-CCV1	1		
10:49	MA31593-CCB1	1		
10:55	MA31593-CRI1	1		
11:01	MA31593-CRID1	1		
11:07	MA31593-CRIA1	1		
11:13	MA31593-CRID2	1		
11:18	MA31593-ICSA1	1		
11:24	MA31593-ICSAB1	1		
11:30	MA31593-CCV2	1		
11:36	MA31593-CCB2	1		
11:42	MP73020-MB1	1		
11:48	MP73020-LC1	1		Batch to reanalyze for Pb, lc out
11:53	MP73020-B1	1		
11:59	MP73020-S1	5		Fe and Pb high
12:05	MP73020-S2	5		Fe and Pb high
12:11	JB41214-1	5		(sample used for QC only; not part of login JB40350)
12:17	MP73020-SD1	25		Fe and Pb high
12:23	ZZZZZZ	1		
12:28	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:40	MA31593-CCV3	1		
12:46	MA31593-CCB3	1		
12:52	ZZZZZZ	1		
12:57	MP72964-MB1	1		Rerun for Tl
13:03	MP72964-LC1	1		
13:09	MP72964-S1	1		
13:15	MP72964-S2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:20	JB40787-6	1		(sample used for QC only; not part of login JB40350)
13:26	MP72964-SD1	5		
13:32	ZZZZZZ	1		
13:38	MP72940-MB1	1		
13:44	MA31593-CCV4	1		
13:50	MA31593-CCB4	1		
13:55	MP72940-B1	1		
14:01	MP72940-S1	1		
14:07	MP72940-S2	1		
14:13	JB40946-11	1		(sample used for QC only; not part of login JB40350)
14:18	MP72940-SD1	5		
14:24	ZZZZZZ	1		
14:30	ZZZZZZ	1		
14:36	ZZZZZZ	1		
14:42	ZZZZZZ	1		
14:47	ZZZZZZ	1		
14:53	MA31593-CCV5	1		
14:59	MA31593-CCB5	1		
15:05	ZZZZZZ	1		
15:11	MP72952-MB1	1		
15:16	MP72952-B1	1		
15:22	MP72952-S1	1		Fe high
15:28	MP72952-S2	1		Fe high
15:34	JB40687-3	1		(sample used for QC only; not part of login JB40350)
15:40	MP72952-SD1	5		Fe high
15:46	ZZZZZZ	1		
15:52	ZZZZZZ	1		
15:58	ZZZZZZ	1		
16:03	MA31593-CCV6	1		
16:09	MA31593-CCB6	1		
16:15	ZZZZZZ	1		
16:21	ZZZZZZ	1		
16:27	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:33	ZZZZZZ	1		
16:38	ZZZZZZ	1		
16:44	ZZZZZZ	1		
16:50	ZZZZZZ	1		
16:56	ZZZZZZ	1		
17:02	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:13	MA31593-CCV7	1		
17:19	MA31593-CCB7	1		
17:25	ZZZZZZ	1		
17:31	ZZZZZZ	1		
17:36	ZZZZZZ	1		
17:42	ZZZZZZ	1		
17:48	ZZZZZZ	1		
17:54	ZZZZZZ	1		
17:59	ZZZZZZ	1		
18:05	MP72853-MB1	1		
18:11	MP72853-B1	1		empty
18:17	MA31593-CCV8	1		
18:23	MA31593-CCB8	1		
18:29	MA31593-CRI2	1		
18:35	MA31593-CRID3	1		
18:41	MA31593-CRIA2	1		
18:46	MA31593-CRID4	1		
18:52	MA31593-ICSA2	1		
18:58	MA31593-ICSAB2	1		
19:04	MA31593-CCV9	1		
19:10	MA31593-CCB9	1		
19:16	MP72853-S1	1		
19:22	MP72853-S2	1		
19:27	JB40350-4	1		
19:33	MP72853-SD1	5		
19:39	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	19:45	JB40350-1	1		
	19:50	JB40350-2	1		high RSD
	19:56	JB40350-3	1		
	20:02	JB40350-5	1		
---------->	Last reportable sample/prep for job JB40350				
	20:08	ZZZZZZ	1		
	20:14	MA31593-CCV10	1		
	20:19	MA31593-CCB10	1		
	20:25	ZZZZZZ	1		
	20:31	ZZZZZZ	1		
	20:37	ZZZZZZ	1		
	20:43	ZZZZZZ	1		
	20:49	MP72792-MB1	1		
	20:55	MP72792-MB2	1		
	21:00	MP72792-LC1	1		
	21:06	MP72792-LC2	1		
	21:12	MP72792-B1	1		
	21:18	MA31593-CCV11	1		
	21:23	MA31593-CCB11	1		
	21:29	MP72792-S1	1		Si high
	21:35	MP72792-S2	1		Si high. Rerun straight for Cd and Mn , high RSD-s
	21:41	MP72792-S3	1		
	21:46	MP72792-S4	1		
	21:52	JB40213-1	1		(sample used for QC only; not part of login JB40350)
	21:58	MP72792-SD1	5		
	22:04	JB40213-1F	1		(sample used for QC only; not part of login JB40350)
	22:10	MP72792-SD2	5		
	22:15	ZZZZZZ	1		
	22:21	ZZZZZZ	1		
	22:27	MA31593-CCV12	1		
	22:33	MA31593-CCB12	1		
	22:39	ZZZZZZ	1		
	22:45	ZZZZZZ	1		
	22:51	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:57	ZZZZZZ	1		
23:03	ZZZZZZ	1		
23:08	ZZZZZZ	1		
23:14	ZZZZZZ	1		
23:20	ZZZZZZ	1		
23:26	ZZZZZZ	1		
23:32	ZZZZZZ	1		
23:38	MA31593-CCV13	1		
23:43	MA31593-CCB13	1		
23:49	ZZZZZZ	10		
23:55	ZZZZZZ	10		
00:01	ZZZZZZ	10		
00:07	ZZZZZZ	10		
00:13	ZZZZZZ	10		
00:18	ZZZZZZ	10		
00:24	ZZZZZZ	10		
00:30	ZZZZZZ	10		
00:36	ZZZZZZ	1		
00:42	ZZZZZZ	1		
00:48	MA31593-CCV14	1		
00:53	MA31593-CCB14	1		
00:59	ZZZZZZ	10		
01:05	ZZZZZZ	10		
01:11	ZZZZZZ	2		
01:17	MP72965-S1	10		
01:22	MP72965-S2	10		empty
01:28	JB41084-9A	10		(sample used for QC only; not part of login JB40350)
01:34	MP72965-SD1	50		
01:40	ZZZZZZ	1		
01:46	ZZZZZZ	1		
01:52	MA31593-CCV15	1		
01:57	MA31593-CCB15	1		
02:03	MA31593-CRI3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	02:09	MA31593-CRID5	1		
	02:15	MA31593-CRIA3	1		
	02:21	MA31593-CRID6	1		
	02:27	MA31593-ICSA3	1		
	02:33	MA31593-ICSAB3	1		
	02:39	MA31593-CCV16	1		
	02:44	MA31593-CCB16	1		
---------->	Last reportable CCB for job JB40350				
	02:50	MP72876-MB1	1		No bracketing CCB
	02:56	MP72876-LC1	1		No bracketing CCB
	03:02	MP72876-S1	1		No bracketing CCB
	03:08	MP72876-S2	1		No bracketing CCB
	03:14	JB40373-3	1		(sample used for QC only; not part of login JB40350)
	03:20	MP72876-SD1	5		No bracketing CCB
	03:25	ZZZZZZ	1		
	03:31	ZZZZZZ	1		
	03:37	ZZZZZZ	1		
	03:43	ZZZZZZ	1		
	03:49	MA31593-CCV17	1		No bracketing CCB
	03:54	ZZZZZZ	1		
	04:00	ZZZZZZ	1		
	04:06	ZZZZZZ	1		
	04:12	ZZZZZZ	1		
	04:18	ZZZZZZ	1		
	04:24	ZZZZZZ	1		
	04:30	ZZZZZZ	1		
	04:36	ZZZZZZ	1		
	04:42	ZZZZZZ	1		
	04:48	ZZZZZZ	1		
	04:54	MA31593-CCV18	1		
	04:59	MA31593-CCB17	1		
	05:05	ZZZZZZ	1		
	05:11	ZZZZZZ	1		
	05:17	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:23	ZZZZZZ	1		
05:29	ZZZZZZ	1		
05:34	ZZZZZZ	1		
05:40	ZZZZZZ	1		
05:46	ZZZZZZ	1		
05:52	ZZZZZZ	1		
05:58	ZZZZZZ	1		
06:04	MA31593-CCV19	1		
06:09	MA31593-CCB18	1		
06:17	MA31593-CCV20	1		
06:23	MA31593-CCB19	1		
06:29	MP72876-MB1	1		
06:34	MP72876-LC1	1		
06:40	MP72876-S1	1		
06:46	MP72876-S2	1		
06:52	JB40373-3	1		(sample used for QC only; not part of login JB40350)
06:58	MP72876-SD1	5		
07:04	ZZZZZZ	1		
07:09	ZZZZZZ	1		
07:15	ZZZZZZ	1		
07:21	ZZZZZZ	1		
07:27	MA31593-CCV21	1		
07:33	MA31593-CCB20	1		
07:38	ZZZZZZ	1		
07:44	ZZZZZZ	1		
07:50	ZZZZZZ	1		
07:56	ZZZZZZ	1		
08:02	ZZZZZZ	1		
08:08	ZZZZZZ	1		
08:14	ZZZZZZ	1		
08:20	ZZZZZZ	1		
08:26	ZZZZZZ	1		
08:32	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:38	MA31593-CCV22	1		
08:44	MA31593-CCB21	1		
08:49	MA31593-CRI4	1		
08:55	MA31593-CRID7	1		
09:01	MA31593-ICSA4	1		
09:07	MA31593-ICSAB4	1		
09:13	MA31593-CCV23	1		
09:19	MA31593-CCB22	1		
09:25	ZZZZZZ	1		
09:31	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:08	MA31593-STD1	1060 R	66511 R	16908 R	1701 R
10:14	MA31593-STD2	1012	61436	16701	1703
10:20	ZZZZZZ	1042	63650	16870	1720
10:26	ZZZZZZ	1057	65805	16841	1692
10:32	MA31593-ICV1	1026	63467	17244	1700
10:37	MA31593-ICB1	1059	66242	16987	1698
10:43	MA31593-CCV1	1037	63826	16901	1718
10:49	MA31593-CCB1	1064	66585	16972	1708
10:55	MA31593-CRI1	1059	64572	17081	1708
11:01	MA31593-CRID1	No results reported for the elements associated with this internal standard.			
11:07	MA31593-CRIA1	1068	67038	17192	1718
11:13	MA31593-CRID2	1068	66830	17113	1713
11:18	MA31593-ICSA1	916	56443	15771	1615
11:24	MA31593-ICSAB1	922	57904	16149	1630
11:30	MA31593-CCV2	1032	62586	16709	1706
11:36	MA31593-CCB2	1065	66556	17056	1710
11:42	MP73020-MB1	1052	66728	17030	1690
11:48	MP73020-LC1	1024	64722	17001	1674
11:53	MP73020-B1	1015	63504	16763	1677
11:59	MP73020-S1	No results reported for the elements associated with this internal standard.			
12:05	MP73020-S2	No results reported for the elements associated with this internal standard.			
12:11	JB41214-1	No results reported for the elements associated with this internal standard.			
12:17	MP73020-SD1	No results reported for the elements associated with this internal standard.			
12:23	ZZZZZZ	1005	62247	16966	1664
12:28	ZZZZZZ	1013	63957	17449	1681
12:34	ZZZZZZ	1009	63162	17082	1675
12:40	MA31593-CCV3	1022	62329	16636	1694
12:46	MA31593-CCB3	1049	66001	16845	1684
12:52	ZZZZZZ	1064	68737	18055	1715
12:57	MP72964-MB1	1052	67017	17283	1690
13:03	MP72964-LC1	1018	64142	16816	1655
13:09	MP72964-S1	1009	62726	16811	1657
13:15	MP72964-S2	996	61315	16511	1638

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:20	JB40787-6	1014	62650	16831	1657
13:26	MP72964-SD1	1050	65160	17002	1697
13:32	ZZZZZZ	1049	66679	17216	1683
13:38	MP72940-MB1	1059	67931	17406	1697
13:44	MA31593-CCV4	1035	63907	17031	1714
13:50	MA31593-CCB4	1053	67751	17243	1690
13:55	MP72940-B1	1035	64829	17045	1707
14:01	MP72940-S1	1045	65590	17609	1723
14:07	MP72940-S2	1054	66199	17860	1734
14:13	JB40946-11	1082	67256	17586	1752
14:18	MP72940-SD1	1065	66934	17295	1717
14:24	ZZZZZZ	1079	67022	17790	1742
14:30	ZZZZZZ	1079	67548	18049	1743
14:36	ZZZZZZ	1096	68585	17971	1750
14:42	ZZZZZZ	1049	66112	17440	1715
14:47	ZZZZZZ	1057	66690	17510	1708
14:53	MA31593-CCV5	1029	62772	17070	1707
14:59	MA31593-CCB5	1057	66856	17106	1698
15:05	ZZZZZZ	1056	66836	17696	1708
15:11	MP72952-MB1	1055	67274	17252	1696
15:16	MP72952-B1	1031	64998	17198	1703
15:22	MP72952-S1	1060	66453	18541	1770
15:28	MP72952-S2	1050	65785	18299	1757
15:34	JB40687-3	1064	66427	18234	1752
15:40	MP72952-SD1	1054	65410	17147	1719
15:46	ZZZZZZ	1018	63406	17325	1692
15:52	ZZZZZZ	1092	68233	18013	1728
15:58	ZZZZZZ	1076	68080	17689	1721
16:03	MA31593-CCV6	1037	64145	17042	1718
16:09	MA31593-CCB6	1052	67986	17087	1693
16:15	ZZZZZZ	1088	68322	18137	1709
16:21	ZZZZZZ	1084	64145	17419	1737
16:27	ZZZZZZ	1057	67358	17391	1715

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:33	ZZZZZZ	1037	65537	16963	1716
16:38	ZZZZZZ	1035	66185	16833	1675
16:44	ZZZZZZ	1068	67996	17812	1740
16:50	ZZZZZZ	1064	67102	17473	1746
16:56	ZZZZZZ	1054	66546	17284	1726
17:02	ZZZZZZ	970	60071	16612	1643
17:07	ZZZZZZ	1058	66055	17600	1738
17:13	MA31593-CCV7	1013	62275	16520	1684
17:19	MA31593-CCB7	1040	65860	17222	1674
17:25	ZZZZZZ	1063	68817	17973	1726
17:31	ZZZZZZ	1059	67509	17750	1716
17:36	ZZZZZZ	1051	66271	17174	1721
17:42	ZZZZZZ	1053	67471	17656	1717
17:48	ZZZZZZ	1090	70049	18653	1749
17:54	ZZZZZZ	1048	66667	17536	1723
17:59	ZZZZZZ	1064	67584	17420	1734
18:05	MP72853-MB1	1067	67831	17473	1716
18:11	MP72853-B1	No results reported for the elements associated with this internal standard.			
18:17	MA31593-CCV8	1030	63740	16901	1707
18:23	MA31593-CCB8	1054	66712	16961	1693
18:29	MA31593-CRI2	1040	62790	16674	1681
18:35	MA31593-CRID3	1045	65665	16645	1685
18:41	MA31593-CRIA2	1071	67724	17169	1720
18:46	MA31593-CRID4	1065	66698	17088	1715
18:52	MA31593-ICSA2	924	57317	15951	1630
18:58	MA31593-ICSAB2	927	57653	15962	1638
19:04	MA31593-CCV9	1038	63987	16927	1720
19:10	MA31593-CCB9	1048	67791	17279	1685
19:16	MP72853-S1	1017	64395	17222	1728
19:22	MP72853-S2	1030	65417	17562	1743
19:27	JB40350-4	1047	66292	17539	1740
19:33	MP72853-SD1	1043	66331	17051	1698
19:39	ZZZZZZ	1013	64176	17264	1692

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:45	JB40350-1	1050	66747	17716	1712
19:50	JB40350-2	1047	67266	17410	1720
19:56	JB40350-3	1045	66139	17469	1732
20:02	JB40350-5	1050	67361	17546	1742
20:08	ZZZZZZ	1052	65626	17311	1798
20:14	MA31593-CCV10	1041	62914	16143	1722
20:19	MA31593-CCB10	1048	67788	17202	1686
20:25	ZZZZZZ	1050	66239	17360	1742
20:31	ZZZZZZ	1056	67291	17013	1747
20:37	ZZZZZZ	1055	66465	17215	1735
20:43	ZZZZZZ	1059	66107	17384	1760
20:49	MP72792-MB1	1040	67204	17153	1678
20:55	MP72792-MB2	1046	65936	16930	1684
21:00	MP72792-LC1	1043	65672	16970	1695
21:06	MP72792-LC2	1047	65760	16918	1699
21:12	MP72792-B1	1023	63488	16730	1674
21:18	MA31593-CCV11	1017	62508	16588	1689
21:23	MA31593-CCB11	1078	65220	17503	1729
21:29	MP72792-S1	978	61898	16905	1705
21:35	MP72792-S2	982	999999 !	17380	1709
21:41	MP72792-S3	997	60728	16292	1642
21:46	MP72792-S4	1026	62717	16671	1684
21:52	JB40213-1	1000	63395	17247	1722
21:58	MP72792-SD1	1036	65478	17086	1703
22:04	JB40213-1F	1025	62321	16538	1676
22:10	MP72792-SD2	1057	65316	16925	1714
22:15	ZZZZZZ	1035	62470	16776	1694
22:21	ZZZZZZ	950	51219	15721	1536
22:27	MA31593-CCV12	1037	63133	16788	1720
22:33	MA31593-CCB12	1053	65503	17143	1696
22:39	ZZZZZZ	1048	66327	16841	1690
22:45	ZZZZZZ	1025	61754	16600	1680
22:51	ZZZZZZ	936	49941	15520	1516

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:57	ZZZZZZ	1029	62673	16719	1682
23:03	ZZZZZZ	1047	65960	17093	1685
23:08	ZZZZZZ	1051	65618	17286	1756
23:14	ZZZZZZ	1050	65978	17329	1768
23:20	ZZZZZZ	1094	68046	17937	1768
23:26	ZZZZZZ	1070	63563	17951	1775
23:32	ZZZZZZ	1053	66239	16929	1743
23:38	MA31593-CCV13	1029	63013	16578	1709
23:43	MA31593-CCB13	1074	67269	17101	1724
23:49	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:55	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:01	ZZZZZZ	979	63279	16844	1677
00:07	ZZZZZZ	982	62775	16546	1686
00:13	ZZZZZZ	991	60979	16933	1701
00:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:24	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:30	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:36	ZZZZZZ	1069	66775	17727	1770
00:42	ZZZZZZ	1086	67674	17780	1771
00:48	MA31593-CCV14	1028	62695	16518	1705
00:53	MA31593-CCB14	1064	67139	17020	1715
00:59	ZZZZZZ	998	64302	16686	1691
01:05	ZZZZZZ	1009	65322	17068	1714
01:11	ZZZZZZ	981	63422	16905	1708
01:17	MP72965-S1	983	64808	17032	1673
01:22	MP72965-S2	No results reported for the elements associated with this internal standard.			
01:28	JB41084-9A	1007	64280	16885	1710
01:34	MP72965-SD1	1035	61446	16973	1697
01:40	ZZZZZZ	1051	66459	17585	1767
01:46	ZZZZZZ	1081	68870	17150	1740
01:52	MA31593-CCV15	1045	63572	16957	1733
01:57	MA31593-CCB15	1078	67418	17142	1729
02:03	MA31593-CRI3	1082	67067	16912	1744

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:09	MA31593-CRID5	1068	66883	17194	1720
02:15	MA31593-CRIA3	1088	68184	17190	1745
02:21	MA31593-CRID6	1074	67106	17038	1727
02:27	MA31593-ICSA3	935	57580	15968	1647
02:33	MA31593-ICSAB3	944	58461	16045	1665
02:39	MA31593-CCV16	1040	63840	16870	1727
02:44	MA31593-CCB16	1076	68688	16724	1727
02:50	MP72876-MB1	No results reported for the elements associated with this internal standard.			
02:56	MP72876-LC1	No results reported for the elements associated with this internal standard.			
03:02	MP72876-S1	No results reported for the elements associated with this internal standard.			
03:08	MP72876-S2	No results reported for the elements associated with this internal standard.			
03:14	JB40373-3	No results reported for the elements associated with this internal standard.			
03:20	MP72876-SD1	No results reported for the elements associated with this internal standard.			
03:25	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:31	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:37	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:43	ZZZZZZ	No results reported for the elements associated with this internal standard.			
03:49	MA31593-CCV17	No results reported for the elements associated with this internal standard.			
03:54	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:00	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:06	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:12	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:24	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:30	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:36	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:42	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:48	ZZZZZZ	No results reported for the elements associated with this internal standard.			
04:54	MA31593-CCV18	1042	63714	16843	1730
04:59	MA31593-CCB17	1092	68443	17113	1751
05:05	ZZZZZZ	1037	62279	16830	1701
05:11	ZZZZZZ	No results reported for the elements associated with this internal standard.			
05:17	ZZZZZZ	1080	68768	17586	1734

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
05:23	ZZZZZZ	1098	68062	17688	1788
05:29	ZZZZZZ	1060	64339	17470	1758
05:34	ZZZZZZ	1132	70006	18517	1807
05:40	ZZZZZZ	1066	65853	17772	1818
05:46	ZZZZZZ	1122	69939	18631	1802
05:52	ZZZZZZ	1053	66525	17889	1801
05:58	ZZZZZZ	1103	67492	17926	1832
06:04	MA31593-CCV19	1050	64423	16953	1741
06:09	MA31593-CCB18	1089	999999 !a	16592	1750
06:17	MA31593-CCV20	1056	64576	16990	1749
06:23	MA31593-CCB19	1090	68459	17345	1748
06:29	MP72876-MB1	1060	69960	17623	1707
06:34	MP72876-LC1	1058	65828	17001	1720
06:40	MP72876-S1	1021	59079	16727	1674
06:46	MP72876-S2	1030	60421	16812	1691
06:52	JB40373-3	1063	62331	17106	1730
06:58	MP72876-SD1	1075	65231	17066	1746
07:04	ZZZZZZ	1074	67245	17668	1775
07:09	ZZZZZZ	1057	65847	17273	1775
07:15	ZZZZZZ	1036	65522	17240	1740
07:21	ZZZZZZ	1062	67004	17577	1776
07:27	MA31593-CCV21	1047	64138	16852	1734
07:33	MA31593-CCB20	1086	68756	17462	1746
07:38	ZZZZZZ	1103	69581	17651	1772
07:44	ZZZZZZ	1047	61186	16852	1711
07:50	ZZZZZZ	1042	59972	16806	1707
07:56	ZZZZZZ	1066	67672	17270	1719
08:02	ZZZZZZ	1029	60144	16750	1688
08:08	ZZZZZZ	1062	61558	16996	1740
08:14	ZZZZZZ	1043	62265	17158	1702
08:20	ZZZZZZ	998	58757	16652	1651
08:26	ZZZZZZ	1051	63729	16754	1727
08:32	ZZZZZZ	1086	64588	17221	1774

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
Analyst: GT Run ID: MA31593
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
08:38	MA31593-CCV22	1069	64971	16982	1767
08:44	MA31593-CCB21	1108	69583	17391	1777
08:49	MA31593-CRI4	1089	68407	17400	1755
08:55	MA31593-CRID7	1084	67409	17130	1746
09:01	MA31593-ICSA4	969	59829	16457	1697
09:07	MA31593-ICSAB4	961	58767	15933	1691
09:13	MA31593-CCV23	1067	64283	16935	1768
09:19	MA31593-CCB22	1096	68619	17139	1763
09:25	ZZZZZZ	1084	67148	16980	1791
09:31	ZZZZZZ	1075	69038	17524	1776

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			10:37		10:49		11:36		12:46	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	-3.8	<200	-7.2	<200	-2.0	<200	-1.2	<200
Antimony	6.0	1.8	-0.30	<6.0	1.2	<6.0	0.50	<6.0	1.2	<6.0
Arsenic	3.0	1.7	0.80	<3.0	0.40	<3.0	1.2	<3.0	-0.30	<3.0
Barium	200	.23	-0.20	<200	-0.20	<200	0.0	<200	0.0	<200
Beryllium	1.0	.09	0.10	<1.0	0.0	<1.0	0.10	<1.0	0.10	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.30	<3.0	0.30	<3.0	0.30	<3.0	0.20	<3.0
Calcium	5000	64	4.1	<5000	3.2	<5000	6.7	<5000	10.1	<5000
Chromium	10	.79	0.30	<10	0.50	<10	0.70	<10	0.30	<10
Cobalt	50	.4	0.30	<50	-0.10	<50	0.30	<50	0.10	<50
Copper	10	.68	0.40	<10	0.10	<10	0.0	<10	0.40	<10
Iron	100	5.2	0.60	<100	1.2	<100	4.3	<100	4.1	<100
Lead	3.0	1.5	-0.80	<3.0	-0.10	<3.0	0.60	<3.0	0.20	<3.0
Lithium	20	1.1								
Magnesium	5000	26	12.8	<5000	14.3	<5000	18.5	<5000	15.7	<5000
Manganese	15	.17	0.10	<15	0.10	<15	0.10	<15	0.20	<15
Molybdenum	20	.35								
Nickel	10	.61	0.40	<10	0.90	<10	0.60	<10	0.20	<10
Palladium	50	2.1								
Potassium	10000	51	0.70	<10000	16.1	<10000	7.3	<10000	-15	<10000
Selenium	10	3.1	0.80	<10	1.5	<10	2.6	<10	1.1	<10
Silicon	200	2.8								
Silver	10	.46	-0.70	<10	-0.10	<10	-0.80	<10	-0.40	<10
Sodium	10000	14	9.9	<10000	6.5	<10000	7.9	<10000	13.3	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-1.6	<2.0	-0.90	<2.0	0.50	<2.0	-0.30	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.80	<50	0.50	<50	0.70	<50	0.20	<50
Zinc	20	8.9	0.30	<20	0.40	<20	0.50	<20	0.40	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			10:37		10:49		11:36		12:46	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.29								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			13:50		14:59		16:09		17:19	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	-6.2	<200	-6.9	<200	1.3	<200	-6.9	<200
Antimony	6.0	1.8	0.50	<6.0	-0.10	<6.0	-0.60	<6.0	2.2	<6.0
Arsenic	3.0	1.7	0.10	<3.0	-0.10	<3.0	1.3	<3.0	0.0	<3.0
Barium	200	.23	-0.20	<200	0.10	<200	0.30	<200	0.20	<200
Beryllium	1.0	.09	0.0	<1.0	0.10	<1.0	0.10	<1.0	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	-0.10	<3.0	0.40	<3.0	0.40	<3.0	0.50	<3.0
Calcium	5000	64	3.6	<5000	4.4	<5000	4.8	<5000	4.7	<5000
Chromium	10	.79	0.20	<10	0.20	<10	-0.10	<10	0.30	<10
Cobalt	50	.4	0.40	<50	-0.10	<50	0.20	<50	0.40	<50
Copper	10	.68	-0.10	<10	-0.10	<10	0.10	<10	0.0	<10
Iron	100	5.2	0.30	<100	4.0	<100	2.6	<100	3.5	<100
Lead	3.0	1.5	-0.70	<3.0	0.60	<3.0	-1.6	<3.0	-1.1	<3.0
Lithium	20	1.1								
Magnesium	5000	26	4.1	<5000	11.9	<5000	21.3	<5000	7.6	<5000
Manganese	15	.17	0.0	<15	0.10	<15	0.10	<15	0.10	<15
Molybdenum	20	.35								
Nickel	10	.61	0.30	<10	0.30	<10	0.30	<10	0.60	<10
Palladium	50	2.1								
Potassium	10000	51	5.1	<10000	3.8	<10000	5.8	<10000	0.90	<10000
Selenium	10	3.1	2.0	<10	1.1	<10	-0.20	<10	0.90	<10
Silicon	200	2.8								
Silver	10	.46	-0.40	<10	-0.70	<10	-0.80	<10	-0.60	<10
Sodium	10000	14	13.1	<10000	23.0	<10000	29.2	<10000	33.6	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-0.40	<2.0	-1.3	<2.0	-0.40	<2.0	-3.0	<2.0**(a
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.60	<50	0.60	<50	0.50	<50	0.10	<50
Zinc	20	8.9	0.40	<20	0.30	<20	0.50	<20	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			13:50		14:59		16:09		17:19	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.29								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			18:23		19:10		20:19		21:23	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	0.80	<200	-0.30	<200	2.1	<200	-2.9	<200
Antimony	6.0	1.8	1.2	<6.0	1.6	<6.0	0.60	<6.0	2.3	<6.0
Arsenic	3.0	1.7	0.80	<3.0	-0.20	<3.0	-0.20	<3.0	-0.30	<3.0
Barium	200	.23	0.30	<200	0.30	<200	0.20	<200	0.30	<200
Beryllium	1.0	.09	0.10	<1.0	0.20	<1.0	0.0	<1.0	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.30	<3.0	0.40	<3.0	0.40	<3.0	0.50	<3.0
Calcium	5000	64	4.9	<5000	6.9	<5000	5.7	<5000	2.2	<5000
Chromium	10	.79	0.40	<10	-0.10	<10	-0.30	<10	0.60	<10
Cobalt	50	.4	-0.10	<50	0.10	<50	0.0	<50	0.0	<50
Copper	10	.68	-0.30	<10	-0.10	<10	-0.40	<10	0.10	<10
Iron	100	5.2	3.4	<100	6.1	<100	3.9	<100	1.7	<100
Lead	3.0	1.5	-0.10	<3.0	-0.40	<3.0	-1.7	<3.0	-0.90	<3.0
Lithium	20	1.1								
Magnesium	5000	26	28.0	<5000	32.4	<5000	21.1	<5000	8.6	<5000
Manganese	15	.17	0.20	<15	0.10	<15	0.0	<15	0.20	<15
Molybdenum	20	.35								
Nickel	10	.61	0.70	<10	0.20	<10	0.60	<10	0.50	<10
Palladium	50	2.1								
Potassium	10000	51	2.3	<10000	-23	<10000	10.1	<10000	23.4	<10000
Selenium	10	3.1	2.9	<10	0.60	<10	3.1	<10	2.0	<10
Silicon	200	2.8								
Silver	10	.46	-0.40	<10	-0.80	<10	-0.50	<10	-1.0	<10
Sodium	10000	14	23.7	<10000	34.8	<10000	38.0	<10000	39.0	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-0.90	<2.0	0.30	<2.0	-0.50	<2.0	0.40	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.50	<50	0.50	<50	0.70	<50	0.50	<50
Zinc	20	8.9	0.30	<20	0.30	<20	0.10	<20	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			18:23		19:10		20:19		21:23	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.29								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			22:33		23:43		00:53		01:57	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	-0.20	<200	2.5	<200	10.7	<200	3.8	<200
Antimony	6.0	1.8	1.4	<6.0	0.50	<6.0	-0.30	<6.0	3.0	<6.0
Arsenic	3.0	1.7	-0.30	<3.0	1.5	<3.0	0.20	<3.0	0.50	<3.0
Barium	200	.23	0.10	<200	0.20	<200	0.40	<200	0.20	<200
Beryllium	1.0	.09	0.10	<1.0	0.10	<1.0	0.10	<1.0	0.20	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.60	<3.0	0.30	<3.0	0.40	<3.0	0.10	<3.0
Calcium	5000	64	6.8	<5000	4.7	<5000	6.5	<5000	10.3	<5000
Chromium	10	.79	0.10	<10	0.30	<10	0.0	<10	-0.10	<10
Cobalt	50	.4	0.0	<50	0.40	<50	0.40	<50	0.0	<50
Copper	10	.68	0.10	<10	0.30	<10	0.40	<10	0.20	<10
Iron	100	5.2	4.3	<100	5.3	<100	16.5	<100	2.9	<100
Lead	3.0	1.5	-0.20	<3.0	-0.70	<3.0	-0.70	<3.0	0.10	<3.0
Lithium	20	1.1								
Magnesium	5000	26	16.5	<5000	17.6	<5000	9.7	<5000	9.7	<5000
Manganese	15	.17	0.20	<15	0.10	<15	0.10	<15	0.20	<15
Molybdenum	20	.35								
Nickel	10	.61	0.80	<10	0.90	<10	0.60	<10	0.80	<10
Palladium	50	2.1								
Potassium	10000	51	45.2	<10000	17.5	<10000	19.0	<10000	9.8	<10000
Selenium	10	3.1	1.5	<10	1.6	<10	1.8	<10	2.6	<10
Silicon	200	2.8								
Silver	10	.46	-0.20	<10	-0.50	<10	-0.40	<10	-0.50	<10
Sodium	10000	14	66.1	<10000	53.8	<10000	50.7	<10000	49.7	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-0.70	<2.0	-0.60	<2.0	-1.5	<2.0	-0.70	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.70	<50	0.50	<50	0.70	<50	0.50	<50
Zinc	20	8.9	0.40	<20	0.40	<20	0.40	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			22:33		23:43		00:53		01:57	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.29								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			02:44	
Sample ID:			CCB16	
Metal	RL	IDL	raw	final
Aluminum	200	6.3	1.3	<200
Antimony	6.0	1.8	2.2	<6.0
Arsenic	3.0	1.7	-0.60	<3.0
Barium	200	.23	0.10	<200
Beryllium	1.0	.09	0.0	<1.0
Bismuth	20	2.3		
Boron	100	.94	anr	
Cadmium	3.0	.24	0.20	<3.0
Calcium	5000	64	4.6	<5000
Chromium	10	.79	-0.10	<10
Cobalt	50	.4	0.0	<50
Copper	10	.68	-0.40	<10
Iron	100	5.2	2.0	<100
Lead	3.0	1.5	-1.7	<3.0
Lithium	20	1.1		
Magnesium	5000	26	23.6	<5000
Manganese	15	.17	0.0	<15
Molybdenum	20	.35		
Nickel	10	.61	0.30	<10
Palladium	50	2.1		
Potassium	10000	51	1.6	<10000
Selenium	10	3.1	1.3	<10
Silicon	200	2.8		
Silver	10	.46	-0.60	<10
Sodium	10000	14	50.2	<10000
Sulfur	50	4.9		
Strontium	10	.13		
Thallium	2.0	1.8	-0.20	<2.0
Tin	10	.58		
Titanium	10	.41		
Tungsten	50	5.1		
Vanadium	50	.56	0.40	<50
Zinc	20	8.9	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31593 Units: ug/l

Time:			02:44	
Sample ID:			CCB16	
Metal	RL	IDL	raw	final
Zirconium	10	.29		

(*) Outside of QC limits
(anr) Analyte not requested

9.2.2
9

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		10:32			10:43			11:30	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	40300	100.8	40000	41100	102.8
Antimony	2000	2010	100.5	2000	1970	98.5	2000	1980	99.0
Arsenic	2000	2010	100.5	2000	1980	99.0	2000	1990	99.5
Barium	2000	2020	101.0	2000	2040	102.0	2000	2080	104.0
Beryllium	2000	2030	101.5	2000	2050	102.5	2000	2090	104.5
Bismuth									
Boron	anr								
Cadmium	2000	2010	100.5	2000	1980	99.0	2000	2000	100.0
Calcium	40000	40200	100.5	40000	40800	102.0	40000	41500	103.8
Chromium	2000	2030	101.5	2000	2060	103.0	2000	2060	103.0
Cobalt	2000	2030	101.5	2000	1990	99.5	2000	2010	100.5
Copper	2000	1960	98.0	2000	1940	97.0	2000	1980	99.0
Iron	40000	40500	101.3	40000	41000	102.5	40000	41700	104.3
Lead	2000	2050	102.5	2000	2020	101.0	2000	2040	102.0
Lithium									
Magnesium	40000	39700	99.3	40000	40400	101.0	40000	41000	102.5
Manganese	2000	2050	102.5	2000	2060	103.0	2000	2070	103.5
Molybdenum									
Nickel	2000	2070	103.5	2000	2030	101.5	2000	2050	102.5
Palladium									
Potassium	40000	40100	100.3	40000	40500	101.3	40000	41300	103.3
Selenium	2000	2010	100.5	2000	1980	99.0	2000	1990	99.5
Silicon									
Silver	250	245	98.0	250	245	98.0	250	250	100.0
Sodium	40000	40300	100.8	40000	40900	102.3	40000	41600	104.0
Sulfur									
Strontium									
Thallium	2000	2050	102.5	2000	2020	101.0	2000	2030	101.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2040	102.0	2000	2050	102.5	2000	2070	103.5
Zinc	2000	2050	102.5	2000	2020	101.0	2000	2030	101.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		10:32			10:43			11:30	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		12:40			13:44			14:53	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	41400	103.5	40000	40000	100.0	40000	40100	100.3
Antimony	2000	2020	101.0	2000	1990	99.5	2000	2000	100.0
Arsenic	2000	2030	101.5	2000	2000	100.0	2000	2010	100.5
Barium	2000	2110	105.5	2000	2030	101.5	2000	2050	102.5
Beryllium	2000	2110	105.5	2000	2030	101.5	2000	2040	102.0
Bismuth									
Boron	anr								
Cadmium	2000	2030	101.5	2000	1990	99.5	2000	2000	100.0
Calcium	40000	41800	104.5	40000	40600	101.5	40000	40600	101.5
Chromium	2000	2080	104.0	2000	2040	102.0	2000	2060	103.0
Cobalt	2000	2040	102.0	2000	2030	101.5	2000	2040	102.0
Copper	2000	2020	101.0	2000	1950	97.5	2000	1990	99.5
Iron	40000	42000	105.0	40000	40700	101.8	40000	40700	101.8
Lead	2000	2070	103.5	2000	2040	102.0	2000	2040	102.0
Lithium									
Magnesium	40000	41100	102.8	40000	39900	99.8	40000	39700	99.3
Manganese	2000	2100	105.0	2000	2030	101.5	2000	2070	103.5
Molybdenum									
Nickel	2000	2080	104.0	2000	2050	102.5	2000	2050	102.5
Palladium									
Potassium	40000	41700	104.3	40000	40400	101.0	40000	40500	101.3
Selenium	2000	2030	101.5	2000	2000	100.0	2000	2010	100.5
Silicon									
Silver	250	251	100.4	250	246	98.4	250	248	99.2
Sodium	40000	42100	105.3	40000	40800	102.0	40000	41100	102.8
Sulfur									
Strontium									
Thallium	2000	2070	103.5	2000	2040	102.0	2000	2040	102.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2090	104.5	2000	2040	102.0	2000	2080	104.0
Zinc	2000	2070	103.5	2000	2020	101.0	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		12:40			13:44			14:53	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

9.2.3
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CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		16:03			17:13			18:17	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	40900	102.3	40000	39800	99.5
Antimony	2000	1970	98.5	2000	2020	101.0	2000	1980	99.0
Arsenic	2000	1990	99.5	2000	2030	101.5	2000	2000	100.0
Barium	2000	2030	101.5	2000	2100	105.0	2000	2040	102.0
Beryllium	2000	2020	101.0	2000	2080	104.0	2000	2030	101.5
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	2030	101.5	2000	1980	99.0
Calcium	40000	40400	101.0	40000	41400	103.5	40000	40400	101.0
Chromium	2000	2030	101.5	2000	2080	104.0	2000	2030	101.5
Cobalt	2000	2020	101.0	2000	2060	103.0	2000	2030	101.5
Copper	2000	1930	96.5	2000	1990	99.5	2000	1930	96.5
Iron	40000	40500	101.3	40000	41500	103.8	40000	40500	101.3
Lead	2000	2030	101.5	2000	2080	104.0	2000	2040	102.0
Lithium									
Magnesium	40000	39600	99.0	40000	40500	101.3	40000	39500	98.8
Manganese	2000	2030	101.5	2000	2090	104.5	2000	2030	101.5
Molybdenum									
Nickel	2000	2030	101.5	2000	2080	104.0	2000	2040	102.0
Palladium									
Potassium	40000	40200	100.5	40000	41400	103.5	40000	40400	101.0
Selenium	2000	1980	99.0	2000	2020	101.0	2000	1990	99.5
Silicon									
Silver	250	244	97.6	250	250	100.0	250	246	98.4
Sodium	40000	40900	102.3	40000	42200	105.5	40000	41200	103.0
Sulfur									
Strontium									
Thallium	2000	2020	101.0	2000	2060	103.0	2000	2020	101.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2030	101.5	2000	2090	104.5	2000	2030	101.5
Zinc	2000	2000	100.0	2000	2050	102.5	2000	2000	100.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		16:03			17:13			18:17	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		19:04			20:14			21:18	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39800	99.5	40000	42100	105.3	40000	41000	102.5
Antimony	2000	1980	99.0	2000	1990	99.5	2000	2050	102.5
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	2060	103.0
Barium	2000	2040	102.0	2000	2160	108.0	2000	2090	104.5
Beryllium	2000	2030	101.5	2000	2140	107.0	2000	2070	103.5
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	1990	99.5	2000	2050	102.5
Calcium	40000	40500	101.3	40000	42800	107.0	40000	41600	104.0
Chromium	2000	2020	101.0	2000	2090	104.5	2000	2110	105.5
Cobalt	2000	2020	101.0	2000	2040	102.0	2000	2090	104.5
Copper	2000	1930	96.5	2000	1990	99.5	2000	2010	100.5
Iron	40000	40600	101.5	40000	42800	107.0	40000	41500	103.8
Lead	2000	2030	101.5	2000	2050	102.5	2000	2100	105.0
Lithium									
Magnesium	40000	39600	99.0	40000	41900	104.8	40000	40800	102.0
Manganese	2000	2030	101.5	2000	2090	104.5	2000	2100	105.0
Molybdenum									
Nickel	2000	2040	102.0	2000	2050	102.5	2000	2100	105.0
Palladium									
Potassium	40000	40400	101.0	40000	42600	106.5	40000	41400	103.5
Selenium	2000	1980	99.0	2000	1990	99.5	2000	2050	102.5
Silicon									
Silver	250	244	97.6	250	251	100.4	250	254	101.6
Sodium	40000	41100	102.8	40000	43500	108.8	40000	42200	105.5
Sulfur									
Strontium									
Thallium	2000	2030	101.5	2000	2040	102.0	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2030	101.5	2000	2090	104.5	2000	2100	105.0
Zinc	2000	2000	100.0	2000	2010	100.5	2000	2070	103.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		19:04			20:14			21:18	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		22:27			23:38			00:48	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40800	102.0	40000	40900	102.3	40000	41200	103.0
Antimony	2000	2010	100.5	2000	2020	101.0	2000	2030	101.5
Arsenic	2000	2010	100.5	2000	2030	101.5	2000	2040	102.0
Barium	2000	2090	104.5	2000	2090	104.5	2000	2110	105.5
Beryllium	2000	2070	103.5	2000	2080	104.0	2000	2090	104.5
Bismuth									
Boron	anr								
Cadmium	2000	2010	100.5	2000	2030	101.5	2000	2040	102.0
Calcium	40000	41300	103.3	40000	41600	104.0	40000	41700	104.3
Chromium	2000	2080	104.0	2000	2080	104.0	2000	2090	104.5
Cobalt	2000	2040	102.0	2000	2060	103.0	2000	2060	103.0
Copper	2000	2000	100.0	2000	1990	99.5	2000	2010	100.5
Iron	40000	41200	103.0	40000	41500	103.8	40000	41500	103.8
Lead	2000	2060	103.0	2000	2080	104.0	2000	2070	103.5
Lithium									
Magnesium	40000	40400	101.0	40000	40900	102.3	40000	40800	102.0
Manganese	2000	2080	104.0	2000	2080	104.0	2000	2100	105.0
Molybdenum									
Nickel	2000	2060	103.0	2000	2080	104.0	2000	2090	104.5
Palladium									
Potassium	40000	40800	102.0	40000	41400	103.5	40000	41700	104.3
Selenium	2000	2000	100.0	2000	2020	101.0	2000	2020	101.0
Silicon									
Silver	250	251	100.4	250	251	100.4	250	252	100.8
Sodium	40000	41200	103.0	40000	42100	105.3	40000	42500	106.3
Sulfur									
Strontium									
Thallium	2000	2050	102.5	2000	2060	103.0	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2080	104.0	2000	2080	104.0	2000	2100	105.0
Zinc	2000	2030	101.5	2000	2050	102.5	2000	2050	102.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		22:27			23:38			00:48	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		01:52			02:39	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	40200	100.5
Antimony	2000	1970	98.5	2000	1990	99.5
Arsenic	2000	1980	99.0	2000	2010	100.5
Barium	2000	2030	101.5	2000	2050	102.5
Beryllium	2000	2010	100.5	2000	2040	102.0
Bismuth						
Boron	anr					
Cadmium	2000	1980	99.0	2000	2000	100.0
Calcium	40000	40200	100.5	40000	40800	102.0
Chromium	2000	2050	102.5	2000	2050	102.5
Cobalt	2000	2000	100.0	2000	2040	102.0
Copper	2000	1970	98.5	2000	1970	98.5
Iron	40000	39900	99.8	40000	40500	101.3
Lead	2000	2020	101.0	2000	2050	102.5
Lithium						
Magnesium	40000	39400	98.5	40000	39900	99.8
Manganese	2000	2050	102.5	2000	2050	102.5
Molybdenum						
Nickel	2000	2030	101.5	2000	2050	102.5
Palladium						
Potassium	40000	40100	100.3	40000	40500	101.3
Selenium	2000	1960	98.0	2000	2000	100.0
Silicon						
Silver	250	247	98.8	250	248	99.2
Sodium	40000	41000	102.5	40000	41500	103.8
Sulfur						
Strontium						
Thallium	2000	2020	101.0	2000	2040	102.0
Tin						
Titanium						
Tungsten						
Vanadium	2000	2050	102.5	2000	2060	103.0
Zinc	2000	1990	99.5	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31593 Units: ug/l

Time:		01:52			02:39	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				10:55		11:07		11:13	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	200	100.0	511	102.2	96.1	96.1
Antimony	6.0	20	3.0	5.9	98.3	19.6	98.0		
Arsenic	8.0	20	3.0	9.2	115.0	19.4	97.0	3.3	110.0
Barium	200		4.0	197	98.5			4.0	100.0
Beryllium	2.0		1.0	2.2	110.0			1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.3	110.0				
Calcium	5000		1000	5290	105.8			1040	104.0
Chromium	10		2.0	11.0	110.0			2.3	115.0
Cobalt	50		3.0	50.6	101.2			3.1	103.3
Copper	10		2.0	11.1	111.0			2.5	125.0
Iron	100	500		104	104.0	524	104.8		
Lead	3.0	20	2.5	3.0	100.0	20.1	100.5		
Lithium	20								
Magnesium	5000		100	5250	105.0				
Manganese	15		3.0	16.2	108.0			3.3	110.0
Molybdenum	20		4.0						
Nickel	10		4.0	11.8	118.0			4.6	115.0
Palladium	50								
Potassium	5000		2000	5220	104.4			2040	102.0
Selenium	10	20	5.0	12.7	127.0	22.1	110.5		
Silicon	200								
Silver	5.0		1.0	4.3	86.0				
Sodium	5000		1000	5350	107.0			1050	105.0
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	9.1	91.0			1.5	75.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	53.2	106.4				
Zinc	20		10	22.1	110.5			10.8	108.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				10:55		11:07		11:13	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

9.2.4

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LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				18:29		18:35		18:41	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	205	102.5	97.2	97.2	508	101.6
Antimony	6.0	20	3.0	7.4	123.3			19.4	97.0
Arsenic	8.0	20	3.0	8.6	107.5	2.4	80.0	17.2	86.0
Barium	200		4.0	203	101.5	4.1	102.5		
Beryllium	2.0		1.0	2.2	110.0	1.0	100.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.4	113.3				
Calcium	5000		1000	5420	108.4	1060	106.0		
Chromium	10		2.0	11.3	113.0	2.0	100.0		
Cobalt	50		3.0	52.1	104.2	3.3	110.0		
Copper	10		2.0	10.7	107.0	1.7	85.0		
Iron	100	500		108	108.0			518	103.6
Lead	3.0	20	2.5	2.2	73.3			19.2	96.0
Lithium	20								
Magnesium	5000		100	5360	107.2				
Manganese	15		3.0	17.1	114.0	3.3	110.0		
Molybdenum	20		4.0						
Nickel	10		4.0	11.2	112.0	4.5	112.5		
Palladium	50								
Potassium	5000		2000	5320	106.4	2090	104.5		
Selenium	10	20	5.0	12.7	127.0			21.2	106.0
Silicon	200								
Silver	5.0		1.0	4.3	86.0				
Sodium	5000		1000	5580	111.6	1100	110.0		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	7.8	78.0	1.8	90.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	55.1	110.2				
Zinc	20		10	22.7	113.5	11.5	115.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				18:29		18:35		18:41	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

9.2.4

9

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				18:46		02:03		02:09	
Sample ID:	CRI	CRIA	CRID	CRID4		CRI3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	109	109.0	208	104.0	96.6	96.6
Antimony	6.0	20	3.0			5.8	96.7		
Arsenic	8.0	20	3.0	2.2	73.3	9.7	121.3	2.5	83.3
Barium	200		4.0	4.2	105.0	196	98.0	4.2	105.0
Beryllium	2.0		1.0	1.0	100.0	2.2	110.0	1.0	100.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0			3.0	100.0		
Calcium	5000		1000	1040	104.0	5270	105.4	1020	102.0
Chromium	10		2.0	2.4	120.0	10.2	102.0	2.3	115.0
Cobalt	50		3.0	3.5	116.7	49.9	99.8	2.8	93.3
Copper	10		2.0	2.0	100.0	10.1	101.0	2.3	115.0
Iron	100	500				105	105.0		
Lead	3.0	20	2.5			2.5	83.3		
Lithium	20								
Magnesium	5000		100			5190	103.8		
Manganese	15		3.0	3.2	106.7	15.6	104.0	3.2	106.7
Molybdenum	20		4.0						
Nickel	10		4.0	4.6	115.0	11.5	115.0	4.4	110.0
Palladium	50								
Potassium	5000		2000	2030	101.5	5140	102.8	2030	101.5
Selenium	10	20	5.0			12.1	121.0		
Silicon	200								
Silver	5.0		1.0			4.4	88.0		
Sodium	5000		1000	1080	108.0	5430	108.6	1070	107.0
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	1.5	75.0	8.3	83.0	2.1	105.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0			51.5	103.0		
Zinc	20		10	11.3	113.0	21.7	108.5	11.4	114.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				18:46		02:03		02:09	
Sample ID:	CRI	CRIA	CRID	CRID4		CRI3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

9.2.4

9

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				02:15		02:21	
Sample ID:	CRI	CRIA	CRID	CRIA3		CRID6	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	500	100.0	100	100.0
Antimony	6.0	20	3.0	20.4	102.0		
Arsenic	8.0	20	3.0	17.1	85.5	3.2	106.7
Barium	200		4.0			4.4	110.0
Beryllium	2.0		1.0			1.1	110.0
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0				
Calcium	5000		1000			1040	104.0
Chromium	10		2.0			2.2	110.0
Cobalt	50		3.0			2.9	96.7
Copper	10		2.0			2.0	100.0
Iron	100	500		510	102.0		
Lead	3.0	20	2.5	19.6	98.0		
Lithium	20						
Magnesium	5000		100				
Manganese	15		3.0			3.2	106.7
Molybdenum	20		4.0				
Nickel	10		4.0			4.6	115.0
Palladium	50						
Potassium	5000		2000			2060	103.0
Selenium	10	20	5.0	21.6	108.0		
Silicon	200						
Silver	5.0		1.0				
Sodium	5000		1000			1100	110.0
Sulfur	50	50	50				
Strontium	10						
Thallium	10		2.0			0.50U	0.0* (a)
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0				
Zinc	20		10			11.2	112.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31593 Units: ug/l

Time:				02:15		02:21	
Sample ID:	CRI	CRIA	CRID	CRIA3		CRID6	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10		5.0				

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31593 Units: ug/l

Time: / Sample ID: / Metal	ICSA True	ICSAB True	11:18 ICSA1 Results	% Rec	11:24 ICSAB1 Results	% Rec	18:52 ICSA2 Results	% Rec	18:58 ICSAB2 Results	% Rec
Aluminum	500000	500000	543000	108.6	517000	103.4	531000	106.2	511000	102.2
Antimony		1000	2.7		1110	111.0	6.4		1100	110.0
Arsenic		1000	0.30		1020	102.0	1.8		1020	102.0
Barium		500	-1.3		533	106.6	-0.80		539	107.8
Beryllium		500	0.60		495	99.0	0.60		495	99.0
Bismuth		500	-16		-16	0.0	-17		-17	0.0*
Boron			0.60		-6.5		1.2		-8.4	
Cadmium		1000	0.80		1090	109.0	0.40		1070	107.0
Calcium	400000	400000	389000	97.3	379000	94.8	376000	94.0	380000	95.0
Chromium		500	0.40		478	95.6	0.30		487	97.4
Cobalt		500	-2.2		527	105.4	-2.4		529	105.8
Copper		500	-5.0		511	102.2	-4.4		513	102.6
Iron	200000	200000	194000	97.0	198000	99.0	189000	94.5	198000	99.0
Lead		1000	2.4		988	98.8	2.3		983	98.3
Lithium		500	3.5		3.8	0.8	3.6		3.7	0.7*
Magnesium	500000	500000	525000	105.0	511000	102.2	506000	101.2	509000	101.8
Manganese		500	0.90		485	97.0	0.0		490	98.0
Molybdenum		500	-1.9		544	108.8	-2.1		544	108.8
Nickel		1000	-1.5		950	95.0	-1.3		944	94.4
Palladium		500	-12		531	106.2	-11		529	105.8
Potassium			174		154		178		156	
Selenium		1000	1.7		1130	113.0	-5.3		1120	112.0
Silicon			15.5		6.7		15.5		7.6	
Silver		1000	8.1		972	97.2	4.9		979	97.9
Sodium			-12		3.5		0.30		10.6	
Sulfur		500	-6.8		-6.4	0.0*	-6.2		-7.1	0.0*
Strontium			3.5		3.3		3.5		3.3	
Thallium		1000	-1.6		1060	106.0	-1.3		1050	105.0
Tin			-4.2		-3.9		-4.3		-3.8	
Titanium			2.6		2.2		2.0		1.6	
Tungsten		500	7.5		27.2	5.4*	1.3		19.7	3.9*
Vanadium		500	0.30		479	95.8	0.60		487	97.4
Zinc		1000	-4.6		1030	103.0	-3.9		1010	101.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31593 Units: ug/l

Time:			11:18		11:24		18:52		18:58	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-1.8		-1.0	0.0*	-2.3		-2.0	0.0*

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31593 Units: ug/l

Time:			02:27		02:33	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	523000	104.6	507000	101.4
Antimony		1000	3.0		1070	107.0
Arsenic		1000	-0.10		991	99.1
Barium		500	-0.80		526	105.2
Beryllium		500	0.70		484	96.8
Bismuth		500	-15		-19	0.0*
Boron			-0.60		-7.1	
Cadmium		1000	0.50		1060	106.0
Calcium	400000	400000	378000	94.5	370000	92.5
Chromium		500	0.0		477	95.4
Cobalt		500	-2.2		517	103.4
Copper		500	-4.8		506	101.2
Iron	200000	200000	187000	93.5	192000	96.0
Lead		1000	1.4		972	97.2
Lithium		500	2.2		2.1	0.4*
Magnesium	500000	500000	503000	100.6	499000	99.8
Manganese		500	0.30		484	96.8
Molybdenum		500	-1.6		531	106.2
Nickel		1000	-1.3		927	92.7
Palladium		500	-13		522	104.4
Potassium			151		157	
Selenium		1000	-0.40		1090	109.0
Silicon			17.7		8.3	
Silver		1000	5.5		962	96.2
Sodium			26.4		39.1	
Sulfur		500	-11		-7.9	0.0*
Strontium			3.5		3.4	
Thallium		1000	-1.7		1030	103.0
Tin			-3.8		-4.1	
Titanium			1.7		1.9	
Tungsten		500	2.8		18.5	3.7*
Vanadium		500	0.10		478	95.6
Zinc		1000	-3.8		991	99.1

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070413M1.ICP Date Analyzed: 07/04/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31593 Units: ug/l

Time:			02:27		02:33	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	-2.4		-2.0	0.0*

(*) Outside of QC limits
(anr) Analyte not requested

9.2.5
9

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:46	MA31602-STD1	1		STDA
07:52	MA31602-STD2	1		STDD
07:58	ZZZZZZ	1		
08:03	ZZZZZZ	1		
08:10	MA31602-ICV1	1		
08:24	MA31602-ICB1	1		
08:32	MA31602-ICV2	1		
08:44	MA31602-ICB2	1		
08:49	MA31602-ICCV1	1		
08:58	MA31602-CCB1	1		
09:03	MA31602-CRI1	1		
09:09	MA31602-CRID1	1		
09:15	MA31602-CRIA1	1		
09:21	MA31602-CRID2	1		
09:27	MA31602-ICSA1	1		
09:33	MA31602-ICSAB1	1		
09:39	ZZZZZZ	1		
09:45	ZZZZZZ	1		
09:51	ZZZZZZ	1		
09:57	ZZZZZZ	1		
10:03	MA31602-CCV1	1		
10:09	MA31602-CCB2	1		
10:15	ZZZZZZ	1		
10:20	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:32	ZZZZZZ	1		
10:38	ZZZZZZ	1		
10:44	ZZZZZZ	1		
10:49	MP72952-S1	3		
10:55	MP72952-S2	3		
11:01	JB40687-3	3		(sample used for QC only; not part of login JB40350)
11:07	MA31602-CCV2	1		
11:12	MA31602-CCB3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:18	MP72952-SD1	15		
11:24	ZZZZZZ	1		
11:30	ZZZZZZ	2		
11:36	ZZZZZZ	5		
11:41	ZZZZZZ	1		
11:47	ZZZZZZ	1		
11:53	ZZZZZZ	1		
11:59	ZZZZZZ	1		
12:05	ZZZZZZ	1		
12:11	MA31602-CCV3	1		
12:17	MA31602-CCB4	1		
12:23	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:35	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:48	MP72775-B1	1		
12:53	ZZZZZZ	5		
12:59	ZZZZZZ	1		
13:05	ZZZZZZ	2		
13:11	ZZZZZZ	1		
13:17	MA31602-CCV4	1		
13:23	MA31602-CCB5	1		
13:28	ZZZZZZ	1		
13:34	ZZZZZZ	50		
13:40	ZZZZZZ	1		
13:46	MA31602-CCV5	1		
13:52	MA31602-CCB6	1		
13:58	MA31602-CRI2	1		
14:16	MA31602-CRID3	1		
14:22	MA31602-CRIA2	1		
14:28	MA31602-CRID4	1		
14:34	MA31602-CCV6	1		
14:40	MA31602-CCB7	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:46	MA31602-ICSA2	1		
14:52	MA31602-ICSAB2	1		
14:57	MP72792-S1	1		
15:03	MP72792-S1	5		
15:09	MP72792-S2	1		
15:14	MP72792-S2	5		
15:20	JB40213-1	1		(sample used for QC only; not part of login JB40350)
15:26	MP72792-SD1	5		
15:32	JB40213-1	5		(sample used for QC only; not part of login JB40350)
15:38	MP72792-SD1	25		
15:43	MA31602-CCV7	1		
15:49	MA31602-CCB8	1		
15:55	ZZZZZZ	3		
16:01	ZZZZZZ	10		
16:07	ZZZZZZ	3		
16:13	ZZZZZZ	10		
16:19	ZZZZZZ	1		
16:25	MP72853-B1	1		
16:30	JB40350-2	1		
---------->	Last reportable sample/prep for job JB40350			
16:36	ZZZZZZ	3		
16:42	MP72856-MB1	1		
16:48	MP72856-LC1	1		
16:54	MA31602-CCV8	1		
16:59	MA31602-CCB9	1		
17:05	ZZZZZZ	1		
17:11	MP72971-MB2	1		
17:17	MP72971-LC1	1		
17:23	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:35	MP72958-MB1	1		
17:40	MP72958-B1	1		
17:46	MP72958-S1	1		high RSD-s
17:52	MP72958-S2	1		high RSD-s

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:58	MA31602-CCV9	1		
18:03	MA31602-CCB10	1		
18:09	JB41043-10	1		(sample used for QC only; not part of login JB40350)
18:15	MP72958-SD1	5		high RSD-s
18:21	ZZZZZZ	1		
18:27	ZZZZZZ	1		
18:33	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:44	ZZZZZZ	1		
18:50	ZZZZZZ	1		
18:56	ZZZZZZ	1		
19:02	ZZZZZZ	1		
19:08	MA31602-CCV10	1		
19:13	MA31602-CCB11	1		
19:19	ZZZZZZ	1		
19:25	ZZZZZZ	1		
19:31	ZZZZZZ	1		
19:37	ZZZZZZ	1		
19:43	ZZZZZZ	1		
19:48	ZZZZZZ	1		
19:54	ZZZZZZ	1		
20:00	ZZZZZZ	1		
20:06	ZZZZZZ	1		
20:12	ZZZZZZ	1		
20:18	MA31602-CCV11	1		
20:23	MA31602-CCB12	1		
20:29	ZZZZZZ	1		
20:35	MP72882-MB1	1		
20:41	MP72882-B1	1		
20:47	MP72882-S1	1		
20:52	MP72882-S2	1		
20:58	JB40471-1	1		(sample used for QC only; not part of login JB40350)
21:04	MP72882-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:10	ZZZZZZ	1		
21:15	ZZZZZZ	1		
21:21	MA31602-CCV12	1		
21:27	MA31602-CCB13	1		
21:33	MA31602-CRI3	1		
21:39	ZZZZZZ	1		
21:45	MA31602-CRIA3	1		
21:51	MA31602-CRID5	1		
21:57	MA31602-ICSA3	1		
22:03	MA31602-ICSAB3	1		
22:09	ZZZZZZ	1		
22:14	ZZZZZZ	1		
22:20	MA31602-CCV13	1		
22:26	MA31602-CCB14	1		
---------->	Last reportable CCB for job JB40350			
22:32	ZZZZZZ	1		
22:38	ZZZZZZ	1		
22:44	ZZZZZZ	1		
22:49	ZZZZZZ	1		
22:55	ZZZZZZ	1		
23:01	ZZZZZZ	1		
23:07	ZZZZZZ	1		
23:12	ZZZZZZ	1		
23:18	ZZZZZZ	1		
23:24	ZZZZZZ	1		
23:30	MA31602-CCV14	1		
23:36	MA31602-CCB15	1		
23:41	ZZZZZZ	1		
23:47	ZZZZZZ	1		
23:53	MP72871-MB1	1		
23:59	MP72871-LC1	1		
00:05	MP72871-S1	1		
00:10	MP72871-S2	1		
00:16	JB40356-4	1		(sample used for QC only; not part of login JB40350)

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:22	MP72871-SD1	5		
00:28	ZZZZZZ	1		
00:34	ZZZZZZ	1		
00:40	MA31602-CCV15	1		
00:45	MA31602-CCB16	1		
00:51	ZZZZZZ	1		
00:57	ZZZZZZ	1		
01:03	ZZZZZZ	1		
01:09	ZZZZZZ	1		
01:15	ZZZZZZ	1		
01:21	ZZZZZZ	1		
01:27	MP72985-MB1	1		
01:32	MP72985-B1	1		
01:38	MP72985-S1	1		
01:44	MP72985-S2	1		
01:49	MA31602-CCV16	1		
01:55	MA31602-CCB17	1		
02:01	JB40638-2	1		(sample used for QC only; not part of login JB40350)
02:07	MP72985-SD1	5		
02:13	ZZZZZZ	1		
02:18	MP73023-MB1	1		
02:24	MP73023-LC1	1		
02:30	MP73023-B1	1		
02:36	MP73023-S1	1		
02:41	MP73023-S2	1		
02:47	JB41201-10	1		(sample used for QC only; not part of login JB40350)
02:53	MP73023-SD1	5		
02:59	MA31602-CCV17	1		
03:04	MA31602-CCB18	1		
03:10	ZZZZZZ	1		
03:16	ZZZZZZ	1		
03:22	ZZZZZZ	1		
03:28	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:33	ZZZZZZ	1		
03:39	ZZZZZZ	1		
03:45	ZZZZZZ	1		
03:51	ZZZZZZ	1		
03:57	ZZZZZZ	1		
04:03	ZZZZZZ	1		
04:09	MA31602-CCV18	1		
04:14	MA31602-CCB19	1		
04:20	ZZZZZZ	1		
04:26	ZZZZZZ	1		
04:32	ZZZZZZ	1		
04:38	ZZZZZZ	1		
04:44	ZZZZZZ	1		
04:49	ZZZZZZ	1		
04:55	ZZZZZZ	1		
05:01	ZZZZZZ	1		
05:07	ZZZZZZ	1		
05:12	MA31602-CCV19	1		
05:18	MA31602-CCB20	1		
05:24	ZZZZZZ	1		
05:30	ZZZZZZ	1		
05:36	ZZZZZZ	1		
05:42	MA31602-CCV20	1		
05:48	MA31602-CCB21	1		
05:53	MA31602-CRI4	1		
05:59	MA31602-CRID6	1		
06:05	MA31602-CRIA4	1		
06:11	MA31602-CRID7	1		
06:17	MA31602-ICSA4	1		
06:23	MA31602-ICSAB4	1		
06:29	MA31602-CCV21	1		
06:35	MA31602-CCB22	1		
06:41	MA31602-CRID8	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:47	ZZZZZZ	1		
06:52	ZZZZZZ	1		
06:58	ZZZZZZ	1		
07:04	ZZZZZZ	1		
07:11	ZZZZZZ	1		
07:16	MA31602-CCV22	1		
07:22	MA31602-CCB23	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
07:46	MA31602-STD1	1541 R	63127 R	14764 R	2977 R
07:52	MA31602-STD2	1426	57669	14535	2507
07:58	ZZZZZZ	1478	60048	14397	2641
08:03	ZZZZZZ	1536	62600	14562	2963
08:10	MA31602-ICV1	No results reported for the elements associated with this internal standard.			
08:24	MA31602-ICB1	No results reported for the elements associated with this internal standard.			
08:32	MA31602-ICV2	1478	59372	14606	2640
08:44	MA31602-ICB2	1540	63063	14835	2976
08:49	MA31602-ICCV1	1478	60052	14687	2637
08:58	MA31602-CCB1	1549	62399	14714	2981
09:03	MA31602-CRI1	1522	62395	14999	2893
09:09	MA31602-CRID1	1562	64249	14981	2993
09:15	MA31602-CRIA1	1543	63441	14711	2964
09:21	MA31602-CRID2	1516	61899	14320	2908
09:27	MA31602-ICSA1	1346	54232	13904	2277
09:33	MA31602-ICSAB1	1351	54096	13694	2290
09:39	ZZZZZZ	6055 !	192270 !	33374 !	10743 !
09:45	ZZZZZZ	6037 !	197770 !	31832 !	10748 !
09:51	ZZZZZZ	1552	63538	14606	3040
09:57	ZZZZZZ	1462	62989	14783	2916
10:03	MA31602-CCV1	1484	59891	14476	2648
10:09	MA31602-CCB2	1546	63288	14478	2990
10:15	ZZZZZZ	1421	59310	14257	2570
10:20	ZZZZZZ	1319	54152	14065	2365
10:26	ZZZZZZ	1531	63399	14673	2970
10:32	ZZZZZZ	1503	62680	15198	2575
10:38	ZZZZZZ	1544	63411	15402	2662
10:44	ZZZZZZ	1590	63979	15180	2693
10:49	MP72952-S1	1528	62863	15038	2635
10:55	MP72952-S2	1542	62811	15499	2645
11:01	JB40687-3	1537	62063	15071	2671
11:07	MA31602-CCV2	1476	60140	14294	2637
11:12	MA31602-CCB3	1542	63215	14763	2979

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:18	MP72952-SD1	1530	61951	14518	2825
11:24	ZZZZZZ	1552	63120	15026	2716
11:30	ZZZZZZ	1530	61866	14986	2725
11:36	ZZZZZZ	1545	63013	14739	2839
11:41	ZZZZZZ	1139	46335	13569	1906 !
11:47	ZZZZZZ	1206	48178	13945	2022 !
11:53	ZZZZZZ	1156	45887	13675	1928 !
11:59	ZZZZZZ	1169	46970	13879	1955 !
12:05	ZZZZZZ	1532	63444	14682	2959
12:11	MA31602-CCV3	1480	62074	14626	2636
12:17	MA31602-CCB4	1558	65108	14988	2998
12:23	ZZZZZZ	1384	58922	14729	2567
12:29	ZZZZZZ	1378	58611	14672	2557
12:35	ZZZZZZ	1334	54679	14717	2328
12:41	ZZZZZZ	6525 !	999999 !	37525 !	11531 !
12:48	MP72775-B1	1438	60530	14600	2660
12:53	ZZZZZZ	1466	59760	14861	2717
12:59	ZZZZZZ	1363	54886	14323	2421
13:05	ZZZZZZ	1370	56543	14399	2440
13:11	ZZZZZZ	1553	64578	14794	3008
13:17	MA31602-CCV4	1468	59685	14209	2610
13:23	MA31602-CCB5	1534	64360	14923	2958
13:28	ZZZZZZ	1402	57173	14102	2537
13:34	ZZZZZZ	1451	59121	13987	2664
13:40	ZZZZZZ	1530	63259	14191	2962
13:46	MA31602-CCV5	1468	60311	14212	2616
13:52	MA31602-CCB6	1534	63853	14388	2956
13:58	MA31602-CRI2	1516	61669	14166	2874
14:16	MA31602-CRID3	1545	60986	13543	2956
14:22	MA31602-CRIA2	1564	62885	14182	3002
14:28	MA31602-CRID4	1564	64312	14683	2993
14:34	MA31602-CCV6	1480	59241	14064	2635
14:40	MA31602-CCB7	1536	63447	14693	2958

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:46	MA31602-ICSA2	1369	53589	13153	2312
14:52	MA31602-ICSAB2	1374	54710	13514	2324
14:57	MP72792-S1	No results reported for the elements associated with this internal standard.			
15:03	MP72792-S1	1504	60971	13998	2731
15:09	MP72792-S2	1474	60017	14126	2553
15:14	MP72792-S2	1515	60450	14092	2759
15:20	JB40213-1	No results reported for the elements associated with this internal standard.			
15:26	MP72792-SD1	No results reported for the elements associated with this internal standard.			
15:32	JB40213-1	1545	63320	13876	2840
15:38	MP72792-SD1	1561	62668	14206	2952
15:43	MA31602-CCV7	1473	60972	13835	2626
15:49	MA31602-CCB8	1516	62620	14628	2916
15:55	ZZZZZZ	1341	52963	14027	2329
16:01	ZZZZZZ	1456	57930	14119	2604
16:07	ZZZZZZ	1329	53812	14124	2303
16:13	ZZZZZZ	1414	56315	14038	2527
16:19	ZZZZZZ	1539	62996	14074	2976
16:25	MP72853-B1	1498	61477	14085	2737
16:30	JB40350-2	1581	63100	14422	2739
16:36	ZZZZZZ	1509	61821	14092	2821
16:42	MP72856-MB1	1541	64049	14354	2983
16:48	MP72856-LC1	1544	61086	14352	2885
16:54	MA31602-CCV8	1504	60587	14352	2673
16:59	MA31602-CCB9	1546	65468	14331	2979
17:05	ZZZZZZ	1537	63249	14250	2966
17:11	MP72971-MB2	1326	52378	14276	2275
17:17	MP72971-LC1	1518	63842	14029	2845
17:23	ZZZZZZ	1278	53450	13758	2164
17:29	ZZZZZZ	1317	52358	13891	2227
17:35	MP72958-MB1	1541	65868	14461	2984
17:40	MP72958-B1	1515	62161	14353	2772
17:46	MP72958-S1	1565	60824	13977	2783
17:52	MP72958-S2	1612	60893	14002	2858

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:58	MA31602-CCV9	1500	60107	13564	2660
18:03	MA31602-CCB10	1586	64080	14332	3024
18:09	JB41043-10	1592	61374	13115	2916
18:15	MP72958-SD1	1627	65079	14059	3059
18:21	ZZZZZZ	1650	67760	14999	3012
18:27	ZZZZZZ	1588	65954	14417	2957
18:33	ZZZZZZ	1604	65192	14804	2982
18:38	ZZZZZZ	1615	66829	15105	2954
18:44	ZZZZZZ	1648	65783	14890	2948
18:50	ZZZZZZ	1472	59397	13399	2717
18:56	ZZZZZZ	1571	65930	14599	2897
19:02	ZZZZZZ	1535	66176	14753	2878
19:08	MA31602-CCV10	1561	60803	14023	2760
19:13	MA31602-CCB11	1584	65033	14340	3024
19:19	ZZZZZZ	1584	65009	14421	2979
19:25	ZZZZZZ	1640	64588	14306	2968
19:31	ZZZZZZ	1563	66079	14506	2847
19:37	ZZZZZZ	1517	59577	13144	2737
19:43	ZZZZZZ	1543	59977	13845	2782
19:48	ZZZZZZ	1600	65444	14346	2995
19:54	ZZZZZZ	1602	61957	13602	2950
20:00	ZZZZZZ	1591	64635	14454	2893
20:06	ZZZZZZ	1614	66648	14993	2939
20:12	ZZZZZZ	1641	66048	14862	2970
20:18	MA31602-CCV11	1501	61698	14627	2664
20:23	MA31602-CCB12	1577	65780	14899	3008
20:29	ZZZZZZ	1545	62234	14684	2767
20:35	MP72882-MB1	1578	60892	14588	3029
20:41	MP72882-B1	1579	64702	15142	2867
20:47	MP72882-S1	1583	65003	14566	2783
20:52	MP72882-S2	1481	60833	14068	2625
20:58	JB40471-1	1519	62826	14935	2771
21:04	MP72882-SD1	1550	62919	14894	2941

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:10	ZZZZZZ	1519	64185	15460	2639
21:15	ZZZZZZ	1309	55256	14505	2193
21:21	MA31602-CCV12	1478	59479	14993	2647
21:27	MA31602-CCB13	1533	64897	15176	2974
21:33	MA31602-CRI3	1534	65014	15239	2931
21:39	ZZZZZZ	1513	63479	14752	2924
21:45	MA31602-CRIA3	1519	64451	14959	2939
21:51	MA31602-CRID5	1548	64553	15084	2991
21:57	MA31602-ICSA3	1363	55593	13955	2317
22:03	MA31602-ICSAB3	1345	55988	14325	2288
22:09	ZZZZZZ	1185	48950	14291	1978 !
22:14	ZZZZZZ	1141	45695	14368	1931 !
22:20	MA31602-CCV13	1462	61260	13904	2623
22:26	MA31602-CCB14	1534	64386	15062	2973
22:32	ZZZZZZ	1531	63230	15348	2694
22:38	ZZZZZZ	1529	65227	15151	2649
22:44	ZZZZZZ	1522	63079	15107	2664
22:49	ZZZZZZ	1542	61996	15313	2693
22:55	ZZZZZZ	1573	62815	15539	2703
23:01	ZZZZZZ	1523	63871	15723	2661
23:07	ZZZZZZ	1476	63085	15376	2706
23:12	ZZZZZZ	1470	60979	14819	2552
23:18	ZZZZZZ	1463	60195	14891	2460
23:24	ZZZZZZ	1513	63419	14883	2813
23:30	MA31602-CCV14	1463	59686	14507	2620
23:36	MA31602-CCB15	1529	65321	14924	2956
23:41	ZZZZZZ	1464	60831	14880	2547
23:47	ZZZZZZ	1490	62350	15274	2678
23:53	MP72871-MB1	1551	67916	14323	3007
23:59	MP72871-LC1	1511	63063	14744	2841
00:05	MP72871-S1	1443	60302	15017	2643
00:10	MP72871-S2	1440	61295	14841	2637
00:16	JB40356-4	1485	62418	14803	2810

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:22	MP72871-SD1	1547	64207	14514	2982
00:28	ZZZZZZ	1487	62117	14735	2827
00:34	ZZZZZZ	1476	62920	14697	2792
00:40	MA31602-CCV15	1484	60553	14385	2657
00:45	MA31602-CCB16	1552	64702	14621	3004
00:51	ZZZZZZ	1503	62251	14671	2865
00:57	ZZZZZZ	1427	57250	14571	2465
01:03	ZZZZZZ	1516	63111	14667	2922
01:09	ZZZZZZ	1460	59923	14573	2684
01:15	ZZZZZZ	1443	59497	14268	2627
01:21	ZZZZZZ	1479	60921	14742	2534
01:27	MP72985-MB1	1542	64025	14733	3015
01:32	MP72985-B1	1505	62279	14587	2775
01:38	MP72985-S1	1527	63353	15006	2649
01:44	MP72985-S2	1515	63098	14993	2626
01:49	MA31602-CCV16	1473	60420	14382	2641
01:55	MA31602-CCB17	1558	64310	14768	3024
02:01	JB40638-2	1566	65104	14870	2748
02:07	MP72985-SD1	1561	65124	14772	2916
02:13	ZZZZZZ	1494	62085	14921	2696
02:18	MP73023-MB1	1531	64296	14717	2997
02:24	MP73023-LC1	1530	64370	15034	2737
02:30	MP73023-B1	1502	61358	14840	2771
02:36	MP73023-S1	1555	62717	14923	2667
02:41	MP73023-S2	1562	62881	14793	2688
02:47	JB41201-10	1580	64434	15030	2754
02:53	MP73023-SD1	1548	63825	14744	2895
02:59	MA31602-CCV17	1459	60100	14339	2617
03:04	MA31602-CCB18	1529	63760	14543	2975
03:10	ZZZZZZ	1631	67908	15988	2742
03:16	ZZZZZZ	1630	66700	15828	2741
03:22	ZZZZZZ	1682	68939	16614	2627
03:28	ZZZZZZ	1645	67559	15700	2750

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:33	ZZZZZZ	1412	58149	14408	2277
03:39	ZZZZZZ	1498	62206	15648	2229
03:45	ZZZZZZ	1353	54816	13929	2199
03:51	ZZZZZZ	1382	57044	14490	2122
03:57	ZZZZZZ	1420	58033	14463	2329
04:03	ZZZZZZ	1416	58554	14409	2300
04:09	MA31602-CCV18	1479	59889	14243	2653
04:14	MA31602-CCB19	1547	63671	14571	3003
04:20	ZZZZZZ	1479	57591	14085	2415
04:26	ZZZZZZ	1441	57393	13853	2349
04:32	ZZZZZZ	1640	64956	14796	2795
04:38	ZZZZZZ	1547	62895	14297	2745
04:44	ZZZZZZ	1551	62761	14570	2736
04:49	ZZZZZZ	1558	63244	14333	2799
04:55	ZZZZZZ	1567	64553	14508	2771
05:01	ZZZZZZ	1590	64413	14631	2812
05:07	ZZZZZZ	1566	64197	14383	2765
05:12	MA31602-CCV19	1465	59700	13888	2616
05:18	MA31602-CCB20	1547	62919	14095	2982
05:24	ZZZZZZ	1325	51702	13711	2262
05:30	ZZZZZZ	1329	51817	13970	2261
05:36	ZZZZZZ	1278	50956	13684	2167
05:42	MA31602-CCV20	1473	59550	13821	2631
05:48	MA31602-CCB21	1547	62662	14145	2989
05:53	MA31602-CRI4	1521	63011	14162	2895
05:59	MA31602-CRID6	1548	63865	14109	2981
06:05	MA31602-CRIA4	1552	64080	14316	2996
06:11	MA31602-CRID7	1543	62703	13899	2968
06:17	MA31602-ICSA4	1359	54878	13357	2304
06:23	MA31602-ICSAB4	1346	54145	13105	2287
06:29	MA31602-CCV21	1479	60241	14091	2638
06:35	MA31602-CCB22	1534	63543	14117	2966
06:41	MA31602-CRID8	1523	62499	14156	2932

INTERNAL STANDARD SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA31602
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:47	ZZZZZZ	1490	61779	14170	2887
06:52	ZZZZZZ	1612	62300	13810	2660
06:58	ZZZZZZ	1556	63674	14386	2997
07:04	ZZZZZZ	1575	64255	14479	3046
07:11	ZZZZZZ	1537	62808	14029	2966
07:16	MA31602-CCV22	1468	59607	13855	2627
07:22	MA31602-CCB23	1556	63828	14315	3005

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			08:44		08:58		10:09		11:12	
Sample ID:			ICB2		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	-6.4	<200	3.2	<200	8.5	<200	8.1	<200
Antimony	6.0	1.8	0.20	<6.0	0.60	<6.0	-0.10	<6.0	0.40	<6.0
Arsenic	3.0	1.7	0.50	<3.0	0.20	<3.0	-0.30	<3.0	-0.50	<3.0
Barium	200	.23	0.10	<200	0.10	<200	0.20	<200	0.10	<200
Beryllium	1.0	.09	0.0	<1.0	0.0	<1.0	0.0	<1.0	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.20	<3.0	0.10	<3.0	0.10	<3.0	0.20	<3.0
Calcium	5000	64	3.0	<5000	3.4	<5000	-0.60	<5000	2.5	<5000
Chromium	10	.79	-0.60	<10	-0.20	<10	-0.60	<10	-0.60	<10
Cobalt	50	.4	-0.30	<50	-0.10	<50	-0.10	<50	0.10	<50
Copper	10	.68	0.40	<10	-0.20	<10	0.40	<10	0.50	<10
Iron	100	5.2	-0.20	<100	-0.40	<100	-0.80	<100	1.3	<100
Lead	3.0	1.5	-0.40	<3.0	-0.30	<3.0	-0.40	<3.0	-1.4	<3.0
Lithium	20	1.1								
Magnesium	5000	26	-9.1	<5000	-12	<5000	-3.8	<5000	-7.2	<5000
Manganese	15	.17	0.0	<15	0.10	<15	0.10	<15	0.10	<15
Molybdenum	20	.35								
Nickel	10	.61	0.30	<10	0.40	<10	0.20	<10	0.30	<10
Palladium	50	2.1								
Potassium	10000	51	7.2	<10000	19.4	<10000	-5.1	<10000	-18	<10000
Selenium	10	3.1	0.70	<10	0.30	<10	0.40	<10	0.40	<10
Silicon	200	2.8								
Silver	10	.46	-0.20	<10	0.0	<10	-0.20	<10	-0.10	<10
Sodium	10000	14	11.0	<10000	12.1	<10000	2.7	<10000	13.0	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	0.70	<2.0	-0.10	<2.0	-0.30	<2.0	0.40	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	0.10	<50	0.0	<50	-0.30	<50	-0.20	<50
Zinc	20	8.9	0.20	<20	0.20	<20	0.10	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			08:44		08:58		10:09		11:12	
Sample ID:			ICB2		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.29								

(*) Outside of QC limits
(anr) Analyte not requested

9.3.2
9

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			12:17		13:23		13:52		14:40	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	7.8	<200	-6.7	<200	23.2	<200	-0.20	<200
Antimony	6.0	1.8	1.6	<6.0	0.20	<6.0	2.9	<6.0	-0.80	<6.0
Arsenic	3.0	1.7	-0.10	<3.0	0.20	<3.0	0.70	<3.0	-0.20	<3.0
Barium	200	.23	0.20	<200	0.10	<200	1.1	<200	0.10	<200
Beryllium	1.0	.09	0.10	<1.0	0.10	<1.0	1.1	* (a)	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.20	<3.0	0.40	<3.0	1.1	<3.0	0.0	<3.0
Calcium	5000	64	-1.4	<5000	0.40	<5000	18.4	<5000	-0.10	<5000
Chromium	10	.79	-0.50	<10	-0.30	<10	0.80	<10	-0.40	<10
Cobalt	50	.4	-0.10	<50	-0.20	<50	0.80	<50	-0.20	<50
Copper	10	.68	-0.40	<10	-0.10	<10	0.90	<10	-0.30	<10
Iron	100	5.2	-0.30	<100	0.90	<100	25.6	<100	-0.20	<100
Lead	3.0	1.5	-0.20	<3.0	-1.0	<3.0	-0.70	<3.0	0.50	<3.0
Lithium	20	1.1								
Magnesium	5000	26	-19	<5000	-11	<5000	14.8	<5000	-9.6	<5000
Manganese	15	.17	0.10	<15	0.10	<15	1.5	<15	0.0	<15
Molybdenum	20	.35								
Nickel	10	.61	-0.10	<10	-0.10	<10	1.1	<10	0.20	<10
Palladium	50	2.1								
Potassium	10000	51	-36	<10000	-63	<10000	-63	<10000	-89	<10000
Selenium	10	3.1	0.90	<10	1.2	<10	1.6	<10	-0.40	<10
Silicon	200	2.8								
Silver	10	.46	-0.30	<10	-0.10	<10	0.10	<10	-0.20	<10
Sodium	10000	14	78.7	<10000	44.6	<10000	60.6	<10000	27.0	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	-0.50	<2.0	0.20	<2.0	1.2	<2.0	-0.90	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	-0.10	<50	0.0	<50	1.1	<50	-0.20	<50
Zinc	20	8.9	0.30	<20	0.20	<20	2.9	<20	0.40	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			12:17		13:23		13:52		14:40	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.29								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No AQ samples reported for this element in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			15:49		16:59		18:03		19:13	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.3	2.1	<200	5.8	<200	-1.9	<200	-5.2	<200
Antimony	6.0	1.8	0.30	<6.0	2.0	<6.0	0.70	<6.0	1.3	<6.0
Arsenic	3.0	1.7	-0.60	<3.0	-0.10	<3.0	0.20	<3.0	0.90	<3.0
Barium	200	.23	0.10	<200	0.0	<200	0.0	<200	0.10	<200
Beryllium	1.0	.09	0.10	<1.0	0.0	<1.0	-0.10	<1.0	0.0	<1.0
Bismuth	20	2.3								
Boron	100	.94	anr							
Cadmium	3.0	.24	0.50	<3.0	0.10	<3.0	0.20	<3.0	0.30	<3.0
Calcium	5000	64	-0.60	<5000	-2.5	<5000	-4.2	<5000	-1.1	<5000
Chromium	10	.79	-0.60	<10	-0.10	<10	-0.40	<10	-0.30	<10
Cobalt	50	.4	-0.10	<50	0.0	<50	0.0	<50	0.10	<50
Copper	10	.68	-0.20	<10	-0.60	<10	-0.60	<10	-0.40	<10
Iron	100	5.2	-0.50	<100	1.6	<100	0.70	<100	1.8	<100
Lead	3.0	1.5	-0.60	<3.0	0.20	<3.0	-0.30	<3.0	-0.20	<3.0
Lithium	20	1.1								
Magnesium	5000	26	2.7	<5000	-3.5	<5000	-11	<5000	-19	<5000
Manganese	15	.17	0.0	<15	0.20	<15	0.10	<15	0.10	<15
Molybdenum	20	.35								
Nickel	10	.61	0.50	<10	0.30	<10	0.10	<10	0.0	<10
Palladium	50	2.1								
Potassium	10000	51	-97	<10000	-120	<10000	-110	<10000	-140	<10000
Selenium	10	3.1	0.80	<10	0.60	<10	-0.30	<10	1.4	<10
Silicon	200	2.8								
Silver	10	.46	-0.50	<10	-0.60	<10	-0.50	<10	-0.20	<10
Sodium	10000	14	34.1	<10000	36.6	<10000	58.1	<10000	41.7	<10000
Sulfur	50	4.9								
Strontium	10	.13								
Thallium	2.0	1.8	0.60	<2.0	-0.20	<2.0	1.4	<2.0	0.0	<2.0
Tin	10	.58								
Titanium	10	.41								
Tungsten	50	5.1								
Vanadium	50	.56	-0.10	<50	-0.10	<50	0.0	<50	0.20	<50
Zinc	20	8.9	0.60	<20	0.60	<20	0.40	<20	0.60	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			15:49		16:59		18:03		19:13	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.29								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			20:23		21:27		22:26	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	6.3	-4.1	<200	0.60	<200	-4.1	<200
Antimony	6.0	1.8	1.4	<6.0	1.4	<6.0	1.3	<6.0
Arsenic	3.0	1.7	-0.70	<3.0	-0.70	<3.0	0.10	<3.0
Barium	200	.23	-0.10	<200	0.0	<200	0.0	<200
Beryllium	1.0	.09	0.10	<1.0	0.0	<1.0	0.0	<1.0
Bismuth	20	2.3						
Boron	100	.94	anr					
Cadmium	3.0	.24	0.30	<3.0	0.40	<3.0	0.30	<3.0
Calcium	5000	64	-1.8	<5000	7.3	<5000	0.50	<5000
Chromium	10	.79	-0.60	<10	-0.60	<10	-0.40	<10
Cobalt	50	.4	0.10	<50	-0.30	<50	0.0	<50
Copper	10	.68	-0.90	<10	0.10	<10	0.0	<10
Iron	100	5.2	2.2	<100	2.7	<100	0.40	<100
Lead	3.0	1.5	-0.60	<3.0	0.40	<3.0	-1.3	<3.0
Lithium	20	1.1						
Magnesium	5000	26	-0.50	<5000	1.6	<5000	-2.9	<5000
Manganese	15	.17	0.10	<15	0.20	<15	0.10	<15
Molybdenum	20	.35						
Nickel	10	.61	-0.20	<10	0.0	<10	0.10	<10
Palladium	50	2.1						
Potassium	10000	51	-150	<10000	-120	<10000	-140	<10000
Selenium	10	3.1	-1.3	<10	0.70	<10	0.80	<10
Silicon	200	2.8						
Silver	10	.46	-0.20	<10	-0.50	<10	0.10	<10
Sodium	10000	14	44.3	<10000	37.8	<10000	118	<10000
Sulfur	50	4.9						
Strontium	10	.13						
Thallium	2.0	1.8	0.10	<2.0	0.90	<2.0	0.80	<2.0
Tin	10	.58						
Titanium	10	.41						
Tungsten	50	5.1						
Vanadium	50	.56	0.10	<50	0.10	<50	-0.10	<50
Zinc	20	8.9	0.20	<20	0.20	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA31602 Units: ug/l

Time:			20:23		21:27		22:26	
Sample ID:			CCB12		CCB13		CCB14	
Metal	RL	IDL	raw	final	raw	final	raw	final
Zirconium	10	.29						

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		08:49	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	39200	98.0
Antimony	2000	1980	99.0
Arsenic	2000	1960	98.0
Barium	2000	1960	98.0
Beryllium	2000	1990	99.5
Bismuth			
Boron	anr		
Cadmium	2000	1990	99.5
Calcium	40000	39800	99.5
Chromium	2000	2010	100.5
Cobalt	2000	2040	102.0
Copper	2000	1930	96.5
Iron	40000	39900	99.8
Lead	2000	2030	101.5
Lithium			
Magnesium	40000	39600	99.0
Manganese	2000	2020	101.0
Molybdenum			
Nickel	2000	2010	100.5
Palladium			
Potassium	40000	39200	98.0
Selenium	2000	1970	98.5
Silicon			
Silver	250	242	96.8
Sodium	40000	39600	99.0
Sulfur			
Strontium			
Thallium	2000	2060	103.0
Tin			
Titanium			
Tungsten			
Vanadium	2000	1960	98.0
Zinc	2000	2040	102.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		08:49	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		08:32			10:03			11:07	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	39800	99.5	40000	40600	101.5
Antimony	2000	1980	99.0	2000	1980	99.0	2000	2000	100.0
Arsenic	2000	1970	98.5	2000	1970	98.5	2000	2000	100.0
Barium	2000	1990	99.5	2000	1990	99.5	2000	2040	102.0
Beryllium	2000	2030	101.5	2000	2020	101.0	2000	2060	103.0
Bismuth									
Boron	anr								
Cadmium	2000	1990	99.5	2000	1990	99.5	2000	2010	100.5
Calcium	40000	40200	100.5	40000	40200	100.5	40000	41200	103.0
Chromium	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0
Cobalt	2000	2030	101.5	2000	2040	102.0	2000	2070	103.5
Copper	2000	1940	97.0	2000	1950	97.5	2000	1950	97.5
Iron	40000	40400	101.0	40000	40200	100.5	40000	41300	103.3
Lead	2000	2030	101.5	2000	2040	102.0	2000	2060	103.0
Lithium									
Magnesium	40000	39900	99.8	40000	40000	100.0	40000	40900	102.3
Manganese	2000	2050	102.5	2000	2040	102.0	2000	2040	102.0
Molybdenum									
Nickel	2000	2000	100.0	2000	2010	100.5	2000	2030	101.5
Palladium									
Potassium	40000	39800	99.5	40000	39800	99.5	40000	40500	101.3
Selenium	2000	1970	98.5	2000	1970	98.5	2000	2000	100.0
Silicon									
Silver	250	244	97.6	250	244	97.6	250	245	98.0
Sodium	40000	40000	100.0	40000	40400	101.0	40000	41300	103.3
Sulfur									
Strontium									
Thallium	2000	2040	102.0	2000	2060	103.0	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1990	99.5	2000	1980	99.0	2000	1990	99.5
Zinc	2000	2020	101.0	2000	2050	102.5	2000	2070	103.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		08:32			10:03			11:07	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		12:11			13:17			13:46	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39100	97.8	40000	39900	99.8	40000	39900	99.8
Antimony	2000	1980	99.0	2000	2000	100.0	2000	2010	100.5
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	2010	100.5
Barium	2000	1960	98.0	2000	1970	98.5	2000	1990	99.5
Beryllium	2000	1980	99.0	2000	2000	100.0	2000	2010	100.5
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	2000	100.0	2000	2000	100.0
Calcium	40000	39900	99.8	40000	40400	101.0	40000	40600	101.5
Chromium	2000	1970	98.5	2000	2070	103.5	2000	2040	102.0
Cobalt	2000	2070	103.5	2000	2090	104.5	2000	2100	105.0
Copper	2000	1900	95.0	2000	1960	98.0	2000	1970	98.5
Iron	40000	40100	100.3	40000	40300	100.8	40000	40700	101.8
Lead	2000	2040	102.0	2000	2070	103.5	2000	2060	103.0
Lithium									
Magnesium	40000	39600	99.0	40000	40000	100.0	40000	40100	100.3
Manganese	2000	1970	98.5	2000	2070	103.5	2000	2040	102.0
Molybdenum									
Nickel	2000	2020	101.0	2000	2040	102.0	2000	2030	101.5
Palladium									
Potassium	40000	38900	97.3	40000	39400	98.5	40000	39500	98.8
Selenium	2000	1990	99.5	2000	2000	100.0	2000	2010	100.5
Silicon									
Silver	250	235	94.0	250	246	98.4	250	244	97.6
Sodium	40000	39000	97.5	40000	40400	101.0	40000	40900	102.3
Sulfur									
Strontium									
Thallium	2000	2080	104.0	2000	2110	105.5	2000	2110	105.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1920	96.0	2000	2010	100.5	2000	2000	100.0
Zinc	2000	2080	104.0	2000	2100	105.0	2000	2110	105.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		12:11			13:17			13:46	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		14:34			15:43			16:54	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	40300	100.8	40000	38500	96.3
Antimony	2000	1980	99.0	2000	1990	99.5	2000	1940	97.0
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	1960	98.0
Barium	2000	1970	98.5	2000	2010	100.5	2000	1910	95.5
Beryllium	2000	2000	100.0	2000	2040	102.0	2000	1930	96.5
Bismuth									
Boron	anr								
Cadmium	2000	1990	99.5	2000	1990	99.5	2000	1930	96.5
Calcium	40000	40400	101.0	40000	41100	102.8	40000	39300	98.3
Chromium	2000	2080	104.0	2000	2010	100.5	2000	2040	102.0
Cobalt	2000	2070	103.5	2000	2090	104.5	2000	2060	103.0
Copper	2000	1960	98.0	2000	1900	95.0	2000	1940	97.0
Iron	40000	40200	100.5	40000	41100	102.8	40000	39200	98.0
Lead	2000	2070	103.5	2000	2070	103.5	2000	2030	101.5
Lithium									
Magnesium	40000	40200	100.5	40000	40500	101.3	40000	38500	96.3
Manganese	2000	2070	103.5	2000	2000	100.0	2000	2020	101.0
Molybdenum									
Nickel	2000	2030	101.5	2000	2040	102.0	2000	1990	99.5
Palladium									
Potassium	40000	39300	98.3	40000	39900	99.8	40000	38100	95.3
Selenium	2000	1990	99.5	2000	2000	100.0	2000	1950	97.5
Silicon									
Silver	250	246	98.4	250	238	95.2	250	241	96.4
Sodium	40000	40300	100.8	40000	41400	103.5	40000	39800	99.5
Sulfur									
Strontium									
Thallium	2000	2090	104.5	2000	2110	105.5	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2020	101.0	2000	1970	98.5	2000	1980	99.0
Zinc	2000	2100	105.0	2000	2130	106.5	2000	2090	104.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		14:34			15:43			16:54	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		17:58			19:08			20:18	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39700	99.3	40000	38900	97.3	40000	37300	93.3
Antimony	2000	1920	96.0	2000	1840	92.0	2000	1940	97.0
Arsenic	2000	1960	98.0	2000	1880	94.0	2000	1980	99.0
Barium	2000	1940	97.0	2000	1930	96.5	2000	1860	93.0
Beryllium	2000	1970	98.5	2000	1940	97.0	2000	1860	93.0
Bismuth									
Boron	anr								
Cadmium	2000	1940	97.0	2000	1860	93.0	2000	1940	97.0
Calcium	40000	40800	102.0	40000	39700	99.3	40000	38300	95.8
Chromium	2000	2080	104.0	2000	2020	101.0	2000	2010	100.5
Cobalt	2000	2090	104.5	2000	1980	99.0	2000	2100	105.0
Copper	2000	1910	95.5	2000	1860	93.0	2000	1870	93.5
Iron	40000	40200	100.5	40000	39200	98.0	40000	37800	94.5
Lead	2000	2070	103.5	2000	1980	99.0	2000	2070	103.5
Lithium									
Magnesium	40000	40400	101.0	40000	39100	97.8	40000	37400	93.5
Manganese	2000	2060	103.0	2000	2010	100.5	2000	2000	100.0
Molybdenum									
Nickel	2000	2020	101.0	2000	1940	97.0	2000	2030	101.5
Palladium									
Potassium	40000	38900	97.3	40000	38300	95.8	40000	37000	92.5
Selenium	2000	1940	97.0	2000	1870	93.5	2000	1980	99.0
Silicon									
Silver	250	241	96.4	250	235	94.0	250	235	94.0
Sodium	40000	40500	101.3	40000	39800	99.5	40000	38600	96.5
Sulfur									
Strontium									
Thallium	2000	2100	105.0	2000	2000	100.0	2000	2110	105.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2000	100.0	2000	1960	98.0	2000	1950	97.5
Zinc	2000	2150	107.5	2000	2040	102.0	2000	2160	108.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		17:58			19:08			20:18	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

9.3.4
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CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		21:21			22:20	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38300	95.8	40000	42000	105.0
Antimony	2000	1970	98.5	2000	1990	99.5
Arsenic	2000	1980	99.0	2000	1990	99.5
Barium	2000	1920	96.0	2000	2090	104.5
Beryllium	2000	1920	96.0	2000	2120	106.0
Bismuth						
Boron	anr					
Cadmium	2000	1950	97.5	2000	1970	98.5
Calcium	40000	38200	95.5	40000	41700	104.3
Chromium	2000	2060	103.0	2000	1970	98.5
Cobalt	2000	2060	103.0	2000	2050	102.5
Copper	2000	2010	100.5	2000	1910	95.5
Iron	40000	38100	95.3	40000	41500	103.8
Lead	2000	2000	100.0	2000	2010	100.5
Lithium						
Magnesium	40000	37100	92.8	40000	40600	101.5
Manganese	2000	2050	102.5	2000	1980	99.0
Molybdenum						
Nickel	2000	1980	99.0	2000	1990	99.5
Palladium						
Potassium	40000	37500	93.8	40000	40100	100.3
Selenium	2000	1980	99.0	2000	1990	99.5
Silicon						
Silver	250	247	98.8	250	238	95.2
Sodium	40000	39600	99.0	40000	40200	100.5
Sulfur						
Strontium						
Thallium	2000	2050	102.5	2000	2050	102.5
Tin						
Titanium						
Tungsten						
Vanadium	2000	2020	101.0	2000	1940	97.0
Zinc	2000	2030	101.5	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA31602 Units: ug/l

Time:		21:21			22:20	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				09:03		09:09		09:15	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	213	106.5	105	105.0	518	103.6
Antimony	6.0	20	3.0	7.6	126.7	3.2	106.7	20.4	102.0
Arsenic	8.0	20	3.0	8.9	111.3	2.8	93.3	17.6	88.0
Barium	200		4.0	187	93.5	3.9	97.5		
Beryllium	2.0		1.0	2.1	105.0	1.1	110.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.4	113.3	1.3	130.0		
Calcium	5000		1000	4990	99.8	1000	100.0		
Chromium	10		2.0	10.1	101.0				
Cobalt	50		3.0	54.8	109.6	3.2	106.7		
Copper	10		2.0	10.1	101.0	1.8	90.0		
Iron	100	500		103	103.0			518	103.6
Lead	3.0	20	2.5	3.5	116.7			20.1	100.5
Lithium	20								
Magnesium	5000		100	5020	100.4	104	104.0		
Manganese	15		3.0	16.1	107.3	3.2	106.7		
Molybdenum	20		4.0						
Nickel	10		4.0	10.8	108.0	4.3	107.5		
Palladium	50								
Potassium	5000		2000	4660	93.2	1940	97.0		
Selenium	10	20	5.0	12.4	124.0	5.8	116.0	21.3	106.5
Silicon	200								
Silver	5.0		1.0	4.7	94.0				
Sodium	5000		1000	4930	98.6	988	98.8		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	12.5	125.0	2.6	130.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	51.2	102.4	1.9	95.0		
Zinc	20		10	22.0	110.0	11.4	114.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				09:03		09:09		09:15	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

9.3.5

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LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				09:21		13:58		14:16	
Sample ID:	CRI	CRIA	CRID	CRID2		CRI2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	118	118.0	224	112.0	108	108.0
Antimony	6.0	20	3.0	3.1	103.3	6.9	115.0	3.3	110.0
Arsenic	8.0	20	3.0	2.5	83.3	8.5	106.3	2.6	86.7
Barium	200		4.0	4.3	107.5	189	94.5	4.2	105.0
Beryllium	2.0		1.0	1.1	110.0	2.4	120.0	1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	1.3	130.0	3.8	126.7	1.3	130.0
Calcium	5000		1000	1070	107.0	5140	102.8	1090	109.0
Chromium	10		2.0			10.4	104.0		
Cobalt	50		3.0	3.3	110.0	55.9	111.8	3.1	103.3
Copper	10		2.0	2.4	120.0	10.7	107.0	2.1	105.0
Iron	100	500				111	111.0		
Lead	3.0	20	2.5			3.2	106.7		
Lithium	20								
Magnesium	5000		100	115	115.0	5100	102.0	89.9	89.9
Manganese	15		3.0	3.3	110.0	16.9	112.7	3.3	110.0
Molybdenum	20		4.0						
Nickel	10		4.0	4.1	102.5	11.2	112.0	3.7	92.5
Palladium	50								
Potassium	5000		2000	2060	103.0	4640	92.8	2040	102.0
Selenium	10	20	5.0	5.5	110.0	10.3	103.0	5.4	108.0
Silicon	200								
Silver	5.0		1.0			4.6	92.0		
Sodium	5000		1000	1070	107.0	5140	102.8	1120	112.0
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.0	100.0	11.0	110.0	2.2	110.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	1.8	90.0	53.0	106.0	1.7	85.0
Zinc	20		10	11.5	115.0	25.2	126.0	11.6	116.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				09:21		13:58		14:16	
Sample ID:	CRI	CRIA	CRID	CRID2		CRI2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

9.3.5

9

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				14:22		14:28		21:33	
Sample ID:	CRI	CRIA	CRID	CRIA2		CRID4		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	518	103.6	97.3	97.3	202	101.0
Antimony	6.0	20	3.0	20.1	100.5	2.2	73.3	6.7	111.7
Arsenic	8.0	20	3.0	17.3	86.5	2.6	86.7	8.5	106.3
Barium	200		4.0			4.0	100.0	182	91.0
Beryllium	2.0		1.0			1.0	100.0	2.2	110.0
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0			1.3	130.0	3.5	116.7
Calcium	5000		1000			986	98.6	4790	95.8
Chromium	10		2.0					10.1	101.0
Cobalt	50		3.0			3.3	110.0	54.2	108.4
Copper	10		2.0			1.5	75.0	10.0	100.0
Iron	100	500		521	104.2			104	104.0
Lead	3.0	20	2.5	20.0	100.0			2.6	86.7
Lithium	20								
Magnesium	5000		100			100	100.0	4670	93.4
Manganese	15		3.0			3.1	103.3	15.7	104.7
Molybdenum	20		4.0						
Nickel	10		4.0			4.0	100.0	10.8	108.0
Palladium	50								
Potassium	5000		2000			1830	91.5	4310	86.2
Selenium	10	20	5.0	20.9	104.5	5.0	100.0	9.4	94.0
Silicon	200								
Silver	5.0		1.0					4.2	84.0
Sodium	5000		1000			1020	102.0	4960	99.2
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0			1.9	95.0	11.6	116.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0			1.8	90.0	49.8	99.6
Zinc	20		10			11.2	112.0	23.9	119.5

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				14:22		14:28		21:33	
Sample ID:	CRI	CRIA	CRID	CRIA2		CRID4		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

9.3.5

9

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				21:45		21:51	
Sample ID:	CRI	CRIA	CRID	CRIA3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	497	99.4	98.7	98.7
Antimony	6.0	20	3.0	21.1	105.5	3.6	120.0
Arsenic	8.0	20	3.0	18.0	90.0	2.6	86.7
Barium	200		4.0			4.0	100.0
Beryllium	2.0		1.0			1.1	110.0
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0			1.3	130.0
Calcium	5000		1000			978	97.8
Chromium	10		2.0				
Cobalt	50		3.0			3.1	103.3
Copper	10		2.0			1.8	90.0
Iron	100	500		502	100.4		
Lead	3.0	20	2.5	19.2	96.0		
Lithium	20						
Magnesium	5000		100			74.5	74.5
Manganese	15		3.0			3.2	106.7
Molybdenum	20		4.0				
Nickel	10		4.0			3.8	95.0
Palladium	50						
Potassium	5000		2000			1770	88.5
Selenium	10	20	5.0	21.9	109.5	5.9	118.0
Silicon	200						
Silver	5.0		1.0				
Sodium	5000		1000			1050	105.0
Sulfur	50	50	50				
Strontium	10						
Thallium	10		2.0			2.2	110.0
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0			2.0	100.0
Zinc	20		10			11.4	114.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA31602 Units: ug/l

Time:				21:45		21:51	
Sample ID:	CRI	CRIA	CRID	CRIA3		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10		5.0				

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31602 Units: ug/l

Time:			09:27		09:33		14:46		14:52	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	513000	102.6	530000	106.0	522000	104.4	506000	101.2
Antimony		1000	1.9		1010	101.0	3.2		977	97.7
Arsenic		1000	-1.5		959	95.9	0.20		942	94.2
Barium		500	-0.90		531	106.2	-1.1		497	99.4
Beryllium		500	0.50		494	98.8	0.60		465	93.0
Bismuth		500	-18		415	83.0	-18		409	81.8
Boron			-1.2		-1.6		-0.50		-0.60	
Cadmium		1000	0.60		1010	101.0	0.30		980	98.0
Calcium	400000	400000	391000	97.8	400000	100.0	395000	98.8	379000	94.8
Chromium		500	-0.60		473	94.6	-0.30		476	95.2
Cobalt		500	-2.5		469	93.8	-2.6		470	94.0
Copper		500	-1.7		508	101.6	-1.6		499	99.8
Iron	200000	200000	209000	104.5	210000	105.0	208000	104.0	200000	100.0
Lead		1000	0.80		945	94.5	1.9		937	93.7
Lithium		500	4.2		521	104.2	3.2		501	100.2
Magnesium	500000	500000	516000	103.2	528000	105.6	518000	103.6	506000	101.2
Manganese		500	1.8		483	96.6	1.2		480	96.0
Molybdenum		500	-1.5		484	96.8	-1.3		480	96.0
Nickel		1000	-0.70		930	93.0	-0.50		918	91.8
Palladium		500	-11		531	106.2	-12		504	100.8
Potassium			151		167		77.6		76.8	
Selenium		1000	1.7		980	98.0	0.20		953	95.3
Silicon			5.8		6.3		8.8		5.0	
Silver		1000	5.5		985	98.5	3.4		967	96.7
Sodium			-15		-8.2		31.5		46.7	
Sulfur		500	-27		441	88.2	-21		442	88.4
Strontium			3.7		3.5		3.3		3.2	
Thallium		1000	-0.20		944	94.4	1.1		951	95.1
Tin			-3.0		-2.7		-3.3		-2.8	
Titanium			1.7		1.6		2.0		2.1	
Tungsten		500	13.0		526	105.2	5.8		520	104.0
Vanadium		500	0.20		470	94.0	0.0		463	92.6
Zinc		1000	0.50		944	94.4	0.40		962	96.2

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31602 Units: ug/l

Time:			09:27		09:33		14:46		14:52	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-1.7		475	95.0	-1.8		459	91.8

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31602 Units: ug/l

Time:			21:57		22:03	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	510000	102.0	494000	98.8
Antimony		1000	3.6		1000	100.0
Arsenic		1000	0.30		957	95.7
Barium		500	-1.1		506	101.2
Beryllium		500	0.60		465	93.0
Bismuth		500	-17		424	84.8
Boron			-2.1		-1.6	
Cadmium		1000	0.50		993	99.3
Calcium	400000	400000	382000	95.5	368000	92.0
Chromium		500	0.10		451	90.2
Cobalt		500	-2.2		469	93.8
Copper		500	-1.5		499	99.8
Iron	200000	200000	199000	99.5	193000	96.5
Lead		1000	2.9		924	92.4
Lithium		500	2.4		498	99.6
Magnesium	500000	500000	487000	97.4	479000	95.8
Manganese		500	1.0		458	91.6
Molybdenum		500	-1.8		485	97.0
Nickel		1000	-0.60		913	91.3
Palladium		500	-9.6		508	101.6
Potassium			14.5		17.0	
Selenium		1000	-1.7		979	97.9
Silicon			6.8		4.7	
Silver		1000	2.9		948	94.8
Sodium			37.5		55.4	
Sulfur		500	-25		442	88.4
Strontium			3.6		3.7	
Thallium		1000	-1.4		943	94.3
Tin			-3.0		-2.6	
Titanium			1.3		2.0	
Tungsten		500	4.1		517	103.4
Vanadium		500	-0.30		451	90.2
Zinc		1000	0.10		929	92.9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

File ID: SD070613M1.ICP Date Analyzed: 07/06/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA31602 Units: ug/l

Time:			21:57		22:03	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	-2.0		452	90.4

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.63	1.5	0.46	<50
Antimony	2.0	.18	.24	-0.13	<2.0
Arsenic	2.0	.17	.23	0.070	<2.0
Barium	20	.023	.054	0.0	<20
Beryllium	0.20	.009	.015	0.0	<0.20
Bismuth	2.0	.23	.14		
Boron	10	.094	.14		
Cadmium	0.50	.024	.071	-0.010	<0.50
Calcium	500	6.4	8.4	0.28	<500
Chromium	1.0	.079	.074	0.040	<1.0
Cobalt	5.0	.04	.042	0.030	<5.0
Copper	2.5	.068	.083	-0.010	<2.5
Iron	50	.52	2.9	0.62	<50
Lead	2.0	.15	.21	-0.13	<2.0
Lithium	2.0	.11	.14		
Magnesium	500	2.6	9.3	1.7	<500
Manganese	1.5	.017	.054	0.010	<1.5
Molybdenum	2.0	.035	.14		
Nickel	4.0	.061	.079	0.070	<4.0
Palladium	5.0	.21	.26		
Potassium	1000	5.1	6.1	-0.58	<1000
Selenium	2.0	.31	.26	-0.090	<2.0
Silicon	20	.28	3.7		
Silver	0.50	.046	.1	-0.080	<0.50
Sodium	1000	1.4	2	2.8	<1000
Strontium	1.0	.013	.024		
Sulfur	5.0	.49	.34		
Thallium	1.0	.18	.29	-0.010	<1.0
Tin	5.0	.058	.77		
Titanium	1.0	.041	.093		
Tungsten	5.0	.51	1.7		
Vanadium	5.0	.056	.073	0.040	<5.0
Zinc	2.0	.89	.23	0.36	<2.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 06/26/13

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.029	.057		

Associated samples MP72853: JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	JB40350-4 Original	MS	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	17400	25600	5920	138.5N(a	75-125
Antimony	0.29	59.7	110	54.2N(a)	75-125
Arsenic	2.6	399	439	90.4	75-125
Barium	53.1	489	439	99.4	75-125
Beryllium	0.51	11.3	11	98.4	75-125
Bismuth					
Boron					
Cadmium	0.056	11.1	11	100.7	75-125
Calcium	1400	2700	1370	94.8	75-125
Chromium	18.1	59.2	43.9	93.7	75-125
Cobalt	5.0	117	110	102.1	75-125
Copper	9.3	62.4	54.8	96.9	75-125
Iron	14000	19200	5700	91.2	75-125
Lead	127	178	110	46.5N(a)	75-125
Lithium					
Magnesium	589	2100	1370	110.2	75-125
Manganese	144	260	110	105.8	75-125
Molybdenum					
Nickel	10.3	118	110	98.2	75-125
Palladium					
Potassium	453	1830	1370	100.5	75-125
Selenium	0.0	412	439	93.9	75-125
Silicon					
Silver	0.60	10.9	11	93.9	75-125
Sodium	67.8	1410	1370	97.9	75-125
Strontium					
Sulfur					
Thallium	0.49	439	439	100.0	75-125
Tin					
Titanium					
Tungsten					
Vanadium	15.9	118	110	93.1	75-125
Zinc	185	318	110	121.3	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 06/26/13

Metal	JB40350-4 Original MS	Spikelot MPIRS1	% Rec	QC Limits
Zirconium				

Associated samples MP72853: JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	JB40350-4 Original	MSD	Spikelot MPIRS1	% Rec	MSD RPD	QC Limit
Aluminum	17400	25500	6100	132.7N(a	0.4	20
Antimony	0.29	56.8	113	50.0N(a)	5.0	20
Arsenic	2.6	392	452	86.1	1.8	20
Barium	53.1	481	452	94.6	1.6	20
Beryllium	0.51	11.2	11.3	94.6	0.9	20
Bismuth						
Boron						
Cadmium	0.056	10.8	11.3	95.0	2.7	20
Calcium	1400	2670	1410	89.9	1.1	20
Chromium	18.1	67.0	45.2	108.1	12.4	20
Cobalt	5.0	119	113	100.8	1.7	20
Copper	9.3	61.7	56.5	92.7	1.1	20
Iron	14000	18300	5880	73.2N(a)	4.8	20
Lead	127	150	113	20.3N(a)	17.1	20
Lithium						
Magnesium	589	1950	1410	96.3	7.4	20
Manganese	144	275	113	115.9	5.6	20
Molybdenum						
Nickel	10.3	120	113	97.0	1.7	20
Palladium						
Potassium	453	1770	1410	93.2	3.3	20
Selenium	0.0	406	452	89.8	1.5	20
Silicon						
Silver	0.60	10.7	11.3	89.3	1.9	20
Sodium	67.8	1370	1410	92.2	2.9	20
Strontium						
Sulfur						
Thallium	0.49	433	452	95.7	1.4	20
Tin						
Titanium						
Tungsten						
Vanadium	15.9	116	113	88.6	1.7	20
Zinc	185	269	113	74.3N(a)	16.7	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 06/26/13

Metal	JB40350-4 Original MSD	Spikelot MPIRS1	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP72853: JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	BSP Result	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	5330	5400	98.7	80-120
Antimony	97.2	100	97.2	80-120
Arsenic	359	400	89.8	80-120
Barium	386	400	96.5	80-120
Beryllium	9.9	10	99.0	80-120
Bismuth				
Boron				
Cadmium	9.6	10	96.0	80-120
Calcium	1220	1250	97.6	80-120
Chromium	41.1	40	102.8	80-120
Cobalt	107	100	107.0	80-120
Copper	48.6	50	97.2	80-120
Iron	5120	5200	98.5	80-120
Lead	102	100	102.0	80-120
Lithium				
Magnesium	1210	1250	96.8	80-120
Manganese	102	100	102.0	80-120
Molybdenum				
Nickel	99.0	100	99.0	80-120
Palladium				
Potassium	1180	1250	94.4	80-120
Selenium	377	400	94.3	80-120
Silicon				
Silver	9.5	10	95.0	80-120
Sodium	1230	1250	98.4	80-120
Strontium				
Sulfur				
Thallium	409	400	102.3	80-120
Tin				
Titanium				
Tungsten				
Vanadium	94.3	100	94.3	80-120
Zinc	106	100	106.0	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/26/13

Metal	BSP Result	Spikelot MPIRS1	% Rec	QC Limits
Zirconium				

Associated samples MP72853: JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/26/13

Metal	JB40350-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum	156000	160000	2.7	0-10
Antimony	2.60	17.1	557.7(a)	0-10
Arsenic	23.2	19.2	17.2 (a)	0-10
Barium	475	493	3.8	0-10
Beryllium	4.60	4.70	2.2	0-10
Bismuth				
Boron				
Cadmium	0.500	0.00	100.0(a)	0-10
Calcium	12500	13300	6.0	0-10
Chromium	162	177	9.5	0-10
Cobalt	44.5	54.6	22.7*(b)	0-10
Copper	82.7	91.7	10.9*(b)	0-10
Iron	125000	132000	5.6	0-10
Lead	1140	1170	2.5	0-10
Lithium				
Magnesium	5270	5560	5.6	0-10
Manganese	1290	1350	4.7	0-10
Molybdenum				
Nickel	92.5	96.9	4.8	0-10
Palladium				
Potassium	4050	4100	1.2	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	5.40	3.80	29.6 (a)	0-10
Sodium	606	1060	75.4 (a)	0-10
Strontium				
Sulfur				
Thallium	4.40	0.00	100.0(a)	0-10
Tin				
Titanium				
Tungsten				
Vanadium	143	154	8.3	0-10
Zinc	1650	2250	36.1*(b)	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP72853 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date: 06/26/13

Metal	JB40350-4 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP72853: JB40350-1, JB40350-2, JB40350-3, JB40350-4, JB40350-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73021
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/03/13

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0068	.0063	-0.013	<0.033

Associated samples MP73021: JB40350-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.5.1

9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73021 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/03/13

Metal	JB40350-5 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.0	0.31	0.318	97.5	75-125

Associated samples MP73021: JB40350-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73021 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/03/13

Metal	JB40350-5 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.35	0.354	98.8	12.1	20

Associated samples MP73021: JB40350-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73021
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/03/13

Metal	LCS Result	Spikelot HGLCS54079	% Rec	QC Limits
Mercury	8.0	9.25	86.5	72-129

Associated samples MP73021: JB40350-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

9.5.3

9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73022
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/03/13

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0068	.0063	-0.0021	<0.033

Associated samples MP73022: JB40350-1, JB40350-2, JB40350-3, JB40350-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73022 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/03/13

Metal	JB40240-2 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	4.6	6.4	1.77	101.7	75-125

Associated samples MP73022: JB40350-1, JB40350-2, JB40350-3, JB40350-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73022 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/03/13

Metal	JB40240-2 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	4.6	7.0	1.86	129.0N(a	9.0	20

Associated samples MP73022: JB40350-1, JB40350-2, JB40350-3, JB40350-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB40350
Account: ENVNJSP - EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP73022
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/03/13

Metal	LCS Result	Spikelot HGLCS54079	% Rec	QC Limits
Mercury	8.4	9.25	90.8	72-129

Associated samples MP73022: JB40350-1, JB40350-2, JB40350-3, JB40350-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

New Jersey

ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: JB40350
Account: ENVNJSP EnviroTrac, Ltd.
Project: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: JB40350-1 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P2

Wet Weight (Total)	28.42	g
Tare Weight	22.32	g
Dry Weight (Total)	27.86	g
Solids, Percent	90.8	%

Sample: JB40350-2 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P3

Wet Weight (Total)	27.95	g
Tare Weight	20.87	g
Dry Weight (Total)	27.2	g
Solids, Percent	89.4	%

Sample: JB40350-3 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P4

Wet Weight (Total)	29.08	g
Tare Weight	22.01	g
Dry Weight (Total)	28.45	g
Solids, Percent	91.1	%

Sample: JB40350-4 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P5

Wet Weight (Total)	23.32	g
Tare Weight	17.61	g
Dry Weight (Total)	22.82	g
Solids, Percent	91.2	%

Sample: JB40350-5 **Analyzed:** 27-JUN-13 by PD **Method:** SM2540 G-97
ClientID: P11

Wet Weight (Total)	29.82	g
Tare Weight	22.17	g
Dry Weight (Total)	29.32	g
Solids, Percent	93.5	%

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

(Accutest Laboratories Southeast, Inc.)

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

PAGE ___ OF ___

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JB40350

Client / Reporting Information

Company Name: Accutest Laboratories
Street Address: 2235 route 130
City: Dayton State: NJ Zip: 08810
Project Contact: Kevin Dovedytis E-mail: Kevind@accutest.com
Phone #: 732-355-4561 Fax #:
Sampler(s) Name(s): Phone:

Project Information

Project Name: Hess QC Lab
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	B827OTCL11+	Allpest 60grams	LAB USE ONLY
1			6/21/2013	12:53		Soil	1					x				X	X	
2			6/21/2013	12:06		Soil	1					x				X	X	
3			6/21/2013	11:19		Soil	1					x				X	X	
4			6/21/2013	10:36		Soil	1					x				X	X	
5			6/21/2013	09:42		Soil	1					x				X	X	

Number of preserved Bottles

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] other

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [X] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format ____
- [ ] Other ____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Data due 7/5/13

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6-25-13 1700	1 FEDEX	2 RP 06-26-13	945	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # 815 [ ] Intact [ ] Not Intact	Preserved where applicable [ ]	On Ice [ ] Cooler Temp. 2.6

11.1 11

JB40350: Chain of Custody
Page 1 of 2
Accutest Laboratories Southeast, Inc.

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: JB40350 CLIENT: ALNJ PROJECT: Hess Qc lab

DATE/TIME RECEIVED: 06-26-13 945 {MM/DD/YY 24:00} NIMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 5633 9345 9165

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 7-2
- [ ] CORRECTED TEMPS: 2-6

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE R Willm 06-26-13 REVIEWER SIGNATURE/DATE 06/26/13

NF 12/10

receipt confirmation 122910.xls

11.1

11

JB40350: Chain of Custody

Page 2 of 2

Internal Sample Tracking Chronicle

Accutest New Jersey

Job No: JB40350

ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ
Project No: ENVNJSP57299

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB40350-1 P2	Collected: 21-JUN-13 12:53 By: JP		Received: 21-JUN-13 By: RW			
JB40350-1	SW846 8270D	01-JUL-13 20:11	NAF	26-JUN-13	NO	B8270TCL11+
JB40350-2 P3	Collected: 21-JUN-13 12:06 By: JP		Received: 21-JUN-13 By: RW			
JB40350-2	SW846 8270D	01-JUL-13 20:38	NAF	26-JUN-13	NO	B8270TCL11+
JB40350-3 P4	Collected: 21-JUN-13 11:19 By: JP		Received: 21-JUN-13 By: RW			
JB40350-3	SW846 8270D	02-JUL-13 17:10	NAF	27-JUN-13	GT	B8270TCL11+
JB40350-4 P5	Collected: 21-JUN-13 10:36 By: JP		Received: 21-JUN-13 By: RW			
JB40350-4	SW846 8270D	02-JUL-13 17:35	NAF	27-JUN-13	GT	B8270TCL11+
JB40350-5 P11	Collected: 21-JUN-13 09:42 By: JP		Received: 21-JUN-13 By: RW			
JB40350-5	SW846 8270D	02-JUL-13 18:00	NAF	27-JUN-13	GT	B8270TCL11+

New Jersey

ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

(Accutest Laboratories Southeast, Inc.)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47524-MB	U039315.D	1	06/28/13	NAF	06/26/13	OP47524	SU1836

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	170	20	ug/kg	
208-96-8	Acenaphthylene	ND	170	19	ug/kg	
98-86-2	Acetophenone	ND	170	20	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
1912-24-9	Atrazine	ND	170	17	ug/kg	
100-52-7	Benzaldehyde	ND	830	170	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	21	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
92-52-4	1,1'-Biphenyl	ND	170	22	ug/kg	
105-60-2	Caprolactam	ND	170	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	22	ug/kg	
106-47-8	4-Chloroaniline	ND	170	25	ug/kg	
86-74-8	Carbazole	ND	170	18	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	23	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	23	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	28	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47524-MB	U039315.D	1	06/28/13	NAF	06/26/13	OP47524	SU1836

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	170	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	23	ug/kg	
67-72-1	Hexachloroethane	ND	170	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	19	ug/kg	
88-74-4	2-Nitroaniline	ND	170	25	ug/kg	
99-09-2	3-Nitroaniline	ND	170	23	ug/kg	
100-01-6	4-Nitroaniline	ND	170	36	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	24	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	21	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	72%	40-102%
4165-62-2	Phenol-d5	72%	41-100%
118-79-6	2,4,6-Tribromophenol	85%	42-108%
4165-60-0	Nitrobenzene-d5	74%	40-105%
321-60-8	2-Fluorobiphenyl	78%	43-107%
1718-51-0	Terphenyl-d14	94%	45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	3.22	1200	ug/kg	J
	Total TIC, Semi-Volatile		0	ug/kg	

Method Blank Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47527-MB	L064464.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	170	20	ug/kg	
208-96-8	Acenaphthylene	ND	170	19	ug/kg	
98-86-2	Acetophenone	ND	170	20	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
1912-24-9	Atrazine	ND	170	17	ug/kg	
100-52-7	Benzaldehyde	ND	830	170	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	21	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
92-52-4	1,1'-Biphenyl	ND	170	22	ug/kg	
105-60-2	Caprolactam	ND	170	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	22	ug/kg	
106-47-8	4-Chloroaniline	ND	170	25	ug/kg	
86-74-8	Carbazole	ND	170	18	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	23	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	23	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	28	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47527-MB	L064464.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	170	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	23	ug/kg	
67-72-1	Hexachloroethane	ND	170	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	19	ug/kg	
88-74-4	2-Nitroaniline	ND	170	25	ug/kg	
99-09-2	3-Nitroaniline	ND	170	23	ug/kg	
100-01-6	4-Nitroaniline	ND	170	36	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	24	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	21	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	54%	40-102%
4165-62-2	Phenol-d5	66%	41-100%
118-79-6	2,4,6-Tribromophenol	77%	42-108%
4165-60-0	Nitrobenzene-d5	71%	40-105%
321-60-8	2-Fluorobiphenyl	68%	43-107%
1718-51-0	Terphenyl-d14	83%	45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile [a]		0	ug/kg	

(a) No TICs detected.

Blank Spike Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47524-BS	U039314.D	1	06/28/13	NAF	06/26/13	OP47524	SU1836

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1670	1330	80	56-109
208-96-8	Acenaphthylene	1670	1330	80	56-106
98-86-2	Acetophenone	1670	1190	71	48-107
120-12-7	Anthracene	1670	1390	83	61-110
1912-24-9	Atrazine	1670	1370	82	60-112
100-52-7	Benzaldehyde	1670	800	48	27-123
56-55-3	Benzo(a)anthracene	1670	1450	87	66-111
50-32-8	Benzo(a)pyrene	1670	1320	79	59-104
205-99-2	Benzo(b)fluoranthene	1670	1430	86	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1550	93	67-113
207-08-9	Benzo(k)fluoranthene	1670	1410	85	67-114
101-55-3	4-Bromophenyl phenyl ether	1670	1410	85	62-110
85-68-7	Butyl benzyl phthalate	1670	1420	85	65-113
92-52-4	1,1'-Biphenyl	1670	1290	77	53-106
105-60-2	Caprolactam	1670	1300	78	40-110
91-58-7	2-Chloronaphthalene	1670	1300	78	53-106
106-47-8	4-Chloroaniline	1670	1290	77	30-115
86-74-8	Carbazole	1670	1510	91	60-111
218-01-9	Chrysene	1670	1470	88	65-112
111-91-1	bis(2-Chloroethoxy)methane	1670	1310	79	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1170	70	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1180	71	40-110
7005-72-3	4-Chlorophenyl phenyl ether	1670	1400	84	58-106
121-14-2	2,4-Dinitrotoluene	1670	1400	84	59-109
606-20-2	2,6-Dinitrotoluene	1670	1390	83	61-107
91-94-1	3,3'-Dichlorobenzidine	1670	1400	84	36-114
53-70-3	Dibenzo(a,h)anthracene	1670	1480	89	68-115
132-64-9	Dibenzofuran	1670	1420	85	57-108
84-74-2	Di-n-butyl phthalate	1670	1430	86	63-108
117-84-0	Di-n-octyl phthalate	1670	1320	79	64-119
84-66-2	Diethyl phthalate	1670	1440	86	61-109
131-11-3	Dimethyl phthalate	1670	1450	87	59-108
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1400	84	64-115
206-44-0	Fluoranthene	1670	1460	88	60-108
86-73-7	Fluorene	1670	1370	82	58-109
118-74-1	Hexachlorobenzene	1670	1430	86	59-111

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47524-BS	U039314.D	1	06/28/13	NAF	06/26/13	OP47524	SU1836

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	1670	1340	80	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1220	73	49-110
67-72-1	Hexachloroethane	1670	1200	72	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1530	92	66-116
78-59-1	Isophorone	1670	1140	68	42-89
91-57-6	2-Methylnaphthalene	1670	1330	80	47-106
88-74-4	2-Nitroaniline	1670	1510	91	56-123
99-09-2	3-Nitroaniline	1670	1270	76	41-111
100-01-6	4-Nitroaniline	1670	1470	88	54-113
91-20-3	Naphthalene	1670	1240	74	44-104
98-95-3	Nitrobenzene	1670	1310	79	43-108
621-64-7	N-Nitroso-di-n-propylamine	1670	1240	74	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1340	80	62-110
85-01-8	Phenanthrene	1670	1390	83	63-111
129-00-0	Pyrene	1670	1380	83	65-115
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1280	77	46-101

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	73%	40-102%
4165-62-2	Phenol-d5	79%	41-100%
118-79-6	2,4,6-Tribromophenol	91%	42-108%
4165-60-0	Nitrobenzene-d5	79%	40-105%
321-60-8	2-Fluorobiphenyl	81%	43-107%
1718-51-0	Terphenyl-d14	91%	45-119%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47527-BS	L064463.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1670	1350	81	56-109
208-96-8	Acenaphthylene	1670	1450	87	56-106
98-86-2	Acetophenone	1670	1240	74	48-107
120-12-7	Anthracene	1670	1510	91	61-110
1912-24-9	Atrazine	1670	1350	81	60-112
100-52-7	Benzaldehyde	1670	785	47	27-123
56-55-3	Benzo(a)anthracene	1670	1500	90	66-111
50-32-8	Benzo(a)pyrene	1670	1400	84	59-104
205-99-2	Benzo(b)fluoranthene	1670	1460	88	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1540	92	67-113
207-08-9	Benzo(k)fluoranthene	1670	1440	86	67-114
101-55-3	4-Bromophenyl phenyl ether	1670	1430	86	62-110
85-68-7	Butyl benzyl phthalate	1670	1540	92	65-113
92-52-4	1,1'-Biphenyl	1670	1260	76	53-106
105-60-2	Caprolactam	1670	1080	65	40-110
91-58-7	2-Chloronaphthalene	1670	1300	78	53-106
106-47-8	4-Chloroaniline	1670	1300	78	30-115
86-74-8	Carbazole	1670	1460	88	60-111
218-01-9	Chrysene	1670	1470	88	65-112
111-91-1	bis(2-Chloroethoxy)methane	1670	1300	78	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1180	71	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1250	75	40-110
7005-72-3	4-Chlorophenyl phenyl ether	1670	1420	85	58-106
121-14-2	2,4-Dinitrotoluene	1670	1360	82	59-109
606-20-2	2,6-Dinitrotoluene	1670	1390	83	61-107
91-94-1	3,3'-Dichlorobenzidine	1670	1460	88	36-114
53-70-3	Dibenzo(a,h)anthracene	1670	1520	91	68-115
132-64-9	Dibenzofuran	1670	1470	88	57-108
84-74-2	Di-n-butyl phthalate	1670	1570	94	63-108
117-84-0	Di-n-octyl phthalate	1670	1540	92	64-119
84-66-2	Diethyl phthalate	1670	1420	85	61-109
131-11-3	Dimethyl phthalate	1670	1400	84	59-108
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1570	94	64-115
206-44-0	Fluoranthene	1670	1500	90	60-108
86-73-7	Fluorene	1670	1470	88	58-109
118-74-1	Hexachlorobenzene	1670	1430	86	59-111

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47527-BS	L064463.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	1670	1280	77	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1240	74	49-110
67-72-1	Hexachloroethane	1670	1190	71	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1550	93	66-116
78-59-1	Isophorone	1670	1130	68	42-89
91-57-6	2-Methylnaphthalene	1670	1170	70	47-106
88-74-4	2-Nitroaniline	1670	1810	109	56-123
99-09-2	3-Nitroaniline	1670	1400	84	41-111
100-01-6	4-Nitroaniline	1670	1470	88	54-113
91-20-3	Naphthalene	1670	1300	78	44-104
98-95-3	Nitrobenzene	1670	1270	76	43-108
621-64-7	N-Nitroso-di-n-propylamine	1670	1310	79	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1370	82	62-110
85-01-8	Phenanthrene	1670	1500	90	63-111
129-00-0	Pyrene	1670	1490	89	65-115
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1090	65	46-101

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	67%	40-102%
4165-62-2	Phenol-d5	73%	41-100%
118-79-6	2,4,6-Tribromophenol	85%	42-108%
4165-60-0	Nitrobenzene-d5	76%	40-105%
321-60-8	2-Fluorobiphenyl	80%	43-107%
1718-51-0	Terphenyl-d14	94%	45-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47524-MS	U039327.D	1	06/29/13	NAF	06/26/13	OP47524	SU1836
OP47524-MSD	U039328.D	1	06/29/13	NAF	06/26/13	OP47524	SU1836
JB40280-1 [a]	U039326.D	1	06/29/13	NAF	06/26/13	OP47524	SU1836

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2

CAS No.	Compound	JB40280-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		1690	1400	83	1680	1340	80	4	56-109/23
208-96-8	Acenaphthylene	ND		1690	1410	84	1680	1350	80	4	56-106/23
98-86-2	Acetophenone	ND		1690	1200	71	1680	1210	72	1	48-107/27
120-12-7	Anthracene	ND		1690	1420	84	1680	1370	82	4	61-110/21
1912-24-9	Atrazine	ND		1690	1370	81	1680	1380	82	1	60-112/21
100-52-7	Benzaldehyde	ND		1690	849	50	1680	848	50	0	27-123/30
56-55-3	Benzo(a)anthracene	ND		1690	1460	87	1680	1430	85	2	66-111/23
50-32-8	Benzo(a)pyrene	ND		1690	1310	78	1680	1300	77	1	59-104/23
205-99-2	Benzo(b)fluoranthene	ND		1690	1420	84	1680	1430	85	1	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND		1690	1580	94	1680	1580	94	0	67-113/21
207-08-9	Benzo(k)fluoranthene	ND		1690	1370	81	1680	1360	81	1	67-114/22
101-55-3	4-Bromophenyl phenyl ether	ND		1690	1470	87	1680	1450	86	1	62-110/21
85-68-7	Butyl benzyl phthalate	ND		1690	1470	87	1680	1400	83	5	65-113/20
92-52-4	1,1'-Biphenyl	ND		1690	1330	79	1680	1300	77	2	53-106/24
105-60-2	Caprolactam	ND		1690	1370	81	1680	1340	80	2	40-110/22
91-58-7	2-Chloronaphthalene	ND		1690	1380	82	1680	1310	78	5	53-106/23
106-47-8	4-Chloroaniline	ND		1690	1320	78	1680	1340	80	2	30-115/30
86-74-8	Carbazole	ND		1690	1520	90	1680	1500	89	1	60-111/19
218-01-9	Chrysene	ND		1690	1470	87	1680	1440	86	2	65-112/25
111-91-1	bis(2-Chloroethoxy)methane	ND		1690	1320	78	1680	1290	77	2	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND		1690	1160	69	1680	1170	70	1	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		1690	1130	67	1680	1130	67	0	40-110/25
7005-72-3	4-Chlorophenyl phenyl ether	ND		1690	1470	87	1680	1420	85	3	58-106/21
121-14-2	2,4-Dinitrotoluene	ND		1690	1440	85	1680	1420	85	1	59-109/20
606-20-2	2,6-Dinitrotoluene	ND		1690	1460	87	1680	1420	85	3	61-107/22
91-94-1	3,3'-Dichlorobenzidine	ND		1690	1590	94	1680	1590	95	0	36-114/28
53-70-3	Dibenzo(a,h)anthracene	ND		1690	1600	95	1680	1580	94	1	68-115/23
132-64-9	Dibenzofuran	ND		1690	1480	88	1680	1450	86	2	57-108/22
84-74-2	Di-n-butyl phthalate	ND		1690	1450	86	1680	1430	85	1	63-108/19
117-84-0	Di-n-octyl phthalate	ND		1690	1290	77	1680	1270	76	2	64-119/21
84-66-2	Diethyl phthalate	ND		1690	1520	90	1680	1480	88	3	61-109/20
131-11-3	Dimethyl phthalate	ND		1690	1520	90	1680	1470	88	3	59-108/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1690	1440	85	1680	1390	83	4	64-115/23
206-44-0	Fluoranthene	ND		1690	1440	85	1680	1410	84	2	60-108/25
86-73-7	Fluorene	ND		1690	1420	84	1680	1370	82	4	58-109/21
118-74-1	Hexachlorobenzene	ND		1690	1430	85	1680	1390	83	3	59-111/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47524-MS	U039327.D	1	06/29/13	NAF	06/26/13	OP47524	SU1836
OP47524-MSD	U039328.D	1	06/29/13	NAF	06/26/13	OP47524	SU1836
JB40280-1 [a]	U039326.D	1	06/29/13	NAF	06/26/13	OP47524	SU1836

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-1, JB40350-2

CAS No.	Compound	JB40280-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		1690	1290	77	1680	1250	74	3	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND		1690	530	31*	1680	514	31*	3	49-110/31
67-72-1	Hexachloroethane	ND		1690	1070	63	1680	1080	64	1	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1690	1600	95	1680	1580	94	1	66-116/22
78-59-1	Isophorone	ND		1690	1180	70	1680	1160	69	2	42-89/22
91-57-6	2-Methylnaphthalene	ND		1690	1340	80	1680	1330	79	1	47-106/27
88-74-4	2-Nitroaniline	ND		1690	1550	92	1680	1550	92	0	56-123/24
99-09-2	3-Nitroaniline	ND		1690	1420	84	1680	1390	83	2	41-111/25
100-01-6	4-Nitroaniline	ND		1690	1510	90	1680	1500	89	1	54-113/22
91-20-3	Naphthalene	ND		1690	1260	75	1680	1230	73	2	44-104/27
98-95-3	Nitrobenzene	ND		1690	1280	76	1680	1260	75	2	43-108/25
621-64-7	N-Nitroso-di-n-propylamine	ND		1690	1270	75	1680	1270	76	0	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND		1690	1430	85	1680	1380	82	4	62-110/21
85-01-8	Phenanthrene	ND		1690	1420	84	1680	1380	82	3	63-111/22
129-00-0	Pyrene	ND		1690	1400	83	1680	1360	81	3	65-115/25
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		1690	1280	76	1680	1240	74	3	46-101/24

CAS No.	Surrogate Recoveries	MS	MSD	JB40280-1	Limits
367-12-4	2-Fluorophenol	69%	72%		40-102%
4165-62-2	Phenol-d5	74%	76%		41-100%
118-79-6	2,4,6-Tribromophenol	87%	87%		42-108%
4165-60-0	Nitrobenzene-d5	75%	74%		40-105%
321-60-8	2-Fluorobiphenyl	82%	79%		43-107%
1718-51-0	Terphenyl-d14	88%	86%		45-119%

(a) Sample used for QC purposes only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47527-MS	L064467.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252
OP47527-MSD	L064468.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252
FA5921-2	L064466.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	FA5921-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		2370	2040	86	2400	1880	78	8	56-109/23
208-96-8	Acenaphthylene	ND		2370	2200	93	2400	2050	86	7	56-106/23
98-86-2	Acetophenone	ND		2370	1600	67	2400	1670	70	4	48-107/27
120-12-7	Anthracene	ND		2370	2250	95	2400	2150	90	5	61-110/21
1912-24-9	Atrazine	ND		2370	2010	85	2400	1990	83	1	60-112/21
100-52-7	Benzaldehyde	ND		2370	1110	47	2400	1170	49	5	27-123/30
56-55-3	Benzo(a)anthracene	ND		2370	2250	95	2400	2090	87	7	66-111/23
50-32-8	Benzo(a)pyrene	ND		2370	1850	78	2400	2020	84	9	59-104/23
205-99-2	Benzo(b)fluoranthene	ND		2370	1960	83	2400	1830	76	7	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND		2370	2110	89	2400	1910	80	10	67-113/21
207-08-9	Benzo(k)fluoranthene	ND		2370	2120	89	2400	2000	83	6	67-114/22
101-55-3	4-Bromophenyl phenyl ether	ND		2370	2170	91	2400	2020	84	7	62-110/21
85-68-7	Butyl benzyl phthalate	ND		2370	2450	103	2400	2100	88	15	65-113/20
92-52-4	1,1'-Biphenyl	ND		2370	1970	83	2400	1880	78	5	53-106/24
105-60-2	Caprolactam	ND		2370	2180	92	2400	1940	81	12	40-110/22
91-58-7	2-Chloronaphthalene	ND		2370	1960	83	2400	1820	76	7	53-106/23
106-47-8	4-Chloroaniline	ND		2370	2030	86	2400	1840	77	10	30-115/30
86-74-8	Carbazole	ND		2370	2200	93	2400	2110	88	4	60-111/19
218-01-9	Chrysene	ND		2370	2240	94	2400	2030	85	10	65-112/25
111-91-1	bis(2-Chloroethoxy)methane	ND		2370	1900	80	2400	1730	72	9	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND		2370	1640	69	2400	1600	67	2	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		2370	1830	77	2400	1630	68	12	40-110/25
7005-72-3	4-Chlorophenyl phenyl ether	ND		2370	2160	91	2400	2050	86	5	58-106/21
121-14-2	2,4-Dinitrotoluene	ND		2370	2190	92	2400	2050	86	7	59-109/20
606-20-2	2,6-Dinitrotoluene	ND		2370	2000	84	2400	2050	86	2	61-107/22
91-94-1	3,3'-Dichlorobenzidine	ND		2370	2090	88	2400	1830	76	13	36-114/28
53-70-3	Dibenzo(a,h)anthracene	ND		2370	2380	100	2400	1870	78	24*	68-115/23
132-64-9	Dibenzofuran	ND		2370	2190	92	2400	2110	88	4	57-108/22
84-74-2	Di-n-butyl phthalate	ND		2370	2270	96	2400	2200	92	3	63-108/19
117-84-0	Di-n-octyl phthalate	ND		2370	2110	89	2400	1990	83	6	64-119/21
84-66-2	Diethyl phthalate	ND		2370	2210	93	2400	2170	91	2	61-109/20
131-11-3	Dimethyl phthalate	ND		2370	2100	88	2400	2060	86	2	59-108/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		2370	2430	102	2400	2170	91	11	64-115/23
206-44-0	Fluoranthene	ND		2370	2210	93	2400	2060	86	7	60-108/25
86-73-7	Fluorene	ND		2370	2240	94	2400	2070	86	8	58-109/21
118-74-1	Hexachlorobenzene	ND		2370	2060	87	2400	2060	86	0	59-111/21

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47527-MS	L064467.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252
OP47527-MSD	L064468.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252
FA5921-2	L064466.D	1	07/02/13	NAF	06/27/13	OP47527	SL3252

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB40350-3, JB40350-4, JB40350-5

CAS No.	Compound	FA5921-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		2370	1970	83	2400	1740	73	12	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND		2370	1770	75	2400	1670	70	6	49-110/31
67-72-1	Hexachloroethane	ND		2370	1410	59	2400	1650	69	16	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND		2370	2420	102	2400	1940	81	22	66-116/22
78-59-1	Isophorone	ND		2370	1810	76	2400	1830	76	1	42-89/22
91-57-6	2-Methylnaphthalene	ND		2370	2180	92	2400	1870	78	15	47-106/27
88-74-4	2-Nitroaniline	ND		2370	2780	117	2400	2590	108	7	56-123/24
99-09-2	3-Nitroaniline	ND		2370	2120	89	2400	2000	83	6	41-111/25
100-01-6	4-Nitroaniline	ND		2370	2350	99	2400	2110	88	11	54-113/22
91-20-3	Naphthalene	ND		2370	2040	86	2400	1800	75	13	44-104/27
98-95-3	Nitrobenzene	ND		2370	2000	84	2400	2140	89	7	43-108/25
621-64-7	N-Nitroso-di-n-propylamine	ND		2370	1670	70	2400	1730	72	4	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND		2370	2150	91	2400	2030	85	6	62-110/21
85-01-8	Phenanthrene	ND		2370	2260	95	2400	2160	90	5	63-111/22
129-00-0	Pyrene	ND		2370	2360	99	2400	2140	89	10	65-115/25
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		2370	1970	83	2400	1860	78	6	46-101/24

CAS No.	Surrogate Recoveries	MS	MSD	FA5921-2	Limits
367-12-4	2-Fluorophenol	70%	64%	68%	40-102%
4165-62-2	Phenol-d5	72%	68%	74%	41-100%
118-79-6	2,4,6-Tribromophenol	85%	82%	84%	42-108%
4165-60-0	Nitrobenzene-d5	81%	85%	73%	40-105%
321-60-8	2-Fluorobiphenyl	83%	77%	80%	43-107%
1718-51-0	Terphenyl-d14	100%	88%	85%	45-119%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: SL3245-DFTPP
Lab File ID: L064265.D
Instrument ID: GCMSL
Injection Date: 06/26/13
Injection Time: 09:33

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	24448	40.0		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	26369	43.1		Pass
70	Less than 2.0% of mass 69	131	0.21	(0.50) [a]	Pass
127	40.0 - 60.0% of mass 198	29409	48.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	61114	100.0		Pass
199	5.0 - 9.0% of mass 198	4331	7.09		Pass
275	10.0 - 30.0% of mass 198	13927	22.8		Pass
365	1.0 - 100.0% of mass 198	1183	1.94		Pass
441	Present, but less than mass 443	5724	9.37	(71.0) [b]	Pass
442	40.0 - 100.0% of mass 198	41457	67.8		Pass
443	17.0 - 23.0% of mass 442	8061	13.2	(19.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SL3245-IC3245	L064266.D	06/26/13	09:58	00:25	Initial cal 5
SL3245-IC3245	L064267.D	06/26/13	10:22	00:49	Initial cal 10
SL3245-IC3245	L064268.D	06/26/13	10:47	01:14	Initial cal 25
SL3245-ICC3245	L064269.D	06/26/13	11:12	01:39	Initial cal 50
SL3245-IC3245	L064270.D	06/26/13	11:37	02:04	Initial cal 60
SL3245-IC3245	L064271.D	06/26/13	12:03	02:30	Initial cal 75
SL3245-IC3245	L064272.D	06/26/13	12:27	02:54	Initial cal 100
SL3245-ICV3245	L064273.D	06/26/13	12:52	03:19	Initial cal verification 50
SL3245-ICV3245	L064274.D	06/26/13	13:19	03:46	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: SL3252-DFTPP
Lab File ID: L064461.D
Instrument ID: GCMSL
Injection Date: 07/02/13
Injection Time: 10:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	40422	43.5		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	44460	47.8		Pass
70	Less than 2.0% of mass 69	129	0.14	(0.29) [a]	Pass
127	40.0 - 60.0% of mass 198	48033	51.6		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	93000	100.0		Pass
199	5.0 - 9.0% of mass 198	6619	7.12		Pass
275	10.0 - 30.0% of mass 198	21141	22.7		Pass
365	1.0 - 100.0% of mass 198	2327	2.50		Pass
441	Present, but less than mass 443	9912	10.7	(77.3) [b]	Pass
442	40.0 - 100.0% of mass 198	63720	68.5		Pass
443	17.0 - 23.0% of mass 442	12815	13.8	(20.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SL3252-CC3245	L064462.D	07/02/13	10:53	00:17	Continuing cal 50
OP47527-BS	L064463.D	07/02/13	11:21	00:45	Blank Spike
OP47527-MB	L064464.D	07/02/13	11:46	01:10	Method Blank
ZZZZZZ	L064465.D	07/02/13	12:12	01:36	(unrelated sample)
FA5921-2	L064466.D	07/02/13	12:37	02:01	(used for QC only; not part of job JB40350)
OP47527-MS	L064467.D	07/02/13	13:02	02:26	Matrix Spike
OP47527-MSD	L064468.D	07/02/13	13:26	02:50	Matrix Spike Duplicate
ZZZZZZ	L064469.D	07/02/13	13:51	03:15	(unrelated sample)
ZZZZZZ	L064470.D	07/02/13	14:15	03:39	(unrelated sample)
ZZZZZZ	L064471.D	07/02/13	14:40	04:04	(unrelated sample)
ZZZZZZ	L064472.D	07/02/13	15:04	04:28	(unrelated sample)
JB40350-3	L064477.D	07/02/13	17:10	06:34	P4
JB40350-4	L064478.D	07/02/13	17:35	06:59	P5
JB40350-5	L064479.D	07/02/13	18:00	07:24	P11
ZZZZZZ	L064480.D	07/02/13	18:24	07:48	(unrelated sample)
ZZZZZZ	L064481.D	07/02/13	18:49	08:13	(unrelated sample)
ZZZZZZ	L064482.D	07/02/13	19:13	08:37	(unrelated sample)
ZZZZZZ	L064483.D	07/02/13	19:37	09:01	(unrelated sample)
ZZZZZZ	L064484.D	07/02/13	20:02	09:26	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: SL3252-DFTPP
Lab File ID: L064461.D
Instrument ID: GCMSL
Injection Date: 07/02/13
Injection Time: 10:36

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	L064485.D	07/02/13	20:26	09:50	(unrelated sample)
ZZZZZZ	L064486.D	07/02/13	20:50	10:14	(unrelated sample)
ZZZZZZ	L064487.D	07/02/13	21:15	10:39	(unrelated sample)
ZZZZZZ	L064488.D	07/02/13	21:39	11:03	(unrelated sample)
ZZZZZZ	L064489.D	07/02/13	22:03	11:27	(unrelated sample)
ZZZZZZ	L064490.D	07/02/13	22:28	11:52	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: SU1817-DFTPP
Lab File ID: U038812.D
Instrument ID: GCMSU
Injection Date: 06/12/13
Injection Time: 10:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	22045	47.7		Pass
68	Less than 2.0% of mass 69	239	0.52	(1.08) [a]	Pass
69	Mass 69 relative abundance	22208	48.1		Pass
70	Less than 2.0% of mass 69	82	0.18	(0.37) [a]	Pass
127	40.0 - 60.0% of mass 198	24474	53.0		Pass
197	Less than 1.0% of mass 198	65	0.14		Pass
198	Base peak, 100% relative abundance	46218	100.0		Pass
199	5.0 - 9.0% of mass 198	3181	6.88		Pass
275	10.0 - 30.0% of mass 198	12114	26.2		Pass
365	1.0 - 100.0% of mass 198	1765	3.82		Pass
441	Present, but less than mass 443	5635	12.2	(69.5) [b]	Pass
442	40.0 - 100.0% of mass 198	38642	83.6		Pass
443	17.0 - 23.0% of mass 442	8112	17.6	(21.0) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SU1817-IC1817	U038813.D	06/12/13	10:53	00:17	Initial cal 5
SU1817-IC1817	U038814.D	06/12/13	11:20	00:44	Initial cal 10
SU1817-IC1817	U038815.D	06/12/13	11:47	01:11	Initial cal 25
SU1817-ICC1817	U038816.D	06/12/13	12:14	01:38	Initial cal 50
SU1817-IC1817	U038817.D	06/12/13	12:41	02:05	Initial cal 60
SU1817-IC1817	U038818.D	06/12/13	13:09	02:33	Initial cal 75
SU1817-IC1817	U038819.D	06/12/13	13:36	03:00	Initial cal 100
SU1817-ICV1817	U038820.D	06/12/13	14:03	03:27	Initial cal verification 50
SU1817-ICV1817	U038821.D	06/12/13	14:31	03:55	Initial cal verification 50
ZZZZZZ	U038822.D	06/12/13	14:58	04:22	(unrelated sample)
OP47290-BS	U038823.D	06/12/13	15:26	04:50	Blank Spike
OP47290-MB	U038824.D	06/12/13	15:53	05:17	Method Blank
FA5443-1	U038825.D	06/12/13	16:21	05:45	(used for QC only; not part of job JB40350)
ZZZZZZ	U038828.D	06/12/13	17:43	07:07	(unrelated sample)
ZZZZZZ	U038829.D	06/12/13	18:11	07:35	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: SU1836-DFTPP
Lab File ID: U039302.D
Instrument ID: GCMSU
Injection Date: 06/28/13
Injection Time: 13:31

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	14519	51.3		Pass
68	Less than 2.0% of mass 69	234	0.83	(1.66) [a]	Pass
69	Mass 69 relative abundance	14080	49.8		Pass
70	Less than 2.0% of mass 69	42	0.15	(0.30) [a]	Pass
127	40.0 - 60.0% of mass 198	15228	53.8		Pass
197	Less than 1.0% of mass 198	58	0.20		Pass
198	Base peak, 100% relative abundance	28299	100.0		Pass
199	5.0 - 9.0% of mass 198	1975	6.98		Pass
275	10.0 - 30.0% of mass 198	7837	27.7		Pass
365	1.0 - 100.0% of mass 198	1314	4.64		Pass
441	Present, but less than mass 443	3979	14.1	(74.1) [b]	Pass
442	40.0 - 100.0% of mass 198	25358	89.6		Pass
443	17.0 - 23.0% of mass 442	5369	19.0	(21.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SU1836-CC1817	U039303.D	06/28/13	13:48	00:17	Continuing cal 50
OP47525-BS	U039304.D	06/28/13	14:18	00:47	Blank Spike
OP47525-MB	U039305.D	06/28/13	14:46	01:15	Method Blank
ZZZZZZ	U039306.D	06/28/13	15:13	01:42	(unrelated sample)
ZZZZZZ	U039307.D	06/28/13	15:41	02:10	(unrelated sample)
ZZZZZZ	U039308.D	06/28/13	16:08	02:37	(unrelated sample)
ZZZZZZ	U039309.D	06/28/13	16:36	03:05	(unrelated sample)
FA5897-1	U039310.D	06/28/13	17:04	03:33	(used for QC only; not part of job JB40350)
OP47525-MS	U039311.D	06/28/13	17:32	04:01	Matrix Spike
OP47525-MSD	U039312.D	06/28/13	17:59	04:28	Matrix Spike Duplicate
ZZZZZZ	U039313.D	06/28/13	18:27	04:56	(unrelated sample)
OP47524-BS	U039314.D	06/28/13	18:54	05:23	Blank Spike
OP47524-MB	U039315.D	06/28/13	19:22	05:51	Method Blank
ZZZZZZ	U039316.D	06/28/13	19:49	06:18	(unrelated sample)
ZZZZZZ	U039318.D	06/28/13	20:44	07:13	(unrelated sample)
ZZZZZZ	U039320.D	06/28/13	21:38	08:07	(unrelated sample)
ZZZZZZ	U039321.D	06/28/13	22:05	08:34	(unrelated sample)
ZZZZZZ	U039322.D	06/28/13	22:32	09:01	(unrelated sample)
ZZZZZZ	U039323.D	06/28/13	22:59	09:28	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: SU1836-DFTPP
Lab File ID: U039302.D
Instrument ID: GCMSU
Injection Date: 06/28/13
Injection Time: 13:31

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	U039324.D	06/28/13	23:26	09:55	(unrelated sample)
ZZZZZZ	U039325.D	06/28/13	23:53	10:22	(unrelated sample)
JB40280-1	U039326.D	06/29/13	00:20	10:49	(used for QC only; not part of job JB40350)
OP47524-MS	U039327.D	06/29/13	00:47	11:16	Matrix Spike
OP47524-MSD	U039328.D	06/29/13	01:14	11:43	Matrix Spike Duplicate

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: SU1839-DFTPP
Lab File ID: U039356.D
Instrument ID: GCMSU
Injection Date: 07/01/13
Injection Time: 09:59

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	16946	44.7		Pass
68	Less than 2.0% of mass 69	290	0.77	(1.69) [a]	Pass
69	Mass 69 relative abundance	17124	45.2		Pass
70	Less than 2.0% of mass 69	99	0.26	(0.58) [a]	Pass
127	40.0 - 60.0% of mass 198	19060	50.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	37882	100.0		Pass
199	5.0 - 9.0% of mass 198	2534	6.69		Pass
275	10.0 - 30.0% of mass 198	9813	25.9		Pass
365	1.0 - 100.0% of mass 198	1637	4.32		Pass
441	Present, but less than mass 443	5430	14.3	(75.6) [b]	Pass
442	40.0 - 100.0% of mass 198	34631	91.4		Pass
443	17.0 - 23.0% of mass 442	7186	19.0	(20.8) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SU1839-CC1817	U039357.D	07/01/13	10:16	00:17	Continuing cal 50
OP47523-BS	U039358.D	07/01/13	10:42	00:43	Blank Spike
OP47523-MB	U039359.D	07/01/13	11:09	01:10	Method Blank
ZZZZZZ	U039360.D	07/01/13	11:36	01:37	(unrelated sample)
ZZZZZZ	U039361.D	07/01/13	12:03	02:04	(unrelated sample)
ZZZZZZ	U039363.D	07/01/13	12:57	02:58	(unrelated sample)
ZZZZZZ	U039364.D	07/01/13	13:24	03:25	(unrelated sample)
ZZZZZZ	U039365.D	07/01/13	13:51	03:52	(unrelated sample)
ZZZZZZ	U039366.D	07/01/13	14:19	04:20	(unrelated sample)
ZZZZZZ	U039367.D	07/01/13	14:46	04:47	(unrelated sample)
ZZZZZZ	U039368.D	07/01/13	15:13	05:14	(unrelated sample)
ZZZZZZ	U039369.D	07/01/13	15:40	05:41	(unrelated sample)
ZZZZZZ	U039370.D	07/01/13	16:07	06:08	(unrelated sample)
ZZZZZZ	U039371.D	07/01/13	16:34	06:35	(unrelated sample)
ZZZZZZ	U039373.D	07/01/13	17:28	07:29	(unrelated sample)
JB40113-1	U039374.D	07/01/13	17:56	07:57	(used for QC only; not part of job JB40350)
ZZZZZZ	U039376.D	07/01/13	18:50	08:51	(unrelated sample)
ZZZZZZ	U039377.D	07/01/13	19:17	09:18	(unrelated sample)
JB40350-1	U039379.D	07/01/13	20:11	10:12	P2

Instrument Performance Check (DFTPP)

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Sample: SU1839-DFTPP
Lab File ID: U039356.D
Instrument ID: GCMSU
Injection Date: 07/01/13
Injection Time: 09:59

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JB40350-2	U039380.D	07/01/13	20:38	10:39	P3
ZZZZZZ	U039381.D	07/01/13	21:05	11:06	(unrelated sample)
ZZZZZZ	U039382.D	07/01/13	21:32	11:33	(unrelated sample)

Semivolatile Internal Standard Area Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	SL3252-CC3245	**Injection Date:**	07/02/13
Lab File ID:	L064462.D	**Injection Time:**	10:53
Instrument ID:	GCMSL	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	101814	4.45	331946	5.47	203901	6.90	317969	8.10	240565	10.57	244124	12.41
Check Std [b]	104086	4.36	275085	5.39	174144	6.81	263827	8.00	199466	10.45	184276	12.25
Upper Limit [c]	208172	4.86	550170	5.89	348288	7.31	527654	8.50	398932	10.95	368552	12.75
Lower Limit [d]	52043	3.86	137543	4.89	87072	6.31	131914	7.50	99733	9.95	92138	11.75

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP47527-BS	114569	4.36	352984	5.39	172370	6.81	273470	8.01	202272	10.44	191248	12.25
OP47527-MB	108242	4.36	279166	5.38	172490	6.80	267024	8.00	224613	10.43	199182	12.24
ZZZZZZ	103700	4.36	286229	5.38	175739	6.80	270991	8.00	208820	10.44	208537	12.25
FA5921-2	106437	4.36	291564	5.38	174041	6.80	280944	8.00	230216	10.44	204710	12.25
OP47527-MS	113407	4.36	271995	5.39	167640	6.80	278290	8.00	203118	10.45	219941	12.25
OP47527-MSD	104609	4.36	268412	5.39	159825	6.80	258101	8.00	196728	10.45	211978	12.25
ZZZZZZ	101417	4.36	264442	5.38	165846	6.80	253048	8.00	210323	10.44	202071	12.24
ZZZZZZ	107341	4.36	285041	5.38	177257	6.80	271066	8.00	219898	10.43	212238	12.24
ZZZZZZ	106058	4.36	283153	5.38	179107	6.80	262613	8.00	221007	10.43	198616	12.25
ZZZZZZ	102456	4.36	286123	5.38	169203	6.80	266544	8.00	225796	10.43	194319	12.25
JB40350-3	81232	4.36	248453	5.39	144374	6.81	221760	8.01	177862	10.44	145484	12.26
JB40350-4	75558	4.36	248307	5.39	142062	6.81	216773	8.01	168148	10.44	142722	12.26
JB40350-5	77998	4.36	262953	5.39	148597	6.81	225260	8.01	177674	10.44	148780	12.26
ZZZZZZ	81081	4.36	272203	5.39	154130	6.80	233413	8.01	179110	10.45	148550	12.26
ZZZZZZ	81338	4.36	272418	5.38	158045	6.81	235620	8.01	187825	10.45	157763	12.26
ZZZZZZ	82940	4.36	269045	5.38	154674	6.80	242063	8.00	187244	10.45	149439	12.27
ZZZZZZ	82691	4.36	261434	5.39	153961	6.81	231210	8.01	175518	10.45	144621	12.27
ZZZZZZ	83263	4.36	263955	5.39	152938	6.81	231025	8.01	186305	10.44	148595	12.26
ZZZZZZ	83412	4.36	264327	5.39	150445	6.81	232470	8.01	195215	10.44	154343	12.26
ZZZZZZ	86448	4.36	273863	5.38	153788	6.81	226597	8.01	180018	10.45	148912	12.27
ZZZZZZ	85696	4.36	273830	5.38	157760	6.81	246387	8.01	181090	10.45	152000	12.26
ZZZZZZ	83526	4.36	261871	5.39	159664	6.81	231305	8.01	185303	10.44	143573	12.26
ZZZZZZ	78803	4.36	250158	5.39	141584	6.81	221580	8.01	182457	10.45	148167	12.26
ZZZZZZ	79439	4.36	250453	5.39	152105	6.81	242505	8.01	187622	10.45	156215	12.26

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SL3245-ICC3245 L064269.D 06/26/13 11:12

Semivolatile Internal Standard Area Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	SL3252-CC3245	**Injection Date:**	07/02/13
Lab File ID:	L064462.D	**Injection Time:**	10:53
Instrument ID:	GCMSL	**Method:**	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	SU1836-CC1817	**Injection Date:**	06/28/13
Lab File ID:	U039303.D	**Injection Time:**	13:48
Instrument ID:	GCMSU	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	72038	4.61	265912	5.68	151687	7.85	266617	10.30	283540	15.20	251330	17.70
Check Std [b]	50820	4.46	186275	5.50	117494	7.61	214627	10.03	262461	14.91	245646	17.39
Upper Limit [c]	101640	4.96	372550	6.00	234988	8.11	429254	10.53	524922	15.41	491292	17.89
Lower Limit [d]	25410	3.96	93138	5.00	58747	7.11	107314	9.53	131231	14.41	122823	16.89

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP47525-BS	48858	4.46	171682	5.50	99009	7.60	184310	10.03	214396	14.90	208620	17.39
OP47525-MB	43479	4.46	158859	5.49	95498	7.60	182526	10.02	202887	14.89	199610	17.38
ZZZZZZ	50774	4.46	184016	5.49	108906	7.60	209215	10.02	240865	14.90	233679	17.39
ZZZZZZ	49130	4.46	188205	5.49	112725	7.60	214250	10.02	243543	14.89	237340	17.39
ZZZZZZ	45364	4.46	172045	5.49	101253	7.60	192726	10.02	216170	14.89	216519	17.39
ZZZZZZ	46037	4.46	176250	5.49	102089	7.60	196223	10.02	215562	14.90	211571	17.39
FA5897-1	42912	4.46	161679	5.49	93461	7.60	176810	10.02	201236	14.90	198532	17.39
OP47525-MS	44310	4.46	160359	5.50	96693	7.60	176345	10.03	214319	14.90	204216	17.39
OP47525-MSD	42873	4.46	150531	5.49	88199	7.60	160198	10.03	188533	14.90	188555	17.39
ZZZZZZ	44061	4.46	161690	5.49	94044	7.60	180044	10.02	204001	14.90	203925	17.39
OP47524-BS	47428	4.46	164028	5.50	94191	7.60	166707	10.03	190164	14.90	183883	17.39
OP47524-MB	50104	4.46	182501	5.49	100923	7.60	177695	10.02	183330	14.89	175642	17.39
ZZZZZZ	44767	4.46	160545	5.49	84528	7.60	153817	10.02	163952	14.89	164097	17.38
ZZZZZZ	47079	4.46	174984	5.49	100321	7.60	187688	10.03	253259	14.93	234631	17.41
ZZZZZZ	49067	4.46	184526	5.49	104929	7.60	197897	10.02	228349	14.90	229891	17.40
ZZZZZZ	45328	4.46	164769	5.49	94651	7.60	176695	10.03	192084	14.90	202928	17.39
ZZZZZZ	51739	4.46	185333	5.49	100513	7.60	193636	10.03	202359	14.90	217166	17.40
ZZZZZZ	51299	4.46	194296	5.49	111618	7.60	209368	10.03	234316	14.90	241726	17.40
ZZZZZZ	51056	4.46	183825	5.50	105848	7.60	192399	10.03	234881	14.91	256537	17.41
ZZZZZZ	50279	4.46	195990	5.50	116524	7.61	235449	10.04	287820	14.94	275245	17.43
JB40280-1	51140	4.46	193877	5.49	107486	7.60	201300	10.03	229450	14.91	240216	17.40
OP47524-MS	48941	4.46	169770	5.50	94697	7.61	166418	10.03	182390	14.91	188610	17.40
OP47524-MSD	47183	4.46	168412	5.50	95617	7.61	168632	10.03	187983	14.91	191167	17.40

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SU1817-ICC1817 U038816.D 06/12/13 12:14
(b) Check Std Limit = -50 to + 100% of initial cal area.

Semivolatile Internal Standard Area Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	SU1836-CC1817	**Injection Date:**	06/28/13
Lab File ID:	U039303.D	**Injection Time:**	13:48
Instrument ID:	GCMSU	**Method:**	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Check Std:	SU1839-CC1817	**Injection Date:**	07/01/13
Lab File ID:	U039357.D	**Injection Time:**	10:16
Instrument ID:	GCMSU	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	72038	4.61	265912	5.68	151687	7.85	266617	10.30	283540	15.20	251330	17.70
Check Std [b]	70300	4.44	265376	5.46	167501	7.57	297867	9.99	356574	14.87	332741	17.36
Upper Limit [c]	140600	4.94	530752	5.96	335002	8.07	595734	10.49	713148	15.37	665482	17.86
Lower Limit [d]	35150	3.94	132688	4.96	83751	7.07	148934	9.49	178287	14.37	166371	16.86

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP47523-BS	70062	4.44	258485	5.46	151886	7.56	263370	9.98	282755	14.87	253026	17.35
OP47523-MB	67954	4.43	260711	5.46	148151	7.55	273266	9.98	291407	14.86	281292	17.35
ZZZZZZ	56545	4.43	207661	5.46	117772	7.55	220378	9.98	225458	14.86	223805	17.34
ZZZZZZ	53090	4.43	200134	5.46	121700	7.56	271387	10.05	334076	14.95	283541	17.43
ZZZZZZ	58394	4.43	227105	5.46	138537	7.56	262667	9.98	277039	14.87	269133	17.36
ZZZZZZ	57639	4.44	221256	5.46	131776	7.56	259544	9.98	255838	14.87	249776	17.36
ZZZZZZ	53656	4.43	206112	5.46	122779	7.56	246441	9.98	288151	14.87	285730	17.36
ZZZZZZ	64838	4.44	235315	5.46	129631	7.56	236765	9.98	278925	14.88	302787	17.38
ZZZZZZ	45513	4.44	180087	5.46	109067	7.56	208088	9.98	237774	14.86	238517	17.35
ZZZZZZ	50334	4.44	196454	5.46	118833	7.56	233090	9.98	251394	14.86	243528	17.35
ZZZZZZ	49574	4.43	189079	5.46	112533	7.56	212125	9.98	248771	14.87	232339	17.36
ZZZZZZ	47657	4.44	180994	5.46	107240	7.56	213124	9.98	255931	14.88	248616	17.37
ZZZZZZ	61559	4.44	243142	5.46	144087	7.56	275244	9.99	307295	14.87	295671	17.36
ZZZZZZ	46032	4.44	179357	5.46	106827	7.56	207860	9.98	247909	14.86	244346	17.36
JB40113-1	51699	4.44	214143	5.46	126942	7.57	238054	9.99	275824	14.87	267508	17.36
ZZZZZZ	59739	4.44	229149	5.46	137536	7.56	265217	9.98	307072	14.87	306220	17.36
ZZZZZZ	61750	4.44	241180	5.46	142578	7.56	270396	9.99	320437	14.87	318956	17.36
JB40350-1	50993	4.44	200045	5.46	119806	7.56	226654	9.98	265321	14.87	264929	17.37
JB40350-2	70595	4.44	275963	5.46	162406	7.57	321320	9.99	358720	14.87	359311	17.37
ZZZZZZ	63713	4.44	230861	5.46	116171	7.57	225649	9.99	263110	14.87	264369	17.36
ZZZZZZ	65101	4.44	210630	5.47	105500	7.56	204273	9.98	236305	14.87	240367	17.36

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SU1817-ICC1817 U038816.D 06/12/13 12:14
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: JB40350
Account: ALNJ Accutest New Jersey
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JB40350-1	U039379.D	71	76	82
JB40350-2	U039380.D	76	83	100
JB40350-3	L064477.D	51	64	73
JB40350-4	L064478.D	60	73	80
JB40350-5	L064479.D	62	74	78
OP47524-BS	U039314.D	79	81	91
OP47524-MB	U039315.D	74	78	94
OP47524-MS	U039327.D	75	82	88
OP47524-MSD	U039328.D	74	79	86
OP47527-BS	L064463.D	76	80	94
OP47527-MB	L064464.D	71	68	83
OP47527-MS	L064467.D	81	83	100
OP47527-MSD	L064468.D	85	77	88

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	40-105%
S2 = 2-Fluorobiphenyl	43-107%
S3 = Terphenyl-d14	45-119%

12.6.1

12

Initial Calibration Summary

Job Number: JB40350 **Sample:** SL3245-ICC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064269.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Response Factor Report MSBNA02

```
Method       : C:\msdchem\2\METHODS\8270da.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Jun 26 12:53:03 2013
Response via : Initial Calibration

Calibration Files
5   =L064266.D   10  =L064267.D   25  =L064268.D   50  =L064269.D
60  =L064270.D   75  =L064271.D   100 =L064272.D

   Compound             5     10    25    50    60    75    100   Avg   %RSD
-------------------------------------------------------------------------------

1) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
2)  1,4-Dioxane       0.819 0.770 0.767 0.754 0.701 0.717 0.725 0.750   5.34
3)  N-nitrosodimethyl 1.103 1.161 1.062 1.054 0.986 1.012 0.983 1.051   6.16
4)  Pyridine          2.618 2.603 2.547 2.520 2.402 2.522 2.489 2.529   2.87
5)P Benzaldehyde      1.198 1.194 1.125 1.063 1.013 0.861 0.669 1.018  18.97
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9972
              Response Ratio = 0.00000 + 1.42245 *A + -0.29847 *A^2

6)  Aniline           2.529 2.396 2.362 2.190 2.058 2.029 2.053 2.231   8.91
7)S 2-Fluorophenol    1.556 1.570 1.464 1.364 1.271 1.259 1.191 1.382  10.91
8)P bis(2-Chloroethyl 1.422 1.423 1.380 1.297 1.209 1.215 1.255 1.315   7.10
9)S Phenol-d5         1.967 1.821 1.709 1.570 1.452 1.453 1.426 1.628  12.90
10)P Phenol           1.967 1.893 1.799 1.699 1.586 1.574 1.510 1.718  10.11
11)P 2-Chlorophenol   1.615 1.539 1.498 1.418 1.337 1.324 1.341 1.439   7.93
12)  1,3-Dichlorobenze 1.845 1.716 1.629 1.563 1.459 1.440 1.403 1.579  10.23
13)  1,4-Dichlorobenze 1.852 1.701 1.607 1.517 1.430 1.410 1.380 1.557  11.16
14)  1,2-Dichlorobenze 1.725 1.641 1.526 1.437 1.344 1.313 1.273 1.465  11.74
15)  Benzyl alcohol   1.040 0.975 0.949 0.914 0.878 0.878 0.876 0.930   6.67
16)P bis(2-chloroisopr 2.123 1.972 1.880 1.767 1.656 1.675 1.633 1.815  10.15
17)P 2-Methylphenol   1.410 1.384 1.338 1.277 1.204 1.223 1.204 1.291   6.71
18)P Acetophenone     1.993 1.979 1.873 1.760 1.708 1.750 1.643 1.815   7.46
19)P Hexachloroethane 0.715 0.681 0.648 0.631 0.592 0.585 0.580 0.633   8.18
20)P N-Nitroso-di-n-pr 1.066 1.030 0.991 0.951 0.907 0.915 0.893 0.965   6.87
21)P 3&4-Methylphenol 1.485 1.518 1.385 1.350 1.277 1.277 1.260 1.365   7.63

22) I   Naphthalene-d8        ----------------ISTD---------------------
23)S Nitrobenzene-d5  0.523 0.496 0.483 0.458 0.433 0.424 0.430 0.464   8.14
24)P Nitrobenzene     0.502 0.485 0.469 0.428 0.415 0.403 0.391 0.442   9.76
25)P Isophorone       0.857 0.845 0.802 0.763 0.703 0.720 0.737 0.775   7.84
26)P 2-Nitrophenol    0.255 0.257 0.254 0.242 0.232 0.230 0.223 0.242   5.69
27)P 2,4-Dimethylpheno 0.470 0.468 0.439 0.416 0.396 0.383 0.379 0.422   9.07
28)P bis(2-Chloroethox 0.552 0.528 0.502 0.470 0.438 0.435 0.425 0.479  10.40
29)  Benzoic Acid     0.106 0.159 0.214 0.231 0.224 0.234 0.257 0.204  25.83
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
              Response Ratio = 0.00000 + 0.18711 *A + 0.02743 *A^2

30)P 2,4-Dichloropheno 0.424 0.383 0.381 0.360 0.339 0.330 0.323 0.363   9.85
31)  1,2,4-Trichlorobe 0.448 0.426 0.402 0.381 0.357 0.349 0.340 0.386  10.66
32)  alpha-Terpineol                                             0.000  -1.00
33)P Naphthalene      1.350 1.250 1.152 1.026 0.972 0.925 0.880 1.079  16.30
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 1.16686 *A + -0.11870 *A^2

34)P 4-Chloroaniline  0.588 0.567 0.536 0.501 0.463 0.460 0.435 0.507  11.51
35)  2,6-Dichloropheno 0.414 0.400 0.376 0.352 0.326 0.322 0.315 0.358  11.02
36)P Hexachlorobutadie 0.249 0.226 0.223 0.210 0.195 0.194 0.186 0.212  10.45
```

12.7.1

12

Initial Calibration Summary

Job Number: JB40350 **Sample:** SL3245-ICC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064269.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
37)P Caprolactam       0.132 0.139 0.133 0.132 0.129 0.129 0.134 0.132   2.76
38)P 4-Chloro-3-methyl 0.396 0.388 0.371 0.354 0.336 0.333 0.342 0.360   7.01
39)P 2-Methylnaphthale 0.865 0.845 0.789 0.716 0.661 0.656 0.625 0.737  13.13
40)  1-Methylnaphthale 0.861 0.847 0.765 0.712 0.660 0.648 0.618 0.730  13.32
41)P 1,2,4,5-Tetrachlo 0.441 0.428 0.397 0.351 0.339 0.329 0.316 0.371  13.46

42) I   Acenaphthene-d10      ----------------ISTD--------------------
43)P Hexachlorocyclope 0.304 0.333 0.359 0.355 0.347 0.340 0.346 0.341   5.32
44)P 2,4,6-Trichloroph 0.472 0.458 0.456 0.416 0.413 0.403 0.403 0.432   6.86
45)P 2,4,5-Trichloroph 0.494 0.472 0.462 0.432 0.420 0.413 0.421 0.445   7.02
46)S 2-Fluorobiphenyl  1.707 1.565 1.476 1.270 1.269 1.205 1.169 1.380  14.79
47)P 1,1'-Biphenyl     1.893 1.727 1.562 1.330 1.350 1.281 1.170 1.473  17.82
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 1.60487 *A + -0.17505 *A^2

48)P 2-Chloronaphthale 1.421 1.328 1.212 1.092 1.065 1.028 1.000 1.164  13.84
49)P 2-Nitroaniline    0.401 0.406 0.407 0.379 0.370 0.373 0.376 0.387   4.21
50)  p-Dinitrobenzene  0.273 0.277 0.269 0.270 0.277 0.277 0.279 0.275   1.42
51)P Acenaphthylene    2.208 2.152 1.969 1.669 1.648 1.581 1.514 1.820  15.65
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
              Response Ratio = 0.00000 + 1.91701 *A + -0.16749 *A^2

52)P Dimethylphthalate 1.524 1.502 1.420 1.244 1.234 1.209 1.210 1.335  10.63
53)  m-Dinitrobenzene  0.256 0.261 0.264 0.254 0.253 0.252 0.260 0.257   1.83
54)P 2,6-Dinitrotoluen 0.354 0.373 0.355 0.336 0.326 0.327 0.325 0.342   5.45
55)  o-Dinitrobenzene  0.241 0.236 0.231 0.218 0.218 0.214 0.212 0.224   5.12
56)P Acenaphthene      1.365 1.343 1.210 1.106 1.085 1.041 0.999 1.164  12.50
57)P 3-Nitroaniline    0.390 0.422 0.386 0.382 0.373 0.375 0.374 0.386   4.49
58)P 2,4-Dinitrophenol 0.091 0.144 0.185 0.218 0.216 0.218 0.234 0.187  27.75
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 0.18272 *A + 0.02056 *A^2

59)P Dibenzofuran      1.981 1.860 1.735 1.501 1.460 1.383 1.343 1.609  15.49
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9985
              Response Ratio = 0.00000 + 1.69837 *A + -0.14900 *A^2

60)P 2,4-Dinitrotoluen 0.480 0.466 0.442 0.426 0.415 0.400 0.413 0.435   6.79
61)P 4-Nitrophenol     0.168 0.177 0.179 0.173 0.171 0.165 0.168 0.171   3.00
62)  2,3,5,6-Tetrachlo 0.328 0.318 0.337 0.338 0.337 0.333 0.337 0.333   2.19
63)P 2,3,4,6-Tetrachlo 0.310 0.363 0.357 0.343 0.337 0.326 0.340 0.339   5.33
64)P Fluorene          1.605 1.534 1.412 1.217 1.208 1.154 1.085 1.316  15.25
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 1.41501 *A + -0.13485 *A^2

65)P 4-Chlorophenyl-ph 0.727 0.708 0.678 0.582 0.584 0.553 0.522 0.622  13.02
66)P Diethylphthalate  1.938 1.561 1.372 1.233 1.222 1.161 1.146 1.376  20.84
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 1.36397 *A + -0.09251 *A^2

67)P 4-Nitroaniline    0.375 0.380 0.371 0.356 0.360 0.362 0.368 0.367   2.36

68) I   Phenanthrene-d10      ----------------ISTD--------------------
69)P 4,6-Dinitro-2-met 0.125 0.147 0.167 0.178 0.172 0.170 0.170 0.161  11.63
70)P n-Nitrosodiphenyl 0.718 0.659 0.630 0.575 0.562 0.529 0.506 0.597  12.68
71)  1,2-Diphenylhydra 0.995 0.946 0.863 0.893 0.869 0.813 0.782 0.880   8.32
72)S 2,4,6-Tribromophe 0.117 0.112 0.117 0.105 0.101 0.098 0.093 0.106   8.73
73)P 4-Bromophenyl-phe 0.260 0.248 0.242 0.231 0.219 0.214 0.209 0.232   8.19
74)P Hexachlorobenzene 0.267 0.254 0.247 0.234 0.218 0.211 0.210 0.234   9.58
75)  Simazine          0.151 0.145 0.143 0.168 0.162 0.162 0.157 0.155   6.14
76)P Atrazine          0.268 0.256 0.277 0.258 0.259 0.254 0.239 0.259   4.57
```

Initial Calibration Summary

Job Number: JB40350 **Sample:** SL3245-ICC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064269.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
77)P Pentachlorophenol 0.072 0.099 0.133 0.147 0.141 0.146 0.151 0.127  23.59
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 0.12976 *A + 0.00865 *A^2

78)P Phenanthrene      1.374 1.224 1.192 1.018 0.979 0.940 0.868 1.085  16.76
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 1.19738 *A + -0.13438 *A^2

79)P Anthracene        1.396 1.325 1.204 1.060 1.008 0.950 0.915 1.123  16.75
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
              Response Ratio = 0.00000 + 1.20524 *A + -0.12121 *A^2

80)P Carbazole         1.338 1.295 1.206 1.083 1.011 0.971 0.933 1.120  14.40
81)P Di-n-butylphthala 1.548 1.460 1.357 1.212 1.136 1.078 1.008 1.257  16.13
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9991
              Response Ratio = 0.00000 + 1.39765 *A + -0.16006 *A^2

82)P Fluoranthene      1.472 1.455 1.317 1.183 1.115 1.064 0.994 1.228  15.42
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 1.36004 *A + -0.14980 *A^2


83) I   Chrysene-d12          ----------------ISTD---------------------
84)  Benzidine         0.978 1.000 1.051 1.005 0.973 0.827 0.736 0.938  12.07
85)P Pyrene            1.770 1.686 1.674 1.501 1.491 1.388 1.357 1.552  10.25
86)S Terphenyl-d14     1.101 1.089 1.037 0.985 0.961 0.920 0.911 1.001   7.70
87)P Butylbenzylphthal 0.662 0.655 0.655 0.652 0.647 0.630 0.626 0.647   2.10
88)P 3,3'-Dichlorobenz 0.436 0.440 0.439 0.434 0.411 0.392 0.364 0.416   7.01
89)P Benzo[a]anthracen 1.262 1.178 1.189 1.137 1.094 1.064 1.077 1.143   6.26
90)P Chrysene          1.144 1.089 1.063 1.040 1.009 0.981 0.954 1.040   6.26
91)P bis(2-Ethylhexyl) 0.837 0.830 0.864 0.848 0.817 0.802 0.801 0.828   2.82

92) I   Perylene-d12          ----------------ISTD---------------------
93)P Di-n-octylphthala 1.519 1.515 1.522 1.445 1.383 1.435 1.392 1.459   4.12
94)P Benzo[b]fluoranth 1.256 1.216 1.232 1.134 1.092 1.146 1.127 1.172   5.30
95)P Benzo[k]fluoranth 1.215 1.174 1.109 1.052 1.003 1.032 0.995 1.083   7.91
96)P Benzo[a]pyrene    1.200 1.133 1.153 1.075 1.039 1.062 1.054 1.102   5.47
97)P Indeno[1,2,3-cd]p 1.020 0.975 0.987 0.936 0.905 0.918 0.921 0.952   4.49
98)P Dibenz[a,h]anthra 1.033 0.994 0.986 0.928 0.902 0.915 0.864 0.946   6.35
99)P Benzo[g,h,i]peryl 1.089 1.067 1.062 0.954 0.900 0.927 0.894 0.985   8.62
-------------------------------------------------------------------------------
(#) = Out of Range

          8270da.m          Thu Jun 27 09:10:20 2013
```

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Initial Calibration Verification

Job Number: JB40350 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064273.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\sl3245\L064273.D          Vial: 9
Acq On    : 26 Jun 2013  12:52 pm                   Operator: nancyf
Sample    : icv3245-50                              Inst    : MSBNA02
Misc      : op47159,sl3245,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270da.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Jun 26 12:53:03 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	95	0.00	4.45
2		1,4-Dioxane	50.000	46.402	7.2	88	0.04	1.74
3		N-nitrosodimethylamine	50.000	45.419	9.2	86	0.03	2.08
4		Pyridine		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
5	P	Benzaldehyde		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
6		Aniline		----------NA----------				
7	S	2-Fluorophenol		----------NA----------				
8	P	bis(2-Chloroethyl)ether	50.000	49.635	0.7	95	0.00	4.25
9	S	Phenol-d5		----------NA----------				
10	P	Phenol	50.000	49.607	0.8	95	0.00	4.22
11	P	2-Chlorophenol	50.000	48.318	3.4	93	0.00	4.29
12		1,3-Dichlorobenzene	50.000	47.230	5.5	91	0.00	4.40
13		1,4-Dichlorobenzene	50.000	46.747	6.5	91	0.00	4.46
14		1,2-Dichlorobenzene	50.000	48.454	3.1	94	0.00	4.58
15		Benzyl alcohol		----------NA----------				
16	P	bis(2-chloroisopropyl)eth	50.000	49.001	2.0	95	0.00	4.69
17	P	2-Methylphenol	50.000	45.534	8.9	87	0.00	4.69
18	P	Acetophenone	50.000	48.334	3.3	95	0.00	4.78
19	P	Hexachloroethane	50.000	47.444	5.1	90	0.00	4.85
20	P	N-Nitroso-di-n-propylamin	50.000	48.203	3.6	93	0.00	4.79
21	P	3&4-Methylphenol	100.000	87.340	12.7	100	0.00	4.82
22	I	Naphthalene-d8	40.000	40.000	0.0	93	0.00	5.47
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene	50.000	47.985	4.0	92	-0.01	4.91
25	P	Isophorone		----------NA----------				
26	P	2-Nitrophenol	50.000	47.185	5.6	88	0.00	5.17
27	P	2,4-Dimethylphenol	50.000	41.393	17.2	78	0.00	5.24
28	P	bis(2-Chloroethoxy)methan	50.000	49.217	1.6	93	0.00	5.30
		----------	Amount	Calc.	%Drift		----------	
29		Benzoic Acid	100.000	91.282	8.7	91	0.03	5.41
		----------	Amount	Calc.	%Drift		----------	
30	P	2,4-Dichlorophenol	50.000	47.264	5.5	89	0.00	5.38
31		1,2,4-Trichlorobenzene	50.000	46.648	6.7	88	0.00	5.43
32		alpha-Terpineol		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	

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Initial Calibration Verification

Job Number: JB40350 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064273.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

			Amount	Calc.	%Drift			
33	P	Naphthalene	50.000	49.474	1.1	92	0.00	5.49
34	P	4-Chloroaniline		NA				
35		2,6-Dichlorophenol	50.000	45.632	8.7	86	0.00	5.55
36	P	Hexachlorobutadiene	50.000	48.593	2.8	91	0.00	5.60
37	P	Caprolactam	50.000	46.281	7.4	87	0.00	5.86
38	P	4-Chloro-3-methylphenol	50.000	47.115	5.8	89	0.00	5.97
39	P	2-Methylnaphthalene		NA				
40		1-Methylnaphthalene	50.000	46.943	6.1	90	0.00	6.13
41	P	1,2,4,5-Tetrachlorobenzen	50.000	45.274	9.5	89	0.00	6.19
42	I	Acenaphthene-d10	40.000	40.000	0.0	90	0.00	6.89
43	P	Hexachlorocyclopentadiene	50.000	47.684	4.6	82	0.00	6.19
44	P	2,4,6-Trichlorophenol	50.000	47.146	5.7	88	0.00	6.30
45	P	2,4,5-Trichlorophenol	50.000	47.997	4.0	89	0.00	6.33
46	S	2-Fluorobiphenyl		NA				
			Amount	Calc.	%Drift			
47	P	1,1'-Biphenyl	50.000	49.329	1.3	92	0.00	6.43
			Amount	Calc.	%Drift			
48	P	2-Chloronaphthalene	50.000	46.970	6.1	90	0.00	6.45
49	P	2-Nitroaniline		NA				
50		p-Dinitrobenzene		NA				
			Amount	Calc.	%Drift			
51	P	Acenaphthylene	50.000	49.806	0.4	91	0.00	6.78
			Amount	Calc.	%Drift			
52	P	Dimethylphthalate	50.000	48.135	3.7	93	-0.01	6.70
53		m-Dinitrobenzene		NA				
54	P	2,6-Dinitrotoluene	50.000	46.229	7.5	84	0.00	6.74
55		o-Dinitrobenzene		NA				
56	P	Acenaphthene	50.000	47.422	5.2	90	0.00	6.92
57	P	3-Nitroaniline		NA				
			Amount	Calc.	%Drift			
58	P	2,4-Dinitrophenol	100.000	89.231	10.8	89	0.00	6.97
59	P	Dibenzofuran		NA				
			Amount	Calc.	%Drift			
60	P	2,4-Dinitrotoluene	50.000	47.551	4.9	87	0.00	7.07
61	P	4-Nitrophenol	100.000	93.509	6.5	98	0.00	7.06
62		2,3,5,6-Tetrachlorophenol		NA				
63	P	2,3,4,6-Tetrachlorophenol	50.000	47.811	4.4	85	0.00	7.18
			Amount	Calc.	%Drift			
64	P	Fluorene	50.000	47.591	4.8	88	0.00	7.34
			Amount	Calc.	%Drift			
65	P	4-Chlorophenyl-phenylethe	50.000	48.859	2.3	94	0.00	7.35
			Amount	Calc.	%Drift			
66	P	Diethylphthalate	50.000	50.456	-0.9	92	0.00	7.27
			Amount	Calc.	%Drift			
67	P	4-Nitroaniline		NA				
68	I	Phenanthrene-d10	40.000	40.000	0.0	88	0.00	8.10

Initial Calibration Verification

Job Number: JB40350 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064273.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

69	P	4,6-Dinitro-2-methylpheno	100.000	109.969	-10.0	98	0.00	7.41
70	P	n-Nitrosodiphenylamine	50.000	48.002	4.0	73	0.00	7.45
71		1,2-Diphenylhydrazine	50.000	46.335	7.3	80	0.00	7.48
72	S	2,4,6-Tribromophenol		----------NA----------				
73	P	4-Bromophenyl-phenylether	50.000	51.885	-3.8	91	0.00	7.74
74	P	Hexachlorobenzene	50.000	49.762	0.5	88	0.00	7.79
75		Simazine		----------NA----------				
76	P	Atrazine	50.000	44.657	10.7	79	0.00	7.90
		----------	Amount	Calc.	%Drift		----------	
77	P	Pentachlorophenol	100.000	97.127	2.9	91	0.00	7.96
78	P	Phenanthrene	50.000	51.694	-3.4	91	0.00	8.12
79	P	Anthracene	50.000	51.438	-2.9	89	0.00	8.16
		----------	Amount	Calc.	%Drift		----------	
80	P	Carbazole		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
81	P	Di-n-butylphthalate	50.000	51.669	-3.3	89	0.00	8.60
82	P	Fluoranthene	50.000	49.590	0.8	86	0.00	9.11
		----------	Amount	Calc.	%Drift		----------	
83	I	Chrysene-d12	40.000	40.000	0.0	85	0.00	10.56
84		Benzidine		----------NA----------				
85	P	Pyrene	50.000	50.681	-1.4	89	0.00	9.32
86	S	Terphenyl-d14		----------NA----------				
87	P	Butylbenzylphthalate	50.000	53.193	-6.4	90	0.00	10.00
88	P	3,3'-Dichlorobenzidine		----------NA----------				
89	P	Benzo[a]anthracene	50.000	50.115	-0.2	86	0.00	10.55
90	P	Chrysene	50.000	48.879	2.2	83	0.00	10.60
91	P	bis(2-Ethylhexyl)phthalat	50.000	52.182	-4.4	87	0.00	10.68
92	I	Perylene-d12	40.000	40.000	0.0	81	-0.01	12.40
93	P	Di-n-octylphthalate	50.000	52.287	-4.6	86	-0.01	11.53
94	P	Benzo[b]fluoranthene	50.000	48.053	3.9	81	0.00	11.90
95	P	Benzo[k]fluoranthene	50.000	49.539	0.9	83	-0.01	11.94
96	P	Benzo[a]pyrene	50.000	46.034	7.9	77	-0.01	12.33
97	P	Indeno[1,2,3-cd]pyrene	50.000	49.447	1.1	82	0.00	13.79
98	P	Dibenz[a,h]anthracene	50.000	48.982	2.0	81	-0.01	13.83
99	P	Benzo[g,h,i]perylene	50.000	49.222	1.6	82	0.00	14.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L064269.D 8270da.m Thu Jun 27 09:10:00 2013

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Initial Calibration Verification

Job Number: JB40350 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064274.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\sl3245\L064274.D          Vial: 10
Acq On    : 26 Jun 2013   1:19 pm                   Operator: nancyf
Sample    : icv3245-50                              Inst    : MSBNA02
Misc      : op47159,sl3245,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270da.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Jun 26 12:53:03 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	92	0.00	4.45
2		1,4-Dioxane		NA				
3		N-nitrosodimethylamine		NA				
4		Pyridine	50.000	51.258	-2.5	95	0.00	2.05
		----------	Amount	Calc.	%Drift	----------		
5	P	Benzaldehyde	25.000	21.032	15.9	87	0.00	4.09
		----------	Amount	Calc.	%Drift	----------		
6		Aniline	50.000	43.333	13.3	81	0.00	4.19
7	S	2-Fluorophenol		NA				
8	P	bis(2-Chloroethyl)ether		NA				
9	S	Phenol-d5		NA				
10	P	Phenol		NA				
11	P	2-Chlorophenol		NA				
12		1,3-Dichlorobenzene		NA				
13		1,4-Dichlorobenzene		NA				
14		1,2-Dichlorobenzene		NA				
15		Benzyl alcohol	50.000	50.444	-0.9	94	0.00	4.58
16	P	bis(2-chloroisopropyl)eth		NA				
17	P	2-Methylphenol		NA				
18	P	Acetophenone		NA				
19	P	Hexachloroethane		NA				
20	P	N-Nitroso-di-n-propylamin		NA				
21	P	3&4-Methylphenol		NA				
22	I	Naphthalene-d8	40.000	40.000	0.0	90	0.00	5.47
23	S	Nitrobenzene-d5		NA				
24	P	Nitrobenzene		NA				
25	P	Isophorone	50.000	47.067	5.9	86	-0.02	5.11
26	P	2-Nitrophenol		NA				
27	P	2,4-Dimethylphenol		NA				
28	P	bis(2-Chloroethoxy)methan		NA				
		----------	Amount	Calc.	%Drift	----------		
29		Benzoic Acid		NA				
		----------	Amount	Calc.	%Drift	----------		
30	P	2,4-Dichlorophenol		NA				
31		1,2,4-Trichlorobenzene		NA				
32		alpha-Terpineol		NA				

12.7.3

12

Initial Calibration Verification

Job Number: JB40350 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064274.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

			Amount	Calc.	%Drift			
33	P	Naphthalene		NA				
34	P	4-Chloroaniline	50.000	44.606	10.8	82	0.00	5.55
35		2,6-Dichlorophenol		NA				
36	P	Hexachlorobutadiene		NA				
37	P	Caprolactam		NA				
38	P	4-Chloro-3-methylphenol		NA				
39	P	2-Methylnaphthalene	50.000	49.316	1.4	92	0.00	6.05
40		1-Methylnaphthalene		NA				
41	P	1,2,4,5-Tetrachlorobenzen		NA				
42	I	Acenaphthene-d10	40.000	40.000	0.0	87	0.00	6.89
43	P	Hexachlorocyclopentadiene		NA				
44	P	2,4,6-Trichlorophenol		NA				
45	P	2,4,5-Trichlorophenol		NA				
46	S	2-Fluorobiphenyl		NA				
47	P	1,1'-Biphenyl		NA				
48	P	2-Chloronaphthalene		NA				
49	P	2-Nitroaniline	50.000	59.261	-18.5	106	0.00	6.54
50		p-Dinitrobenzene		NA				
51	P	Acenaphthylene		NA				
52	P	Dimethylphthalate		NA				
53		m-Dinitrobenzene	50.000	44.432	11.1	78	-0.01	6.72
54	P	2,6-Dinitrotoluene		NA				
55		o-Dinitrobenzene		NA				
56	P	Acenaphthene		NA				
57	P	3-Nitroaniline	50.000	48.959	2.1	86	0.00	6.88
58	P	2,4-Dinitrophenol		NA				
59	P	Dibenzofuran	50.000	52.847	-5.7	92	0.00	7.06
60	P	2,4-Dinitrotoluene		NA				
61	P	4-Nitrophenol		NA				
62		2,3,5,6-Tetrachlorophenol		NA				
63	P	2,3,4,6-Tetrachlorophenol		NA				
64	P	Fluorene		NA				
65	P	4-Chlorophenyl-phenylethe		NA				
66	P	Diethylphthalate		NA				
67	P	4-Nitroaniline	50.000	52.297	-4.6	94	-0.02	7.38

12.7.3 12

Initial Calibration Verification

Job Number: JB40350 **Sample:** SL3245-ICV3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064274.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

68	I	Phenanthrene-d10	40.000	40.000	0.0	86	0.00	8.10
69	P	4,6-Dinitro-2-methylpheno		----------NA----------				
70	P	n-Nitrosodiphenylamine		----------NA----------				
71		1,2-Diphenylhydrazine		----------NA----------				
72	S	2,4,6-Tribromophenol		----------NA----------				
73	P	4-Bromophenyl-phenylether		----------NA----------				
74	P	Hexachlorobenzene		----------NA----------				
75		Simazine	50.000	59.029	-18.1	94	0.00	7.88
76	P	Atrazine		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
77	P	Pentachlorophenol		----------NA----------				
78	P	Phenanthrene		----------NA----------				
79	P	Anthracene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
80	P	Carbazole	50.000	50.779	-1.6	90	0.00	8.30
		----------	Amount	Calc.	%Drift	----------		
81	P	Di-n-butylphthalate		----------NA----------				
82	P	Fluoranthene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
83	I	Chrysene-d12	40.000	40.000	0.0	91	-0.01	10.56
84		Benzidine	50.000	49.007	2.0	84	0.00	9.25
85	P	Pyrene		----------NA----------				
86	S	Terphenyl-d14		----------NA----------				
87	P	Butylbenzylphthalate		----------NA----------				
88	P	3,3'-Dichlorobenzidine	50.000	46.520	7.0	82	0.00	10.55
89	P	Benzo[a]anthracene		----------NA----------				
90	P	Chrysene		----------NA----------				
91	P	bis(2-Ethylhexyl)phthalat		----------NA----------				
92	I	Perylene-d12	40.000	40.000	0.0	88	-0.02	12.40
93	P	Di-n-octylphthalate		----------NA----------				
94	P	Benzo[b]fluoranthene		----------NA----------				
95	P	Benzo[k]fluoranthene		----------NA----------				
96	P	Benzo[a]pyrene		----------NA----------				
97	P	Indeno[1,2,3-cd]pyrene		----------NA----------				
98	P	Dibenz[a,h]anthracene		----------NA----------				
99	P	Benzo[g,h,i]perylene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L064269.D 8270da.m Thu Jun 27 09:10:01 2013

12.7.3

12

Continuing Calibration Summary

Job Number: JB40350 **Sample:** SL3252-CC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064462.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\sl3252\L064462.D          Vial: 2
Acq On    :  2 Jul 2013  10:53 am                   Operator: nancyf
Sample    : cc3245-50                               Inst    : MSBNA02
Misc      : op47159,sl3252,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270da.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Tue Jul 02 12:35:18 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	4.36
2		1,4-Dioxane	0.750	0.734	2.1	99	-0.01	1.56
3		N-nitrosodimethylamine	1.051	0.862	18.0	84	-0.02	1.88
4		Pyridine	2.529	1.857	26.6#	75	-0.02	1.89
		----------	Amount	Calc.	%Drift		----------	
5	P	Benzaldehyde	50.000	53.552	-7.1	105	0.00	4.00
		----------	AvgRF	CCRF	%Dev		----------	
6		Aniline	2.231	2.009	10.0	94	0.00	4.10
7	S	2-Fluorophenol	1.382	1.293	6.4	97	-0.03	3.30
8	P	bis(2-Chloroethyl)ether	1.315	1.247	5.2	98	0.00	4.16
9	S	Phenol-d5	1.628	1.431	12.1	93	0.00	4.12
10	P	Phenol	1.718	1.569	8.7	94	0.00	4.13
11	P	2-Chlorophenol	1.439	1.435	0.3	103	0.00	4.20
12		1,3-Dichlorobenzene	1.579	1.536	2.7	100	0.00	4.31
13		1,4-Dichlorobenzene	1.557	1.436	7.8	97	0.00	4.37
14		1,2-Dichlorobenzene	1.465	1.536	-4.8	109	0.00	4.50
15		Benzyl alcohol	0.930	0.956	-2.8	107	0.00	4.50
16	P	bis(2-chloroisopropyl)eth	1.815	1.898	-4.6	110	0.01	4.60
17	P	2-Methylphenol	1.291	1.261	2.3	101	0.01	4.61
18	P	Acetophenone	1.815	1.832	-0.9	106	0.01	4.70
19	P	Hexachloroethane	0.633	0.673	-6.3	109	0.01	4.76
20	P	N-Nitroso-di-n-propylamin	0.965	0.965	0.0	104	0.00	4.71
21	P	3&4-Methylphenol	1.365	1.257	7.9	95	0.01	4.74
22	I	Naphthalene-d8	1.000	1.000	0.0	83	0.00	5.39
23	S	Nitrobenzene-d5	0.464	0.556	-19.8	101	-0.01	4.82
24	P	Nitrobenzene	0.442	0.507	-14.7	98	-0.01	4.83
25	P	Isophorone	0.775	0.904	-16.6	98	0.00	5.03
26	P	2-Nitrophenol	0.242	0.282	-16.5	96	0.00	5.09
27	P	2,4-Dimethylphenol	0.422	0.485	-14.9	97	0.00	5.15
28	P	bis(2-Chloroethoxy)methan	0.479	0.549	-14.6	97	0.00	5.22
		----------	Amount	Calc.	%Drift		----------	
29		Benzoic Acid	50.000	47.622	4.8	75	0.00	5.29
		----------	AvgRF	CCRF	%Dev		----------	
30	P	2,4-Dichlorophenol	0.363	0.363	0.0	83	0.00	5.29
31		1,2,4-Trichlorobenzene	0.386	0.378	2.1	82	0.00	5.34
32		alpha-Terpineol		----------NA----------				

12.7.4

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Continuing Calibration Summary

Job Number: JB40350 **Sample:** SL3252-CC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064462.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

			Amount	Calc.	%Drift			
33	P	Naphthalene	50.000	49.359	1.3	81	0.00	5.40
			AvgRF	CCRF	%Dev			
34	P	4-Chloroaniline	0.507	0.502	1.0	83	0.00	5.47
35		2,6-Dichlorophenol	0.358	0.350	2.2	82	0.00	5.47
36	P	Hexachlorobutadiene	0.212	0.207	2.4	81	0.00	5.52
37	P	Caprolactam	0.132	0.127	3.8	80	0.00	5.78
38	P	4-Chloro-3-methylphenol	0.360	0.366	-1.7	86	0.00	5.89
39	P	2-Methylnaphthalene	0.737	0.732	0.7	85	0.00	5.96
40		1-Methylnaphthalene	0.730	0.720	1.4	84	0.00	6.04
41	P	1,2,4,5-Tetrachlorobenzen	0.371	0.385	-3.8	91	0.01	6.11
42	I	Acenaphthene-d10	1.000	1.000	0.0	85	0.00	6.81
43	P	Hexachlorocyclopentadiene	0.341	0.320	6.2	77	-0.01	6.10
44	P	2,4,6-Trichlorophenol	0.432	0.414	4.2	85	0.00	6.21
45	P	2,4,5-Trichlorophenol	0.445	0.427	4.0	84	0.00	6.25
46	S	2-Fluorobiphenyl	1.380	1.255	9.1	84	0.00	6.27
			Amount	Calc.	%Drift			
47	P	1,1'-Biphenyl	50.000	52.151	-4.3	92	0.00	6.35
			AvgRF	CCRF	%Dev			
48	P	2-Chloronaphthalene	1.164	1.116	4.1	87	0.00	6.36
49	P	2-Nitroaniline	0.387	0.373	3.6	84	0.00	6.46
50		p-Dinitrobenzene	0.275	0.254	7.6	80	0.00	6.57
			Amount	Calc.	%Drift			
51	P	Acenaphthylene	50.000	49.421	1.2	86	0.00	6.69
			AvgRF	CCRF	%Dev			
52	P	Dimethylphthalate	1.335	1.259	5.7	86	0.00	6.62
53		m-Dinitrobenzene	0.257	0.249	3.1	83	0.00	6.64
54	P	2,6-Dinitrotoluene	0.342	0.318	7.0	81	0.00	6.66
55		o-Dinitrobenzene	0.224	0.232	-3.6	91	0.00	6.70
56	P	Acenaphthene	1.164	1.074	7.7	83	0.00	6.83
57	P	3-Nitroaniline	0.386	0.368	4.7	82	0.00	6.80
			Amount	Calc.	%Drift			
58	P	2,4-Dinitrophenol	50.000	49.772	0.5	81	0.00	6.88
59	P	Dibenzofuran	50.000	50.105	-0.2	86	0.00	6.97
			AvgRF	CCRF	%Dev			
60	P	2,4-Dinitrotoluene	0.435	0.414	4.8	83	0.00	6.99
61	P	4-Nitrophenol	0.171	0.173	-1.2	85	0.00	6.97
62		2,3,5,6-Tetrachlorophenol	0.333	0.314	5.7	80	0.00	7.05
63	P	2,3,4,6-Tetrachlorophenol	0.339	0.317	6.5	79	0.00	7.09
			Amount	Calc.	%Drift			
64	P	Fluorene	50.000	49.280	1.4	86	0.00	7.25
			AvgRF	CCRF	%Dev			
65	P	4-Chlorophenyl-phenylethe	0.622	0.588	5.5	86	0.00	7.26
			Amount	Calc.	%Drift			
66	P	Diethylphthalate	50.000	46.890	6.2	82	0.00	7.19
			AvgRF	CCRF	%Dev			
67	P	4-Nitroaniline	0.367	0.341	7.1	82	0.00	7.29

Continuing Calibration Summary

Job Number: JB40350 **Sample:** SL3252-CC3245
Account: ALNJ Accutest New Jersey **Lab FileID:** L064462.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

68	I	Phenanthrene-d10	1.000	1.000	0.0	83	0.00	8.00
69	P	4,6-Dinitro-2-methylpheno	0.161	0.174	-8.1	81	0.00	7.33
70	P	n-Nitrosodiphenylamine	0.597	0.585	2.0	84	0.00	7.36
71		1,2-Diphenylhydrazine	0.880	0.889	-1.0	83	0.00	7.39
72	S	2,4,6-Tribromophenol	0.106	0.109	-2.8	85	0.00	7.45
73	P	4-Bromophenyl-phenylether	0.232	0.226	2.6	81	0.00	7.65
74	P	Hexachlorobenzene	0.234	0.237	-1.3	84	0.00	7.71
75		Simazine	0.155	0.131	15.5	65	0.00	7.79
76	P	Atrazine	0.259	0.263	-1.5	85	0.00	7.82
		----------	Amount	Calc.	%Drift		----------	
77	P	Pentachlorophenol	50.000	52.198	-4.4	83	0.00	7.87
78	P	Phenanthrene	50.000	51.469	-2.9	86	0.00	8.03
79	P	Anthracene	50.000	51.689	-3.4	85	0.00	8.07
		----------	AvgRF	CCRF	%Dev		----------	
80	P	Carbazole	1.120	1.084	3.2	83	0.00	8.21
		----------	Amount	Calc.	%Drift		----------	
81	P	Di-n-butylphthalate	50.000	52.054	-4.1	85	0.00	8.51
82	P	Fluoranthene	50.000	47.677	4.6	79	0.00	9.01
		----------	AvgRF	CCRF	%Dev		----------	
83	I	Chrysene-d12	1.000	1.000	0.0	83	0.00	10.45
84		Benzidine	0.938	1.006	-7.2	83	0.00	9.15
85	P	Pyrene	1.552	1.550	0.1	86	0.00	9.21
86	S	Terphenyl-d14	1.001	0.992	0.9	84	0.00	9.38
87	P	Butylbenzylphthalate	0.647	0.660	-2.0	84	0.00	9.89
88	P	3,3'-Dichlorobenzidine	0.416	0.426	-2.4	82	0.00	10.43
89	P	Benzo[a]anthracene	1.143	1.117	2.3	81	0.00	10.43
90	P	Chrysene	1.040	0.988	5.0	79	0.00	10.47
91	P	bis(2-Ethylhexyl)phthalat	0.828	0.821	0.8	80	0.00	10.56
92	I	Perylene-d12	1.000	1.000	0.0	75	0.00	12.25
93	P	Di-n-octylphthalate	1.459	1.509	-3.4	79	0.00	11.40
94	P	Benzo[b]fluoranthene	1.172	1.151	1.8	77	0.00	11.76
95	P	Benzo[k]fluoranthene	1.083	1.052	2.9	76	0.00	11.80
96	P	Benzo[a]pyrene	1.102	1.071	2.8	75	0.00	12.18
97	P	Indeno[1,2,3-cd]pyrene	0.952	0.961	-0.9	77	0.01	13.63
98	P	Dibenz[a,h]anthracene	0.946	0.927	2.0	75	0.00	13.68
99	P	Benzo[g,h,i]perylene	0.985	0.943	4.3	75	0.00	13.95

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L064269.D 8270da.m Wed Jul 03 13:17:28 2013

12.7.4 12

Initial Calibration Summary

Job Number: JB40350 **Sample:** SU1817-ICC1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U038816.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Response Factor Report MSBNA04

Method : C:\msdchem\2\METHODS\8270d.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Thu Jun 13 09:33:14 2013
Response via : Initial Calibration

Calibration Files
5 =U038813.D 10 =U038814.D 25 =U038815.D 50 =U038816.D
60 =U038817.D 75 =U038818.D 100 =U038819.D

Compound	5	10	25	50	60	75	100	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------								
2) 1,4-Dioxane	0.466	0.459	0.479	0.473	0.501	0.492	0.498	0.481	3.37
3) N-nitrosodimethyl	0.827	0.925	0.937	0.915	0.914	0.919	0.933	0.910	4.13
4) Pyridine	1.233	1.228	1.291	1.268	1.292	1.278	1.288	1.268	2.14
5)S 2-Fluorophenol	1.126	1.165	1.225	1.303	1.351	1.419	1.453	1.291	9.68
6)P Benzaldehyde	0.903	0.886	0.896	0.839	0.777	0.669	0.507	0.782	18.81
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9979									
Response Ratio = 0.00000 + 1.12548 *A + -0.24491 *A^2									
7) Aniline	1.876	1.899	2.119	2.221	2.265	2.358	2.401	2.163	9.68
8)P bis(2-Chloroethyl	1.115	1.111	1.184	1.158	1.183	1.212	1.230	1.170	3.90
9)S Phenol-d5	1.414	1.503	1.641	1.727	1.808	1.893	1.948	1.705	11.62
10)P Phenol	1.550	1.632	1.767	1.822	1.886	2.003	2.069	1.819	10.30
11)P 2-Chlorophenol	1.202	1.217	1.286	1.276	1.304	1.362	1.377	1.289	5.13
12) 1,3-Dichlorobenze	1.354	1.401	1.443	1.530	1.579	1.633	1.685	1.518	8.13
13) 1,4-Dichlorobenze	1.457	1.428	1.504	1.586	1.656	1.740	1.767	1.591	8.48
14) 1,2-Dichlorobenze	1.291	1.350	1.375	1.493	1.589	1.733	1.819	1.521	13.21
15) Benzyl alcohol	0.704	0.724	0.803	0.845	0.873	0.941	0.992	0.840	12.65
16)P 2-Methylphenol	1.140	1.133	1.227	1.262	1.331	1.353	1.381	1.261	7.93
17)P bis(2-chloroisopr	2.092	2.156	2.180	2.141	2.117	2.193	2.145	2.146	1.62
18)P Acetophenone	1.784	1.873	1.950	2.017	2.055	2.128	2.211	2.003	7.33
19)P N-Nitroso-di-n-pr	0.895	0.980	1.040	1.076	1.070	1.119	1.150	1.047	8.25
20)P 3&4-Methylphenol	1.167	1.197	1.217	1.249	1.265	1.366	1.439	1.271	7.66
21)P Hexachloroethane	0.635	0.616	0.667	0.675	0.684	0.703	0.717	0.671	5.36
22) I Naphthalene-d8	----------ISTD----------								
23)S Nitrobenzene-d5	0.405	0.428	0.437	0.433	0.445	0.444	0.456	0.435	3.74
24)P Nitrobenzene	0.413	0.433	0.431	0.434	0.432	0.445	0.458	0.435	3.18
25)P Isophorone	0.655	0.686	0.696	0.707	0.686	0.701	0.731	0.695	3.34
26)P 2-Nitrophenol	0.179	0.189	0.194	0.196	0.199	0.201	0.214	0.196	5.48
27)P 2,4-Dimethylpheno	0.377	0.396	0.403	0.408	0.420	0.423	0.442	0.410	5.10
28)P bis(2-Chloroethox	0.362	0.378	0.383	0.405	0.399	0.411	0.434	0.396	6.03
29) Benzoic Acid	0.220	0.256	0.264	0.264	0.266	0.262	0.296	0.261	8.58
30)P 2,4-Dichloropheno	0.277	0.292	0.292	0.309	0.310	0.324	0.355	0.309	8.33
31) 1,2,4-Trichlorobe	0.317	0.325	0.331	0.351	0.367	0.375	0.404	0.353	8.84
32)P Naphthalene	0.941	0.981	0.996	1.043	1.069	1.122	1.209	1.052	8.71
33)P 4-Chloroaniline	0.391	0.421	0.428	0.469	0.478	0.508	0.555	0.464	12.06
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 0.37789 *A + 0.07025 *A^2									
34) 2,6-Dichloropheno	0.277	0.290	0.301	0.323	0.333	0.349	0.375	0.321	10.80
35)P Hexachlorobutadie	0.213	0.222	0.227	0.242	0.248	0.258	0.278	0.241	9.34
36)P Caprolactam	0.086	0.096	0.094	0.094	0.093	0.094	0.099	0.094	4.19
37)P 4-Chloro-3-methyl	0.297	0.323	0.323	0.334	0.324	0.338	0.358	0.328	5.67
38)P 2-Methylnaphthale	0.645	0.692	0.699	0.729	0.752	0.783	0.825	0.732	8.27
39) 1-Methylnaphthale	0.595	0.621	0.634	0.667	0.681	0.701	0.752	0.665	8.02

Initial Calibration Summary

Job Number: JB40350 **Sample:** SU1817-ICC1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U038816.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
40)P 1,2,4,5-Tetrachlo 0.335 0.344 0.356 0.387 0.399 0.424 0.461 0.387  11.79

41) I   Acenaphthene-d10      ----------------ISTD---------------------
42)P Hexachlorocyclope 0.180 0.212 0.283 0.342 0.362 0.380 0.393 0.307  27.47
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
              Response Ratio = 0.00000 + 0.28754 *A + 0.04414 *A^2

43)P 2,4,6-Trichloroph 0.374 0.374 0.394 0.407 0.416 0.414 0.424 0.400   5.03
44)P 2,4,5-Trichloroph 0.359 0.377 0.384 0.408 0.407 0.417 0.422 0.396   5.90
45)S 2-Fluorobiphenyl  1.363 1.346 1.411 1.478 1.506 1.533 1.568 1.458   5.89
46)P 1,1'-Biphenyl     1.472 1.457 1.534 1.602 1.670 1.743 1.787 1.609   8.06
47)P 2-Chloronaphthale 1.071 1.104 1.141 1.229 1.250 1.265 1.299 1.194   7.37
48)P 2-Nitroaniline    0.389 0.414 0.418 0.419 0.410 0.406 0.407 0.409   2.49
49)  p-Dinitrobenzene  0.237 0.252 0.271 0.269 0.266 0.262 0.266 0.260   4.62
50)P Dimethylphthalate 1.232 1.285 1.305 1.323 1.293 1.283 1.294 1.288   2.19
51)  m-Dinitrobenzene  0.196 0.215 0.218 0.228 0.219 0.220 0.220 0.216   4.51
52)P 2,6-Dinitrotoluen 0.269 0.284 0.293 0.289 0.284 0.288 0.294 0.286   2.85
53)P Acenaphthylene    1.758 1.843 1.895 1.926 1.965 1.971 1.983 1.906   4.29
54)  o-Dinitrobenzene  0.299 0.314 0.318 0.318 0.309 0.305 0.302 0.309   2.49
55)P 3-Nitroaniline    0.299 0.318 0.337 0.346 0.341 0.346 0.357 0.335   5.88
56)P Acenaphthene      1.137 1.158 1.193 1.238 1.247 1.266 1.285 1.218   4.62
57)P 2,4-Dinitrophenol 0.060 0.104 0.146 0.168 0.175 0.183 0.189 0.146  32.78
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 0.14276 *A + 0.01945 *A^2

58)P 4-Nitrophenol     0.188 0.216 0.239 0.232 0.231 0.230 0.238 0.225   7.88
59)P Dibenzofuran      1.568 1.626 1.723 1.732 1.729 1.754 1.805 1.706   4.73
60)P 2,4-Dinitrotoluen 0.358 0.372 0.390 0.393 0.387 0.391 0.398 0.384   3.66
61)  2,3,5,6-Tetrachlo 0.250 0.271 0.297 0.314 0.313 0.324 0.339 0.301  10.29
62)P 2,3,4,6-Tetrachlo 0.286 0.283 0.307 0.322 0.319 0.333 0.355 0.315   8.19
63)P Diethylphthalate  1.372 1.407 1.452 1.450 1.422 1.432 1.473 1.430   2.33
64)P Fluorene          1.282 1.345 1.391 1.453 1.432 1.468 1.515 1.412   5.60
65)P 4-Chlorophenyl-ph 0.636 0.679 0.694 0.721 0.729 0.741 0.776 0.711   6.42
66)P 4-Nitroaniline    0.270 0.296 0.315 0.303 0.296 0.299 0.301 0.297   4.55

67) I   Phenanthrene-d10      ----------------ISTD---------------------
68)P 4,6-Dinitro-2-met 0.077 0.107 0.126 0.136 0.138 0.143 0.151 0.125  20.24
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.11748 *A + 0.01351 *A^2

69)P n-Nitrosodiphenyl 0.510 0.522 0.547 0.560 0.572 0.593 0.627 0.562   7.21
70)  1,2-Diphenylhydra 0.799 0.815 0.833 0.848 0.855 0.871 0.886 0.844   3.61
71)S 2,4,6-Tribromophe 0.098 0.104 0.111 0.124 0.130 0.144 0.159 0.124  17.51
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 0.09192 *A + 0.01339 *A^2

72)P 4-Bromophenyl-phe 0.203 0.196 0.214 0.223 0.231 0.239 0.252 0.222   8.91
73)P Hexachlorobenzene 0.217 0.220 0.231 0.241 0.245 0.258 0.273 0.241   8.37
74)  Simazine          0.104 0.109 0.110 0.111 0.111 0.112 0.117 0.111   3.41
75)P Atrazine          0.210 0.211 0.218 0.212 0.213 0.223 0.254 0.220   7.07
76)P Pentachlorophenol 0.051 0.064 0.086 0.105 0.108 0.116 0.128 0.094  29.72
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9997
              Response Ratio = 0.00000 + 0.07687 *A + 0.02063 *A^2

77)P Phenanthrene      1.008 1.038 1.060 1.095 1.126 1.164 1.228 1.103   6.93
78)P Anthracene        1.019 1.051 1.084 1.134 1.157 1.207 1.260 1.130   7.62
79)P Carbazole         0.933 0.981 1.022 1.024 1.053 1.080 1.139 1.033   6.45
80)P Di-n-butylphthala 1.196 1.268 1.330 1.350 1.352 1.402 1.473 1.339   6.66
81)P Fluoranthene      1.079 1.165 1.218 1.257 1.287 1.350 1.451 1.258   9.66
```

Initial Calibration Summary

Job Number: JB40350 **Sample:** SU1817-ICC1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U038816.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

```
82) I   Chrysene-d12          ----------------ISTD---------------------
83)  Benzidine         0.521 0.524 0.566 0.563 0.535 0.481       0.532   5.91
84)P Pyrene            1.208 1.196 1.194 1.224 1.232 1.227 1.245 1.218   1.57
85)S Terphenyl-d14     0.798 0.767 0.804 0.831 0.840 0.849 0.881 0.824   4.55
86)P Butylbenzylphthal 0.518 0.532 0.528 0.534 0.535 0.528 0.535 0.530   1.15
87)P 3,3'-Dichlorobenz 0.374 0.379 0.409 0.412 0.407 0.405 0.412 0.400   4.02
88)P Benzo[a]anthracen 1.079 1.053 1.065 1.079 1.093 1.095 1.129 1.085   2.25
89)P Chrysene          0.964 1.000 1.029 1.060 1.072 1.092 1.140 1.051   5.59
90)P bis(2-Ethylhexyl) 0.735 0.723 0.760 0.748 0.756 0.757 0.777 0.751   2.33

91) I   Perylene-d12          ----------------ISTD---------------------
92)P Di-n-octylphthala 1.285 1.351 1.367 1.395 1.367 1.399 1.479 1.378   4.24
93)P Benzo[b]fluoranth 0.994 1.031 1.091 1.120 1.129 1.160 1.224 1.107   7.01
94)P Benzo[k]fluoranth 1.018 1.084 1.081 1.151 1.160 1.199 1.222 1.131   6.44
95)P Benzo[a]pyrene    0.982 0.994 1.051 1.092 1.118 1.147 1.205 1.084   7.47
96)P Indeno[1,2,3-cd]p 0.878 0.921 0.951 0.983 1.013 1.074 1.127 0.992   8.76
97)P Dibenz[a,h]anthra 0.881 0.916 0.940 1.031 1.073 1.117 1.169 1.018  10.72
98)P Benzo[g,h,i]peryl 0.966 1.005 1.039 1.080 1.101 1.139 1.194 1.075   7.32
---------------------------------------------------------------------------
(#) = Out of Range

          8270d.m           Thu Jun 13 09:41:29 2013
```

12.7.5

12

Initial Calibration Verification

Job Number: JB40350 **Sample:** SU1817-ICV1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U038820.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\SU1817\U038820.D          Vial: 9
Acq On    : 12 Jun 2013   2:03 pm                   Operator: nancyf
Sample    : icv1817-50                              Inst    : MSBNA04
Misc      : op47117,su1817,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270d.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Thu Jun 13 09:33:14 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	126	0.00	4.61
2		1,4-Dioxane	50.000	47.785	4.4	123	0.05	2.20
3		N-nitrosodimethylamine	50.000	49.074	1.9	123	0.03	2.49
4		Pyridine		----------NA----------				
5	S	2-Fluorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
6	P	Benzaldehyde	50.000	41.567	16.9	109	0.00	4.29
		----------	Amount	Calc.	%Drift		----------	
7		Aniline		----------NA----------				
8	P	bis(2-Chloroethyl)ether	50.000	50.501	-1.0	129	0.00	4.43
9	S	Phenol-d5		----------NA----------				
10	P	Phenol	50.000	42.232	15.5	106	0.00	4.38
11	P	2-Chlorophenol	50.000	49.588	0.8	126	0.00	4.46
12		1,3-Dichlorobenzene	50.000	50.182	-0.4	126	0.00	4.57
13		1,4-Dichlorobenzene	50.000	50.519	-1.0	128	0.00	4.62
14		1,2-Dichlorobenzene	50.000	47.953	4.1	123	0.00	4.74
15		Benzyl alcohol		----------NA----------				
16	P	2-Methylphenol	50.000	49.974	0.1	126	0.00	4.83
17	P	bis(2-chloroisopropyl)eth	50.000	49.333	1.3	125	0.00	4.83
18	P	Acetophenone	50.000	49.761	0.5	125	0.00	4.93
19	P	N-Nitroso-di-n-propylamin	50.000	50.640	-1.3	124	0.00	4.93
20	P	3&4-Methylphenol	100.000	106.188	-6.2	118	0.00	4.95
21	P	Hexachloroethane	50.000	49.818	0.4	125	0.00	5.00
22	I	Naphthalene-d8	40.000	40.000	0.0	129	0.00	5.68
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene	50.000	47.954	4.1	124	0.00	5.06
25	P	Isophorone	50.000	40.495	19.0	103	0.00	5.27
26	P	2-Nitrophenol	50.000	47.731	4.5	123	0.00	5.33
27	P	2,4-Dimethylphenol	50.000	42.116	15.8	109	0.00	5.39
28	P	bis(2-Chloroethoxy)methan	50.000	48.679	2.6	123	0.00	5.46
29		Benzoic Acid	100.000	97.333	2.7	111	0.04	5.58
30	P	2,4-Dichlorophenol	50.000	51.078	-2.2	131	0.00	5.56
31		1,2,4-Trichlorobenzene	50.000	49.160	1.7	127	0.00	5.63
32	P	Naphthalene	50.000	49.765	0.5	129	0.00	5.70
		----------	Amount	Calc.	%Drift		----------	
33	P	4-Chloroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	

12.7.6 12

Initial Calibration Verification

Job Number: JB40350 **Sample:** SU1817-ICV1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U038820.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

34		2,6-Dichlorophenol	50.000	45.324	9.4	116	0.00	5.77
35	P	Hexachlorobutadiene	50.000	49.336	1.3	127	0.00	5.82
36	P	Caprolactam	50.000	45.482	9.0	117	0.00	6.17
37	P	4-Chloro-3-methylphenol	50.000	47.314	5.4	120	0.00	6.31
38	P	2-Methylnaphthalene		----------NA----------				
39		1-Methylnaphthalene	50.000	49.345	1.3	127	0.00	6.57
40	P	1,2,4,5-Tetrachlorobenzen	50.000	47.763	4.5	123	0.00	6.66
41	I	Acenaphthene-d10	40.000	40.000	0.0	124	0.00	7.85
		----------	Amount	Calc.	%Drift	----------		
42	P	Hexachlorocyclopentadiene	50.000	50.637	-1.3	126	0.00	6.64
		----------	Amount	Calc.	%Drift	----------		
43	P	2,4,6-Trichlorophenol	50.000	50.052	-0.1	122	0.00	6.81
44	P	2,4,5-Trichlorophenol	50.000	52.584	-5.2	127	0.00	6.87
45	S	2-Fluorobiphenyl		----------NA----------				
46	P	1,1'-Biphenyl	50.000	50.668	-1.3	127	0.00	7.05
47	P	2-Chloronaphthalene	50.000	51.439	-2.9	124	0.00	7.06
48	P	2-Nitroaniline		----------NA----------				
49		p-Dinitrobenzene		----------NA----------				
50	P	Dimethylphthalate	50.000	51.148	-2.3	124	-0.01	7.51
51		m-Dinitrobenzene		----------NA----------				
52	P	2,6-Dinitrotoluene	50.000	49.113	1.8	121	0.00	7.59
53	P	Acenaphthylene	50.000	51.401	-2.8	126	0.00	7.64
54		o-Dinitrobenzene		----------NA----------				
55	P	3-Nitroaniline		----------NA----------				
56	P	Acenaphthene	50.000	50.575	-1.2	124	0.00	7.90
		----------	Amount	Calc.	%Drift	----------		
57	P	2,4-Dinitrophenol	100.000	96.813	3.2	112	0.00	8.01
		----------	Amount	Calc.	%Drift	----------		
58	P	4-Nitrophenol	100.000	96.787	3.2	105	0.00	8.20
59	P	Dibenzofuran		----------NA----------				
60	P	2,4-Dinitrotoluene	50.000	49.409	1.2	120	0.00	8.21
61		2,3,5,6-Tetrachlorophenol		----------NA----------				
62	P	2,3,4,6-Tetrachlorophenol	50.000	49.373	1.3	120	0.00	8.39
63	P	Diethylphthalate	50.000	49.563	0.9	122	0.00	8.63
64	P	Fluorene	50.000	49.437	1.1	119	0.00	8.72
65	P	4-Chlorophenyl-phenylethe	50.000	51.377	-2.8	126	0.00	8.75
66	P	4-Nitroaniline		----------NA----------				
67	I	Phenanthrene-d10	40.000	40.000	0.0	122	0.00	10.30
		----------	Amount	Calc.	%Drift	----------		
68	P	4,6-Dinitro-2-methylpheno	100.000	100.643	-0.6	120	0.00	8.88
		----------	Amount	Calc.	%Drift	----------		
69	P	n-Nitrosodiphenylamine	50.000	46.396	7.2	95	0.00	8.97
70		1,2-Diphenylhydrazine	50.000	49.696	0.6	121	0.00	9.01
		----------	Amount	Calc.	%Drift	----------		
71	S	2,4,6-Tribromophenol		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
72	P	4-Bromophenyl-phenylether	50.000	51.516	-3.0	126	0.00	9.58
73	P	Hexachlorobenzene	50.000	50.752	-1.5	124	0.00	9.64
74		Simazine		----------NA----------				
75	P	Atrazine	50.000	48.401	3.2	123	0.00	9.98

Initial Calibration Verification

Job Number: JB40350 **Sample:** SU1817-ICV1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U038820.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

			Amount	Calc.	%Drift			
76	P	Pentachlorophenol	100.000	96.218	3.8	113	0.00	10.02
			Amount	Calc.	%Drift			
77	P	Phenanthrene	50.000	50.133	-0.3	123	0.00	10.35
78	P	Anthracene	50.000	49.972	0.1	122	0.00	10.44
79	P	Carbazole		----------NA----------				
80	P	Di-n-butylphthalate	50.000	49.169	1.7	119	0.00	11.57
81	P	Fluoranthene	50.000	49.019	2.0	120	0.00	12.51
82	I	Chrysene-d12	40.000	40.000	0.0	115	0.00	15.21
83		Benzidine		----------NA----------				
84	P	Pyrene	50.000	51.738	-3.5	119	0.00	12.91
85	S	Terphenyl-d14		----------NA----------				
86	P	Butylbenzylphthalate	50.000	51.934	-3.9	119	0.00	14.36
87	P	3,3'-Dichlorobenzidine		----------NA----------				
88	P	Benzo[a]anthracene	50.000	50.052	-0.1	116	0.00	15.19
89	P	Chrysene	50.000	47.430	5.1	108	0.00	15.26
90	P	bis(2-Ethylhexyl)phthalat	50.000	51.906	-3.8	120	0.00	15.55
91	I	Perylene-d12	40.000	40.000	0.0	108	0.00	17.70
92	P	Di-n-octylphthalate	50.000	54.411	-8.8	116	0.00	16.73
93	P	Benzo[b]fluoranthene	50.000	51.077	-2.2	109	0.00	17.09
94	P	Benzo[k]fluoranthene	50.000	53.094	-6.2	112	0.00	17.14
95	P	Benzo[a]pyrene	50.000	46.769	6.5	100	0.00	17.60
96	P	Indeno[1,2,3-cd]pyrene	50.000	48.295	3.4	105	0.00	19.27
97	P	Dibenz[a,h]anthracene	50.000	49.703	0.6	106	0.00	19.32
98	P	Benzo[g,h,i]perylene	50.000	47.793	4.4	102	0.00	19.62

(#) = Out of Range SPCC's out = 0 CCC's out = 0
U038816.D 8270d.m Thu Jun 13 09:38:00 2013

12.7.6

12

Initial Calibration Verification

Job Number: JB40350 **Sample:** SU1817-ICV1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U038821.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\SU1817\U038821.D          Vial: 10
Acq On    : 12 Jun 2013   2:31 pm                   Operator: nancyf
Sample    : icv1817-50                              Inst    : MSBNA04
Misc      : op47117,su1817,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270d.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Thu Jun 13 09:33:14 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	98	0.00	4.61
2		1,4-Dioxane		----------NA----------				
3		N-nitrosodimethylamine		----------NA----------				
4		Pyridine	50.000	51.826	-3.7	102	-0.02	2.47
5	S	2-Fluorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
6	P	Benzaldehyde	25.000	24.189	3.2	104	0.00	4.29
		----------	Amount	Calc.	%Drift	----------		
7		Aniline	50.000	40.913	18.2	78	0.00	4.37
8	P	bis(2-Chloroethyl)ether		----------NA----------				
9	S	Phenol-d5		----------NA----------				
10	P	Phenol		----------NA----------				
11	P	2-Chlorophenol		----------NA----------				
12		1,3-Dichlorobenzene		----------NA----------				
13		1,4-Dichlorobenzene		----------NA----------				
14		1,2-Dichlorobenzene		----------NA----------				
15		Benzyl alcohol	50.000	48.186	3.6	94	0.00	4.73
16	P	2-Methylphenol		----------NA----------				
17	P	bis(2-chloroisopropyl)eth		----------NA----------				
18	P	Acetophenone		----------NA----------				
19	P	N-Nitroso-di-n-propylamin		----------NA----------				
20	P	3&4-Methylphenol		----------NA----------				
21	P	Hexachloroethane		----------NA----------				
22	I	Naphthalene-d8	40.000	40.000	0.0	100	0.00	5.68
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene		----------NA----------				
25	P	Isophorone	50.000	50.708	-1.4	100	-0.01	5.26
26	P	2-Nitrophenol		----------NA----------				
27	P	2,4-Dimethylphenol		----------NA----------				
28	P	bis(2-Chloroethoxy)methan		----------NA----------				
29		Benzoic Acid		----------NA----------				
30	P	2,4-Dichlorophenol		----------NA----------				
31		1,2,4-Trichlorobenzene		----------NA----------				
32	P	Naphthalene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
33	P	4-Chloroaniline	50.000	40.896	18.2	79	0.00	5.76

12.7.7

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Initial Calibration Verification

Job Number: JB40350 **Sample:** SU1817-ICV1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U038821.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

			Amount	Calc.	%Drift			
34		2,6-Dichlorophenol		NA				
35	P	Hexachlorobutadiene		NA				
36	P	Caprolactam		NA				
37	P	4-Chloro-3-methylphenol		NA				
38	P	2-Methylnaphthalene	50.000	50.581	-1.2	102	0.00	6.45
39		1-Methylnaphthalene		NA				
40	P	1,2,4,5-Tetrachlorobenzen		NA				
41	I	Acenaphthene-d10	40.000	40.000	0.0	99	0.00	7.84
			Amount	Calc.	%Drift			
42	P	Hexachlorocyclopentadiene		NA				
			Amount	Calc.	%Drift			
43	P	2,4,6-Trichlorophenol		NA				
44	P	2,4,5-Trichlorophenol		NA				
45	S	2-Fluorobiphenyl		NA				
46	P	1,1'-Biphenyl		NA				
47	P	2-Chloronaphthalene		NA				
48	P	2-Nitroaniline	50.000	53.217	-6.4	103	0.00	7.22
49		p-Dinitrobenzene		NA				
50	P	Dimethylphthalate		NA				
51		m-Dinitrobenzene	50.000	44.479	11.0	84	-0.02	7.54
52	P	2,6-Dinitrotoluene		NA				
53	P	Acenaphthylene		NA				
54		o-Dinitrobenzene		NA				
55	P	3-Nitroaniline	50.000	44.864	10.3	86	-0.01	7.83
56	P	Acenaphthene		NA				
			Amount	Calc.	%Drift			
57	P	2,4-Dinitrophenol		NA				
			Amount	Calc.	%Drift			
58	P	4-Nitrophenol		NA				
59	P	Dibenzofuran	50.000	51.721	-3.4	101	0.00	8.16
60	P	2,4-Dinitrotoluene		NA				
61		2,3,5,6-Tetrachlorophenol		NA				
62	P	2,3,4,6-Tetrachlorophenol		NA				
63	P	Diethylphthalate		NA				
64	P	Fluorene		NA				
65	P	4-Chlorophenyl-phenylethe		NA				
66	P	4-Nitroaniline	50.000	50.787	-1.6	99	-0.02	8.80
67	I	Phenanthrene-d10	40.000	40.000	0.0	100	0.00	10.30
			Amount	Calc.	%Drift			
68	P	4,6-Dinitro-2-methylpheno		NA				
			Amount	Calc.	%Drift			
69	P	n-Nitrosodiphenylamine		NA				
70		1,2-Diphenylhydrazine		NA				
			Amount	Calc.	%Drift			
71	S	2,4,6-Tribromophenol		NA				
			Amount	Calc.	%Drift			
72	P	4-Bromophenyl-phenylether		NA				
73	P	Hexachlorobenzene		NA				
74		Simazine	50.000	60.896	-21.8#	121	-0.02	9.90

Initial Calibration Verification

Job Number: JB40350 **Sample:** SU1817-ICV1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U038821.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

			Amount	Calc.	%Drift		
75	P	Atrazine		----------NA----------			
76	P	Pentachlorophenol		----------NA----------			
77	P	Phenanthrene		----------NA----------			
78	P	Anthracene		----------NA----------			
79	P	Carbazole	50.000	50.574	-1.1	102	0.00	10.78
80	P	Di-n-butylphthalate		----------NA----------			
81	P	Fluoranthene		----------NA----------			
82	I	Chrysene-d12	40.000	40.000	0.0	91	-0.01	15.19
83		Benzidine	50.000	59.737	-19.5	103	0.00	12.86
84	P	Pyrene		----------NA----------			
85	S	Terphenyl-d14		----------NA----------			
86	P	Butylbenzylphthalate		----------NA----------			
87	P	3,3'-Dichlorobenzidine	50.000	46.379	7.2	82	0.00	15.23
88	P	Benzo[a]anthracene		----------NA----------			
89	P	Chrysene		----------NA----------			
90	P	bis(2-Ethylhexyl)phthalat		----------NA----------			
91	I	Perylene-d12	40.000	40.000	0.0	97	0.00	17.69
92	P	Di-n-octylphthalate		----------NA----------			
93	P	Benzo[b]fluoranthene		----------NA----------			
94	P	Benzo[k]fluoranthene		----------NA----------			
95	P	Benzo[a]pyrene		----------NA----------			
96	P	Indeno[1,2,3-cd]pyrene		----------NA----------			
97	P	Dibenz[a,h]anthracene		----------NA----------			
98	P	Benzo[g,h,i]perylene		----------NA----------			

(#) = Out of Range SPCC's out = 0 CCC's out = 0
U038816.D 8270d.m Thu Jun 13 09:38:01 2013

12.7.7

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Continuing Calibration Summary

Job Number: JB40350 **Sample:** SU1836-CC1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U039303.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\SU1836\U039303.D          Vial: 2
Acq On    : 28 Jun 2013   1:48 pm                   Operator: nancyf
Sample    : cc1817-50                               Inst    : MSBNA04
Misc      : op47524,su1836,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270d.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Sun Jun 30 13:46:46 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	71	0.00	4.46
2		1,4-Dioxane		----------NA----------				
3		N-nitrosodimethylamine	0.910	0.911	-0.1	70	0.00	2.29
4		Pyridine	1.268	1.225	3.4	68	0.00	2.30
5	S	2-Fluorophenol	1.291	1.249	3.3	68	-0.04	3.50
		----------	Amount	Calc.	%Drift		----------	
6	P	Benzaldehyde	50.000	52.413	-4.8	71	0.00	4.14
		----------	AvgRF	CCRF	%Dev		----------	
7		Aniline	2.163	2.226	-2.9	71	0.00	4.23
8	P	bis(2-Chloroethyl)ether	1.170	1.115	4.7	68	0.00	4.28
9	S	Phenol-d5	1.705	1.776	-4.2	73	0.00	4.23
10	P	Phenol	1.819	1.840	-1.2	71	0.00	4.24
11	P	2-Chlorophenol	1.289	1.232	4.4	68	0.00	4.31
12		1,3-Dichlorobenzene	1.518	1.497	1.4	69	0.00	4.42
13		1,4-Dichlorobenzene	1.591	1.568	1.4	70	0.00	4.47
14		1,2-Dichlorobenzene	1.521	1.577	-3.7	75	0.00	4.58
15		Benzyl alcohol	0.840	0.878	-4.5	73	0.00	4.58
16	P	2-Methylphenol	1.261	1.256	0.4	70	0.00	4.67
17	P	bis(2-chloroisopropyl)eth	2.146	2.005	6.6	66	0.00	4.67
18	P	Acetophenone	2.003	2.040	-1.8	71	0.00	4.77
19	P	N-Nitroso-di-n-propylamin	1.047	1.083	-3.4	71	0.00	4.78
20	P	3&4-Methylphenol	1.271	1.204	5.3	68	0.00	4.79
21	P	Hexachloroethane	0.671	0.670	0.1	70	0.00	4.83
22	I	Naphthalene-d8	1.000	1.000	0.0	70	0.00	5.50
23	S	Nitrobenzene-d5	0.435	0.444	-2.1	72	0.00	4.89
24	P	Nitrobenzene	0.435	0.443	-1.8	72	0.00	4.90
25	P	Isophorone	0.695	0.709	-2.0	70	0.00	5.10
26	P	2-Nitrophenol	0.196	0.192	2.0	69	0.00	5.16
27	P	2,4-Dimethylphenol	0.410	0.413	-0.7	71	0.00	5.22
28	P	bis(2-Chloroethoxy)methan	0.396	0.383	3.3	66	0.00	5.29
29		Benzoic Acid	0.261	0.276	-5.7	73	0.02	5.37
30	P	2,4-Dichlorophenol	0.309	0.311	-0.6	70	0.00	5.38
31		1,2,4-Trichlorobenzene	0.353	0.364	-3.1	73	0.00	5.45
32	P	Naphthalene	1.052	1.047	0.5	70	0.00	5.52
		----------	Amount	Calc.	%Drift		----------	
33	P	4-Chloroaniline	50.000	51.830	-3.7	73	0.00	5.58
		----------	AvgRF	CCRF	%Dev		----------	

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Continuing Calibration Summary

Job Number: JB40350 **Sample:** SU1836-CC1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U039303.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

34		2,6-Dichlorophenol	0.321	0.345	-7.5	75	0.00	5.59
35	P	Hexachlorobutadiene	0.241	0.254	-5.4	73	0.00	5.63
36	P	Caprolactam	0.094	0.098	-4.3	73	0.00	5.98
37	P	4-Chloro-3-methylphenol	0.328	0.342	-4.3	72	0.00	6.12
38	P	2-Methylnaphthalene	0.732	0.706	3.6	68	0.00	6.24
39		1-Methylnaphthalene	0.665	0.699	-5.1	73	0.00	6.35
40	P	1,2,4,5-Tetrachlorobenzen	0.387	0.411	-6.2	74	0.00	6.44
41	I	Acenaphthene-d10	1.000	1.000	0.0	77	0.00	7.61
		----------	Amount	Calc.	%Drift	----------		
42	P	Hexachlorocyclopentadiene	50.000	46.227	7.5	71	0.00	6.43
		----------	AvgRF	CCRF	%Dev	----------		
43	P	2,4,6-Trichlorophenol	0.400	0.382	4.5	73	0.00	6.60
44	P	2,4,5-Trichlorophenol	0.396	0.380	4.0	72	-0.01	6.65
45	S	2-Fluorobiphenyl	1.458	1.396	4.3	73	0.00	6.70
46	P	1,1'-Biphenyl	1.609	1.587	1.4	77	-0.01	6.82
47	P	2-Chloronaphthalene	1.194	1.175	1.6	74	-0.01	6.84
48	P	2-Nitroaniline	0.409	0.406	0.7	75	0.00	7.00
49		p-Dinitrobenzene	0.260	0.264	-1.5	76	0.00	7.22
50	P	Dimethylphthalate	1.288	1.284	0.3	75	0.00	7.29
51		m-Dinitrobenzene	0.216	0.212	1.9	72	0.00	7.33
52	P	2,6-Dinitrotoluene	0.286	0.278	2.8	75	0.00	7.36
53	P	Acenaphthylene	1.906	1.825	4.2	73	0.00	7.40
54		o-Dinitrobenzene	0.309	0.257	16.8	63	0.00	7.43
55	P	3-Nitroaniline	0.335	0.345	-3.0	77	0.00	7.60
56	P	Acenaphthene	1.218	1.180	3.1	74	0.00	7.66
		----------	Amount	Calc.	%Drift	----------		
57	P	2,4-Dinitrophenol	50.000	48.477	3.0	74	0.01	7.77
		----------	AvgRF	CCRF	%Dev	----------		
58	P	4-Nitrophenol	0.225	0.244	-8.4	81	0.00	7.95
59	P	Dibenzofuran	1.706	1.699	0.4	76	0.00	7.92
60	P	2,4-Dinitrotoluene	0.384	0.388	-1.0	77	0.01	7.97
61		2,3,5,6-Tetrachlorophenol	0.301	0.332	-10.3	82	0.00	8.07
62	P	2,3,4,6-Tetrachlorophenol	0.315	0.339	-7.6	81	0.00	8.14
63	P	Diethylphthalate	1.430	1.437	-0.5	77	0.03	8.39
64	P	Fluorene	1.412	1.366	3.3	73	0.01	8.46
65	P	4-Chlorophenyl-phenylethe	0.711	0.718	-1.0	77	0.02	8.50
66	P	4-Nitroaniline	0.297	0.290	2.4	74	0.02	8.57
67	I	Phenanthrene-d10	1.000	1.000	0.0	81	0.00	10.03
		----------	Amount	Calc.	%Drift	----------		
68	P	4,6-Dinitro-2-methylpheno	50.000	49.126	1.7	78	-0.02	8.63
		----------	AvgRF	CCRF	%Dev	----------		
69	P	n-Nitrosodiphenylamine	0.562	0.531	5.5	76	-0.02	8.72
70		1,2-Diphenylhydrazine	0.844	0.796	5.7	76	-0.02	8.76
		----------	Amount	Calc.	%Drift	----------		
71	S	2,4,6-Tribromophenol	100.000	103.394	-3.4	85	-0.02	8.86
		----------	AvgRF	CCRF	%Dev	----------		
72	P	4-Bromophenyl-phenylether	0.222	0.219	1.4	79	0.00	9.31
73	P	Hexachlorobenzene	0.241	0.239	0.8	80	-0.01	9.37
74		Simazine	0.111	0.102	8.1	74	0.00	9.66
75	P	Atrazine	0.220	0.241	-9.5	91	0.01	9.72

Continuing Calibration Summary

Job Number: JB40350 **Sample:** SU1836-CC1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U039303.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

			Amount	Calc.	%Drift			
76	P	Pentachlorophenol	50.000	58.656	-17.3	97	0.00	9.75

			AvgRF	CCRF	%Dev			
77	P	Phenanthrene	1.103	1.082	1.9	80	0.00	10.07
78	P	Anthracene	1.130	1.110	1.8	79	0.00	10.16
79	P	Carbazole	1.033	1.026	0.7	81	0.02	10.51
80	P	Di-n-butylphthalate	1.339	1.345	-0.4	80	0.06	11.30
81	P	Fluoranthene	1.258	1.343	-6.8	86	0.05	12.22
82	I	Chrysene-d12	1.000	1.000	0.0	93	0.00	14.91
83		Benzidine	0.532	0.534	-0.4	88	-0.03	12.58
84	P	Pyrene	1.218	1.141	6.3	86	-0.05	12.61
85	S	Terphenyl-d14	0.824	0.783	5.0	87	-0.03	13.04
86	P	Butylbenzylphthalate	0.530	0.495	6.6	86	0.00	14.09
87	P	3,3'-Dichlorobenzidine	0.400	0.435	-8.7	98	0.01	14.95
88	P	Benzo[a]anthracene	1.085	1.044	3.8	90	0.00	14.89
89	P	Chrysene	1.051	1.084	-3.1	95	0.00	14.96
90	P	bis(2-Ethylhexyl)phthalat	0.751	0.693	7.7	86	0.03	15.27
91	I	Perylene-d12	1.000	1.000	0.0	98	0.00	17.39
92	P	Di-n-octylphthalate	1.378	1.255	8.9	88	0.02	16.45
93	P	Benzo[b]fluoranthene	1.107	1.093	1.3	95	0.00	16.79
94	P	Benzo[k]fluoranthene	1.131	1.151	-1.8	98	0.00	16.84
95	P	Benzo[a]pyrene	1.084	1.091	-0.6	98	0.00	17.30
96	P	Indeno[1,2,3-cd]pyrene	0.992	1.003	-1.1	100	0.03	18.97
97	P	Dibenz[a,h]anthracene	1.018	1.053	-3.4	100	0.03	19.02
98	P	Benzo[g,h,i]perylene	1.075	1.091	-1.5	99	0.03	19.31

(#) = Out of Range SPCC's out = 0 CCC's out = 0
U038816.D 8270d.m Mon Jul 01 08:18:48 2013

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Continuing Calibration Summary

Job Number: JB40350 **Sample:** SU1839-CC1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U039357.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\2\DATA\SU1839\U039357.D          Vial: 2
Acq On    :  1 Jul 2013  10:16 am                   Operator: nancyf
Sample    : cc1817-50                               Inst    : MSBNA04
Misc      : op47525,su1839,30.0,,,1,1,soil          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\2\METHODS\8270d.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Tue Jul 02 11:26:02 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	4.44
2		1,4-Dioxane	0.481	0.465	3.3	96	0.00	1.92
3		N-nitrosodimethylamine	0.910	0.871	4.3	93	-0.02	2.25
4		Pyridine	1.268	1.191	6.1	92	-0.02	2.26
5	S	2-Fluorophenol	1.291	1.259	2.5	94	-0.05	3.47
		----------	Amount	Calc.	%Drift		----------	
6	P	Benzaldehyde	50.000	63.741	-27.5#	109	-0.01	4.12
		----------	AvgRF	CCRF	%Dev		----------	
7		Aniline	2.163	2.151	0.6	95	0.00	4.20
8	P	bis(2-Chloroethyl)ether	1.170	1.127	3.7	95	0.00	4.25
9	S	Phenol-d5	1.705	1.756	-3.0	99	0.00	4.21
10	P	Phenol	1.819	1.799	1.1	96	0.00	4.22
11	P	2-Chlorophenol	1.289	1.280	0.7	98	0.00	4.29
12		1,3-Dichlorobenzene	1.518	1.503	1.0	96	0.00	4.39
13		1,4-Dichlorobenzene	1.591	1.584	0.4	98	0.00	4.45
14		1,2-Dichlorobenzene	1.521	1.592	-4.7	104	0.00	4.55
15		Benzyl alcohol	0.840	0.928	-10.5	107	0.00	4.55
16	P	2-Methylphenol	1.261	1.272	-0.9	98	0.00	4.64
17	P	bis(2-chloroisopropyl)eth	2.146	1.848	13.9	84	0.00	4.64
18	P	Acetophenone	2.003	2.138	-6.7	103	0.00	4.75
19	P	N-Nitroso-di-n-propylamin	1.047	1.070	-2.2	97	0.00	4.75
20	P	3&4-Methylphenol	1.271	1.226	3.5	96	0.00	4.77
21	P	Hexachloroethane	0.671	0.646	3.7	94	0.00	4.81
22	I	Naphthalene-d8	1.000	1.000	0.0	100	0.00	5.46
23	S	Nitrobenzene-d5	0.435	0.424	2.5	98	0.00	4.86
24	P	Nitrobenzene	0.435	0.415	4.6	95	0.00	4.87
25	P	Isophorone	0.695	0.665	4.3	94	0.00	5.07
26	P	2-Nitrophenol	0.196	0.192	2.0	98	0.00	5.13
27	P	2,4-Dimethylphenol	0.410	0.403	1.7	98	0.00	5.19
28	P	bis(2-Chloroethoxy)methan	0.396	0.383	3.3	94	0.01	5.26
29		Benzoic Acid	0.261	0.282	-8.0	106	0.03	5.35
30	P	2,4-Dichlorophenol	0.309	0.319	-3.2	103	0.00	5.35
31		1,2,4-Trichlorobenzene	0.353	0.354	-0.3	101	0.00	5.42
32	P	Naphthalene	1.052	1.037	1.4	99	0.00	5.48
		----------	Amount	Calc.	%Drift		----------	
33	P	4-Chloroaniline	50.000	51.958	-3.9	104	0.00	5.55
		----------	AvgRF	CCRF	%Dev		----------	

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Continuing Calibration Summary

Job Number: JB40350 **Sample:** SU1839-CC1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U039357.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

34		2,6-Dichlorophenol	0.321	0.344	-7.2	106	0.00	5.55
35	P	Hexachlorobutadiene	0.241	0.242	-0.4	100	0.00	5.60
36	P	Caprolactam	0.094	0.104	-10.6	111	0.01	5.95
37	P	4-Chloro-3-methylphenol	0.328	0.337	-2.7	101	0.01	6.08
38	P	2-Methylnaphthalene	0.732	0.706	3.6	97	0.00	6.20
39		1-Methylnaphthalene	0.665	0.703	-5.7	105	0.00	6.31
40	P	1,2,4,5-Tetrachlorobenzen	0.387	0.415	-7.2	107	0.00	6.40
41	I	Acenaphthene-d10	1.000	1.000	0.0	110	0.00	7.57
		----------	Amount	Calc.	%Drift	----------		
42	P	Hexachlorocyclopentadiene	50.000	43.229	13.5	94	-0.01	6.39
		----------	AvgRF	CCRF	%Dev	----------		
43	P	2,4,6-Trichlorophenol	0.400	0.394	1.5	107	0.00	6.56
44	P	2,4,5-Trichlorophenol	0.396	0.396	0.0	107	-0.01	6.61
45	S	2-Fluorobiphenyl	1.458	1.372	5.9	103	0.00	6.66
46	P	1,1'-Biphenyl	1.609	1.679	-4.4	116	-0.01	6.78
47	P	2-Chloronaphthalene	1.194	1.170	2.0	105	0.00	6.80
48	P	2-Nitroaniline	0.409	0.382	6.6	101	0.00	6.96
49		p-Dinitrobenzene	0.260	0.256	1.5	105	0.00	7.18
50	P	Dimethylphthalate	1.288	1.253	2.7	105	0.00	7.25
51		m-Dinitrobenzene	0.216	0.218	-0.9	106	0.01	7.30
52	P	2,6-Dinitrotoluene	0.286	0.287	-0.3	110	0.00	7.32
53	P	Acenaphthylene	1.906	1.849	3.0	106	0.00	7.36
54		o-Dinitrobenzene	0.309	0.237	23.3#	82	0.00	7.39
55	P	3-Nitroaniline	0.335	0.349	-4.2	112	0.00	7.56
56	P	Acenaphthene	1.218	1.164	4.4	104	0.00	7.61
		----------	Amount	Calc.	%Drift	----------		
57	P	2,4-Dinitrophenol	50.000	57.373	-14.7	129	0.02	7.74
		----------	AvgRF	CCRF	%Dev	----------		
58	P	4-Nitrophenol	0.225	0.225	0.0	107	0.02	7.91
59	P	Dibenzofuran	1.706	1.687	1.1	108	0.00	7.88
60	P	2,4-Dinitrotoluene	0.384	0.395	-2.9	111	0.02	7.93
61		2,3,5,6-Tetrachlorophenol	0.301	0.332	-10.3	117	0.01	8.03
62	P	2,3,4,6-Tetrachlorophenol	0.315	0.340	-7.9	116	0.01	8.10
63	P	Diethylphthalate	1.430	1.408	1.5	107	0.03	8.35
64	P	Fluorene	1.412	1.377	2.5	105	0.02	8.42
65	P	4-Chlorophenyl-phenylethe	0.711	0.702	1.3	107	0.02	8.45
66	P	4-Nitroaniline	0.297	0.304	-2.4	111	0.03	8.53
67	I	Phenanthrene-d10	1.000	1.000	0.0	112	0.00	9.99
		----------	Amount	Calc.	%Drift	----------		
68	P	4,6-Dinitro-2-methylpheno	50.000	52.902	-5.8	118	-0.02	8.60
		----------	AvgRF	CCRF	%Dev	----------		
69	P	n-Nitrosodiphenylamine	0.562	0.542	3.6	108	-0.03	8.67
70		1,2-Diphenylhydrazine	0.844	0.780	7.6	103	-0.03	8.72
		----------	Amount	Calc.	%Drift	----------		
71	S	2,4,6-Tribromophenol	100.000	106.001	-6.0	122	-0.03	8.82
		----------	AvgRF	CCRF	%Dev	----------		
72	P	4-Bromophenyl-phenylether	0.222	0.223	-0.5	112	-0.02	9.27
73	P	Hexachlorobenzene	0.241	0.243	-0.8	113	-0.01	9.33
74		Simazine	0.111	0.104	6.3	105	0.00	9.62
75	P	Atrazine	0.220	0.261	-18.6	138	0.01	9.69

Continuing Calibration Summary

Job Number: JB40350 **Sample:** SU1839-CC1817
Account: ALNJ Accutest New Jersey **Lab FileID:** U039357.D
Project: ENVNJSP: Hess QC Lab, 835 West Avenue, Port Reading, NJ

			Amount	Calc.	%Drift			
76	P	Pentachlorophenol	50.000	63.054	-26.1#	147	0.00	9.71

			AvgRF	CCRF	%Dev			
77	P	Phenanthrene	1.103	1.091	1.1	111	0.00	10.03
78	P	Anthracene	1.130	1.122	0.7	111	0.00	10.12
79	P	Carbazole	1.033	1.040	-0.7	113	0.01	10.46
80	P	Di-n-butylphthalate	1.339	1.350	-0.8	112	0.06	11.26
81	P	Fluoranthene	1.258	1.317	-4.7	117	0.06	12.18
82	I	Chrysene-d12	1.000	1.000	0.0	126	0.00	14.87
83		Benzidine	0.532	0.636	-19.5	142	-0.04	12.54
84	P	Pyrene	1.218	1.140	6.4	117	-0.05	12.58
85	S	Terphenyl-d14	0.824	0.796	3.4	121	-0.03	13.00
86	P	Butylbenzylphthalate	0.530	0.503	5.1	119	0.00	14.04
87	P	3,3'-Dichlorobenzidine	0.400	0.446	-11.5	136	0.01	14.91
88	P	Benzo[a]anthracene	1.085	1.066	1.8	124	0.00	14.85
89	P	Chrysene	1.051	1.079	-2.7	128	0.00	14.92
90	P	bis(2-Ethylhexyl)phthalat	0.751	0.705	6.1	119	0.03	15.23
91	I	Perylene-d12	1.000	1.000	0.0	132	0.00	17.36
92	P	Di-n-octylphthalate	1.378	1.293	6.2	123	0.00	16.42
93	P	Benzo[b]fluoranthene	1.107	1.124	-1.5	133	-0.01	16.75
94	P	Benzo[k]fluoranthene	1.131	1.120	1.0	129	0.00	16.81
95	P	Benzo[a]pyrene	1.084	1.102	-1.7	134	0.00	17.27
96	P	Indeno[1,2,3-cd]pyrene	0.992	1.082	-9.1	146	0.03	18.94
97	P	Dibenz[a,h]anthracene	1.018	1.105	-8.5	142	0.03	18.98
98	P	Benzo[g,h,i]perylene	1.075	1.141	-6.1	140	0.04	19.28

(#) = Out of Range SPCC's out = 0 CCC's out = 0
U038816.D 8270d.m Tue Jul 02 11:27:23 2013

12.7.9

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APPENDIX VII

Soil and Ground Water Analytical Data Packages- December 2013

EnviroTrac

New Jersey
ACCUTEST LABORATORIES

06/17/14

Technical Report for

EnviroTrac

Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Accutest Job Number: JB55929

Sampling Dates: 12/16/13 - 12/17/13

Report to:

EnviroTrac

sarahd@envirotrac.com

ATTN: Sarah Dyson

Total number of pages in report: **433**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

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Sample Summary

EnviroTrac

Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Job No: JB55929

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB55929-1	12/16/13	14:52	SD	12/18/13	SO	Soil	P-6R (2-2.5)
JB55929-2	12/17/13	08:50	SD	12/18/13	SO	Soil	P-7R (2-2.5)
JB55929-3	12/17/13	09:10	SD	12/18/13	SO	Soil	P-7R (5.5-6.0)
JB55929-4	12/16/13	15:20	SD	12/18/13	SO	Soil	P-8R (2-2.5)
JB55929-5	12/17/13	11:31	SD	12/18/13	SO	Soil	P-9R (2-2.5)
JB55929-6	12/17/13	09:52	SD	12/18/13	SO	Soil	P-10R (2-2.5)
JB55929-7	12/17/13	14:04	SD	12/18/13	SO	Soil	P-12 (2-2.5)
JB55929-7A	12/17/13	14:04	SD	12/18/13	SO	Soil	P-12 (2-2.5)
JB55929-8	12/17/13	14:20	SD	12/18/13	SO	Soil	P-12 (4-4.5)
JB55929-9	12/17/13	13:23	SD	12/18/13	SO	Soil	P-13 (2-2.5)
JB55929-9A	12/17/13	13:23	SD	12/18/13	SO	Soil	P-13 (2-2.5)
JB55929-10	12/17/13	13:26	SD	12/18/13	SO	Soil	P-13 (4-4.5)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	EnviroTrac	**Job No**	JB55929
Site:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ	**Report Date**	1/6/2014 12:09:17 PM

On 12/18/2013, 10 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 1.6 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB55929 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** VE9266

- All samples were analyzed within the recommended method holding time.
- Sample(s) JB55760-24MS, JB55760-24MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: SO **Batch ID:** VE9269

- All samples were analyzed within the recommended method holding time.
- Sample(s) JB56141-1MS, JB56141-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP71561

- All samples were extracted within the recommended method holding time.
- Sample(s) JB55929-2MS, JB55929-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Benzaldehyde are outside control limits. Outside of in house control limits.
- Matrix Spike Recovery(s) for 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2-Nitrophenol, 4-Chloro-3-methyl phenol, 4-Chloroaniline, Acetophenone, Benzaldehyde, bis(2-Chloroethoxy)methane, Caprolactam, Hexachlorobutadiene, Isophorone, Nitrobenzene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2-Nitrophenol, 4-Chloro-3-methyl phenol, 4-Nitrophenol, Acetophenone, bis(2-Chloroethoxy)methane, Caprolactam, Hexachlorobutadiene, Isophorone, Nitrobenzene, Benzaldehyde are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MSD for Benzaldehyde, Hexachlorocyclopentadiene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Recovery(s) for 2-Methylnaphthalene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- OP71561-MSD for Nitrobenzene-d5: Outside control limits due to matrix interference.
- JB55929-2 for Nitrobenzene-d5: Outside control limits due to matrix interference.
- JB55929-2 for Nitrobenzene-d5: Outside control limits due to matrix interference.
- JB55929-4 for Nitrobenzene-d5: Outside control limits due to matrix interference. Confirmed by dilution.

Metals By Method SW846 6010C

Matrix: LEACHATE **Batch ID:** MP76951

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB55342-1RMS, JB55342-1RMSD, JB55342-1RSDL were used as the QC samples for metals.

Matrix: SO **Batch ID:** MP76794

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB55750-6AMS, JB55750-6AMSD, JB55750-6ASDL were used as the QC samples for metals.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Aluminum, Antimony, Potassium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Iron, Magnesium, Manganese are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- RPD(s) for Serial Dilution for Selenium, Cadmium, are outside control limits. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP76794-SD1 for Calcium: Serial dilution indicates possible matrix interference.
- MP76794-SD1 for Iron: Serial dilution indicates possible matrix interference.
- MP76794-SD1 for Zinc: Serial dilution indicates possible matrix interference.
- MP76794-MB1 for Zinc: All reported results <RL or >10x MB value.

Matrix: SO **Batch ID:** MP76911

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB56044-9MSD, JB56044-9MS, JB56044-9SDL were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Antimony, Magnesium, Silver are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Aluminum, Antimony, Chromium, Magnesium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Iron, Potassium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- RPD(s) for Serial Dilution for Antimony, Cadmium, Selenium,are outside control limits. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP76911-SD1 for Zinc: Serial dilution indicates possible matrix interference.
- MP76911-SD1 for Sodium: Serial dilution indicates possible matrix interference.
- MP76911-SD1 for Nickel: Serial dilution indicates possible matrix interference.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP77002

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB56022-1MS, JB56022-1MSD were used as the QC samples for metals.

Wet Chemistry By Method ASTM 4643-00

Matrix: SO **Batch ID:** GN97133

- The data for ASTM 4643-00 meets quality control requirements.

Wet Chemistry By Method CORP ENG 81M/SW9060M

Matrix: SO	**Batch ID:** GP76798

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB55473-5DUP, JB55473-5MS were used as the QC samples for Total Organic Carbon.
- JB55929-9 for Total Organic Carbon: Multiple injections indicate possible sample non-homogeneity.

Wet Chemistry By Method SM2540 G-97

Matrix: SO	**Batch ID:** GN97295

- The data for SM2540 G-97 meets quality control requirements.

Wet Chemistry By Method SW846 1312

Matrix: ALL	**Batch ID:** GN97339

- The data for SW846 1312 meets quality control requirements.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB55929
Account: EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Collected: 12/16/13 thru 12/17/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB55929-1	**P-6R (2-2.5)**					
No hits reported in this sample.						
JB55929-2	**P-7R (2-2.5)**					
Anthracene		45.8	35	12	ug/kg	SW846 8270D
Benzo(a)anthracene		23.0 J	35	11	ug/kg	SW846 8270D
Benzo(a)pyrene		16.9 J	35	11	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		18.0 J	35	13	ug/kg	SW846 8270D
1,1'-Biphenyl		567	70	4.1	ug/kg	SW846 8270D
Chrysene		41.3	35	12	ug/kg	SW846 8270D
Dibenzofuran		122	70	10	ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		59.5 J	70	31	ug/kg	SW846 8270D
Fluorene		211	35	12	ug/kg	SW846 8270D
2-Methylnaphthalene		5760	350	98	ug/kg	SW846 8270D
Naphthalene		2900	35	9.6	ug/kg	SW846 8270D
Phenanthrene		265	35	16	ug/kg	SW846 8270D
Pyrene		65.8	35	13	ug/kg	SW846 8270D
Total TIC, Semi-Volatile		14540 J			ug/kg	
Total Alkanes		9200 J			ug/kg	
Total Organic Carbon		2920	1100		mg/kg	CORP ENG 81M/SW9060M
JB55929-3	**P-7R (5.5-6.0)**					
Benzene		623	58	7.3	ug/kg	SW846 8260B
Cyclohexane		466	290	15	ug/kg	SW846 8260B
Ethylbenzene		14800	580	100	ug/kg	SW846 8260B
Isopropylbenzene		1060	290	8.5	ug/kg	SW846 8260B
Methylcyclohexane		8140	290	9.5	ug/kg	SW846 8260B
Methyl Tert Butyl Ether		27200	580	200	ug/kg	SW846 8260B
Toluene		4950	58	8.2	ug/kg	SW846 8260B
m,p-Xylene		60300	580	280	ug/kg	SW846 8260B
o-Xylene		5750	58	10	ug/kg	SW846 8260B
Xylene (total)		66000	580	100	ug/kg	SW846 8260B
Total TIC, Volatile		22100 J			ug/kg	
Total Alkanes		57600 J			ug/kg	
JB55929-4	**P-8R (2-2.5)**					
Acenaphthene		126	32	9.4	ug/kg	SW846 8270D
Benzo(a)anthracene		83.5	32	11	ug/kg	SW846 8270D
Benzo(a)pyrene		255	32	9.9	ug/kg	SW846 8270D
Benzo(b)fluoranthene		128	32	11	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		237	32	12	ug/kg	SW846 8270D

Summary of Hits

Job Number: JB55929
Account: EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Collected: 12/16/13 thru 12/17/13

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Chrysene	432	32	11	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	110	32	11	ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate	183	65	29	ug/kg	SW846 8270D
Fluoranthene	47.1	32	14	ug/kg	SW846 8270D
Fluorene	152	32	11	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	111	32	11	ug/kg	SW846 8270D
2-Methylnaphthalene	3970	260	72	ug/kg	SW846 8270D
Naphthalene	2790	130	35	ug/kg	SW846 8270D
Phenanthrene	286	32	15	ug/kg	SW846 8270D
Pyrene	271	32	12	ug/kg	SW846 8270D
Total TIC, Semi-Volatile	29000 J			ug/kg	
Total Alkanes	5160 J			ug/kg	
JB55929-5 P-9R (2-2.5)					
Total TIC, Semi-Volatile	220 J			ug/kg	
JB55929-6 P-10R (2-2.5)					
bis(2-Ethylhexyl)phthalate	41.2 J	63	28	ug/kg	SW846 8270D
JB55929-7 P-12 (2-2.5)					
Aluminum	8170	48		mg/kg	SW846 6010C
Arsenic	3.8	1.9		mg/kg	SW846 6010C
Barium	34.0	19		mg/kg	SW846 6010C
Beryllium	0.36	0.19		mg/kg	SW846 6010C
Chromium	10.5	0.95		mg/kg	SW846 6010C
Copper	5.4	2.4		mg/kg	SW846 6010C
Iron	13800	48		mg/kg	SW846 6010C
Lead	4.9	1.9		mg/kg	SW846 6010C
Magnesium	981	480		mg/kg	SW846 6010C
Manganese	153	1.4		mg/kg	SW846 6010C
Nickel	6.5	3.8		mg/kg	SW846 6010C
Vanadium	13.8	4.8		mg/kg	SW846 6010C
Zinc	19.4	1.9		mg/kg	SW846 6010C
JB55929-7A P-12 (2-2.5)					
pH, SPLP Leachate	6.49			su	SW846 1312
Volume, SPLP Leachate	2.008			l	SW846 1312
Weight, SPLP Leachate	0.1004			kg	SW846 1312
Dry Weight, SPLP Leachate	0.09710			kg	SW846 1312

Summary of Hits

Job Number: JB55929
Account: EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Collected: 12/16/13 thru 12/17/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB55929-8	**P-12 (4-4.5)**					
Aluminum		13500	61		mg/kg	SW846 6010C
Arsenic		8.6	2.5		mg/kg	SW846 6010C
Barium		97.7	25		mg/kg	SW846 6010C
Beryllium		0.65	0.25		mg/kg	SW846 6010C
Chromium		16.6	1.2		mg/kg	SW846 6010C
Cobalt		9.8	6.1		mg/kg	SW846 6010C
Copper		36.2	3.1		mg/kg	SW846 6010C
Iron		18900	61		mg/kg	SW846 6010C
Lead		97.7	2.5		mg/kg	SW846 6010C
Magnesium		2430	610		mg/kg	SW846 6010C
Manganese		729	1.8		mg/kg	SW846 6010C
Nickel		12.4	4.9		mg/kg	SW846 6010C
Vanadium		27.4	6.1		mg/kg	SW846 6010C
Zinc		43.6	2.5		mg/kg	SW846 6010C
JB55929-9	**P-13 (2-2.5)**					
Aluminum		5620	50		mg/kg	SW846 6010C
Arsenic		78.7	2.0		mg/kg	SW846 6010C
Barium		21.7	20		mg/kg	SW846 6010C
Beryllium		0.68	0.20		mg/kg	SW846 6010C
Chromium		25.3	1.0		mg/kg	SW846 6010C
Cobalt		8.6	5.0		mg/kg	SW846 6010C
Copper		8.8	2.5		mg/kg	SW846 6010C
Iron		41900	50		mg/kg	SW846 6010C
Lead		7.0	2.0		mg/kg	SW846 6010C
Magnesium		968	500		mg/kg	SW846 6010C
Manganese		127	1.5		mg/kg	SW846 6010C
Nickel		19.2	4.0		mg/kg	SW846 6010C
Silver		0.58	0.50		mg/kg	SW846 6010C
Vanadium		24.4	5.0		mg/kg	SW846 6010C
Zinc		52.8	2.0		mg/kg	SW846 6010C
Total Organic Carbon [a]		2660	1100		mg/kg	CORP ENG 81M/SW9060M
JB55929-9A	**P-13 (2-2.5)**					
pH, SPLP Leachate		6.06			su	SW846 1312
Volume, SPLP Leachate		2.002			l	SW846 1312
Weight, SPLP Leachate		0.1001			kg	SW846 1312
Dry Weight, SPLP Leachate		0.09230			kg	SW846 1312

Summary of Hits

Job Number: JB55929
Account: EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Collected: 12/16/13 thru 12/17/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB55929-10	**P-13 (4-4.5)**					
Aluminum		14500	58		mg/kg	SW846 6010C
Arsenic		13.3	2.3		mg/kg	SW846 6010C
Barium		79.9	23		mg/kg	SW846 6010C
Beryllium		0.81	0.23		mg/kg	SW846 6010C
Calcium		1120	580		mg/kg	SW846 6010C
Chromium		27.7	1.2		mg/kg	SW846 6010C
Cobalt		8.8	5.8		mg/kg	SW846 6010C
Copper		32.5	2.9		mg/kg	SW846 6010C
Iron		33500	58		mg/kg	SW846 6010C
Lead		36.7	2.3		mg/kg	SW846 6010C
Magnesium		5460	580		mg/kg	SW846 6010C
Manganese		252	1.7		mg/kg	SW846 6010C
Nickel		19.2	4.6		mg/kg	SW846 6010C
Potassium		2420	1200		mg/kg	SW846 6010C
Vanadium		46.2	5.8		mg/kg	SW846 6010C
Zinc		54.8	2.3		mg/kg	SW846 6010C

(a) Multiple injections indicate possible sample non-homogeneity.

New Jersey

ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P-6R (2-2.5)		
Lab Sample ID:	JB55929-1	**Date Sampled:**	12/16/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	94.8
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M59628.D	1	12/23/13	KS	12/19/13	OP71561	E2M2516
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	69	34	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	34	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	56	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	58	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	690	42	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	690	42	ug/kg	
95-48-7	2-Methylphenol	ND	69	39	ug/kg	
	3&4-Methylphenol	ND	69	44	ug/kg	
88-75-5	2-Nitrophenol	ND	170	37	ug/kg	
100-02-7	4-Nitrophenol	ND	340	58	ug/kg	
87-86-5	Pentachlorophenol	ND	340	59	ug/kg	
108-95-2	Phenol	ND	69	36	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	36	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	40	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	32	ug/kg	
83-32-9	Acenaphthene	ND	34	10	ug/kg	
208-96-8	Acenaphthylene	ND	34	11	ug/kg	
98-86-2	Acetophenone	ND	170	6.1	ug/kg	
120-12-7	Anthracene	ND	34	12	ug/kg	
1912-24-9	Atrazine	ND	69	6.8	ug/kg	
56-55-3	Benzo(a)anthracene	ND	34	11	ug/kg	
50-32-8	Benzo(a)pyrene	ND	34	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	34	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	34	13	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	34	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	69	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	69	20	ug/kg	
92-52-4	1,1'-Biphenyl	ND	69	4.0	ug/kg	
100-52-7	Benzaldehyde	ND	170	7.9	ug/kg	
91-58-7	2-Chloronaphthalene	ND	69	11	ug/kg	
106-47-8	4-Chloroaniline	ND	170	11	ug/kg	
86-74-8	Carbazole	ND	69	16	ug/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-6R (2-2.5)		
Lab Sample ID:	JB55929-1	**Date Sampled:**	12/16/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	94.8
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	69	11	ug/kg	
218-01-9	Chrysene	ND	34	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	69	14	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	69	10	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	69	10	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	69	10	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	34	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	34	13	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	69	8.8	ug/kg	
123-91-1	1,4-Dioxane	ND	34	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	34	12	ug/kg	
132-64-9	Dibenzofuran	ND	69	10	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	69	7.7	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	69	17	ug/kg	
84-66-2	Diethyl phthalate	ND	69	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	69	12	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	69	30	ug/kg	
206-44-0	Fluoranthene	ND	34	15	ug/kg	
86-73-7	Fluorene	ND	34	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	69	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	34	9.6	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	340	35	ug/kg	
67-72-1	Hexachloroethane	ND	170	9.6	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	34	12	ug/kg	
78-59-1	Isophorone	ND	69	9.3	ug/kg	
91-57-6	2-Methylnaphthalene	ND	69	19	ug/kg	
88-74-4	2-Nitroaniline	ND	170	15	ug/kg	
99-09-2	3-Nitroaniline	ND	170	14	ug/kg	
100-01-6	4-Nitroaniline	ND	170	13	ug/kg	
91-20-3	Naphthalene	ND	34	9.4	ug/kg	
98-95-3	Nitrobenzene	ND	69	10	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	69	8.4	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	21	ug/kg	
85-01-8	Phenanthrene	ND	34	16	ug/kg	
129-00-0	Pyrene	ND	34	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		13-110%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-6R (2-2.5)		
Lab Sample ID:	JB55929-1	**Date Sampled:**	12/16/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	94.8
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	49%		15-110%
118-79-6	2,4,6-Tribromophenol	43%		20-123%
4165-60-0	Nitrobenzene-d5	48%		10-110%
321-60-8	2-Fluorobiphenyl	49%		17-110%
1718-51-0	Terphenyl-d14	50%		30-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	3.49	2300	ug/kg	J
	Total TIC, Semi-Volatile		0	ug/kg	
	Total Alkanes		0	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-7R (2-2.5)		
Lab Sample ID:	JB55929-2	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	93.3
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M59562.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
Run #2	2M59627.D	5	12/23/13	KS	12/19/13	OP71561	E2M2516

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2	30.5 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	70	35	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	35	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	57	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	700	43	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	700	43	ug/kg	
95-48-7	2-Methylphenol	ND	70	40	ug/kg	
	3&4-Methylphenol	ND	70	45	ug/kg	
88-75-5	2-Nitrophenol	ND	180	37	ug/kg	
100-02-7	4-Nitrophenol	ND	350	59	ug/kg	
87-86-5	Pentachlorophenol	ND	350	60	ug/kg	
108-95-2	Phenol	ND	70	37	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	36	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	41	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	33	ug/kg	
83-32-9	Acenaphthene	ND	35	10	ug/kg	
208-96-8	Acenaphthylene	ND	35	11	ug/kg	
98-86-2	Acetophenone	ND	180	6.2	ug/kg	
120-12-7	Anthracene	45.8	35	12	ug/kg	
1912-24-9	Atrazine	ND	70	6.9	ug/kg	
56-55-3	Benzo(a)anthracene	23.0	35	11	ug/kg	J
50-32-8	Benzo(a)pyrene	16.9	35	11	ug/kg	J
205-99-2	Benzo(b)fluoranthene	ND	35	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	18.0	35	13	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	35	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	70	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	70	20	ug/kg	
92-52-4	1,1'-Biphenyl	567	70	4.1	ug/kg	
100-52-7	Benzaldehyde	ND	180	8.1	ug/kg	
91-58-7	2-Chloronaphthalene	ND	70	11	ug/kg	
106-47-8	4-Chloroaniline	ND	180	11	ug/kg	
86-74-8	Carbazole	ND	70	16	ug/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-7R (2-2.5)		
Lab Sample ID:	JB55929-2	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	93.3
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	70	11	ug/kg	
218-01-9	Chrysene	41.3	35	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	70	14	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	70	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	70	10	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	70	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	35	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	35	13	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	70	8.9	ug/kg	
123-91-1	1,4-Dioxane	ND	35	23	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	35	12	ug/kg	
132-64-9	Dibenzofuran	122	70	10	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	70	7.8	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	70	17	ug/kg	
84-66-2	Diethyl phthalate	ND	70	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	70	12	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	59.5	70	31	ug/kg	J
206-44-0	Fluoranthene	ND	35	15	ug/kg	
86-73-7	Fluorene	211	35	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	70	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	35	9.8	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	350	36	ug/kg	
67-72-1	Hexachloroethane	ND	180	9.8	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	35	12	ug/kg	
78-59-1	Isophorone	ND	70	9.5	ug/kg	
91-57-6	2-Methylnaphthalene	5760 [a]	350	98	ug/kg	
88-74-4	2-Nitroaniline	ND	180	15	ug/kg	
99-09-2	3-Nitroaniline	ND	180	14	ug/kg	
100-01-6	4-Nitroaniline	ND	180	14	ug/kg	
91-20-3	Naphthalene	2900	35	9.6	ug/kg	
98-95-3	Nitrobenzene	ND	70	10	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	70	8.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	21	ug/kg	
85-01-8	Phenanthrene	265	35	16	ug/kg	
129-00-0	Pyrene	65.8	35	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	91%	82%	13-110%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-7R (2-2.5)		
Lab Sample ID:	JB55929-2	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	93.3
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	82%	81%	15-110%
118-79-6	2,4,6-Tribromophenol	84%	73%	20-123%
4165-60-0	Nitrobenzene-d5	218% [b]	132% [b]	10-110%
321-60-8	2-Fluorobiphenyl	88%	91%	17-110%
1718-51-0	Terphenyl-d14	85%	78%	30-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	3.50	870	ug/kg	J
	C3 alkyl benzene	4.41	990	ug/kg	J
	C3 alkyl benzene	4.63	1900	ug/kg	J
	Cyclohexane alkyl	4.87	490	ug/kg	J
	C4 alkyl benzene	4.98	1400	ug/kg	J
	C4 alkyl benzene	5.01	920	ug/kg	J
	unknown	5.07	990	ug/kg	J
	unknown	5.29	750	ug/kg	J
	C4 alkyl benzene	5.43	770	ug/kg	J
	unknown	6.43	930	ug/kg	J
	unknown	7.14	510	ug/kg	J
	unknown	10.03	1600	ug/kg	J
	unknown	10.06	890	ug/kg	J
	unknown	11.71	690	ug/kg	J
	unknown	12.52	610	ug/kg	J
10544-50-0	Cyclic octaatomic sulfur	13.25	1100	ug/kg	JN
	Total TIC, Semi-Volatile		14540	ug/kg	J
	Total Alkanes		9200	ug/kg	J

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-7R (2-2.5)		
Lab Sample ID:	JB55929-2	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	93.3
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	93.3		%	1	12/24/13 11:25	BM	ASTM 4643-00
Total Organic Carbon	2920	1100	mg/kg	1	12/26/13 14:50	VA	CORP ENG 81M/SW9060M

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P-7R (5.5-6.0)		
Lab Sample ID:	JB55929-3	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	84.3
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E211176.D	1	12/27/13	KC	12/19/13 08:00	n/a	VE9266
Run #2	E211259.D	1	12/30/13	KC	12/19/13 08:00	n/a	VE9269

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.1 g	5.0 ml	100 ul
Run #2	6.1 g	5.0 ml	10.0 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	580	260	ug/kg	
71-43-2	Benzene	623	58	7.3	ug/kg	
74-97-5	Bromochloromethane	ND	290	30	ug/kg	
75-27-4	Bromodichloromethane	ND	290	16	ug/kg	
75-25-2	Bromoform	ND	290	15	ug/kg	
74-83-9	Bromomethane	ND	290	28	ug/kg	
78-93-3	2-Butanone (MEK)	ND	580	250	ug/kg	
75-15-0	Carbon disulfide	ND	290	8.2	ug/kg	
56-23-5	Carbon tetrachloride	ND	290	15	ug/kg	
108-90-7	Chlorobenzene	ND	290	11	ug/kg	
75-00-3	Chloroethane	ND	290	58	ug/kg	
67-66-3	Chloroform	ND	290	15	ug/kg	
74-87-3	Chloromethane	ND	290	20	ug/kg	
110-82-7	Cyclohexane	466	290	15	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	580	77	ug/kg	
124-48-1	Dibromochloromethane	ND	290	14	ug/kg	
106-93-4	1,2-Dibromoethane	ND	58	32	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	290	20	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	290	13	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	290	15	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	290	20	ug/kg	
75-34-3	1,1-Dichloroethane	ND	290	18	ug/kg	
107-06-2	1,2-Dichloroethane	ND	58	19	ug/kg	
75-35-4	1,1-Dichloroethene	ND	290	17	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	290	12	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	290	25	ug/kg	
78-87-5	1,2-Dichloropropane	ND	290	25	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	290	13	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	290	16	ug/kg	
100-41-4	Ethylbenzene	14800 [a]	580	100	ug/kg	
76-13-1	Freon 113	ND	290	25	ug/kg	
591-78-6	2-Hexanone	ND	290	100	ug/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-7R (5.5-6.0)		
Lab Sample ID:	JB55929-3	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8260B SW846 5035	**Percent Solids:**	84.3
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	1060	290	8.5	ug/kg	
79-20-9	Methyl Acetate	ND	290	97	ug/kg	
108-87-2	Methylcyclohexane	8140	290	9.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	27200 [a]	580	200	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	290	76	ug/kg	
75-09-2	Methylene chloride	ND	290	98	ug/kg	
100-42-5	Styrene	ND	290	13	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	290	20	ug/kg	
127-18-4	Tetrachloroethene	ND	290	24	ug/kg	
108-88-3	Toluene	4950	58	8.2	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	290	12	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	290	10	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	290	17	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	290	48	ug/kg	
79-01-6	Trichloroethene	ND	290	20	ug/kg	
75-69-4	Trichlorofluoromethane	ND	290	13	ug/kg	
75-01-4	Vinyl chloride	ND	290	20	ug/kg	
	m,p-Xylene	60300 [a]	580	280	ug/kg	
95-47-6	o-Xylene	5750	58	10	ug/kg	
1330-20-7	Xylene (total)	66000 [a]	580	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	97%	59-130%
17060-07-0	1,2-Dichloroethane-D4	97%	103%	65-123%
2037-26-5	Toluene-D8	101%	99%	80-124%
460-00-4	4-Bromofluorobenzene	94%	96%	71-132%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	alkene	9.27	2800	ug/kg	J
	alkene	15.03	5400	ug/kg	J
95-63-6	Benzene, 1,2,4-trimethyl-	16.21	8400	ug/kg	JN
	alkene	16.47	2600	ug/kg	J
	C4 alkyl benzene	16.88	2900	ug/kg	J
	Total TIC, Volatile		22100	ug/kg	J
	Total Alkanes		57600	ug/kg	J

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-8R (2-2.5)		
Lab Sample ID:	JB55929-4	**Date Sampled:**	12/16/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	93.1
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M59629.D	1	12/23/13	KS	12/19/13	OP71561	E2M2516
Run #2	2M59670.D	4	12/24/13	KS	12/19/13	OP71561	E2M2518

	Initial Weight	Final Volume
Run #1	33.1 g	1.0 ml
Run #2	33.1 g	1.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	65	32	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	160	32	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	160	52	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	160	55	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	650	40	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	650	40	ug/kg	
95-48-7	2-Methylphenol	ND	65	37	ug/kg	
	3&4-Methylphenol	ND	65	41	ug/kg	
88-75-5	2-Nitrophenol	ND	160	34	ug/kg	
100-02-7	4-Nitrophenol	ND	320	55	ug/kg	
87-86-5	Pentachlorophenol	ND	320	55	ug/kg	
108-95-2	Phenol	ND	65	34	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	160	33	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	160	38	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	160	31	ug/kg	
83-32-9	Acenaphthene	126	32	9.4	ug/kg	
208-96-8	Acenaphthylene	ND	32	10	ug/kg	
98-86-2	Acetophenone	ND	160	5.7	ug/kg	
120-12-7	Anthracene	ND	32	11	ug/kg	
1912-24-9	Atrazine	ND	65	6.4	ug/kg	
56-55-3	Benzo(a)anthracene	83.5	32	11	ug/kg	
50-32-8	Benzo(a)pyrene	255	32	9.9	ug/kg	
205-99-2	Benzo(b)fluoranthene	128	32	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	237	32	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	32	12	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	65	12	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	65	19	ug/kg	
92-52-4	1,1'-Biphenyl	ND	65	3.8	ug/kg	
100-52-7	Benzaldehyde	ND	160	7.5	ug/kg	
91-58-7	2-Chloronaphthalene	ND	65	10	ug/kg	
106-47-8	4-Chloroaniline	ND	160	10	ug/kg	
86-74-8	Carbazole	ND	65	15	ug/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-8R (2-2.5)		
Lab Sample ID:	JB55929-4	**Date Sampled:**	12/16/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	93.1
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	65	10	ug/kg	
218-01-9	Chrysene	432	32	11	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	65	13	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	65	9.8	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	65	9.6	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	65	9.8	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	32	14	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	32	12	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	65	8.2	ug/kg	
123-91-1	1,4-Dioxane	ND	32	21	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	110	32	11	ug/kg	
132-64-9	Dibenzofuran	ND	65	9.6	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	65	7.2	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	65	16	ug/kg	
84-66-2	Diethyl phthalate	ND	65	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	65	11	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	183	65	29	ug/kg	
206-44-0	Fluoranthene	47.1	32	14	ug/kg	
86-73-7	Fluorene	152	32	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	65	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	32	9.0	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	320	33	ug/kg	
67-72-1	Hexachloroethane	ND	160	9.0	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	111	32	11	ug/kg	
78-59-1	Isophorone	ND	65	8.7	ug/kg	
91-57-6	2-Methylnaphthalene	3970 [a]	260	72	ug/kg	
88-74-4	2-Nitroaniline	ND	160	14	ug/kg	
99-09-2	3-Nitroaniline	ND	160	13	ug/kg	
100-01-6	4-Nitroaniline	ND	160	13	ug/kg	
91-20-3	Naphthalene	2790 [a]	130	35	ug/kg	
98-95-3	Nitrobenzene	ND	65	9.4	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	65	7.9	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	160	19	ug/kg	
85-01-8	Phenanthrene	286	32	15	ug/kg	
129-00-0	Pyrene	271	32	12	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	160	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	85%	75%	13-110%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-8R (2-2.5)		
Lab Sample ID:	JB55929-4	**Date Sampled:**	12/16/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	93.1
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	82%	78%	15-110%
118-79-6	2,4,6-Tribromophenol	79%	64%	20-123%
4165-60-0	Nitrobenzene-d5	160% [b]	104%	10-110%
321-60-8	2-Fluorobiphenyl	87%	70%	17-110%
1718-51-0	Terphenyl-d14	79%	66%	30-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	3.50	1100	ug/kg	J
	C3 alkyl benzene	4.40	2900	ug/kg	J
	C3 alkyl benzene	4.63	2900	ug/kg	J
	C4 alkyl benzene	4.97	2900	ug/kg	J
	C4 alkyl benzene	5.01	2100	ug/kg	J
	C4 alkyl benzene	5.07	1300	ug/kg	J
	unknown	5.10	830	ug/kg	J
	C4 alkyl benzene	5.13	890	ug/kg	J
	unknown	5.29	860	ug/kg	J
	C4 alkyl benzene	5.32	840	ug/kg	J
	C4 alkyl benzene	5.43	910	ug/kg	J
	unknown	5.54	1600	ug/kg	J
	unknown	5.64	2400	ug/kg	J
	unknown	6.23	1400	ug/kg	J
	1H-Indene-dihydro-dimethyl	6.35	800	ug/kg	J
	unknown	6.41	1600	ug/kg	J
	unknown	6.55	860	ug/kg	J
	unknown	8.13	1000	ug/kg	J
	unknown	10.02	1200	ug/kg	J
	unknown	11.71	870	ug/kg	J
	unknown	14.12	840	ug/kg	J
	Total TIC, Semi-Volatile		29000	ug/kg	J
	Total Alkanes		5160	ug/kg	J

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference. Confirmed by dilution.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-9R (2-2.5)		
Lab Sample ID:	JB55929-5	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	96.1
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M59667.D	1	12/24/13	KS	12/19/13	OP71561	E2M2518
Run #2							

	Initial Weight	Final Volume
Run #1	31.6 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	66	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	160	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	160	53	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	160	55	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	660	40	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	660	40	ug/kg	
95-48-7	2-Methylphenol	ND	66	38	ug/kg	
	3&4-Methylphenol	ND	66	42	ug/kg	
88-75-5	2-Nitrophenol	ND	160	35	ug/kg	
100-02-7	4-Nitrophenol	ND	330	56	ug/kg	
87-86-5	Pentachlorophenol	ND	330	56	ug/kg	
108-95-2	Phenol	ND	66	35	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	160	34	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	160	38	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	160	31	ug/kg	
83-32-9	Acenaphthene	ND	33	9.5	ug/kg	
208-96-8	Acenaphthylene	ND	33	11	ug/kg	
98-86-2	Acetophenone	ND	160	5.8	ug/kg	
120-12-7	Anthracene	ND	33	12	ug/kg	
1912-24-9	Atrazine	ND	66	6.5	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	11	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	12	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	66	12	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	66	19	ug/kg	
92-52-4	1,1'-Biphenyl	ND	66	3.8	ug/kg	
100-52-7	Benzaldehyde	ND	160	7.6	ug/kg	
91-58-7	2-Chloronaphthalene	ND	66	10	ug/kg	
106-47-8	4-Chloroaniline	ND	160	11	ug/kg	
86-74-8	Carbazole	ND	66	15	ug/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-9R (2-2.5)		
Lab Sample ID:	JB55929-5	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	96.1
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	66	10	ug/kg	
218-01-9	Chrysene	ND	33	11	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	66	13	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	66	9.9	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	66	9.8	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	66	9.9	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	14	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	13	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	66	8.4	ug/kg	
123-91-1	1,4-Dioxane	ND	33	21	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	11	ug/kg	
132-64-9	Dibenzofuran	ND	66	9.8	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	66	7.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	66	16	ug/kg	
84-66-2	Diethyl phthalate	ND	66	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	66	12	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	66	29	ug/kg	
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	66	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	9.2	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	34	ug/kg	
67-72-1	Hexachloroethane	ND	160	9.2	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	11	ug/kg	
78-59-1	Isophorone	ND	66	8.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	66	18	ug/kg	
88-74-4	2-Nitroaniline	ND	160	14	ug/kg	
99-09-2	3-Nitroaniline	ND	160	13	ug/kg	
100-01-6	4-Nitroaniline	ND	160	13	ug/kg	
91-20-3	Naphthalene	ND	33	9.0	ug/kg	
98-95-3	Nitrobenzene	ND	66	9.5	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	66	8.0	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	160	20	ug/kg	
85-01-8	Phenanthrene	ND	33	15	ug/kg	
129-00-0	Pyrene	ND	33	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	160	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		13-110%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-9R (2-2.5)		
Lab Sample ID:	JB55929-5	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	96.1
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	85%		15-110%
118-79-6	2,4,6-Tribromophenol	45%		20-123%
4165-60-0	Nitrobenzene-d5	84%		10-110%
321-60-8	2-Fluorobiphenyl	76%		17-110%
1718-51-0	Terphenyl-d14	78%		30-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	2.25	500	ug/kg	J
	system artifact	3.31	140	ug/kg	J
	system artifact	3.37	190	ug/kg	J
	system artifact	3.42	310	ug/kg	J
	system artifact/aldol-condensation	3.47	3500	ug/kg	J
	unknown	4.25	220	ug/kg	J
	Total TIC, Semi-Volatile		220	ug/kg	J
	Total Alkanes		0	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-10R (2-2.5)		
Lab Sample ID:	JB55929-6	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	95.6
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M59631.D	1	12/23/13	KS	12/19/13	OP71561	E2M2516
Run #2							

	Initial Weight	Final Volume
Run #1	33.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	63	32	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	160	32	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	160	51	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	160	53	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	630	38	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	630	38	ug/kg	
95-48-7	2-Methylphenol	ND	63	36	ug/kg	
	3&4-Methylphenol	ND	63	40	ug/kg	
88-75-5	2-Nitrophenol	ND	160	33	ug/kg	
100-02-7	4-Nitrophenol	ND	320	53	ug/kg	
87-86-5	Pentachlorophenol	ND	320	54	ug/kg	
108-95-2	Phenol	ND	63	33	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	160	32	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	160	37	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	160	30	ug/kg	
83-32-9	Acenaphthene	ND	32	9.1	ug/kg	
208-96-8	Acenaphthylene	ND	32	10	ug/kg	
98-86-2	Acetophenone	ND	160	5.5	ug/kg	
120-12-7	Anthracene	ND	32	11	ug/kg	
1912-24-9	Atrazine	ND	63	6.2	ug/kg	
56-55-3	Benzo(a)anthracene	ND	32	10	ug/kg	
50-32-8	Benzo(a)pyrene	ND	32	9.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	32	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	32	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	32	12	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	63	11	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	63	18	ug/kg	
92-52-4	1,1'-Biphenyl	ND	63	3.7	ug/kg	
100-52-7	Benzaldehyde	ND	160	7.2	ug/kg	
91-58-7	2-Chloronaphthalene	ND	63	9.8	ug/kg	
106-47-8	4-Chloroaniline	ND	160	10	ug/kg	
86-74-8	Carbazole	ND	63	15	ug/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-10R (2-2.5)		
Lab Sample ID:	JB55929-6	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	95.6
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	63	9.9	ug/kg	
218-01-9	Chrysene	ND	32	11	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	63	13	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	63	9.5	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	63	9.4	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	63	9.5	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	32	14	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	32	12	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	63	8.0	ug/kg	
123-91-1	1,4-Dioxane	ND	32	20	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	32	11	ug/kg	
132-64-9	Dibenzofuran	ND	63	9.4	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	63	7.0	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	63	15	ug/kg	
84-66-2	Diethyl phthalate	ND	63	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	63	11	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	41.2	63	28	ug/kg	J
206-44-0	Fluoranthene	ND	32	14	ug/kg	
86-73-7	Fluorene	ND	32	10	ug/kg	
118-74-1	Hexachlorobenzene	ND	63	10	ug/kg	
87-68-3	Hexachlorobutadiene	ND	32	8.8	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	320	32	ug/kg	
67-72-1	Hexachloroethane	ND	160	8.8	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	32	11	ug/kg	
78-59-1	Isophorone	ND	63	8.5	ug/kg	
91-57-6	2-Methylnaphthalene	ND	63	18	ug/kg	
88-74-4	2-Nitroaniline	ND	160	14	ug/kg	
99-09-2	3-Nitroaniline	ND	160	13	ug/kg	
100-01-6	4-Nitroaniline	ND	160	12	ug/kg	
91-20-3	Naphthalene	ND	32	8.6	ug/kg	
98-95-3	Nitrobenzene	ND	63	9.1	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	63	7.7	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	160	19	ug/kg	
85-01-8	Phenanthrene	ND	32	14	ug/kg	
129-00-0	Pyrene	ND	32	12	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	160	9.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	82%		13-110%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-10R (2-2.5)		
Lab Sample ID:	JB55929-6	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	95.6
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	79%		15-110%
118-79-6	2,4,6-Tribromophenol	72%		20-123%
4165-60-0	Nitrobenzene-d5	80%		10-110%
321-60-8	2-Fluorobiphenyl	83%		17-110%
1718-51-0	Terphenyl-d14	85%		30-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	2.29	790	ug/kg	J
	system artifact	3.23	150	ug/kg	J
	system artifact	3.32	250	ug/kg	J
	system artifact	3.39	280	ug/kg	J
	system artifact	3.44	450	ug/kg	J
	system artifact/aldol-condensation	3.49	3600	ug/kg	J
	system artifact	3.62	180	ug/kg	J
	Total TIC, Semi-Volatile		0	ug/kg	
	Total Alkanes		0	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P-12 (2-2.5)		
Lab Sample ID:	JB55929-7	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	96.7
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8170	48	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 1.9	1.9	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Arsenic	3.8	1.9	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Barium	34.0	19	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.36	0.19	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.48	0.48	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Calcium	< 480	480	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Chromium	10.5	0.95	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 4.8	4.8	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Copper	5.4	2.4	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Iron	13800	48	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Lead	4.9	1.9	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Magnesium	981	480	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Manganese	153	1.4	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.034	0.034	mg/kg	1	12/31/13	12/31/13	DP	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.5	3.8	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 950	950	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 1.9	1.9	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.48	0.48	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 950	950	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 0.95	0.95	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Vanadium	13.8	4.8	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]
Zinc	19.4	1.9	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA32979
(2) Instrument QC Batch: MA32983
(3) Prep QC Batch: MP76911
(4) Prep QC Batch: MP77002

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P-12 (2-2.5)		
Lab Sample ID:	JB55929-7A	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	96.7
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

Metals Analysis, SPLP Leachate SW846 1312

Analyte	Result	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Beryllium	< 5.0		5.0	ug/l	1	12/27/13	01/01/14	KK	SW846 6010C [1]	SW846 3010A [2]
Lead	< 50		50	ug/l	1	12/27/13	01/01/14	KK	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA32983
(2) Prep QC Batch: MP76951

RL = Reporting Limit
MCL = Maximum Contamination Level (not available)

Report of Analysis

Client Sample ID:	P-12 (2-2.5)		
Lab Sample ID:	JB55929-7A	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	96.7
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
SPLP Ratio for Extractables and Metals							
pH, SPLP Leachate	6.49		su	1	12/27/13	MH	SW846 1312
Volume, SPLP Leachate	2.008		l	1	12/27/13	MH	SW846 1312
Weight, SPLP Leachate	0.1004		kg	1	12/27/13	MH	SW846 1312
Dry Weight, SPLP Leachate	0.09710		kg	1	12/27/13	MH	SW846 1312

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P-12 (4-4.5)		
Lab Sample ID:	JB55929-8	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	84.8
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13500	61	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Arsenic	8.6	2.5	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Barium	97.7	25	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.65	0.25	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Calcium	< 610	610	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Chromium	16.6	1.2	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Cobalt	9.8	6.1	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Copper	36.2	3.1	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Iron	18900	61	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Lead	97.7	2.5	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Magnesium	2430	610	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Manganese	729	1.8	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Mercury	< 0.039	0.039	mg/kg	1	12/31/13	12/31/13	DP	SW846 7471B [2]	SW846 7471B [4]
Nickel	12.4	4.9	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Silver	< 0.61	0.61	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Vanadium	27.4	6.1	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Zinc	43.6	2.5	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA32966
(2) Instrument QC Batch: MA32979
(3) Prep QC Batch: MP76794
(4) Prep QC Batch: MP77002

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P-13 (2-2.5)		
Lab Sample ID:	JB55929-9	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	92.2
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5620	50	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Antimony	< 2.0	2.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Arsenic	78.7	2.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Barium	21.7	20	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.68	0.20	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Cadmium	< 0.50	0.50	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Calcium	< 500	500	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Chromium	25.3	1.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Cobalt	8.6	5.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Copper	8.8	2.5	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Iron	41900	50	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Lead	7.0	2.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Magnesium	968	500	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Manganese	127	1.5	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Mercury	< 0.035	0.035	mg/kg	1	12/31/13	12/31/13	DP	SW846 7471B [1]	SW846 7471B [5]
Nickel	19.2	4.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Potassium	< 1000	1000	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Selenium	< 2.0	2.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Silver	0.58	0.50	mg/kg	1	12/26/13	01/03/14	ND	SW846 6010C [3]	SW846 3050B [4]
Sodium	< 1000	1000	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Thallium	< 1.0	1.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Vanadium	24.4	5.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]
Zinc	52.8	2.0	mg/kg	1	12/26/13	01/01/14	KK	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA32979
(2) Instrument QC Batch: MA32983
(3) Instrument QC Batch: MA32999
(4) Prep QC Batch: MP76911
(5) Prep QC Batch: MP77002

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P-13 (2-2.5)		
Lab Sample ID:	JB55929-9	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	92.2
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	92.2		%	1	12/27/13 15:45	GL	SM2540 G-97
Total Organic Carbon [a]	2660	1100	mg/kg	1	12/26/13 15:14	VA	CORP ENG 81M/SW9060M

(a) Multiple injections indicate possible sample non-homogeneity.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P-13 (2-2.5)		
Lab Sample ID:	JB55929-9A	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	92.2
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

Metals Analysis, SPLP Leachate SW846 1312

Analyte	Result	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Beryllium	< 5.0		5.0	ug/l	1	12/27/13	01/01/14	KK	SW846 6010C [1]	SW846 3010A [2]
Nickel	< 10		10	ug/l	1	12/27/13	01/01/14	KK	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA32983
(2) Prep QC Batch: MP76951

RL = Reporting Limit
MCL = Maximum Contamination Level (not available)

Report of Analysis

Client Sample ID:	P-13 (2-2.5)		
Lab Sample ID:	JB55929-9A	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	92.2
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
SPLP Ratio for Extractables and Metals							
pH, SPLP Leachate	6.06		su	1	12/27/13	MH	SW846 1312
Volume, SPLP Leachate	2.002		l	1	12/27/13	MH	SW846 1312
Weight, SPLP Leachate	0.1001		kg	1	12/27/13	MH	SW846 1312
Dry Weight, SPLP Leachate	0.09230		kg	1	12/27/13	MH	SW846 1312

RL = Reporting Limit

Report of Analysis

Client Sample ID:	P-13 (4-4.5)		
Lab Sample ID:	JB55929-10	**Date Sampled:**	12/17/13
Matrix:	SO - Soil	**Date Received:**	12/18/13
		Percent Solids:	86.0
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14500	58	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Arsenic	13.3	2.3	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Barium	79.9	23	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.81	0.23	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Cadmium	< 0.58	0.58	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Calcium	1120	580	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Chromium	27.7	1.2	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Cobalt	8.8	5.8	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Copper	32.5	2.9	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Iron	33500	58	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Lead	36.7	2.3	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Magnesium	5460	580	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Manganese	252	1.7	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Mercury	< 0.037	0.037	mg/kg	1	12/31/13	12/31/13	DP	SW846 7471B [2]	SW846 7471B [4]
Nickel	19.2	4.6	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Potassium	2420	1200	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Silver	< 0.58	0.58	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Vanadium	46.2	5.8	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]
Zinc	54.8	2.3	mg/kg	1	12/19/13	12/29/13	ND	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA32966
(2) Instrument QC Batch: MA32979
(3) Prep QC Batch: MP76794
(4) Prep QC Batch: MP77002

RL = Reporting Limit

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST LABORATORIES

SO
SLL

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
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PAGE ___ OF ___ 1

FED-EX Tracking #
Bottle Order Control #
Accutest Quote #
Accutest Job # JB55929

Client / Reporting Information

Company Name: EnviroTrac Ltd
Street Address: 6 Terri Ln, Suite 350
City State Zip: Burlington NJ 08016
Project Contact: Dave Carlson
E-mail:
Phone #: 609-387-5553
Fax #:
Sampler(s) Name(s): Sarah Dyson
Phone #:

Project Information

Project Name: Hess Port Reading Complex - QC Lab
Street: 835 West Ave
City State: Port Reading NJ
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	TCL SVOC +TICs	TCL VOC +TICs	TCL SVOC +TICs (hold & extract)	TOC	SPLP	TAL Metals						LAB USE ONLY
1	P-6R (2-2.5)		12/16/2013	14:52	SO	SO	1					X				X											E58
2	P-7R (2-2.5)		12/17/2013	8:50	SO	SO	1					X				X			X								M51
3	P-7R (5.5-6.0)		12/17/2013	9:10	SO	SO	4					X			X		X	X									4910
4	P-8R (2-2.5		12/16/2013	15:20	SO	SO	1					X				X											G30T2
5	P-9R (2-2.5)		12/17/2013	11:31	SO	SO	1					X				X											
6	P-10R (2-2.5)		12/17/2013	9:52	SO	SO	1									X											
7	P-12 (2-2.5)		12/17/2013	14:04	SO	SO	2													X	X						
8	P-12 (4-4.5)		12/17/2013	14:20	SO	SO	1														X						
9	P-13 (2-2.5		12/17/2013	13:23	SO	SO	3												X	X	X						
10	P 13 (4-4.5)		12/17/2013	13:26	SO	SO	1														X						

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] other _____

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format _____
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	12-17-13	1 STORAGE.	2	12-18-13	2
Relinquished by Sampler: 3	12-18-13 11	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time: 1625	Received By: 5	Custody Seal # NONE	Intact / Not Intact	Preserved where applicable

On Ice: [x] Cooler Temp. 1.6C

2B

3 Encores

5.1 5

JB55929: Chain of Custody
Page 1 of 4

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB55929 **Client:** ENVIROTRAC **Project:** HESS PORT READING

Date / Time Received: 12/18/2013 1625 **Delivery Method:** Accutest Courier **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (1.6/1.6); 0

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No, Coolers	1	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☐	☑

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments -4 ID on label "P7R." ID on Cap matches ID on COC. Date and time ok

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

5.1

5

JB55929: Chain of Custody
Page 2 of 4

Sample Receipt Summary - Problem Resolution

Accutest Job Number: JB55929

CSR: Kevin Dovedytis **Response Date:** 12/20/2013

Response: Per Sarah Dyson the correct ID for sample -4 is P-8R (2-2.5) collected on 12/16/13 @ 15:20 as listed on the chain of custody.

ACCUTEST LABORATORIES

Job Change Order: JB55929

Requested Date:	1/28/2014	**Received Date:**	12/18/2013
Account Name:	EnviroTrac	**Due Date:**	1/2/2014
Project Description:	Hess Port Reading, QC Labs, 835 West Avenue, P	**Deliverable:**	REDT2
CSR:	kellyp	**TAT (Days):**	1

Sample #: JB55929-7A
Dept:
Change: Please retrieve for SPLP BE (EBE)

P-12 (2-2.5)

Sample #: JB55929-9A
Dept:
Change: Please retrieve for SPLP BE (EBE)

P-13 (2-2.5)

Above Changes Per: Sarah Dyson **Date:** 1/28/2014

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

5.1 5

JB55929: Chain of Custody
Page 4 of 4

Internal Sample Tracking Chronicle

EnviroTrac

Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Job No: JB55929

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB55929-1	Collected: 16-DEC-13 14:52 By: SD		Received: 18-DEC-13 By: AS			
P-6R (2-2.5)						
JB55929-1	SW846 8270D	23-DEC-13 19:31	KS	19-DEC-13	TM	AB8270TCL20+
JB55929-1	ASTM 4643-00	24-DEC-13 11:25	BM			%SOL
JB55929-2	Collected: 17-DEC-13 08:50 By: SD		Received: 18-DEC-13 By: AS			
P-7R (2-2.5)						
JB55929-2	SW846 8270D	21-DEC-13 04:13	AD	19-DEC-13	TM	AB8270TCL20+
JB55929-2	SW846 8270D	23-DEC-13 19:03	KS	19-DEC-13	TM	AB8270TCL20+
JB55929-2	ASTM 4643-00	24-DEC-13 11:25	BM			%SOL
JB55929-2	CORP ENG 81M/SW9020-D	26-DEC-13 14:50	VA	26-DEC-13	VA	TOC
JB55929-3	Collected: 17-DEC-13 09:10 By: SD		Received: 18-DEC-13 By: AS			
P-7R (5.5-6.0)						
JB55929-3	ASTM 4643-00	24-DEC-13 11:25	BM			%SOL
JB55929-3	SW846 8260B	27-DEC-13 18:02	KC			V8260TCL20+
JB55929-3	SW846 8260B	30-DEC-13 12:33	KC			V8260TCL20+
JB55929-4	Collected: 16-DEC-13 15:20 By: SD		Received: 18-DEC-13 By: AS			
P-8R (2-2.5)						
JB55929-4	SW846 8270D	23-DEC-13 19:59	KS	19-DEC-13	TM	AB8270TCL20+
JB55929-4	ASTM 4643-00	24-DEC-13 11:25	BM			%SOL
JB55929-4	SW846 8270D	24-DEC-13 19:37	KS	19-DEC-13	TM	AB8270TCL20+
JB55929-5	Collected: 17-DEC-13 11:31 By: SD		Received: 18-DEC-13 By: AS			
P-9R (2-2.5)						
JB55929-5	ASTM 4643-00	24-DEC-13 11:25	BM			%SOL
JB55929-5	SW846 8270D	24-DEC-13 18:13	KS	19-DEC-13	TM	AB8270TCL20+
JB55929-6	Collected: 17-DEC-13 09:52 By: SD		Received: 18-DEC-13 By: AS			
P-10R (2-2.5)						
JB55929-6	SW846 8270D	23-DEC-13 20:55	KS	19-DEC-13	TM	AB8270TCL20+
JB55929-6	ASTM 4643-00	24-DEC-13 11:25	BM			%SOL

Internal Sample Tracking Chronicle

EnviroTrac

Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Job No: JB55929

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB55929-7 P-12 (2-2.5)	Collected: 17-DEC-13 14:04 By: SD		Received: 18-DEC-13 By: AS			
JB55929-7	ASTM 4643-00	24-DEC-13 11:25	BM			%SOL
JB55929-7	SW846 7471B	31-DEC-13 13:09	DP	31-DEC-13	DP	HG
JB55929-7	SW846 6010C	01-JAN-14 08:03	KK	26-DEC-13	NS	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB55929-8 P-12 (4-4.5)	Collected: 17-DEC-13 14:20 By: SD		Received: 18-DEC-13 By: AS			
JB55929-8	ASTM 4643-00	24-DEC-13 11:25	BM			%SOL
JB55929-8	SW846 6010C	29-DEC-13 16:17	ND	19-DEC-13	WWZ	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB55929-8	SW846 7471B	31-DEC-13 13:10	DP	31-DEC-13	DP	HG
JB55929-9 P-13 (2-2.5)	Collected: 17-DEC-13 13:23 By: SD		Received: 18-DEC-13 By: AS			
JB55929-9	CORP ENG 81M/SW9060A	30-DEC-13 15:14	VA	26-DEC-13	VA	TOC
JB55929-9	SM2540 G-97	27-DEC-13 15:45	GL			%SOL
JB55929-9	SW846 7471B	31-DEC-13 13:12	DP	31-DEC-13	DP	HG
JB55929-9	SW846 6010C	01-JAN-14 08:20	KK	26-DEC-13	NS	AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB55929-9	SW846 6010C	03-JAN-14 22:27	ND	26-DEC-13	NS	AG
JB55929-10 P-13 (4-4.5)	Collected: 17-DEC-13 13:26 By: SD		Received: 18-DEC-13 By: AS			
JB55929-10	ASTM 4643-00	24-DEC-13 11:25	BM			%SOL
JB55929-10	SW846 6010C	29-DEC-13 16:23	ND	19-DEC-13	WWZ	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JB55929-10	SW846 7471B	31-DEC-13 13:13	DP	31-DEC-13	DP	HG

Internal Sample Tracking Chronicle

EnviroTrac

Job No: JB55929

Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB55929-7A	Collected: 17-DEC-13 14:04 By: SD		Received: 18-DEC-13 By: AS			
P-12 (2-2.5)						
JB55929-7A	SW846 1312	27-DEC-13	MH			SPLPRATIO
JB55929-7A	SW846 6010C	01-JAN-14 02:53	KK	27-DEC-13	NS	EPB
JB55929-9A	Collected: 17-DEC-13 13:23 By: SD		Received: 18-DEC-13 By: AS			
P-13 (2-2.5)						
JB55929-9A	SW846 1312	27-DEC-13	MH			SPLPRATIO
JB55929-9A	SW846 6010C	01-JAN-14 02:58	KK	27-DEC-13	NS	ENI

Accutest Internal Chain of Custody

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Received: 12/18/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB55929-1.1	Secured Storage	Bernadette Vassilatos	12/20/13 08:33	Retrieve from Storage
JB55929-1.1	Bernadette Vassilatos	Secured Staging Area	12/20/13 08:33	Return to Storage
JB55929-1.1	Secured Staging Area	Humaira Janjua	12/20/13 08:44	Retrieve from Storage
JB55929-1.1	Humaira Janjua	Secured Storage	12/20/13 14:47	Return to Storage
JB55929-1.1	Secured Storage	Alfredo Crespo	12/24/13 08:42	Retrieve from Storage
JB55929-1.1	Alfredo Crespo	Secured Staging Area	12/24/13 08:42	Return to Storage
JB55929-1.1	Secured Staging Area	Beatrice Marcelino	12/24/13 08:47	Retrieve from Storage
JB55929-1.1	Beatrice Marcelino	Secured Storage	12/24/13 12:20	Return to Storage
JB55929-1.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-1.1.1	Humaira Janjua	Organics Prep	12/20/13 08:46	Extract from JB55929-1.1
JB55929-1.1.1	Organics Prep	Tin Marlar	12/20/13 16:08	Extract from JB55929-1.1
JB55929-1.1.1	Tin Marlar	Extract Storage	12/20/13 16:08	Return to Storage
JB55929-1.1.1	Extract Storage	Kevin Schaefer	12/23/13 12:20	Retrieve from Storage
JB55929-1.1.1	Kevin Schaefer	GCMS2M	12/23/13 12:20	Load on Instrument
JB55929-1.1.1	GCMS2M	Kevin Schaefer	12/24/13 16:50	Unload from Instrument
JB55929-1.1.1	Kevin Schaefer	Extract Freezer	12/24/13 16:50	Return to Storage
JB55929-1.1.1	Extract Freezer		01/30/14 09:00	Disposed
JB55929-2.1	Secured Storage	Bernadette Vassilatos	12/20/13 08:33	Retrieve from Storage
JB55929-2.1	Bernadette Vassilatos	Secured Staging Area	12/20/13 08:33	Return to Storage
JB55929-2.1	Secured Staging Area	Humaira Janjua	12/20/13 08:44	Retrieve from Storage
JB55929-2.1	Humaira Janjua	Secured Storage	12/20/13 14:47	Return to Storage
JB55929-2.1	Secured Storage	Alfredo Crespo	12/24/13 08:42	Retrieve from Storage
JB55929-2.1	Alfredo Crespo	Secured Staging Area	12/24/13 08:42	Return to Storage
JB55929-2.1	Secured Staging Area	Beatrice Marcelino	12/24/13 08:47	Retrieve from Storage
JB55929-2.1	Beatrice Marcelino	Secured Storage	12/24/13 12:20	Return to Storage
JB55929-2.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-2.1.1	Humaira Janjua	Organics Prep	12/20/13 08:46	Extract from JB55929-2.1
JB55929-2.1.1	Organics Prep	Tin Marlar	12/20/13 16:08	Extract from JB55929-2.1
JB55929-2.1.1	Tin Marlar	Extract Storage	12/20/13 16:08	Return to Storage
JB55929-2.1.1	Extract Storage	Ashley Dye	12/20/13 23:39	Retrieve from Storage
JB55929-2.1.1	Ashley Dye	GCMS2M	12/20/13 23:39	Load on Instrument
JB55929-2.1.1	GCMS2M	Kevin Schaefer	12/23/13 12:18	Unload from Instrument
JB55929-2.1.1	Kevin Schaefer	Extract Freezer	12/23/13 12:18	Return to Storage
JB55929-2.1.1	Extract Freezer	Kevin Schaefer	12/23/13 12:19	Retrieve from Storage
JB55929-2.1.1	Kevin Schaefer	GCMS2M	12/23/13 12:19	Load on Instrument
JB55929-2.1.1	GCMS2M	Kevin Schaefer	12/24/13 16:50	Unload from Instrument
JB55929-2.1.1	Kevin Schaefer	Extract Freezer	12/24/13 16:50	Return to Storage
JB55929-2.1.1	Extract Freezer		01/30/14 09:00	Disposed
JB55929-2.2	Secured Storage	Trushna R. Patel	12/24/13 12:38	Retrieve from Storage
JB55929-2.2	Trushna R. Patel	Secured Staging Area	12/24/13 12:38	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Received: 12/18/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB55929-2.2	Secured Staging Area	Vaidehi Amin	12/24/13 12:40	Retrieve from Storage
JB55929-2.2	Vaidehi Amin	Secured Storage	12/24/13 17:14	Return to Storage
JB55929-2.2	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-3.1	Secured Storage	Bernadette Vassilatos	12/20/13 08:33	Retrieve from Storage
JB55929-3.1	Bernadette Vassilatos	Secured Staging Area	12/20/13 08:33	Return to Storage
JB55929-3.1	Secured Staging Area	Humaira Janjua	12/20/13 08:44	Retrieve from Storage
JB55929-3.1	Humaira Janjua	Secured Storage	12/20/13 14:47	Return to Storage
JB55929-3.1	Secured Storage	Alfredo Crespo	12/24/13 08:42	Retrieve from Storage
JB55929-3.1	Alfredo Crespo	Secured Staging Area	12/24/13 08:42	Return to Storage
JB55929-3.1	Secured Staging Area	Beatrice Marcelino	12/24/13 08:47	Retrieve from Storage
JB55929-3.1	Beatrice Marcelino	Secured Storage	12/24/13 12:20	Return to Storage
JB55929-3.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-3.1.1	Humaira Janjua	Organics Prep	12/20/13 08:46	Extract from JB55929-3.1
JB55929-3.1.1	Organics Prep	Tin Marlar	12/20/13 16:08	Extract from JB55929-3.1
JB55929-3.1.1	Tin Marlar	Extract Storage	12/20/13 16:08	Return to Storage
JB55929-3.1.1	Extract Storage	Kevin Schaefer	12/23/13 12:20	Retrieve from Storage
JB55929-3.1.1	Kevin Schaefer	GCMS2M	12/23/13 12:20	Load on Instrument
JB55929-3.1.1	GCMS2M	Kevin Schaefer	12/24/13 16:50	Unload from Instrument
JB55929-3.1.1	Kevin Schaefer	Extract Freezer	12/24/13 16:50	Return to Storage
JB55929-3.1.1	Extract Freezer		01/30/14 09:00	Disposed
JB55929-3.3	Secured Storage	Jayna Patel	12/19/13 08:26	Retrieve from Storage
JB55929-3.3	Jayna Patel	Secured Storage	12/19/13 08:26	Return to Storage
JB55929-3.3	Secured Storage	King Cheng	12/27/13 10:19	Retrieve from Storage
JB55929-3.3	King Cheng	Secured Storage	12/27/13 16:35	Return to Storage
JB55929-3.3	Secured Storage	King Cheng	12/30/13 09:28	Retrieve from Storage
JB55929-3.3	King Cheng	Secured Storage	12/30/13 16:35	Return to Storage
JB55929-3.3	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-3.4	Secured Storage	Jayna Patel	12/19/13 08:26	Retrieve from Storage
JB55929-3.4	Jayna Patel	Secured Storage	12/19/13 08:26	Return to Storage
JB55929-3.4	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-3.5	Secured Storage	Jayna Patel	12/19/13 08:26	Retrieve from Storage
JB55929-3.5	Jayna Patel	Secured Storage	12/19/13 08:26	Return to Storage
JB55929-3.5	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-4.1	Secured Storage	Bernadette Vassilatos	12/20/13 08:33	Retrieve from Storage
JB55929-4.1	Bernadette Vassilatos	Secured Staging Area	12/20/13 08:33	Return to Storage
JB55929-4.1	Secured Staging Area	Humaira Janjua	12/20/13 08:44	Retrieve from Storage
JB55929-4.1	Humaira Janjua	Secured Storage	12/20/13 14:47	Return to Storage
JB55929-4.1	Secured Storage	Alfredo Crespo	12/24/13 08:42	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Received: 12/18/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB55929-4.1	Alfredo Crespo	Secured Staging Area	12/24/13 08:42	Return to Storage
JB55929-4.1	Secured Staging Area	Beatrice Marcelino	12/24/13 08:47	Retrieve from Storage
JB55929-4.1	Beatrice Marcelino	Secured Storage	12/24/13 12:20	Return to Storage
JB55929-4.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-4.1.1	Humaira Janjua	Organics Prep	12/20/13 08:46	Extract from JB55929-4.1
JB55929-4.1.1	Organics Prep	Tin Marlar	12/20/13 16:08	Extract from JB55929-4.1
JB55929-4.1.1	Tin Marlar	Extract Storage	12/20/13 16:08	Return to Storage
JB55929-4.1.1	Extract Storage	Kevin Schaefer	12/23/13 12:20	Retrieve from Storage
JB55929-4.1.1	Kevin Schaefer	GCMS2M	12/23/13 12:20	Load on Instrument
JB55929-4.1.1	GCMS2M	Kevin Schaefer	12/24/13 16:50	Unload from Instrument
JB55929-4.1.1	Kevin Schaefer	Extract Freezer	12/24/13 16:50	Return to Storage
JB55929-4.1.1	Extract Freezer		01/30/14 09:00	Disposed
JB55929-5.1	Secured Storage	Bernadette Vassilatos	12/20/13 08:33	Retrieve from Storage
JB55929-5.1	Bernadette Vassilatos	Secured Staging Area	12/20/13 08:33	Return to Storage
JB55929-5.1	Secured Staging Area	Humaira Janjua	12/20/13 08:44	Retrieve from Storage
JB55929-5.1	Humaira Janjua	Secured Storage	12/20/13 14:47	Return to Storage
JB55929-5.1	Secured Storage	Alfredo Crespo	12/24/13 08:42	Retrieve from Storage
JB55929-5.1	Alfredo Crespo	Secured Staging Area	12/24/13 08:42	Return to Storage
JB55929-5.1	Secured Staging Area	Beatrice Marcelino	12/24/13 08:47	Retrieve from Storage
JB55929-5.1	Beatrice Marcelino	Secured Storage	12/24/13 12:20	Return to Storage
JB55929-5.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-5.1.1	Humaira Janjua	Organics Prep	12/20/13 08:46	Extract from JB55929-5.1
JB55929-5.1.1	Organics Prep	Tin Marlar	12/20/13 16:08	Extract from JB55929-5.1
JB55929-5.1.1	Tin Marlar	Extract Storage	12/20/13 16:08	Return to Storage
JB55929-5.1.1	Extract Storage	Kevin Schaefer	12/23/13 12:20	Retrieve from Storage
JB55929-5.1.1	Kevin Schaefer	GCMS2M	12/23/13 12:20	Load on Instrument
JB55929-5.1.1	GCMS2M	Kevin Schaefer	12/24/13 16:50	Unload from Instrument
JB55929-5.1.1	Kevin Schaefer	Extract Freezer	12/24/13 16:50	Return to Storage
JB55929-5.1.1	Extract Freezer	Kevin Schaefer	12/24/13 16:50	Retrieve from Storage
JB55929-5.1.1	Kevin Schaefer	GCMS2M	12/24/13 16:50	Load on Instrument
JB55929-5.1.1	GCMS2M	Kevin Schaefer	12/26/13 09:22	Unload from Instrument
JB55929-5.1.1	Kevin Schaefer	Extract Freezer	12/26/13 09:22	Return to Storage
JB55929-5.1.1	Extract Freezer		01/30/14 09:00	Disposed
JB55929-6.1	Secured Storage	Bernadette Vassilatos	12/20/13 08:33	Retrieve from Storage
JB55929-6.1	Bernadette Vassilatos	Secured Staging Area	12/20/13 08:33	Return to Storage
JB55929-6.1	Secured Staging Area	Humaira Janjua	12/20/13 08:44	Retrieve from Storage
JB55929-6.1	Humaira Janjua	Secured Storage	12/20/13 14:47	Return to Storage
JB55929-6.1	Secured Storage	Alfredo Crespo	12/24/13 08:42	Retrieve from Storage
JB55929-6.1	Alfredo Crespo	Secured Staging Area	12/24/13 08:42	Return to Storage
JB55929-6.1	Secured Staging Area	Beatrice Marcelino	12/24/13 08:47	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Received: 12/18/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB55929-6.1	Beatrice Marcelino	Secured Storage	12/24/13 12:20	Return to Storage
JB55929-6.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-6.1.1	Humaira Janjua	Organics Prep	12/20/13 08:46	Extract from JB55929-6.1
JB55929-6.1.1	Organics Prep	Tin Marlar	12/20/13 16:08	Extract from JB55929-6.1
JB55929-6.1.1	Tin Marlar	Extract Storage	12/20/13 16:08	Return to Storage
JB55929-6.1.1	Extract Storage	Kevin Schaefer	12/23/13 12:20	Retrieve from Storage
JB55929-6.1.1	Kevin Schaefer	GCMS2M	12/23/13 12:20	Load on Instrument
JB55929-6.1.1	GCMS2M	Kevin Schaefer	12/24/13 16:50	Unload from Instrument
JB55929-6.1.1	Kevin Schaefer	Extract Freezer	12/24/13 16:50	Return to Storage
JB55929-6.1.1	Extract Freezer		01/30/14 09:00	Disposed
JB55929-7.1	Secured Storage	Bernadette Vassilatos	12/23/13 13:08	Retrieve from Storage
JB55929-7.1	Bernadette Vassilatos	Secured Staging Area	12/23/13 13:08	Return to Storage
JB55929-7.1	Secured Staging Area	Lee Blair	12/23/13 15:09	Retrieve from Storage
JB55929-7.1	Lee Blair	Secured Storage	12/23/13 17:57	Return to Storage
JB55929-7.1	Secured Storage	Nida Saleem	12/26/13 10:16	Retrieve from Storage
JB55929-7.1	Nida Saleem	Secured Storage	12/26/13 11:03	Return to Storage
JB55929-7.1	Secured Storage	Minhaj Hashmi	12/27/13 12:31	Retrieve from Storage
JB55929-7.1	Minhaj Hashmi	Secured Storage	12/27/13 13:03	Return to Storage
JB55929-7.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-7.1.1	Lee Blair	TCLP	12/23/13 17:57	Leachate from JB55929-7.1
JB55929-7.1.1	TCLP	Lee Blair	12/27/13 11:15	Leachate from JB55929-7.1
JB55929-7.1.1	Shirley Grzybowski	Secured Storage	12/28/13 08:48	Return to Storage
Analyst unavailable for custody transfer.				
JB55929-7.1.1	Secured Storage		02/24/14 09:00	Disposed
JB55929-7.1.2	Nida Saleem	Metals Digestion	12/26/13 11:02	Digestate from JB55929-7.1
JB55929-7.1.2	Metals Digestion	Juliana Franchetti	01/07/14 17:31	Digestate from JB55929-7.1
JB55929-7.1.2	Juliana Franchetti	Metals Digestate Storage	01/07/14 17:31	Return to Storage
JB55929-7.1.2	Metals Digestate Storage		03/04/14 09:00	Disposed
JB55929-7.1.3	Minhaj Hashmi	TCLP	12/27/13 12:40	Leachate from JB55929-7.1
JB55929-7.1.3	TCLP	Minhaj Hashmi	12/27/13 12:45	Leachate from JB55929-7.1
JB55929-7.1.3	Minhaj Hashmi	Secured Storage	12/27/13 13:03	Return to Storage
JB55929-7.1.3	Secured Storage		02/26/14 09:00	Disposed
JB55929-7.2	Secured Storage	Alfredo Crespo	12/24/13 08:42	Retrieve from Storage
JB55929-7.2	Alfredo Crespo	Secured Staging Area	12/24/13 08:42	Return to Storage
JB55929-7.2	Secured Staging Area	Beatrice Marcelino	12/24/13 08:47	Retrieve from Storage
JB55929-7.2	Beatrice Marcelino	Secured Storage	12/24/13 12:20	Return to Storage
JB55929-7.2	Secured Storage	Gina Montenegro	12/26/13 09:17	Retrieve from Storage
JB55929-7.2	Gina Montenegro	Secured Storage	12/26/13 11:23	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Received: 12/18/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB55929-7.2	Secured Storage	Trushna R. Patel	12/30/13 22:32	Retrieve from Storage
JB55929-7.2	Trushna R. Patel	Secured Staging Area	12/30/13 22:32	Return to Storage
JB55929-7.2	Secured Staging Area	Darshananben Patel	12/31/13 08:27	Retrieve from Storage
JB55929-7.2	Darshananben Patel	Secured Storage	12/31/13 12:48	Return to Storage
JB55929-7.2	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-8.1	Secured Storage	Donald Phelps	12/19/13 16:10	Retrieve from Storage
JB55929-8.1	Donald Phelps	Secured Staging Area	12/19/13 16:10	Return to Storage
JB55929-8.1	Secured Staging Area	Juliana Franchetti	12/19/13 16:12	Retrieve from Storage
JB55929-8.1	Juliana Franchetti	Secured Storage	12/19/13 19:22	Return to Storage
JB55929-8.1	Secured Storage	Alfredo Crespo	12/24/13 08:42	Retrieve from Storage
JB55929-8.1	Alfredo Crespo	Secured Staging Area	12/24/13 08:42	Return to Storage
JB55929-8.1	Secured Staging Area	Beatrice Marcelino	12/24/13 08:47	Retrieve from Storage
JB55929-8.1	Beatrice Marcelino	Secured Storage	12/24/13 12:20	Return to Storage
JB55929-8.1	Secured Storage	Trushna R. Patel	12/30/13 22:32	Retrieve from Storage
JB55929-8.1	Trushna R. Patel	Secured Staging Area	12/30/13 22:32	Return to Storage
JB55929-8.1	Secured Staging Area	Darshananben Patel	12/31/13 08:27	Retrieve from Storage
JB55929-8.1	Darshananben Patel	Secured Storage	12/31/13 12:48	Return to Storage
JB55929-8.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-8.1.1	Juliana Franchetti	Metals Digestion	12/19/13 19:22	Digestate from JB55929-8.1
JB55929-8.1.1	Metals Digestion	Juliana Franchetti	12/19/13 19:22	Digestate from JB55929-8.1
JB55929-8.1.1	Juliana Franchetti	Metals Digestate Storage	12/19/13 19:22	Return to Storage
JB55929-8.1.1	Metals Digestate Storage	Sasha May	01/02/14 15:48	Retrieve from Storage
JB55929-8.1.1	Sasha May	Metals Digestate Storage	01/02/14 15:52	Return to Storage
JB55929-8.1.1	Metals Digestate Storage		02/25/14 09:00	Disposed
JB55929-9.1	Secured Storage	Bernadette Vassilatos	12/23/13 13:08	Retrieve from Storage
JB55929-9.1	Bernadette Vassilatos	Secured Staging Area	12/23/13 13:08	Return to Storage
JB55929-9.1	Secured Staging Area	Lee Blair	12/23/13 15:09	Retrieve from Storage
JB55929-9.1	Lee Blair	Secured Storage	12/23/13 17:57	Return to Storage
JB55929-9.1	Secured Storage	Nida Saleem	12/26/13 10:16	Retrieve from Storage
JB55929-9.1	Nida Saleem	Secured Storage	12/26/13 11:03	Return to Storage
JB55929-9.1	Secured Storage	Minhaj Hashmi	12/27/13 12:31	Retrieve from Storage
JB55929-9.1	Minhaj Hashmi	Secured Storage	12/27/13 13:03	Return to Storage
JB55929-9.1	Secured Storage	Todd Shoemaker	12/27/13 13:46	Retrieve from Storage
JB55929-9.1	Todd Shoemaker	Secured Staging Area	12/27/13 13:46	Return to Storage
JB55929-9.1	Secured Staging Area	Gianinna Luisi	12/27/13 14:55	Retrieve from Storage
JB55929-9.1	Gianinna Luisi	Secured Staging Area	12/27/13 17:16	Return to Storage
JB55929-9.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-9.1.1	Lee Blair	TCLP	12/23/13 17:57	Leachate from JB55929-9.1
JB55929-9.1.1	TCLP	Lee Blair	12/27/13 11:15	Leachate from JB55929-9.1
JB55929-9.1.1	Shirley Grzybowski	Secured Storage	12/28/13 08:48	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Received: 12/18/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
Analyst unavailable for custody transfer.				
JB55929-9.1.1	Secured Storage		02/24/14 09:00	Disposed
JB55929-9.1.2	Nida Saleem	Metals Digestion	12/26/13 11:02	Digestate from JB55929-9.1
JB55929-9.1.2	Metals Digestion	Juliana Franchetti	01/07/14 17:31	Digestate from JB55929-9.1
JB55929-9.1.2	Juliana Franchetti	Metals Digestate Storage	01/07/14 17:31	Return to Storage
JB55929-9.1.2	Metals Digestate Storage		03/04/14 09:00	Disposed
JB55929-9.1.3	Minhaj Hashmi	TCLP	12/27/13 12:40	Leachate from JB55929-9.1
JB55929-9.1.3	TCLP	Minhaj Hashmi	12/27/13 12:45	Leachate from JB55929-9.1
JB55929-9.1.3	Minhaj Hashmi	Secured Storage	12/27/13 13:03	Return to Storage
JB55929-9.1.3	Secured Storage		02/26/14 09:00	Disposed
JB55929-9.2	Secured Storage	Gina Montenegro	12/26/13 09:17	Retrieve from Storage
JB55929-9.2	Gina Montenegro	Secured Storage	12/26/13 11:23	Return to Storage
JB55929-9.2	Secured Storage	Trushna R. Patel	12/30/13 22:32	Retrieve from Storage
JB55929-9.2	Trushna R. Patel	Secured Staging Area	12/30/13 22:32	Return to Storage
JB55929-9.2	Secured Staging Area	Darshananben Patel	12/31/13 08:27	Retrieve from Storage
JB55929-9.2	Darshananben Patel	Secured Storage	12/31/13 12:48	Return to Storage
JB55929-9.2	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-9.3	Secured Storage	Trushna R. Patel	12/24/13 12:38	Retrieve from Storage
JB55929-9.3	Trushna R. Patel	Secured Staging Area	12/24/13 12:38	Return to Storage
JB55929-9.3	Secured Staging Area	Vaidehi Amin	12/24/13 12:40	Retrieve from Storage
JB55929-9.3	Vaidehi Amin	Secured Storage	12/24/13 17:14	Return to Storage
JB55929-9.3	Secured Storage	Alfredo Crespo	12/27/13 07:14	Retrieve from Storage
JB55929-9.3	Alfredo Crespo	Secured Staging Area	12/27/13 07:14	Return to Storage
JB55929-9.3	Secured Staging Area	Beatrice Marcelino	12/27/13 08:23	Retrieve from Storage
JB55929-9.3	Beatrice Marcelino	Secured Storage	12/27/13 15:23	Return to Storage
JB55929-9.3	Secured Storage	Steve Magda	12/28/13 09:20	Retrieve from Storage
JB55929-9.3	Steve Magda	Secured Staging Area	12/28/13 09:21	Return to Storage
JB55929-9.3	Secured Staging Area	Krimesh Patel	12/28/13 09:39	Retrieve from Storage
JB55929-9.3	Krimesh Patel	Secured Storage	12/28/13 15:33	Return to Storage
JB55929-9.3	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-10.1	Secured Storage	Donald Phelps	12/19/13 16:10	Retrieve from Storage
JB55929-10.1	Donald Phelps	Secured Staging Area	12/19/13 16:10	Return to Storage
JB55929-10.1	Secured Staging Area	Juliana Franchetti	12/19/13 16:12	Retrieve from Storage
JB55929-10.1	Juliana Franchetti	Secured Storage	12/19/13 19:22	Return to Storage
JB55929-10.1	Secured Storage	Alfredo Crespo	12/24/13 08:42	Retrieve from Storage
JB55929-10.1	Alfredo Crespo	Secured Staging Area	12/24/13 08:42	Return to Storage
JB55929-10.1	Secured Staging Area	Beatrice Marcelino	12/24/13 08:47	Retrieve from Storage
JB55929-10.1	Beatrice Marcelino	Secured Storage	12/24/13 12:20	Return to Storage
JB55929-10.1	Secured Storage	Trushna R. Patel	12/30/13 22:32	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Received: 12/18/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB55929-10.1	Trushna R. Patel	Secured Staging Area	12/30/13 22:32	Return to Storage
JB55929-10.1	Secured Staging Area	Darshananben Patel	12/31/13 08:27	Retrieve from Storage
JB55929-10.1	Darshananben Patel	Secured Storage	12/31/13 12:48	Return to Storage
JB55929-10.1	Shirley Grzybowski		01/27/14 07:11	Disposed
JB55929-10.1.1	Juliana Franchetti	Metals Digestion	12/19/13 19:22	Digestate from JB55929-10.1
JB55929-10.1.1	Metals Digestion	Juliana Franchetti	12/19/13 19:22	Digestate from JB55929-10.1
JB55929-10.1.1	Juliana Franchetti	Metals Digestate Storage	12/19/13 19:22	Return to Storage
JB55929-10.1.1	Metals Digestate Storage	Sasha May	01/02/14 15:48	Retrieve from Storage
JB55929-10.1.1	Sasha May	Metals Digestate Storage	01/02/14 15:52	Return to Storage
JB55929-10.1.1	Metals Digestate Storage		02/25/14 09:00	Disposed

New Jersey
ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9266-MB	E211166.D	1	12/27/13	KC	n/a	n/a	VE9266

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB55929-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	230	ug/kg	
71-43-2	Benzene	ND	50	6.3	ug/kg	
74-97-5	Bromochloromethane	ND	250	26	ug/kg	
75-27-4	Bromodichloromethane	ND	250	14	ug/kg	
75-25-2	Bromoform	ND	250	13	ug/kg	
74-83-9	Bromomethane	ND	250	24	ug/kg	
78-93-3	2-Butanone (MEK)	ND	500	220	ug/kg	
75-15-0	Carbon disulfide	ND	250	7.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	250	13	ug/kg	
108-90-7	Chlorobenzene	ND	250	9.9	ug/kg	
75-00-3	Chloroethane	ND	250	50	ug/kg	
67-66-3	Chloroform	ND	250	13	ug/kg	
74-87-3	Chloromethane	ND	250	17	ug/kg	
110-82-7	Cyclohexane	ND	250	13	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	500	67	ug/kg	
124-48-1	Dibromochloromethane	ND	250	12	ug/kg	
106-93-4	1,2-Dibromoethane	ND	50	27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	250	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	250	11	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	250	13	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	250	18	ug/kg	
75-34-3	1,1-Dichloroethane	ND	250	16	ug/kg	
107-06-2	1,2-Dichloroethane	ND	50	16	ug/kg	
75-35-4	1,1-Dichloroethene	ND	250	14	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	250	10	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	250	21	ug/kg	
78-87-5	1,2-Dichloropropane	ND	250	22	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	250	11	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	250	14	ug/kg	
76-13-1	Freon 113	ND	250	22	ug/kg	
591-78-6	2-Hexanone	ND	250	89	ug/kg	
98-82-8	Isopropylbenzene	ND	250	7.4	ug/kg	
79-20-9	Methyl Acetate	ND	250	84	ug/kg	
108-87-2	Methylcyclohexane	ND	250	8.2	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	250	66	ug/kg	
75-09-2	Methylene chloride	ND	250	85	ug/kg	

Method Blank Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9266-MB	E211166.D	1	12/27/13	KC	n/a	n/a	VE9266

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB55929-3

CAS No.	Compound	Result	RL	MDL	Units	Q
100-42-5	Styrene	ND	250	12	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	17	ug/kg	
127-18-4	Tetrachloroethene	ND	250	21	ug/kg	
108-88-3	Toluene	ND	50	7.1	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	250	10	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	9.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	250	14	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	250	41	ug/kg	
79-01-6	Trichloroethene	ND	250	18	ug/kg	
75-69-4	Trichlorofluoromethane	ND	250	11	ug/kg	
75-01-4	Vinyl chloride	ND	250	17	ug/kg	
95-47-6	o-Xylene	ND	50	8.9	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	59-130%
17060-07-0	1,2-Dichloroethane-D4	96%	65-123%
2037-26-5	Toluene-D8	96%	80-124%
460-00-4	4-Bromofluorobenzene	102%	71-132%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9269-MB	E211257.D	1	12/30/13	KC	n/a	n/a	VE9269

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB55929-3

CAS No.	Compound	Result	RL	MDL	Units	Q
100-41-4	Ethylbenzene	ND	50	8.8	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	17	ug/kg	
	m,p-Xylene	ND	50	24	ug/kg	
1330-20-7	Xylene (total)	ND	50	8.9	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	59-130%
17060-07-0	1,2-Dichloroethane-D4	104%	65-123%
2037-26-5	Toluene-D8	98%	80-124%
460-00-4	4-Bromofluorobenzene	104%	71-132%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9266-BS	E211167.D	1	12/27/13	KC	n/a	n/a	VE9266

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB55929-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	2500	2440	98	50-156
71-43-2	Benzene	2500	2530	101	77-121
74-97-5	Bromochloromethane	2500	2340	94	77-127
75-27-4	Bromodichloromethane	2500	2510	100	77-131
75-25-2	Bromoform	2500	2580	103	73-136
74-83-9	Bromomethane	2500	2280	91	61-144
78-93-3	2-Butanone (MEK)	2500	2510	100	63-144
75-15-0	Carbon disulfide	2500	2290	92	68-131
56-23-5	Carbon tetrachloride	2500	2570	103	71-142
108-90-7	Chlorobenzene	2500	2640	106	77-118
75-00-3	Chloroethane	2500	2480	99	65-140
67-66-3	Chloroform	2500	2420	97	75-126
74-87-3	Chloromethane	2500	2280	91	58-143
110-82-7	Cyclohexane	2500	2490	100	68-133
96-12-8	1,2-Dibromo-3-chloropropane	2500	2510	100	66-136
124-48-1	Dibromochloromethane	2500	2640	106	75-129
106-93-4	1,2-Dibromoethane	2500	2620	105	77-125
95-50-1	1,2-Dichlorobenzene	2500	2560	102	76-117
541-73-1	1,3-Dichlorobenzene	2500	2630	105	75-118
106-46-7	1,4-Dichlorobenzene	2500	2580	103	73-116
75-71-8	Dichlorodifluoromethane	2500	3200	128	43-137
75-34-3	1,1-Dichloroethane	2500	2280	91	76-130
107-06-2	1,2-Dichloroethane	2500	2640	106	68-139
75-35-4	1,1-Dichloroethene	2500	2380	95	71-130
156-59-2	cis-1,2-Dichloroethene	2500	2410	96	74-123
156-60-5	trans-1,2-Dichloroethene	2500	2340	94	73-124
78-87-5	1,2-Dichloropropane	2500	2370	95	76-126
10061-01-5	cis-1,3-Dichloropropene	2500	2260	90	73-120
10061-02-6	trans-1,3-Dichloropropene	2500	2290	92	74-129
76-13-1	Freon 113	2500	2650	106	60-137
591-78-6	2-Hexanone	2500	2480	99	65-139
98-82-8	Isopropylbenzene	2500	2560	102	72-123
79-20-9	Methyl Acetate	2500	2070	83	42-154
108-87-2	Methylcyclohexane	2500	2650	106	62-132
108-10-1	4-Methyl-2-pentanone(MIBK)	2500	2400	96	70-136
75-09-2	Methylene chloride	2500	2320	93	67-128

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9266-BS	E211167.D	1	12/27/13	KC	n/a	n/a	VE9266

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB55929-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
100-42-5	Styrene	2500	2620	105	76-120
79-34-5	1,1,2,2-Tetrachloroethane	2500	2410	96	66-124
127-18-4	Tetrachloroethene	2500	2710	108	71-130
108-88-3	Toluene	2500	2510	100	76-119
87-61-6	1,2,3-Trichlorobenzene	2500	2260	90	67-134
120-82-1	1,2,4-Trichlorobenzene	2500	2300	92	70-135
71-55-6	1,1,1-Trichloroethane	2500	2490	100	75-132
79-00-5	1,1,2-Trichloroethane	2500	2440	98	77-127
79-01-6	Trichloroethene	2500	2590	104	81-125
75-69-4	Trichlorofluoromethane	2500	2520	101	60-142
75-01-4	Vinyl chloride	2500	2270	91	57-130
95-47-6	o-Xylene	2500	2570	103	75-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	59-130%
17060-07-0	1,2-Dichloroethane-D4	94%	65-123%
2037-26-5	Toluene-D8	96%	80-124%
460-00-4	4-Bromofluorobenzene	91%	71-132%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE9269-BS	E211258.D	1	12/30/13	KC	n/a	n/a	VE9269

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB55929-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
100-41-4	Ethylbenzene	2500	2620	105	75-119
1634-04-4	Methyl Tert Butyl Ether	5000	5050	101	69-127
	m,p-Xylene	5000	5330	107	76-119
1330-20-7	Xylene (total)	7500	7890	105	76-118

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	59-130%
17060-07-0	1,2-Dichloroethane-D4	110%	65-123%
2037-26-5	Toluene-D8	97%	80-124%
460-00-4	4-Bromofluorobenzene	92%	71-132%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB55760-24MS	E211177.D	1	12/27/13	KC	n/a	n/a	VE9266
JB55760-24MSD	E211178.D	1	12/27/13	KC	n/a	n/a	VE9266
JB55760-24 [a]	E211174.D	1	12/27/13	KC	n/a	n/a	VE9266

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB55929-3

CAS No.	Compound	JB55760-24 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		6800	5950	87	6800	5940	87	0	10-184/33
71-43-2	Benzene	ND		6800	7090	104	6800	7000	103	1	40-133/26
74-97-5	Bromochloromethane	ND		6800	6500	96	6800	6550	96	1	49-128/25
75-27-4	Bromodichloromethane	ND		6800	6920	102	6800	6920	102	0	42-135/26
75-25-2	Bromoform	ND		6800	6830	100	6800	6780	100	1	35-137/26
74-83-9	Bromomethane	ND		6800	5700	84	6800	5750	84	1	26-144/32
78-93-3	2-Butanone (MEK)	ND		6800	7100	104	6800	6930	102	2	20-165/29
75-15-0	Carbon disulfide	ND		6800	6470	95	6800	6520	96	1	27-146/29
56-23-5	Carbon tetrachloride	ND		6800	7010	103	6800	6930	102	1	35-149/28
108-90-7	Chlorobenzene	ND		6800	7290	107	6800	7300	107	0	32-135/27
75-00-3	Chloroethane	ND		6800	5490	81	6800	5540	81	1	32-143/29
67-66-3	Chloroform	ND		6800	6730	99	6800	6680	98	1	46-132/25
74-87-3	Chloromethane	ND		6800	5260	77	6800	5900	87	11	35-140/26
110-82-7	Cyclohexane	ND		6800	7550	111	6800	7630	112	1	17-152/31
96-12-8	1,2-Dibromo-3-chloropropane	ND		6800	6670	98	6800	6690	98	0	22-141/28
124-48-1	Dibromochloromethane	ND		6800	7080	104	6800	7040	103	1	41-133/25
106-93-4	1,2-Dibromoethane	ND		6800	7090	104	6800	7120	105	0	42-130/26
95-50-1	1,2-Dichlorobenzene	ND		6800	7310	107	6800	7350	108	1	20-138/31
541-73-1	1,3-Dichlorobenzene	ND		6800	7470	110	6800	7530	111	1	18-140/31
106-46-7	1,4-Dichlorobenzene	ND		6800	7450	109	6800	7420	109	0	18-139/31
75-71-8	Dichlorodifluoromethane	ND		6800	7350	108	6800	7280	107	1	23-158/29
75-34-3	1,1-Dichloroethane	ND		6800	6320	93	6800	6270	92	1	45-136/26
107-06-2	1,2-Dichloroethane	ND		6800	7120	105	6800	7090	104	0	46-132/24
75-35-4	1,1-Dichloroethene	ND		6800	6570	97	6800	6760	99	3	33-147/29
156-59-2	cis-1,2-Dichloroethene	ND		6800	6640	98	6800	6640	98	0	40-132/26
156-60-5	trans-1,2-Dichloroethene	ND		6800	6580	97	6800	6450	95	2	37-136/28
78-87-5	1,2-Dichloropropane	ND		6800	6560	96	6800	6490	95	1	45-132/25
10061-01-5	cis-1,3-Dichloropropene	ND		6800	6910	102	6800	6890	101	0	38-133/27
10061-02-6	trans-1,3-Dichloropropene	ND		6800	6500	96	6800	6440	95	1	35-134/27
76-13-1	Freon 113	ND		6800	6100	90	6800	6100	90	0	24-153/30
591-78-6	2-Hexanone	ND		6800	6330	93	6800	6300	93	0	20-157/30
98-82-8	Isopropylbenzene	ND		6800	7110	104	6800	7150	105	1	24-143/30
79-20-9	Methyl Acetate	ND		6800	5740	84	6800	5710	84	1	15-178/30
108-87-2	Methylcyclohexane	ND		6800	6920	102	6800	6800	100	2	10-153/33
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		6800	5950	87	6800	5990	88	1	34-138/26
75-09-2	Methylene chloride	ND		6800	6380	94	6800	6460	95	1	40-131/26

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB55760-24MS	E211177.D	1	12/27/13	KC	n/a	n/a	VE9266
JB55760-24MSD	E211178.D	1	12/27/13	KC	n/a	n/a	VE9266
JB55760-24 [a]	E211174.D	1	12/27/13	KC	n/a	n/a	VE9266

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB55929-3

CAS No.	Compound	JB55760-24 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
100-42-5	Styrene	ND		6800	7320	108	6800	7360	108	1	25-141/31
79-34-5	1,1,2,2-Tetrachloroethane	ND		6800	6560	96	6800	6530	96	0	32-130/28
127-18-4	Tetrachloroethene	ND		6800	7420	109	6800	7380	108	1	16-182/29
108-88-3	Toluene	ND		6800	7180	106	6800	7100	104	1	32-137/28
87-61-6	1,2,3-Trichlorobenzene	ND		6800	7330	108	6800	7100	104	3	10-157/37
120-82-1	1,2,4-Trichlorobenzene	ND		6800	7300	107	6800	7220	106	1	10-158/37
71-55-6	1,1,1-Trichloroethane	ND		6800	6700	98	6800	6730	99	0	41-143/28
79-00-5	1,1,2-Trichloroethane	ND		6800	6680	98	6800	6730	99	1	37-134/27
79-01-6	Trichloroethene	2280		6800	8910	97	6800	8820	96	1	26-161/28
75-69-4	Trichlorofluoromethane	ND		6800	6560	96	6800	6490	95	1	25-160/27
75-01-4	Vinyl chloride	ND		6800	5630	83	6800	6140	90	9	36-144/27
95-47-6	o-Xylene	ND		6800	7100	104	6800	7120	105	0	27-139/29

CAS No.	Surrogate Recoveries	MS	MSD	JB55760-24	Limits
1868-53-7	Dibromofluoromethane	94%	95%	94%	59-130%
17060-07-0	1,2-Dichloroethane-D4	96%	95%	96%	65-123%
2037-26-5	Toluene-D8	98%	97%	96%	80-124%
460-00-4	4-Bromofluorobenzene	91%	91%	98%	71-132%

(a) Diluted due to high concentration of target compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB56141-1MS	E211275.D	1	12/30/13	KC	n/a	n/a	VE9269
JB56141-1MSD	E211276.D	1	12/30/13	KC	n/a	n/a	VE9269
JB56141-1 [a]	E211274.D	1	12/30/13	KC	n/a	n/a	VE9269

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB55929-3

CAS No.	Compound	JB56141-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
100-41-4	Ethylbenzene	110		3100	3570	112	3100	3580	112	0	27-139/29
1634-04-4	Methyl Tert Butyl Ether	ND		3100	3330	107	3100	3380	109	1	43-131/24
	m,p-Xylene	569		6200	7560	113	6200	7630	114	1	23-142/30
1330-20-7	Xylene (total)	982		9300	11400	112	9300	11400	112	0	25-140/29

CAS No.	Surrogate Recoveries	MS	MSD	JB56141-1	Limits
1868-53-7	Dibromofluoromethane	97%	99%	97%	59-130%
17060-07-0	1,2-Dichloroethane-D4	105%	103%	108%	65-123%
2037-26-5	Toluene-D8	98%	97%	98%	80-124%
460-00-4	4-Bromofluorobenzene	89%	87%	93%	71-132%

(a) Diluted due to high concentration of non-target compound.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: VE9226-BFB
Lab File ID: E210289.D
Instrument ID: GCMSE
Injection Date: 12/02/13
Injection Time: 19:29

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	8055	17.7		Pass
75	30.0 - 60.0% of mass 95	20810	45.6		Pass
95	Base peak, 100% relative abundance	45608	100.0		Pass
96	5.0 - 9.0% of mass 95	2975	6.52		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	42026	92.1		Pass
175	5.0 - 9.0% of mass 174	3193	7.00	(7.60) [a]	Pass
176	95.0 - 101.0% of mass 174	40629	89.1	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	2579	5.65	(6.35) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VE9226-IC9226	E210290.D	12/02/13	19:59	00:30	Initial cal 0.5
VE9226-IC9226	E210291.D	12/02/13	20:29	01:00	Initial cal 1
VE9226-IC9226	E210292.D	12/02/13	20:59	01:30	Initial cal 2
VE9226-IC9226	E210293.D	12/02/13	21:28	01:59	Initial cal 5
VE9226-IC9226	E210294.D	12/02/13	21:58	02:29	Initial cal 10
VE9226-IC9226	E210295.D	12/02/13	22:28	02:59	Initial cal 20
VE9226-ICC9226	E210296.D	12/02/13	22:58	03:29	Initial cal 50
VE9226-IC9226	E210297.D	12/02/13	23:27	03:58	Initial cal 100
VE9226-IC9226	E210298.D	12/02/13	23:57	04:28	Initial cal 200
VE9226-ICV9226	E210301.D	12/03/13	01:27	05:58	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: VE9266-BFB
Lab File ID: E211164.D
Instrument ID: GCMSE
Injection Date: 12/27/13
Injection Time: 11:48

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	5145	17.8		Pass
75	30.0 - 60.0% of mass 95	13720	47.4		Pass
95	Base peak, 100% relative abundance	28944	100.0		Pass
96	5.0 - 9.0% of mass 95	1962	6.78		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	28504	98.5		Pass
175	5.0 - 9.0% of mass 174	2226	7.69	(7.81) [a]	Pass
176	95.0 - 101.0% of mass 174	27744	95.9	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	1916	6.62	(6.91) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VE9266-CC9226	E211165.D	12/27/13	12:19	00:31	Continuing cal 20
VE9266-MB	E211166.D	12/27/13	13:00	01:12	Method Blank
ZZZZZZ	E211166.D	12/27/13	13:00	01:12	(unrelated sample)
VE9266-BS	E211167.D	12/27/13	13:35	01:47	Blank Spike
ZZZZZZ	E211169.D	12/27/13	14:33	02:45	(unrelated sample)
ZZZZZZ	E211170.D	12/27/13	15:03	03:15	(unrelated sample)
ZZZZZZ	E211171.D	12/27/13	15:33	03:45	(unrelated sample)
ZZZZZZ	E211172.D	12/27/13	16:02	04:14	(unrelated sample)
ZZZZZZ	E211173.D	12/27/13	16:32	04:44	(unrelated sample)
JB55760-24	E211174.D	12/27/13	17:02	05:14	(used for QC only; not part of job JB55929)
ZZZZZZ	E211175.D	12/27/13	17:32	05:44	(unrelated sample)
JB55929-3	E211176.D	12/27/13	18:02	06:14	P-7R (5.5-6.0)
JB55760-24MS	E211177.D	12/27/13	18:31	06:43	Matrix Spike
JB55760-24MSD	E211178.D	12/27/13	19:00	07:12	Matrix Spike Duplicate
ZZZZZZ	E211179.D	12/27/13	19:30	07:42	(unrelated sample)
ZZZZZZ	E211180.D	12/27/13	20:00	08:12	(unrelated sample)
ZZZZZZ	E211183.D	12/27/13	21:28	09:40	(unrelated sample)
ZZZZZZ	E211184.D	12/27/13	21:58	10:10	(unrelated sample)
ZZZZZZ	E211185.D	12/27/13	22:27	10:39	(unrelated sample)
ZZZZZZ	E211186.D	12/27/13	22:57	11:09	(unrelated sample)
ZZZZZZ	E211187.D	12/27/13	23:27	11:39	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: VE9269-BFB
Lab File ID: E211255.D
Instrument ID: GCMSE
Injection Date: 12/30/13
Injection Time: 10:20

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	5540	19.8		Pass
75	30.0 - 60.0% of mass 95	13293	47.5		Pass
95	Base peak, 100% relative abundance	27994	100.0		Pass
96	5.0 - 9.0% of mass 95	1865	6.66		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	26714	95.4		Pass
175	5.0 - 9.0% of mass 174	2128	7.60	(7.97) [a]	Pass
176	95.0 - 101.0% of mass 174	25917	92.6	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	1688	6.03	(6.51) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VE9269-CC9226	E211256.D	12/30/13	10:52	00:32	Continuing cal 20
ZZZZZZ	E211257.D	12/30/13	11:28	01:08	(unrelated sample)
VE9269-MB	E211257.D	12/30/13	11:28	01:08	Method Blank
VE9269-BS	E211258.D	12/30/13	12:03	01:43	Blank Spike
JB55929-3	E211259.D	12/30/13	12:33	02:13	P-7R (5.5-6.0)
ZZZZZZ	E211260.D	12/30/13	13:02	02:42	(unrelated sample)
ZZZZZZ	E211262.D	12/30/13	14:01	03:41	(unrelated sample)
ZZZZZZ	E211264A.D	12/30/13	15:05	04:45	(unrelated sample)
ZZZZZZ	E211265.D	12/30/13	15:35	05:15	(unrelated sample)
ZZZZZZ	E211266.D	12/30/13	16:05	05:45	(unrelated sample)
ZZZZZZ	E211266B.D	12/30/13	17:03	06:43	(unrelated sample)
ZZZZZZ	E211267.D	12/30/13	17:33	07:13	(unrelated sample)
ZZZZZZ	E211268.D	12/30/13	18:02	07:42	(unrelated sample)
ZZZZZZ	E211269.D	12/30/13	18:32	08:12	(unrelated sample)
ZZZZZZ	E211270.D	12/30/13	19:01	08:41	(unrelated sample)
ZZZZZZ	E211271.D	12/30/13	19:31	09:11	(unrelated sample)
ZZZZZZ	E211272.D	12/30/13	20:01	09:41	(unrelated sample)
ZZZZZZ	E211273.D	12/30/13	20:31	10:11	(unrelated sample)
JB56141-1	E211274.D	12/30/13	21:01	10:41	(used for QC only; not part of job JB55929)
JB56141-1MS	E211275.D	12/30/13	21:30	11:10	Matrix Spike
JB56141-1MSD	E211276.D	12/30/13	22:00	11:40	Matrix Spike Duplicate

Volatile Internal Standard Area Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std:	VE9266-CC9226	**Injection Date:**	12/27/13
Lab File ID:	E211165.D	**Injection Time:**	12:19
Instrument ID:	GCMSE	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	53440	7.61	94307	9.85	133159	10.76	121443	14.09	64288	16.66
Upper Limit [a]	106880	8.11	188614	10.35	266318	11.26	242886	14.59	128576	17.16
Lower Limit [b]	26720	7.11	47154	9.35	66580	10.26	60722	13.59	32144	16.16

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VE9266-MB	51886	7.62	90316	9.85	129356	10.76	116601	14.09	55425	16.67
ZZZZZZ	51886	7.62	90316	9.85	129356	10.76	116601	14.09	55425	16.67
VE9266-BS	52419	7.62	92085	9.84	132214	10.76	119363	14.09	66704	16.67
ZZZZZZ	36240	7.62	91547	9.85	129660	10.76	118575	14.09	61629	16.66
ZZZZZZ	40167	7.63	90478	9.84	130624	10.76	120325	14.09	65515	16.67
ZZZZZZ	47624	7.62	91310	9.84	131642	10.76	120837	14.09	65452	16.67
ZZZZZZ	46819	7.62	91888	9.85	132656	10.76	121066	14.09	63554	16.66
ZZZZZZ	40974	7.62	89938	9.84	129857	10.76	119308	14.09	59240	16.67
JB55760-24	40945	7.63	89236	9.84	130406	10.76	119990	14.09	59164	16.67
ZZZZZZ	41766	7.62	90875	9.84	129656	10.76	119314	14.09	58377	16.67
JB55929-3	43153	7.63	90340	9.84	132004	10.76	123039	14.09	74087	16.67
JB55760-24MS	43586	7.63	94940	9.84	136642	10.76	127264	14.09	71061	16.67
JB55760-24MSD	42826	7.63	92511	9.84	133854	10.76	123293	14.09	68778	16.66
ZZZZZZ	39609	7.63	90697	9.84	132019	10.76	119847	14.09	61047	16.67
ZZZZZZ	52820	7.62	92831	9.84	134497	10.76	124093	14.09	61077	16.67
ZZZZZZ	41675	7.63	92159	9.84	132296	10.76	119400	14.09	63740	16.67
ZZZZZZ	47074	7.63	91922	9.84	136624	10.76	128250	14.09	68566	16.67
ZZZZZZ	47570	7.63	94156	9.84	135361	10.76	122675	14.09	71123	16.66
ZZZZZZ	49324	7.61	95338	9.85	138032	10.77	126332	14.09	70843	16.66
ZZZZZZ	48751	7.62	96078	9.84	137904	10.76	126111	14.09	69020	16.67

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std:	VE9269-CC9226	**Injection Date:**	12/30/13
Lab File ID:	E211256.D	**Injection Time:**	10:52
Instrument ID:	GCMSE	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	46210	7.62	82704	9.85	119358	10.76	108570	14.09	57514	16.67
Upper Limit [a]	92420	8.12	165408	10.35	238716	11.26	217140	14.59	115028	17.17
Lower Limit [b]	23105	7.12	41352	9.35	59679	10.26	54285	13.59	28757	16.17

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
ZZZZZZ	45194	7.62	81956	9.85	116350	10.77	104847	14.09	49888	16.66
VE9269-MB	45194	7.62	81956	9.85	116350	10.77	104847	14.09	49888	16.66
VE9269-BS	47764	7.62	82852	9.85	119081	10.76	108873	14.09	60421	16.66
JB55929-3	46131	7.62	84001	9.85	118122	10.76	110427	14.09	59338	16.67
ZZZZZZ	37904	7.63	82531	9.85	118152	10.76	108071	14.09	58022	16.67
ZZZZZZ	35320	7.62	84344	9.84	121607	10.76	111907	14.09	55937	16.67
ZZZZZZ	55794	7.62	85010	9.84	122741	10.76	111566	14.09	57465	16.67
ZZZZZZ	48074	7.62	86443	9.84	123038	10.76	112597	14.09	58399	16.67
ZZZZZZ	36761	7.62	85065	9.85	122515	10.76	111948	14.09	55613	16.67
ZZZZZZ	48745	7.64	87750	9.84	123467	10.76	111816	14.09	57835	16.67
ZZZZZZ	37237	7.63	84800	9.84	122179	10.76	112079	14.09	54673	16.67
ZZZZZZ	37576	7.63	83939	9.84	120288	10.76	110360	14.09	54818	16.67
ZZZZZZ	38137	7.63	84557	9.84	121562	10.76	112312	14.10	54645	16.67
ZZZZZZ	38309	7.63	84104	9.84	121220	10.76	109895	14.09	54347	16.66
ZZZZZZ	38200	7.63	83803	9.85	121424	10.76	110955	14.09	53601	16.66
ZZZZZZ	38839	7.63	83299	9.84	119281	10.76	110742	14.09	53125	16.67
ZZZZZZ	36671	7.63	82559	9.84	118212	10.76	109761	14.09	53950	16.66
JB56141-1	49039	7.63	82873	9.85	118817	10.76	109637	14.09	60053	16.66
JB56141-1MS	46241	7.64	83950	9.84	122051	10.76	111484	14.09	63703	16.66
JB56141-1MSD	32749	7.67	85370	9.84	123818	10.76	111897	14.09	65306	16.67

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB55929-3	E211176.D	95	97	101	94
JB55929-3	E211259.D	97	103	99	96
JB55760-24MS	E211177.D	94	96	98	91
JB55760-24MSD	E211178.D	95	95	97	91
JB56141-1MS	E211275.D	97	105	98	89
JB56141-1MSD	E211276.D	99	103	97	87
VE9266-BS	E211167.D	95	94	96	91
VE9266-MB	E211166.D	95	96	96	102
VE9269-BS	E211258.D	98	110	97	92
VE9269-MB	E211257.D	95	104	98	104

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	59-130%
S2 = 1,2-Dichloroethane-D4	65-123%
S3 = Toluene-D8	80-124%
S4 = 4-Bromofluorobenzene	71-132%

Initial Calibration Summary

Job Number: JB55929 **Sample:** VE9226-ICC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210296.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Response Factor Report MSE

```
Method       : C:\MSDCHEM\1\METHODS\ME9226.M (RTE Integrator)
Title        : SW846  8260B,ZB624 60m x 0.25mm x 1.4um
Last Update  : Thu Dec 19 11:44:23 2013
Response via : Initial Calibration

Calibration Files
5   =E210293.D   2   =E210292.D   20  =E210295.D   50  =E210296.D
100 =E210297.D   1   =E210291.D   200 =E210298.D   0.5 =E210290.D
10  =E210294.D       =

 Compound
           5     2     20    50    100   1     200   0.5   10      Avg    %RSD
-------------------------------------------------------------------------------

1)     Tert Butyl Alcohol-d9 ----------------ISTD---------------------
2)  1,4-dioxane
          0.066       0.086 0.105 0.093       0.086       0.081   0.086   15.03
           ----- Linear regression -----  Coefficient =  0.9952
             Response Ratio = 0.01016 + 0.08683 *A

3)  tertiary butyl alcohol
          1.278 0.974 1.306 1.361 1.329       1.335       1.309   1.270   10.49
4)  ethanol
                                                                  0.000#  -1.00

5) I   pentafluorobenzene    ----------------ISTD---------------------
6)  freon 23
                                                                  0.000#  -1.00
7)  freon 115
                                                                  0.000#  -1.00
8)  freon 143a
                                                                  0.000#  -1.00
9)  freon 152a
                                                                  0.000#  -1.00
10)  chlorotrifluoroethene
                                                                  0.000#  -1.00
11)  chlorodifluoromethane
          0.609 0.509 0.573 0.586 0.571 0.378 0.537       0.564   0.541   13.36
12)  dichlorodifluoromethane
          0.586 0.486 0.603 0.592 0.592       0.538       0.603   0.571    7.67
13)  freon 114
                                                                  0.000#  -1.00
14)  freon 142b
                                                                  0.000#  -1.00
15)  chloromethane
          0.934 0.754 0.946 0.907 0.898 0.870 0.821 0.795 0.912   0.871    7.62
16)  vinyl chloride
          0.850 0.714 0.856 0.831 0.814 0.780 0.750       0.840   0.804    6.42
17)  1,3-Butadiene
                                                                  0.000#  -1.00
18)  acetaldehyde
                                                                  0.000#  -1.00
19)  bromomethane
          0.589 0.490 0.562 0.544 0.535 0.558 0.492       0.558   0.541    6.40
20)  chloroethane
          0.436 0.312 0.426 0.403 0.401 0.364 0.370       0.412   0.390   10.27
21)  vinyl bromide
          0.462 0.309 0.462 0.448 0.448       0.412       0.416   0.422   12.77
```

Initial Calibration Summary

Job Number: JB55929 **Sample:** VE9226-ICC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210296.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

22)	trichlorofluoromethane										
		0.893	0.724	0.897	0.869	0.861	0.624	0.777	0.886	0.816	12.17
23)	pentane										
		0.992	0.646	0.928	0.901	0.916		0.813	0.854	0.864	12.93
24)	ethyl ether										
		0.297	0.221	0.338	0.336	0.334		0.309	0.321	0.308	13.37
25)	freon 141b										
										0.000#	-1.00
26)	freon 123a										
										0.000#	-1.00
27)	freon 123										
										0.000#	-1.00
28)	2-chloropropane										
		1.080	0.818	1.106	1.085	1.057	0.911	0.959	1.088	1.013	10.38
29)	acrolein										
		0.125	0.120	0.135	0.130	0.133	0.112	0.126	0.132	0.127	6.10
30)	1,1-dichloroethene										
		0.539	0.380	0.554	0.555	0.545	0.421	0.516	0.550	0.507	13.42
31)	isopropyl alcohol										
										0.000#	-1.00
32)	acetone										
				0.050	0.051	0.054		0.051	0.039	0.049	12.08
33)	allyl chloride										
		1.170	0.956	1.082	1.105	1.054	0.976	1.009	0.838 1.058	1.027	9.42
34)	acetonitrile										
				0.044	0.043	0.039		0.037	0.042	0.041	6.85
35)	iodomethane										
		0.965	0.739	1.026	1.022	1.009	0.831	0.960	1.008	0.945	11.06
36)	iso-butyl alcohol										
										0.000#	-1.00
37)	carbon disulfide										
		1.928	1.472	2.123	2.107	2.089	1.782	1.965	2.123	1.949	11.65
38)	methylene chloride										
		0.615	0.453	0.647	0.642	0.631	0.543	0.594	0.638	0.595	11.24
39)	1-chloropropane										
		1.111	0.851	1.097	1.085	1.071	0.971	0.985	0.829 1.109	1.012	10.90
40)	methyl acetate										
		0.468	0.391	0.490	0.494	0.475		0.462	0.478	0.466	7.47
41)	methyl tert butyl ether										
		1.714	1.487	1.800	1.791	1.782	1.613	1.682	1.201 1.778	1.650	11.95
42)	trans-1,2-dichloroethene										
		0.574	0.407	0.615	0.600	0.601	0.507	0.567	0.608	0.560	12.63
43)	di-isopropyl ether										
		2.138	1.889	2.074	2.087	2.006	1.637	1.924	1.452 2.052	1.918	12.01
44)	ethyl tert-butyl ether										
		1.722		1.673	1.687	1.627		1.571	1.638	1.653	3.19
45)	2-butanone										
				0.060	0.060	0.062		0.059	0.050	0.058	8.41
46)	1,1-dichloroethane										
		1.058	0.797	1.122	1.104	1.076	0.922	1.011	1.089	1.022	10.87
47)	chloroprene										
		0.871	0.701	0.823	0.840	0.819	0.563	0.788	0.805	0.776	12.81
48)	acrylonitrile										
		0.224	0.189	0.244	0.242	0.239	0.179	0.227	0.238	0.223	11.16
49)	vinyl acetate										
				0.091	0.097	0.093		0.092	0.076	0.090	9.07
50)	ethyl acetate										
		0.054		0.080	0.085	0.080		0.077	0.070	0.075	14.95
51)	2,2-dichloropropane										
		0.858	0.624	0.885	0.865	0.851	0.701	0.789	0.866	0.805	11.73

Initial Calibration Summary

Job Number: JB55929 **Sample:** VE9226-ICC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210296.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
52)  cis-1,2-dichloroethene
           0.621 0.467 0.652 0.647 0.644 0.571 0.614       0.633   0.606   10.23
53)  methyl acrylate
           0.465       0.554 0.531 0.533       0.514       0.527   0.521    5.81
54)  propionitrile
           0.084 0.066 0.091 0.090 0.089 0.062 0.084       0.089   0.082   14.04
55)  bromochloromethane
           0.282       0.312 0.316 0.316       0.299       0.298   0.304    4.39
56)  tetrahydrofuran
           0.204       0.222 0.220 0.216       0.206       0.225   0.216    4.07
57)  chloroform
           0.966 0.733 1.027 1.009 1.007 0.844 0.958       1.000   0.943   10.87
58)  t-butyl formate
           0.546 0.461 0.547 0.568 0.557       0.541       0.537   0.537    6.53
59)  Iso-octane
           2.032 1.715 1.930 1.963 1.966 1.533 1.838       1.878   1.857    8.74
60)  dibromofluoromethane (s)
           0.468 0.475 0.520 0.521 0.522 0.445 0.509       0.512   0.497    5.93
61)  1,2-dichloroethane-d4 (s)
           0.534 0.566 0.606 0.600 0.602 0.574 0.579 0.400 0.603   0.563   11.62
62)  freon 113
           0.416 0.301 0.397 0.404 0.396       0.371       0.389   0.382    9.96
63)  methacrylonitrile
           0.351 0.271 0.389 0.392 0.386       0.364       0.377   0.361   11.82
64)  1,1,1-trichloroethane
           0.856 0.627 0.886 0.870 0.874 0.736 0.820       0.865   0.817   11.06
65)  tert-amyl methyl ether
           1.840 1.675 1.790 1.806 1.788 1.450 1.748 1.324 1.757   1.687   10.59

66) I   1,4-difluorobenzene   ----------------ISTD---------------------
67)  Di-isobutylene
                                                                   0.000#  -1.00
68)  tert amyl alcohol
                                                                   0.000#  -1.00
69)  epichlorohydrin
           0.037 0.030 0.041 0.041 0.039       0.038       0.039   0.038   10.11
70)  n-butyl alcohol
           0.010 0.007 0.011 0.011 0.010       0.009       0.011   0.010   14.02
71)  tert-amyl ethyl ether
                                                                   0.000#  -1.00
72)  carbon tetrachloride
           0.495 0.348 0.518 0.518 0.522       0.495       0.512   0.487   12.79
73)  1,1-dichloropropene
           0.493 0.364 0.529 0.523 0.525 0.398 0.495       0.513   0.480   13.20
74)  hexane
           0.444       0.422 0.429 0.423       0.388       0.423   0.422    4.35
75)  benzene
           1.519 1.193 1.607 1.583 1.589 1.389 1.505 1.112 1.585   1.453   12.68
76)  heptane
           0.257 0.197 0.245 0.244 0.246       0.227       0.240   0.237    8.22
77)  isopropyl acetate
           0.776 0.688 0.779 0.774 0.741 0.590 0.726       0.761   0.729    8.77
78)  1,2-dichloroethane
           0.466 0.369 0.512 0.504 0.498 0.395 0.469       0.500   0.464   11.55
79)  ethyl acrylate
           0.457       0.500 0.506 0.515       0.492       0.428   0.483    6.93
80)  trichloroethene
           0.368 0.268 0.398 0.391 0.390 0.302 0.369       0.381   0.358   13.20
81)  2-nitropropane
                                                                   0.000#  -1.00
```

Initial Calibration Summary

Job Number: JB55929 **Sample:** VE9226-ICC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210296.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
 82)  2-chloroethyl vinyl ether
            0.210 0.183 0.225 0.233 0.232       0.231       0.212   0.218    8.34
 83)  methylcyclohexane
            0.638 0.527 0.597 0.603 0.598 0.417 0.567       0.591   0.567   12.11
 84)  methyl methacrylate
            0.363 0.300 0.398 0.405 0.402       0.384       0.386   0.377    9.75
 85)  1,2-dichloropropane
            0.392 0.315 0.431 0.423 0.420 0.343 0.395       0.422   0.393   10.80
 86)  dibromomethane
            0.213 0.165 0.242 0.240 0.242       0.230       0.232   0.223   12.37
 87)  bromodichloromethane
            0.485 0.375 0.531 0.532 0.533 0.444 0.511       0.515   0.491   11.38
 88)  cis-1,3-dichloropropene
            0.623 0.469 0.674 0.671 0.672 0.486 0.645       0.653   0.611   13.87
 89)  toluene-d8 (s)
            1.253 1.320 1.388 1.356 1.369 1.343 1.336 1.224 1.378   1.330    4.22
 90)  4-methyl-2-pentanone
            0.140       0.166 0.164 0.163       0.154       0.159   0.158    6.13
 91)  toluene
            0.943 0.693 1.004 0.986 0.991 0.778 0.943       0.973   0.914   12.50
 92)  3-methyl-1-butanol
            0.017 0.013 0.019 0.019 0.017       0.015       0.019   0.017   13.48
 93)  trans-1,3-dichloropropene
            0.530 0.398 0.606 0.612 0.618 0.421 0.591       0.582   0.545   16.14
             ----- Linear regression -----  Coefficient =  0.9994
               Response Ratio = 0.00292 + 0.59572 *A

 94)  ethyl methacrylate
            0.437 0.348 0.530 0.525 0.536       0.522       0.478   0.482   14.30
 95)  1,1,2-trichloroethane
            0.269 0.224 0.311 0.304 0.305       0.293       0.301   0.286   10.77
 96)  2-hexanone
            0.109       0.139 0.144 0.144       0.139       0.130   0.134   10.04

 97) I   chlorobenzene-d5      ----------------ISTD---------------------
 98)  cyclohexanone
            0.029 0.030 0.031 0.029 0.025 0.031             0.028   0.029    6.62
 99)  tetrachloroethene
            0.461 0.350 0.485 0.478 0.475 0.397 0.456       0.469   0.446   10.69
100)  1,3-dichloropropane
            0.624 0.532 0.676 0.669 0.656 0.548 0.623       0.658   0.623    8.81
101)  butyl acetate
            0.245 0.186 0.273 0.286 0.275       0.270       0.263   0.257   13.22
102)  3,3-dimethyl-1-butanol
            0.047 0.038 0.050 0.051 0.042       0.039       0.047   0.045   11.81
103)  dibromochloromethane
            0.410 0.337 0.463 0.465 0.464 0.363 0.448       0.449   0.425   11.82
104)  1,2-dibromoethane
            0.361 0.289 0.405 0.401 0.402 0.283 0.386       0.386   0.364   13.77
105)  n-butyl ether
                                                                    0.000#  -1.00
106)  chlorobenzene
            1.143 0.936 1.227 1.204 1.195 1.043 1.151 0.763 1.197   1.095   14.19
107)  1,1,1,2-tetrachloroethane
            0.416 0.352 0.460 0.461 0.457 0.351 0.445       0.448   0.424   11.05
108)  ethylbenzene
            1.992 1.569 2.136 2.104 2.095 1.775 2.012 1.465 2.058   1.912   13.00
109)  m,p-xylene
            0.763 0.593 0.803 0.798 0.799 0.663 0.771 0.538 0.780   0.723   13.79
110)  o-xylene
```

Initial Calibration Summary

Job Number: JB55929 **Sample:** VE9226-ICC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210296.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
            0.741 0.584 0.818 0.804 0.803 0.661 0.767       0.783   0.745   11.04
111)  butyl acrylate
                                                                    0.000#  -1.00
112)  styrene
            1.187 0.901 1.361 1.370 1.386 1.004 1.340       1.273   1.228   14.97
113)  bromoform
            0.294 0.227 0.333 0.342 0.348       0.346       0.312   0.315   13.81

114) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
115)  isopropylbenzene
            3.807 3.008 3.910 3.734 3.590 3.598 3.372 3.101 3.800   3.547    9.04
116)  4-bromofluorobenzene (s)
            0.969 1.076 1.050 1.011 0.992 1.207 0.961 1.103 1.053   1.047    7.36
117)  bromobenzene
            0.972 0.800 1.022 0.999 0.972 0.893 0.931       0.984   0.947    7.53
118)  1,1,2,2-tetrachloroethane
            1.030 0.938 1.057 1.015 0.967 0.985 0.907 0.693 1.037   0.959   11.55
119)  trans-1,4-dichloro-2-butene
            0.186       0.247 0.249 0.244       0.235       0.214   0.229   10.69
120)  1,2,3-trichloropropane
            0.239 0.212 0.266 0.260 0.248       0.235       0.254   0.245    7.47
121)  n-propylbenzene
            4.221 3.305 4.344 4.219 4.101 3.744 3.885 3.220 4.235   3.919   10.65
122)  p-ethyltoluene
            3.734       3.995 3.798 3.937       3.841       3.918   3.871    2.50
123)  2-chlorotoluene
            0.933 0.689 0.953 0.916 0.895 0.803 0.848       0.918   0.869   10.06
124)  4-chlorotoluene
            2.652 2.142 2.737 2.666 2.644 2.408 2.513 1.972 2.633   2.485   10.63
125)  1,3,5-trimethylbenzene
            3.140 2.503 3.286 3.181 3.111 2.948 2.937 2.617 3.197   2.991    9.04
126)  tert-butylbenzene
            2.754 2.333 2.770 2.754 2.645 2.587 2.535 2.136 2.736   2.583    8.50
127)  pentachloroethane
            0.627 0.537 0.671 0.655 0.652 0.531 0.631       0.651   0.619    8.82
128)  1,2,4-trimethylbenzene
            3.098 2.351 3.208 3.128 3.087 2.749 2.922 2.402 3.129   2.897   11.23
129)  sec-butylbenzene
            3.961 3.098 4.159 4.040 3.949 3.531 3.763 3.038 3.979   3.724   11.08
130)  1,3-dichlorobenzene
            1.806 1.393 1.899 1.879 1.873 1.569 1.811 1.318 1.861   1.712   13.18
131)  p-isopropyltoluene
            3.195 2.440 3.466 3.430 3.363 2.726 3.192       3.343   3.144   11.70
132)  1,4-dichlorobenzene
            1.825 1.511 1.950 1.913 1.912 1.689 1.830 1.385 1.875   1.766   11.18
133)  benzyl chloride
            1.617 1.375 1.714 1.790 1.733 1.129 1.667       1.635   1.583   13.99
134)  p-diethylbenzene
            1.842       2.052 2.006 2.129       2.145       1.941   2.019    5.72
135)  1,2-dichlorobenzene
            1.709 1.416 1.835 1.823 1.807 1.476 1.731       1.777   1.697    9.52
136)  n-butylbenzene
            1.354       1.592 1.613 1.608       1.536       1.471   1.529    6.63
137)  1,2,4,5-tetramethylbenzene
            2.934       3.328 3.222 3.419       3.419       3.041   3.227    6.27
138)  1,2-dibromo-3-chloropropane
            0.124       0.160 0.163 0.161       0.148       0.150   0.151    9.73
139)  1,3,5-trichlorobenzene
            1.078       1.339 1.381 1.396       1.297       1.193   1.281    9.62
140)  1,2,4-trichlorobenzene
```

Initial Calibration Summary

Job Number: JB55929 **Sample:** VE9226-ICC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210296.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
            0.581       0.909 1.050 1.083       1.029       0.756   0.901   21.93
             ----- Linear regression -----  Coefficient =  0.9988
               Response Ratio = -0.02872 + 1.04887 *A

141)  hexachlorobutadiene
            0.499       0.610 0.615 0.590       0.535       0.563   0.569    8.01
142)  naphthalene
            1.225       1.908 2.215 2.300       2.177       1.540   1.894   22.65
             ----- Linear regression -----  Coefficient =  0.9987
               Response Ratio = -0.06562 + 2.22226 *A

143)  MMT
                                                                    0.000#  -1.00
144)  1,2,3-trichlorobenzene
            0.487       0.749 0.863 0.883       0.828       0.616   0.738   21.23
             ----- Linear regression -----  Coefficient =  0.9983
               Response Ratio = -0.01446 + 0.84412 *A

145)  hexachloroethane
            0.608 0.475 0.648 0.642 0.631 0.500 0.594       0.617   0.589   11.14
146)  Cyclohexane
            1.203 0.839 1.189 1.125 1.077 0.969 0.961       1.198   1.070   12.58
147)  ethyleinimine
                                                                    0.000#  -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           ME9226.M          Thu Dec 19 11:46:44 2013   RPT1
```

6.7.1

6

Initial Calibration Verification

Job Number: JB55929 **Sample:** VE9226-ICV9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210301.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ve9221-9230\E210301.D      Vial: 15
Acq On    :  3 Dec 2013   1:27 am                    Operator: hennys
Sample    : icv9226-50                               Inst    : MSE
Misc      : MS59212,VE9226,5.0,,100,5,1              Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\ME9226.M (RTE Integrator)
Title        : SW846  8260B,ZB624 60m x 0.25mm x 1.4um
Last Update  : Fri Dec 06 10:37:04 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.010  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	97	0.00	7.63
		----------	True	Calc.	% Drift	----------		
2	M	1,4-dioxane	1250.000	1158.224	7.3	78	0.00	11.49
		----------	AvgRF	CCRF	% Dev	----------		
3	M	tertiary butyl alcohol	1.270	1.385	-9.1	99	0.00	7.74
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	106	0.00	9.85
6		freon 23		----------NA----------				
7		freon 115		----------NA----------				
8		freon 143a		----------NA----------				
9		freon 152a		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane	0.541	0.569	-5.2	103	0.00	4.30
12	M	dichlorodifluoromethane	0.571	0.734	-28.5#	131	0.00	4.29
13		freon 114		----------NA----------				
14		freon 142b		----------NA----------				
15	M	chloromethane	0.871	0.933	-7.1	109	0.00	4.63
16	M	vinyl chloride	0.804	0.815	-1.4	104	0.00	4.90
17		1,3-Butadiene		----------NA----------				
18	M	acetaldehyde		----------NA----------				
19	M	bromomethane	0.541	0.529	2.2	103	0.00	5.55
20	M	chloroethane	0.390	0.434	-11.3	114	0.00	5.72
21	M	vinyl bromide	0.422	0.442	-4.7	104	0.00	6.09
22	M	trichlorofluoromethane	0.816	0.818	-0.2	99	0.00	6.23
23	M	pentane	0.864	0.868	-0.5	102	0.00	6.29
24	M	ethyl ether	0.308	0.349	-13.3	110	0.00	6.59
25		freon 141b		----------NA----------				
26		freon 123a		----------NA----------				
27		freon 123		----------NA----------				
28	m	2-chloropropane	1.013	1.039	-2.6	101	0.00	6.78
29	M	acrolein	0.127	0.122	3.9	98	0.00	6.80
30	M	1,1-dichloroethene	0.507	0.527	-3.9	100	0.00	7.03
31	M	isopropyl alcohol		----------NA----------				
32	M	acetone	0.049	0.054	-10.2	111	0.00	7.01
33	M	allyl chloride	1.027	1.055	-2.7	101	0.00	7.52
34	M	acetonitrile	0.041	0.038	7.3	93	0.00	7.41
35	M	iodomethane	0.945	1.007	-6.6	104	0.00	7.30
36	M	iso-butyl alcohol		----------NA----------				
37	M	carbon disulfide	1.949	1.970	-1.1	99	0.00	7.47

Initial Calibration Verification

Job Number: JB55929 **Sample:** VE9226-ICV9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210301.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

38	M	methylene chloride	0.595	0.621	-4.4	102	0.00	7.69
39	m	1-chloropropane	1.012	1.031	-1.9	100	0.00	7.75
40	M	methyl acetate	0.466	0.464	0.4	99	0.00	7.48
41	M	methyl tert butyl ether	1.650	1.752	-6.2	104	0.00	8.05
42	M	trans-1,2-dichloroethene	0.560	0.576	-2.9	101	0.00	8.09
43	M	di-isopropyl ether	1.918	2.100	-9.5	106	0.00	8.64
44	M	ethyl tert-butyl ether	1.653	1.931	-16.8	121	0.00	9.10
45	M	2-butanone	0.058	0.061	-5.2	106	0.00	9.28
46	M	1,1-dichloroethane	1.022	1.063	-4.0	102	0.00	8.62
47	M	chloroprene	0.776	0.846	-9.0	106	0.00	8.75
48	M	acrylonitrile	0.223	0.231	-3.6	101	0.00	7.95
49	M	vinyl acetate	0.090	0.107	-18.9	117	0.00	8.59
50	M	ethyl acetate	0.075	0.085	-13.3	105	0.00	9.31
51	M	2,2-dichloropropane	0.805	0.786	2.4	96	0.00	9.37
52	M	cis-1,2-dichloroethene	0.606	0.617	-1.8	101	0.00	9.35
53	m	methyl acrylate	0.521	0.516	1.0	103	0.00	9.39
54	M	propionitrile	0.082	0.088	-7.3	103	0.00	9.33
55	M	bromochloromethane	0.304	0.302	0.7	101	0.00	9.65
56	M	tetrahydrofuran	0.216	0.215	0.5	103	0.00	9.71
57	M	chloroform	0.943	0.974	-3.3	102	0.00	9.70
58	m	t-butyl formate	0.537	0.567	-5.6	105	0.00	9.74
59	M	Iso-octane	1.857	2.042	-10.0	110	0.00	10.47
60	S	dibromofluoromethane (s)	0.497	0.498	-0.2	101	0.00	9.89
61	S	1,2-dichloroethane-d4 (s)	0.563	0.570	-1.2	100	0.00	10.30
62	M	freon 113	0.382	0.429	-12.3	112	0.00	7.02
63	M	methacrylonitrile	0.361	0.374	-3.6	101	0.00	9.54
64	M	1,1,1-trichloroethane	0.817	0.846	-3.5	103	0.00	9.99
65	M	tert-amyl methyl ether	1.687	1.890	-12.0	111	0.00	10.46
66	I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	10.76
67	M	Di-isobutylene		----------NA----------				
68	M	tert amyl alcohol		----------NA----------				
69	M	epichlorohydrin	0.038	0.039	-2.6	99	0.00	12.00
70	M	n-butyl alcohol	0.010	0.010	0.0	98	0.00	10.84
71	M	tert-amyl ethyl ether		----------NA----------				
72	M	carbon tetrachloride	0.487	0.503	-3.3	101	0.00	10.22
73	M	1,1-dichloropropene	0.480	0.488	-1.7	97	0.00	10.17
74	M	hexane	0.422	0.502	-19.0	122	0.00	8.42
75	M	benzene	1.453	1.560	-7.4	103	0.00	10.42
76	M	heptane	0.237	0.275	-16.0	118	0.00	10.62
77	M	isopropyl acetate	0.729	0.792	-8.6	107	0.00	10.30
78	M	1,2-dichloroethane	0.464	0.493	-6.2	102	0.00	10.39
79		ethyl acrylate	0.483	0.501	-3.7	103	0.00	11.09
80	M	trichloroethene	0.358	0.382	-6.7	102	0.00	11.14
81	M	2-nitropropane		----------NA----------				
82	M	2-chloroethyl vinyl ether	0.218	0.231	-6.0	103	0.00	11.89
83	M	methylcyclohexane	0.567	0.656	-15.7	113	0.00	11.40
84	M	methyl methacrylate	0.377	0.417	-10.6	107	0.00	11.37
85	M	1,2-dichloropropane	0.393	0.423	-7.6	104	0.00	11.37
86	M	dibromomethane	0.223	0.238	-6.7	103	0.00	11.53
87	M	bromodichloromethane	0.491	0.518	-5.5	101	0.00	11.66
88	M	cis-1,3-dichloropropene	0.611	0.603	1.3	94	0.00	12.14
89	S	toluene-d8 (s)	1.330	1.323	0.5	102	0.00	12.47
90	M	4-methyl-2-pentanone	0.158	0.162	-2.5	103	0.00	12.22
91	M	toluene	0.914	0.960	-5.0	102	0.00	12.55
92	M	3-methyl-1-butanol	0.017	0.018	-5.9	100	0.00	12.23
		----------	True	Calc.	% Drift	----------		
93	M	trans-1,3-dichloropropene	50.000	49.100	1.8	100	0.00	12.71

Initial Calibration Verification

Job Number: JB55929 **Sample:** VE9226-ICV9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210301.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

			AvgRF	CCRF	% Dev			
94	M	ethyl methacrylate	0.482	0.511	-6.0	101	0.00	12.72
95	M	1,1,2-trichloroethane	0.286	0.303	-5.9	104	0.00	12.94
96	M	2-hexanone	0.134	0.144	-7.5	104	0.00	13.12
97	I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	14.09
98	M	cyclohexanone	0.029	0.018	37.9#	64	0.00	15.29
99	M	tetrachloroethene	0.446	0.465	-4.3	103	0.00	13.20
100	M	1,3-dichloropropane	0.623	0.644	-3.4	101	0.00	13.14
101	M	butyl acetate	0.257	0.286	-11.3	105	0.00	13.22
102	m	3,3-dimethyl-1-butanol	0.045	0.047	-4.4	98	0.00	13.31
103	M	dibromochloromethane	0.425	0.452	-6.4	102	0.00	13.44
104	M	1,2-dibromoethane	0.364	0.389	-6.9	102	0.00	13.61
105	M	n-butyl ether		NA				
106	M	chlorobenzene	1.095	1.174	-7.2	103	0.00	14.13
107	M	1,1,1,2-tetrachloroethane	0.424	0.435	-2.6	99	0.00	14.19
108	M	ethylbenzene	1.912	2.021	-5.7	101	0.00	14.19
109	M	m,p-xylene	0.723	0.775	-7.2	102	0.00	14.31
110	M	o-xylene	0.745	0.772	-3.6	101	0.00	14.77
111	M	butyl acrylate		NA				
112	M	styrene	1.228	1.335	-8.7	103	0.00	14.77
113	M	bromoform	0.315	0.333	-5.7	102	0.00	15.05
114	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	16.67
115	M	isopropylbenzene	3.547	3.645	-2.8	101	0.00	15.15
116	S	4-bromofluorobenzene (s)	1.047	0.987	5.7	101	0.00	15.37
117	M	bromobenzene	0.947	0.975	-3.0	101	0.00	15.59
118	M	1,1,2,2-tetrachloroethane	0.959	0.958	0.1	98	0.00	15.44
119	M	trans-1,4-dichloro-2-bute	0.229	0.245	-7.0	102	0.00	15.49
120	M	1,2,3-trichloropropane	0.245	0.248	-1.2	99	0.00	15.53
121	M	n-propylbenzene	3.919	4.300	-9.7	106	0.00	15.61
122	M	p-ethyltoluene		NA				
123	M	2-chlorotoluene	0.869	0.891	-2.5	101	0.00	15.77
124	M	4-chlorotoluene	2.485	2.570	-3.4	100	0.00	15.87
125	M	1,3,5-trimethylbenzene	2.991	3.083	-3.1	101	0.00	15.77
126	M	tert-butylbenzene	2.583	2.669	-3.3	101	0.00	16.16
127	M	pentachloroethane	0.619	0.642	-3.7	102	0.00	16.24
128	M	1,2,4-trimethylbenzene	2.897	3.130	-8.0	104	0.00	16.21
129	M	sec-butylbenzene	3.724	3.899	-4.7	100	0.00	16.40
130	M	1,3-dichlorobenzene	1.712	1.822	-6.4	101	0.00	16.61
131	M	p-isopropyltoluene	3.144	3.386	-7.7	102	0.00	16.53
132	M	1,4-dichlorobenzene	1.766	1.878	-6.3	102	0.00	16.70
133		benzyl chloride	1.583	1.768	-11.7	102	0.00	16.80
134	M	p-diethylbenzene		NA				
135	M	1,2-dichlorobenzene	1.697	1.793	-5.7	102	0.00	17.13
136	M	n-butylbenzene	1.529	1.602	-4.8	103	0.00	16.99
137	M	1,2,4,5-tetramethylbenzen		NA				
138	M	1,2-dibromo-3-chloropropa	0.151	0.159	-5.3	101	0.00	17.95
139	m	1,3,5-trichlorobenzene	1.281	1.385	-8.1	104	0.00	18.19
			True	Calc.	% Drift			
140	M	1,2,4-trichlorobenzene	50.000	50.176	-0.4	101	0.00	18.90
			AvgRF	CCRF	% Dev			
141	M	hexachlorobutadiene	0.569	0.589	-3.5	99	0.00	19.05
			True	Calc.	% Drift			
142	M	naphthalene	50.000	49.731	0.5	100	0.00	19.21
			AvgRF	CCRF	% Dev			

Initial Calibration Verification

Job Number: JB55929 **Sample:** VE9226-ICV9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210301.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
143     MMT                                  ----------NA----------

            ----------------------- True    Calc.   % Drift  ------------
144 M   1,2,3-trichlorobenzene     50.000  50.576     -1.2  101   0.00   19.49

            ----------------------- AvgRF   CCRF     % Dev   -------------
145 M   hexachloroethane            0.589   0.629     -6.8  102   0.00   17.45
146 M   Cyclohexane                 1.070   1.052      1.7   97   0.00   10.10
147     ethyleinimine                       ----------NA----------
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range               SPCC's out = 0  CCC's out = 0
     E210296.D  ME9226.M         Fri Dec 06 10:38:15 2013   RPT1
```

6.7.2

6

Initial Calibration Verification

Job Number: JB55929 **Sample:** VE9254-ICV9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210870.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E210870.D                    Vial: 36
Acq On    : 19 Dec 2013   3:42 am                     Operator: KingC
Sample    : icv9226-50                                Inst    : MSE
Misc      : MS60293,VE9254,5,,100,5,1                 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\ME9226.M (RTE Integrator)
Title        : SW846  8260B,ZB624 60m x 0.25mm x 1.4um
Last Update  : Thu Dec 19 11:44:23 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.010  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	117	0.00	7.63
		----------	True	Calc.	% Drift	----------		
2	M	1,4-dioxane		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
3	M	tertiary butyl alcohol		----------NA----------				
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	98	0.00	9.84
6		freon 23		----------NA----------				
7		freon 115		----------NA----------				
8		freon 143a		----------NA----------				
9		freon 152a		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane		----------NA----------				
12	M	dichlorodifluoromethane		----------NA----------				
13		freon 114		----------NA----------				
14		freon 142b		----------NA----------				
15	M	chloromethane		----------NA----------				
16	M	vinyl chloride		----------NA----------				
17		1,3-Butadiene		----------NA----------				
18	M	acetaldehyde		----------NA----------				
19	M	bromomethane		----------NA----------				
20	M	chloroethane		----------NA----------				
21	M	vinyl bromide		----------NA----------				
22	M	trichlorofluoromethane		----------NA----------				
23	M	pentane		----------NA----------				
24	M	ethyl ether		----------NA----------				
25		freon 141b		----------NA----------				
26		freon 123a		----------NA----------				
27		freon 123		----------NA----------				
28	m	2-chloropropane		----------NA----------				
29	M	acrolein		----------NA----------				
30	M	1,1-dichloroethene		----------NA----------				
31	M	isopropyl alcohol		----------NA----------				
32	M	acetone		----------NA----------				
33	M	allyl chloride		----------NA----------				
34	M	acetonitrile		----------NA----------				
35	M	iodomethane		----------NA----------				
36	M	iso-butyl alcohol		----------NA----------				
37	M	carbon disulfide		----------NA----------				

Initial Calibration Verification

Job Number: JB55929 **Sample:** VE9254-ICV9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210870.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

38	M	methylene chloride		----------NA----------				
39	m	1-chloropropane		----------NA----------				
40	M	methyl acetate		----------NA----------				
41	M	methyl tert butyl ether		----------NA----------				
42	M	trans-1,2-dichloroethene		----------NA----------				
43	M	di-isopropyl ether		----------NA----------				
44	M	ethyl tert-butyl ether		----------NA----------				
45	M	2-butanone		----------NA----------				
46	M	1,1-dichloroethane		----------NA----------				
47	M	chloroprene		----------NA----------				
48	M	acrylonitrile		----------NA----------				
49	M	vinyl acetate		----------NA----------				
50	M	ethyl acetate		----------NA----------				
51	M	2,2-dichloropropane		----------NA----------				
52	M	cis-1,2-dichloroethene		----------NA----------				
53	m	methyl acrylate		----------NA----------				
54	M	propionitrile		----------NA----------				
55	M	bromochloromethane		----------NA----------				
56	M	tetrahydrofuran		----------NA----------				
57	M	chloroform		----------NA----------				
58	m	t-butyl formate		----------NA----------				
59	M	Iso-octane		----------NA----------				
60	S	dibromofluoromethane (s)	0.497	0.462	7.0	87	0.00	9.89
61	S	1,2-dichloroethane-d4 (s)	0.563	0.526	6.6	86	0.00	10.30
62	M	freon 113		----------NA----------				
63	M	methacrylonitrile		----------NA----------				
64	M	1,1,1-trichloroethane		----------NA----------				
65	M	tert-amyl methyl ether		----------NA----------				
66	I	1,4-difluorobenzene	1.000	1.000	0.0	92	0.00	10.76
67	M	Di-isobutylene		----------NA----------				
68	M	tert amyl alcohol		----------NA----------				
69	M	epichlorohydrin		----------NA----------				
70	M	n-butyl alcohol		----------NA----------				
71	M	tert-amyl ethyl ether		----------NA----------				
72	M	carbon tetrachloride		----------NA----------				
73	M	1,1-dichloropropene		----------NA----------				
74	M	hexane		----------NA----------				
75	M	benzene		----------NA----------				
76	M	heptane		----------NA----------				
77	M	isopropyl acetate		----------NA----------				
78	M	1,2-dichloroethane		----------NA----------				
79		ethyl acrylate		----------NA----------				
80	M	trichloroethene		----------NA----------				
81	M	2-nitropropane		----------NA----------				
82	M	2-chloroethyl vinyl ether		----------NA----------				
83	M	methylcyclohexane		----------NA----------				
84	M	methyl methacrylate		----------NA----------				
85	M	1,2-dichloropropane		----------NA----------				
86	M	dibromomethane		----------NA----------				
87	M	bromodichloromethane		----------NA----------				
88	M	cis-1,3-dichloropropene		----------NA----------				
89	S	toluene-d8 (s)	1.330	1.271	4.4	87	0.00	12.46
90	M	4-methyl-2-pentanone		----------NA----------				
91	M	toluene		----------NA----------				
92	M	3-methyl-1-butanol		----------NA----------				
		----------	True	Calc.	% Drift	----------		
93	M	trans-1,3-dichloropropene		----------NA----------				

Initial Calibration Verification

Job Number: JB55929 **Sample:** VE9254-ICV9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210870.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

			AvgRF	CCRF	% Dev			
94	M	ethyl methacrylate		NA				
95	M	1,1,2-trichloroethane		NA				
96	M	2-hexanone		NA				
97	I	chlorobenzene-d5	1.000	1.000	0.0	94	0.00	14.10
98	M	cyclohexanone		NA				
99	M	tetrachloroethene		NA				
100	M	1,3-dichloropropane		NA				
101	M	butyl acetate		NA				
102	m	3,3-dimethyl-1-butanol		NA				
103	M	dibromochloromethane		NA				
104	M	1,2-dibromoethane		NA				
105	M	n-butyl ether		NA				
106	M	chlorobenzene		NA				
107	M	1,1,1,2-tetrachloroethane		NA				
108	M	ethylbenzene		NA				
109	M	m,p-xylene		NA				
110	M	o-xylene		NA				
111	M	butyl acrylate		NA				
112	M	styrene		NA				
113	M	bromoform		NA				
114	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	87	0.00	16.67
115	M	isopropylbenzene		NA				
116	S	4-bromofluorobenzene (s)	1.047	0.983	6.1	85	0.00	15.37
117	M	bromobenzene		NA				
118	M	1,1,2,2-tetrachloroethane		NA				
119	M	trans-1,4-dichloro-2-bute		NA				
120	M	1,2,3-trichloropropane		NA				
121	M	n-propylbenzene		NA				
122	M	p-ethyltoluene	3.871	3.921	-1.3	90	-0.05	15.72
123	M	2-chlorotoluene		NA				
124	M	4-chlorotoluene		NA				
125	M	1,3,5-trimethylbenzene		NA				
126	M	tert-butylbenzene		NA				
127	M	pentachloroethane		NA				
128	M	1,2,4-trimethylbenzene		NA				
129	M	sec-butylbenzene		NA				
130	M	1,3-dichlorobenzene		NA				
131	M	p-isopropyltoluene		NA				
132	M	1,4-dichlorobenzene		NA				
133		benzyl chloride		NA				
134	M	p-diethylbenzene	2.019	2.073	-2.7	90	-0.04	16.95
135	M	1,2-dichlorobenzene		NA				
136	M	n-butylbenzene		NA				
137	M	1,2,4,5-tetramethylbenzen	3.227	3.302	-2.3	89	-0.13	17.81
138	M	1,2-dibromo-3-chloropropa		NA				
139	m	1,3,5-trichlorobenzene		NA				
			True	Calc.	% Drift			
140	M	1,2,4-trichlorobenzene		NA				
			AvgRF	CCRF	% Dev			
141	M	hexachlorobutadiene		NA				
			True	Calc.	% Drift			
142	M	naphthalene		NA				
			AvgRF	CCRF	% Dev			

6.7.3

6

Initial Calibration Verification

Job Number: JB55929 **Sample:** VE9254-ICV9226
Account: ENVNJB EnviroTrac **Lab FileID:** E210870.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
143     MMT                                  ----------NA----------

            ----------------------- True    Calc.   % Drift  ------------
144 M   1,2,3-trichlorobenzene               ----------NA----------

            ----------------------- AvgRF   CCRF     % Dev   -------------
145 M   hexachloroethane                     ----------NA----------
146 M   Cyclohexane                          ----------NA----------
147     ethyleinimine                        ----------NA----------
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range               SPCC's out = 0  CCC's out = 0
     E210296.D  ME9226.M         Thu Dec 19 11:46:58 2013   RPT1
```

6.7.3

6

Continuing Calibration Summary

Job Number: JB55929 **Sample:** VE9266-CC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E211165.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E211165.D Vial: 6
Acq On : 27 Dec 2013 12:19 pm Operator: KingC
Sample : cc9226-20 Inst : MSE
Misc : MS60673,VE9266,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\ME9226.M (RTE Integrator)
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Dec 19 11:44:23 2013
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	99	-0.01	7.61
		----------	True	Calc.	% Drift	----------		
2	M	1,4-dioxane	500.000	517.231	-3.4	115	0.00	11.48
		----------	AvgRF	CCRF	% Dev	----------		
3	M	tertiary butyl alcohol	1.270	1.236	2.7	94	0.00	7.74
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	90	0.00	9.85
6		freon 23		----------NA----------				
7		freon 115		----------NA----------				
8		freon 143a		----------NA----------				
9		freon 152a		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane	0.541	0.491	9.2	77	0.00	4.30
12	M	dichlorodifluoromethane	0.571	0.598	-4.7	90	0.00	4.29
13		freon 114		----------NA----------				
14		freon 142b		----------NA----------				
15	M	chloromethane	0.871	0.730	16.2	70	0.00	4.63
16	M	vinyl chloride	0.804	0.701	12.8	74	0.02	4.92
17		1,3-Butadiene		----------NA----------				
18	M	acetaldehyde		----------NA----------				
19	M	bromomethane	0.541	0.491	9.2	79	0.01	5.56
20	M	chloroethane	0.390	0.352	9.7	75	0.00	5.72
21	M	vinyl bromide		----------NA----------				
22	M	trichlorofluoromethane	0.816	0.789	3.3	79	0.00	6.22
23	M	pentane		----------NA----------				
24	M	ethyl ether	0.308	0.256	16.9	68	0.00	6.59
25		freon 141b		----------NA----------				
26		freon 123a		----------NA----------				
27		freon 123		----------NA----------				
28	m	2-chloropropane	1.013	0.825	18.6	67	0.00	6.78
29	M	acrolein	0.127	0.098	22.8#	66	0.00	6.80
30	M	1,1-dichloroethene	0.507	0.467	7.9	76	0.00	7.03
31	M	isopropyl alcohol		----------NA----------				
32	M	acetone	0.049	0.041	16.3	74	0.00	7.01
33	M	allyl chloride	1.027	0.767	25.3#	64	0.00	7.52
34	M	acetonitrile	0.041	0.034	17.1	70	-0.01	7.40
35	M	iodomethane	0.945	0.895	5.3	79	0.00	7.29
36	M	iso-butyl alcohol		----------NA----------				
37	M	carbon disulfide	1.949	1.620	16.9	69	0.00	7.46

Continuing Calibration Summary

Job Number: JB55929 **Sample:** VE9266-CC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E211165.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

38	M	methylene chloride	0.595	0.529	11.1	74	0.00	7.69
39	m	1-chloropropane	1.012	0.809	20.1#	67	0.00	7.75
40	M	methyl acetate	0.466	0.377	19.1	69	0.00	7.48
41	M	methyl tert butyl ether	1.650	1.535	7.0	77	0.00	8.04
42	M	trans-1,2-dichloroethene	0.560	0.502	10.4	74	0.00	8.09
43	M	di-isopropyl ether	1.918	1.633	14.9	71	0.00	8.63
44	M	ethyl tert-butyl ether	1.653	1.575	4.7	85	0.00	9.09
45	M	2-butanone	0.058	0.047	19.0	71	0.00	9.27
46	M	1,1-dichloroethane	1.022	0.867	15.2	70	0.00	8.62
47	M	chloroprene	0.776	0.695	10.4	76	0.00	8.75
48	M	acrylonitrile	0.223	0.191	14.3	71	0.00	7.96
49	M	vinyl acetate	0.090	0.077	14.4	76	0.00	8.60
50	M	ethyl acetate	0.075	0.062	17.3	69	0.00	9.32
51	M	2,2-dichloropropane	0.805	0.720	10.6	73	0.00	9.36
52	M	cis-1,2-dichloroethene	0.606	0.546	9.9	76	0.00	9.35
53	m	methyl acrylate	0.521	0.430	17.5	70	0.00	9.40
54	M	propionitrile	0.082	0.076	7.3	75	0.00	9.33
55	M	bromochloromethane	0.304	0.273	10.2	79	0.00	9.64
56	M	tetrahydrofuran	0.216	0.180	16.7	73	0.00	9.71
57	M	chloroform	0.943	0.872	7.5	77	0.00	9.70
58	m	t-butyl formate	0.537	0.460	14.3	76	0.00	9.74
59	M	Iso-octane	1.857	1.725	7.1	81	0.00	10.46
60	S	dibromofluoromethane (s)	0.497	0.468	5.8	81	0.00	9.89
61	S	1,2-dichloroethane-d4 (s)	0.563	0.522	7.3	78	0.00	10.30
62	M	freon 113	0.382	0.334	12.6	76	0.00	7.01
63	M	methacrylonitrile	0.361	0.310	14.1	72	0.00	9.54
64	M	1,1,1-trichloroethane	0.817	0.766	6.2	78	0.00	9.99
65	M	tert-amyl methyl ether	1.687	1.581	6.3	80	0.00	10.46
66	I	1,4-difluorobenzene	1.000	1.000	0.0	85	0.00	10.76
67	M	Di-isobutylene		----------NA----------				
68	M	tert amyl alcohol		----------NA----------				
69	M	epichlorohydrin	0.038	0.037	2.6	77	0.00	12.01
70	M	n-butyl alcohol	0.010	0.012	-20.0	91	0.00	10.85
71	M	tert-amyl ethyl ether		----------NA----------				
72	M	carbon tetrachloride	0.487	0.470	3.5	77	0.00	10.21
73	M	1,1-dichloropropene	0.480	0.459	4.4	74	0.00	10.17
74	M	hexane	0.422	0.387	8.3	78	0.00	8.42
75	M	benzene	1.453	1.403	3.4	74	0.00	10.42
76	M	heptane	0.237	0.215	9.3	75	0.00	10.62
77	M	isopropyl acetate	0.729	0.668	8.4	73	0.00	10.30
78	M	1,2-dichloroethane	0.464	0.451	2.8	75	0.00	10.40
79		ethyl acrylate		----------NA----------				
80	M	trichloroethene	0.358	0.353	1.4	75	0.00	11.13
81	M	2-nitropropane		----------NA----------				
82	M	2-chloroethyl vinyl ether	0.218	0.155	28.9#	58	0.00	11.89
83	M	methylcyclohexane	0.567	0.552	2.6	79	0.00	11.39
84	M	methyl methacrylate	0.377	0.341	9.5	73	0.00	11.37
85	M	1,2-dichloropropane	0.393	0.350	10.9	69	0.00	11.37
86	M	dibromomethane	0.223	0.212	4.9	75	0.00	11.53
87	M	bromodichloromethane	0.491	0.472	3.9	75	0.00	11.66
88	M	cis-1,3-dichloropropene	0.611	0.575	5.9	72	0.00	12.13
89	S	toluene-d8 (s)	1.330	1.301	2.2	80	0.00	12.47
90	M	4-methyl-2-pentanone	0.158	0.137	13.3	70	0.00	12.22
91	M	toluene	0.914	0.882	3.5	75	0.00	12.54
92	M	3-methyl-1-butanol	0.017	0.020	-17.6	87	0.00	12.23
		----------	True	Calc.	% Drift	----------		
93	M	trans-1,3-dichloropropene	20.000	17.044	14.8	72	0.00	12.71

Continuing Calibration Summary

Job Number: JB55929 **Sample:** VE9266-CC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E211165.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

			AvgRF	CCRF	% Dev			
94	M	ethyl methacrylate	0.482	0.425	11.8	68	0.00	12.72
95	M	1,1,2-trichloroethane	0.286	0.269	5.9	74	0.00	12.94
96	M	2-hexanone	0.134	0.116	13.4	71	0.00	13.13
97	I	chlorobenzene-d5	1.000	1.000	0.0	85	0.00	14.09
98	M	cyclohexanone	0.029	0.022	24.1#	62	0.00	15.29
99	M	tetrachloroethene	0.446	0.463	-3.8	81	0.00	13.19
100	M	1,3-dichloropropane	0.623	0.561	10.0	71	0.00	13.14
101	M	butyl acetate	0.257	0.240	6.6	75	0.00	13.21
102	m	3,3-dimethyl-1-butanol	0.045	0.051	-13.3	86	0.00	13.30
103	M	dibromochloromethane	0.425	0.422	0.7	78	0.00	13.43
104	M	1,2-dibromoethane	0.364	0.361	0.8	76	0.00	13.61
105	M	n-butyl ether		NA				
106	M	chlorobenzene	1.095	1.094	0.1	76	0.00	14.13
107	M	1,1,1,2-tetrachloroethane	0.424	0.419	1.2	78	0.00	14.18
108	M	ethylbenzene	1.912	1.869	2.2	75	0.00	14.19
109	M	m,p-xylene	0.723	0.733	-1.4	78	0.00	14.31
110	M	o-xylene	0.745	0.727	2.4	76	0.00	14.77
111	M	butyl acrylate		NA				
112	M	styrene	1.228	1.198	2.4	75	0.00	14.77
113	M	bromoform	0.315	0.302	4.1	77	0.00	15.05
114	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	83	0.00	16.66
115	M	isopropylbenzene	3.547	3.636	-2.5	77	0.00	15.15
116	S	4-bromofluorobenzene (s)	1.047	0.982	6.2	78	0.00	15.36
117	M	bromobenzene	0.947	0.961	-1.5	78	0.00	15.59
118	M	1,1,2,2-tetrachloroethane	0.959	0.949	1.0	74	0.00	15.44
119	M	trans-1,4-dichloro-2-bute	0.229	0.183	20.1#	62	0.00	15.49
120	M	1,2,3-trichloropropane	0.245	0.245	0.0	76	0.00	15.52
121	M	n-propylbenzene	3.919	3.930	-0.3	75	0.00	15.60
122	M	p-ethyltoluene		NA				
123	M	2-chlorotoluene	0.869	0.869	0.0	76	0.00	15.77
124	M	4-chlorotoluene	2.485	2.476	0.4	75	0.00	15.87
125	M	1,3,5-trimethylbenzene	2.991	3.014	-0.8	76	0.00	15.77
126	M	tert-butylbenzene	2.583	2.627	-1.7	79	0.00	16.16
127	M	pentachloroethane	0.619	0.655	-5.8	81	0.00	16.24
128	M	1,2,4-trimethylbenzene	2.897	2.954	-2.0	76	0.00	16.20
129	M	sec-butylbenzene	3.724	3.756	-0.9	75	0.00	16.40
130	M	1,3-dichlorobenzene	1.712	1.714	-0.1	75	0.00	16.61
131	M	p-isopropyltoluene	3.144	3.113	1.0	74	0.00	16.53
132	M	1,4-dichlorobenzene	1.766	1.742	1.4	74	0.00	16.70
133		benzyl chloride	1.583	1.558	1.6	75	0.00	16.80
134	M	p-diethylbenzene		NA				
135	M	1,2-dichlorobenzene	1.697	1.681	0.9	76	0.00	17.12
136	M	n-butylbenzene	1.529	1.355	11.4	71	0.00	16.98
137	M	1,2,4,5-tetramethylbenzen		NA				
138	M	1,2-dibromo-3-chloropropa	0.151	0.139	7.9	72	0.00	17.94
139	m	1,3,5-trichlorobenzene	1.281	1.214	5.2	75	0.00	18.19
			True	Calc.	% Drift			
140	M	1,2,4-trichlorobenzene	20.000	16.162	19.2	71	0.00	18.90
			AvgRF	CCRF	% Dev			
141	M	hexachlorobutadiene	0.569	0.625	-9.8	85	0.00	19.05
			True	Calc.	% Drift			
142	M	naphthalene	20.000	15.527	22.4#	68	0.00	19.21
			AvgRF	CCRF	% Dev			

Continuing Calibration Summary

Job Number: JB55929 **Sample:** VE9266-CC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E211165.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
143     MMT                                  ----------NA----------

            ----------------------- True    Calc.   % Drift  ------------
144 M   1,2,3-trichlorobenzene     20.000  15.734     21.3#  69   0.00   19.49

            ----------------------- AvgRF   CCRF     % Dev   -------------
145 M   hexachloroethane            0.589   0.605     -2.7   77   0.00   17.44
146 M   Cyclohexane                 1.070   1.054      1.5   73   0.00   10.10
147     ethyleinimine                       ----------NA----------
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range               SPCC's out = 0  CCC's out = 0
     E210295.D  ME9226.M         Fri Dec 27 15:26:11 2013   RPT1
```

6.7.4

6

Continuing Calibration Summary

Job Number: JB55929 **Sample:** VE9269-CC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E211256.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E211256.D Vial: 7
Acq On : 30 Dec 2013 10:52 am Operator: KingC
Sample : cc9226-20 Inst : MSE
Misc : MS60673,VE9269,5,,100,5,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\ME9226.M (RTE Integrator)
Title : SW846 8260B,ZB624 60m x 0.25mm x 1.4um
Last Update : Thu Dec 19 11:44:23 2013
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		Tert Butyl Alcohol-d9	1.000	1.000	0.0	86	-0.01	7.62
		----------	True	Calc.	% Drift	----------		
2	M	1,4-dioxane	500.000	417.275	16.5	82	0.00	11.49
		----------	AvgRF	CCRF	% Dev	----------		
3	M	tertiary butyl alcohol	1.270	1.180	7.1	77	0.00	7.74
4		ethanol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	79	0.00	9.85
6		freon 23		----------NA----------				
7		freon 115		----------NA----------				
8		freon 143a		----------NA----------				
9		freon 152a		----------NA----------				
10	M	chlorotrifluoroethene		----------NA----------				
11	M	chlorodifluoromethane	0.541	0.612	-13.1	85	0.00	4.30
12	M	dichlorodifluoromethane	0.571	0.661	-15.8	87	0.00	4.29
13		freon 114		----------NA----------				
14		freon 142b		----------NA----------				
15	M	chloromethane	0.871	0.840	3.6	70	0.00	4.63
16	M	vinyl chloride	0.804	0.786	2.2	73	0.02	4.91
17		1,3-Butadiene		----------NA----------				
18	M	acetaldehyde		----------NA----------				
19	M	bromomethane	0.541	0.533	1.5	75	0.01	5.56
20	M	chloroethane	0.390	0.374	4.1	70	0.00	5.72
21	M	vinyl bromide		----------NA----------				
22	M	trichlorofluoromethane	0.816	0.907	-11.2	80	0.00	6.23
23	M	pentane		----------NA----------				
24	M	ethyl ether	0.308	0.272	11.7	64	-0.01	6.59
25		freon 141b		----------NA----------				
26		freon 123a		----------NA----------				
27		freon 123		----------NA----------				
28	m	2-chloropropane	1.013	0.919	9.3	66	0.00	6.79
29	M	acrolein	0.127	0.104	18.1	61	0.00	6.80
30	M	1,1-dichloroethene	0.507	0.476	6.1	68	0.00	7.03
31	M	isopropyl alcohol		----------NA----------				
32	M	acetone	0.049	0.039	20.4#	62	0.00	7.01
33	M	allyl chloride	1.027	0.732	28.7#	54	0.00	7.52
34	M	acetonitrile	0.041	0.055	-34.1#	100	0.00	7.41
35	M	iodomethane	0.945	0.914	3.3	71	0.00	7.30
36	M	iso-butyl alcohol		----------NA----------				
37	M	carbon disulfide	1.949	1.674	14.1	62	0.00	7.47

Continuing Calibration Summary

Job Number: JB55929 **Sample:** VE9269-CC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E211256.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

38	M	methylene chloride	0.595	0.533	10.4	65	0.00	7.69
39	m	1-chloropropane	1.012	0.935	7.6	68	0.00	7.75
40	M	methyl acetate	0.466	0.451	3.2	73	0.01	7.49
41	M	methyl tert butyl ether	1.650	1.643	0.4	72	0.00	8.05
42	M	trans-1,2-dichloroethene	0.560	0.506	9.6	65	0.00	8.09
43	M	di-isopropyl ether	1.918	1.859	3.1	71	0.00	8.63
44	M	ethyl tert-butyl ether	1.653	1.763	-6.7	83	0.00	9.09
45	M	2-butanone	0.058	0.052	10.3	68	0.00	9.28
46	M	1,1-dichloroethane	1.022	0.926	9.4	65	0.00	8.63
47	M	chloroprene	0.776	0.803	-3.5	77	0.00	8.75
48	M	acrylonitrile	0.223	0.196	12.1	64	0.00	7.96
49	M	vinyl acetate	0.090	0.081	10.0	70	0.00	8.59
50	M	ethyl acetate	0.075	0.071	5.3	70	0.00	9.32
51	M	2,2-dichloropropane	0.805	0.828	-2.9	74	0.00	9.37
52	M	cis-1,2-dichloroethene	0.606	0.556	8.3	68	0.00	9.35
53	m	methyl acrylate	0.521	0.447	14.2	64	0.00	9.40
54	M	propionitrile	0.082	0.079	3.7	68	0.00	9.34
55	M	bromochloromethane	0.304	0.279	8.2	71	0.00	9.65
56	M	tetrahydrofuran	0.216	0.197	8.8	70	0.00	9.71
57	M	chloroform	0.943	0.928	1.6	72	0.00	9.70
58	m	t-butyl formate	0.537	0.516	3.9	75	0.00	9.74
59	M	Iso-octane	1.857	1.945	-4.7	80	0.00	10.46
60	S	dibromofluoromethane (s)	0.497	0.484	2.6	74	0.00	9.89
61	S	1,2-dichloroethane-d4 (s)	0.563	0.602	-6.9	79	0.00	10.30
62	M	freon 113	0.382	0.372	2.6	74	0.00	7.02
63	M	methacrylonitrile	0.361	0.336	6.9	68	0.00	9.54
64	M	1,1,1-trichloroethane	0.817	0.824	-0.9	74	0.00	9.99
65	M	tert-amyl methyl ether	1.687	1.691	-0.2	75	0.00	10.46
66	I	1,4-difluorobenzene	1.000	1.000	0.0	76	0.00	10.76
67	M	Di-isobutylene		----------NA----------				
68	M	tert amyl alcohol		----------NA----------				
69	M	epichlorohydrin	0.038	0.036	5.3	68	0.00	12.00
70	M	n-butyl alcohol	0.010	0.011	-10.0	73	0.00	10.85
71	M	tert-amyl ethyl ether		----------NA----------				
72	M	carbon tetrachloride	0.487	0.495	-1.6	73	0.00	10.21
73	M	1,1-dichloropropene	0.480	0.487	-1.5	70	0.00	10.17
74	M	hexane	0.422	0.432	-2.4	78	0.00	8.42
75	M	benzene	1.453	1.393	4.1	66	0.00	10.42
76	M	heptane	0.237	0.246	-3.8	76	0.00	10.62
77	M	isopropyl acetate	0.729	0.733	-0.5	72	0.00	10.30
78	M	1,2-dichloroethane	0.464	0.503	-8.4	75	0.00	10.39
79		ethyl acrylate		----------NA----------				
80	M	trichloroethene	0.358	0.349	2.5	67	0.00	11.14
81	M	2-nitropropane		----------NA----------				
82	M	2-chloroethyl vinyl ether	0.218	0.177	18.8	60	0.00	11.89
83	M	methylcyclohexane	0.567	0.579	-2.1	74	0.00	11.40
84	M	methyl methacrylate	0.377	0.357	5.3	68	0.00	11.38
85	M	1,2-dichloropropane	0.393	0.356	9.4	63	0.00	11.37
86	M	dibromomethane	0.223	0.218	2.2	68	0.00	11.53
87	M	bromodichloromethane	0.491	0.502	-2.2	72	0.00	11.66
88	M	cis-1,3-dichloropropene	0.611	0.603	1.3	68	0.00	12.13
89	S	toluene-d8 (s)	1.330	1.285	3.4	70	0.00	12.46
90	M	4-methyl-2-pentanone	0.158	0.139	12.0	64	0.00	12.22
91	M	toluene	0.914	0.899	1.6	68	0.00	12.54
92	M	3-methyl-1-butanol	0.017	0.018	-5.9	71	0.00	12.22
		----------	True	Calc.	% Drift	----------		
93	M	trans-1,3-dichloropropene	20.000	18.604	7.0	71	0.00	12.71

6.7.5

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Continuing Calibration Summary

Job Number: JB55929 **Sample:** VE9269-CC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E211256.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

			AvgRF	CCRF	% Dev			
94	M	ethyl methacrylate	0.482	0.450	6.6	65	0.00	12.72
95	M	1,1,2-trichloroethane	0.286	0.266	7.0	65	0.00	12.94
96	M	2-hexanone	0.134	0.116	13.4	64	0.00	13.13
97	I	chlorobenzene-d5	1.000	1.000	0.0	76	0.00	14.09
98	M	cyclohexanone	0.029	0.028	3.4	70	0.00	15.29
99	M	tetrachloroethene	0.446	0.464	-4.0	73	0.00	13.20
100	M	1,3-dichloropropane	0.623	0.603	3.2	68	0.00	13.14
101	M	butyl acetate	0.257	0.248	3.5	69	0.00	13.22
102	m	3,3-dimethyl-1-butanol	0.045	0.045	0.0	68	0.00	13.30
103	M	dibromochloromethane	0.425	0.430	-1.2	71	0.00	13.44
104	M	1,2-dibromoethane	0.364	0.384	-5.5	72	0.00	13.61
105	M	n-butyl ether		----------NA----------				
106	M	chlorobenzene	1.095	1.112	-1.6	69	0.00	14.13
107	M	1,1,1,2-tetrachloroethane	0.424	0.439	-3.5	73	0.00	14.18
108	M	ethylbenzene	1.912	1.911	0.1	68	0.00	14.19
109	M	m,p-xylene	0.723	0.735	-1.7	70	0.00	14.31
110	M	o-xylene	0.745	0.744	0.1	69	0.00	14.77
111	M	butyl acrylate		----------NA----------				
112	M	styrene	1.228	1.239	-0.9	69	0.00	14.77
113	M	bromoform	0.315	0.302	4.1	69	0.00	15.05
114	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	74	0.00	16.67
115	M	isopropylbenzene	3.547	3.701	-4.3	70	0.00	15.15
116	S	4-bromofluorobenzene (s)	1.047	0.998	4.7	70	0.00	15.36
117	M	bromobenzene	0.947	0.970	-2.4	70	0.00	15.59
118	M	1,1,2,2-tetrachloroethane	0.959	0.960	-0.1	67	0.00	15.44
119	M	trans-1,4-dichloro-2-bute	0.229	0.213	7.0	64	0.00	15.49
120	M	1,2,3-trichloropropane	0.245	0.249	-1.6	69	0.00	15.53
121	M	n-propylbenzene	3.919	4.128	-5.3	70	0.00	15.61
122	M	p-ethyltoluene		----------NA----------				
123	M	2-chlorotoluene	0.869	0.890	-2.4	69	0.00	15.77
124	M	4-chlorotoluene	2.485	2.582	-3.9	70	0.00	15.87
125	M	1,3,5-trimethylbenzene	2.991	3.142	-5.0	71	0.00	15.77
126	M	tert-butylbenzene	2.583	3.220	-24.7#	86	0.00	16.16
127	M	pentachloroethane	0.619	0.663	-7.1	73	0.00	16.24
128	M	1,2,4-trimethylbenzene	2.897	3.089	-6.6	71	0.00	16.21
129	M	sec-butylbenzene	3.724	3.933	-5.6	70	0.00	16.40
130	M	1,3-dichlorobenzene	1.712	1.793	-4.7	70	0.00	16.60
131	M	p-isopropyltoluene	3.144	3.288	-4.6	70	0.00	16.53
132	M	1,4-dichlorobenzene	1.766	1.816	-2.8	69	0.00	16.69
133		benzyl chloride	1.583	1.828	-15.5	79	0.00	16.80
134	M	p-diethylbenzene		----------NA----------				
135	M	1,2-dichlorobenzene	1.697	1.754	-3.4	71	0.00	17.13
136	M	n-butylbenzene	1.529	1.499	2.0	70	0.00	16.99
137	M	1,2,4,5-tetramethylbenzen		----------NA----------				
138	M	1,2-dibromo-3-chloropropa	0.151	0.158	-4.6	73	0.00	17.94
139	m	1,3,5-trichlorobenzene	1.281	1.306	-2.0	72	0.00	18.19
			True	Calc.	% Drift			
140	M	1,2,4-trichlorobenzene	20.000	18.338	8.3	73	0.00	18.90
			AvgRF	CCRF	% Dev			
141	M	hexachlorobutadiene	0.569	0.653	-14.8	79	0.00	19.05
			True	Calc.	% Drift			
142	M	naphthalene	20.000	17.578	12.1	70	0.00	19.21
			AvgRF	CCRF	% Dev			

Continuing Calibration Summary

Job Number: JB55929 **Sample:** VE9269-CC9226
Account: ENVNJB EnviroTrac **Lab FileID:** E211256.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
143     MMT                                  ----------NA----------

            ----------------------- True    Calc.   % Drift  ------------
144 M   1,2,3-trichlorobenzene     20.000  18.179      9.1   72   0.00   19.48

            ----------------------- AvgRF   CCRF     % Dev   -------------
145 M   hexachloroethane            0.589   0.635     -7.8   73   0.00   17.44
146 M   Cyclohexane                 1.070   1.225    -14.5   76   0.00   10.10
147     ethyleinimine                       ----------NA----------
 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range               SPCC's out = 0  CCC's out = 0
     E210295.D  ME9226.M         Mon Dec 30 15:15:11 2013   RPT1
```

6.7.5

6

New Jersey
ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-MB1	2M59554.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	57	29	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	140	29	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	140	46	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	140	48	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	570	35	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	570	35	ug/kg	
95-48-7	2-Methylphenol	ND	57	33	ug/kg	
	3&4-Methylphenol	ND	57	36	ug/kg	
88-75-5	2-Nitrophenol	ND	140	30	ug/kg	
100-02-7	4-Nitrophenol	ND	290	48	ug/kg	
87-86-5	Pentachlorophenol	ND	290	49	ug/kg	
108-95-2	Phenol	ND	57	30	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	140	29	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	140	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	140	27	ug/kg	
83-32-9	Acenaphthene	ND	29	8.3	ug/kg	
208-96-8	Acenaphthylene	ND	29	9.1	ug/kg	
98-86-2	Acetophenone	ND	140	5.0	ug/kg	
120-12-7	Anthracene	ND	29	10	ug/kg	
1912-24-9	Atrazine	ND	57	5.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	29	9.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	29	8.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	29	9.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	29	11	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	29	11	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	57	10	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	57	17	ug/kg	
92-52-4	1,1'-Biphenyl	ND	57	3.3	ug/kg	
100-52-7	Benzaldehyde	ND	140	6.6	ug/kg	
91-58-7	2-Chloronaphthalene	ND	57	8.9	ug/kg	
106-47-8	4-Chloroaniline	ND	140	9.1	ug/kg	
86-74-8	Carbazole	ND	57	13	ug/kg	
105-60-2	Caprolactam	ND	57	9.0	ug/kg	
218-01-9	Chrysene	ND	29	9.7	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	57	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	57	8.6	ug/kg	

Method Blank Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-MB1	2M59554.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	57	8.5	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	57	8.6	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	29	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	29	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	57	7.3	ug/kg	
123-91-1	1,4-Dioxane	ND	29	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	29	9.7	ug/kg	
132-64-9	Dibenzofuran	ND	57	8.5	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	57	6.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	57	14	ug/kg	
84-66-2	Diethyl phthalate	ND	57	9.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	57	10	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	57	25	ug/kg	
206-44-0	Fluoranthene	ND	29	13	ug/kg	
86-73-7	Fluorene	ND	29	9.4	ug/kg	
118-74-1	Hexachlorobenzene	ND	57	9.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	29	7.9	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	290	29	ug/kg	
67-72-1	Hexachloroethane	ND	140	7.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	29	9.9	ug/kg	
78-59-1	Isophorone	ND	57	7.7	ug/kg	
91-57-6	2-Methylnaphthalene	ND	57	16	ug/kg	
88-74-4	2-Nitroaniline	ND	140	13	ug/kg	
99-09-2	3-Nitroaniline	ND	140	11	ug/kg	
100-01-6	4-Nitroaniline	ND	140	11	ug/kg	
91-20-3	Naphthalene	ND	29	7.8	ug/kg	
98-95-3	Nitrobenzene	ND	57	8.3	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	57	7.0	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	140	17	ug/kg	
85-01-8	Phenanthrene	ND	29	13	ug/kg	
129-00-0	Pyrene	ND	29	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	140	8.8	ug/kg	

Method Blank Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-MB1	2M59554.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	83%	13-110%
4165-62-2	Phenol-d5	79%	15-110%
118-79-6	2,4,6-Tribromophenol	75%	20-123%
4165-60-0	Nitrobenzene-d5	81%	10-110%
321-60-8	2-Fluorobiphenyl	80%	17-110%
1718-51-0	Terphenyl-d14	83%	30-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	3.51	5600	ug/kg	J
	Total TIC, Semi-Volatile		0	ug/kg	

Method Blank Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-MB1	Z87457.D	1	12/24/13	EP	12/19/13	OP71561	EZ4373

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	57	29	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	140	29	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	140	46	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	140	48	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	570	35	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	570	35	ug/kg	
95-48-7	2-Methylphenol	ND	57	33	ug/kg	
	3&4-Methylphenol	ND	57	36	ug/kg	
88-75-5	2-Nitrophenol	ND	140	30	ug/kg	
100-02-7	4-Nitrophenol	ND	290	48	ug/kg	
87-86-5	Pentachlorophenol	ND	290	49	ug/kg	
108-95-2	Phenol	ND	57	30	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	140	29	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	140	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	140	27	ug/kg	
83-32-9	Acenaphthene	ND	29	8.3	ug/kg	
208-96-8	Acenaphthylene	ND	29	9.1	ug/kg	
98-86-2	Acetophenone	ND	140	5.0	ug/kg	
120-12-7	Anthracene	ND	29	10	ug/kg	
1912-24-9	Atrazine	ND	57	5.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	29	9.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	29	8.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	29	9.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	29	11	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	29	11	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	57	10	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	57	17	ug/kg	
92-52-4	1,1'-Biphenyl	ND	57	3.3	ug/kg	
100-52-7	Benzaldehyde	ND	140	6.6	ug/kg	
91-58-7	2-Chloronaphthalene	ND	57	8.9	ug/kg	
106-47-8	4-Chloroaniline	ND	140	9.1	ug/kg	
86-74-8	Carbazole	ND	57	13	ug/kg	
105-60-2	Caprolactam	ND	57	9.0	ug/kg	
218-01-9	Chrysene	ND	29	9.7	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	57	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	57	8.6	ug/kg	

Method Blank Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-MB1	Z87457.D	1	12/24/13	EP	12/19/13	OP71561	EZ4373

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	57	8.5	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	57	8.6	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	29	12	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	29	11	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	57	7.3	ug/kg	
123-91-1	1,4-Dioxane	ND	29	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	29	9.7	ug/kg	
132-64-9	Dibenzofuran	ND	57	8.5	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	57	6.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	57	14	ug/kg	
84-66-2	Diethyl phthalate	ND	57	9.7	ug/kg	
131-11-3	Dimethyl phthalate	ND	57	10	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	57	25	ug/kg	
206-44-0	Fluoranthene	ND	29	13	ug/kg	
86-73-7	Fluorene	ND	29	9.4	ug/kg	
118-74-1	Hexachlorobenzene	ND	57	9.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	29	7.9	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	290	29	ug/kg	
67-72-1	Hexachloroethane	ND	140	7.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	29	9.9	ug/kg	
78-59-1	Isophorone	ND	57	7.7	ug/kg	
91-57-6	2-Methylnaphthalene	ND	57	16	ug/kg	
88-74-4	2-Nitroaniline	ND	140	13	ug/kg	
99-09-2	3-Nitroaniline	ND	140	11	ug/kg	
100-01-6	4-Nitroaniline	ND	140	11	ug/kg	
91-20-3	Naphthalene	ND	29	7.8	ug/kg	
98-95-3	Nitrobenzene	ND	57	8.3	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	57	7.0	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	140	17	ug/kg	
85-01-8	Phenanthrene	ND	29	13	ug/kg	
129-00-0	Pyrene	ND	29	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	140	8.8	ug/kg	

Method Blank Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-MB1	Z87457.D	1	12/24/13	EP	12/19/13	OP71561	EZ4373

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	86%	13-110%
4165-62-2	Phenol-d5	83%	15-110%
118-79-6	2,4,6-Tribromophenol	93%	20-123%
4165-60-0	Nitrobenzene-d5	87%	10-110%
321-60-8	2-Fluorobiphenyl	85%	17-110%
1718-51-0	Terphenyl-d14	100%	30-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	4.25	7200	ug/kg	J
	Total TIC, Semi-Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-BS1	2M59555.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-57-8	2-Chlorophenol	1430	1230	86	37-110
59-50-7	4-Chloro-3-methyl phenol	1430	1290	90	44-125
120-83-2	2,4-Dichlorophenol	1430	1260	88	41-120
105-67-9	2,4-Dimethylphenol	1430	1290	90	43-137
51-28-5	2,4-Dinitrophenol	2860	2240	78	21-147
534-52-1	4,6-Dinitro-o-cresol	1430	1180	83	37-136
95-48-7	2-Methylphenol	1430	1200	84	40-110
	3&4-Methylphenol	1430	1330	93	39-111
88-75-5	2-Nitrophenol	1430	1230	86	36-117
100-02-7	4-Nitrophenol	1430	1470	103	26-143
87-86-5	Pentachlorophenol	1430	1310	92	21-123
108-95-2	Phenol	1430	1160	81	36-112
58-90-2	2,3,4,6-Tetrachlorophenol	1430	1280	90	40-121
95-95-4	2,4,5-Trichlorophenol	1430	1340	94	48-120
88-06-2	2,4,6-Trichlorophenol	1430	1280	90	48-119
83-32-9	Acenaphthene	1430	1180	83	46-110
208-96-8	Acenaphthylene	1430	1050	74	43-103
98-86-2	Acetophenone	1430	1220	85	35-120
120-12-7	Anthracene	1430	1230	86	56-118
1912-24-9	Atrazine	1430	1500	105	57-151
56-55-3	Benzo(a)anthracene	1430	1240	87	56-117
50-32-8	Benzo(a)pyrene	1430	1260	88	56-124
205-99-2	Benzo(b)fluoranthene	1430	1230	86	53-127
191-24-2	Benzo(g,h,i)perylene	1430	1190	83	52-126
207-08-9	Benzo(k)fluoranthene	1430	1200	84	51-122
101-55-3	4-Bromophenyl phenyl ether	1430	1200	84	51-121
85-68-7	Butyl benzyl phthalate	1430	1360	95	52-133
92-52-4	1,1'-Biphenyl	1430	1210	85	42-122
100-52-7	Benzaldehyde	1430	1800	126* [a]	30-119
91-58-7	2-Chloronaphthalene	1430	1150	81	42-110
106-47-8	4-Chloroaniline	1430	768	54	32-102
86-74-8	Carbazole	1430	1320	92	53-119
105-60-2	Caprolactam	1430	1350	95	35-144
218-01-9	Chrysene	1430	1310	92	54-121
111-91-1	bis(2-Chloroethoxy)methane	1430	1220	85	40-118
111-44-4	bis(2-Chloroethyl)ether	1430	1200	84	33-110

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-BS1	2M59555.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-60-1	bis(2-Chloroisopropyl)ether	1430	1150	81	30-108
7005-72-3	4-Chlorophenyl phenyl ether	1430	1200	84	48-116
121-14-2	2,4-Dinitrotoluene	1430	1300	91	51-126
606-20-2	2,6-Dinitrotoluene	1430	1320	92	52-126
91-94-1	3,3'-Dichlorobenzidine	2860	1650	58	49-115
123-91-1	1,4-Dioxane	1430	544	38	10-110
53-70-3	Dibenzo(a,h)anthracene	1430	1270	89	53-126
132-64-9	Dibenzofuran	1430	1160	81	45-114
84-74-2	Di-n-butyl phthalate	1430	1360	95	56-125
117-84-0	Di-n-octyl phthalate	1430	1310	92	49-145
84-66-2	Diethyl phthalate	1430	1230	86	52-118
131-11-3	Dimethyl phthalate	1430	1220	85	54-114
117-81-7	bis(2-Ethylhexyl)phthalate	1430	1380	97	52-138
206-44-0	Fluoranthene	1430	1300	91	55-119
86-73-7	Fluorene	1430	1210	85	51-114
118-74-1	Hexachlorobenzene	1430	1170	82	47-122
87-68-3	Hexachlorobutadiene	1430	1090	76	28-117
77-47-4	Hexachlorocyclopentadiene	2860	2310	81	22-126
67-72-1	Hexachloroethane	1430	1080	76	28-103
193-39-5	Indeno(1,2,3-cd)pyrene	1430	1190	83	53-128
78-59-1	Isophorone	1430	1150	81	37-117
91-57-6	2-Methylnaphthalene	1430	1080	76	34-114
88-74-4	2-Nitroaniline	1430	1280	90	46-135
99-09-2	3-Nitroaniline	1430	917	64	44-114
100-01-6	4-Nitroaniline	1430	1370	96	44-128
91-20-3	Naphthalene	1430	1060	74	37-104
98-95-3	Nitrobenzene	1430	1160	81	34-117
621-64-7	N-Nitroso-di-n-propylamine	1430	1150	81	35-115
86-30-6	N-Nitrosodiphenylamine	1430	1200	84	51-114
85-01-8	Phenanthrene	1430	1200	84	55-113
129-00-0	Pyrene	1430	1200	84	54-120
95-94-3	1,2,4,5-Tetrachlorobenzene	1430	1050	74	38-112

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-BS1	2M59555.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	90%	13-110%
4165-62-2	Phenol-d5	84%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	20-123%
4165-60-0	Nitrobenzene-d5	84%	10-110%
321-60-8	2-Fluorobiphenyl	82%	17-110%
1718-51-0	Terphenyl-d14	92%	30-124%

(a) Outside of in house control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-MS	2M59560.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
OP71561-MSD	2M59561.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
JB55929-2	2M59562.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
JB55929-2	2M59627.D	5	12/23/13	KS	12/19/13	OP71561	E2M2516

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Compound	JB55929-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		1710	1480	87	1630	1450	89	2	16-104/44
59-50-7	4-Chloro-3-methyl phenol	ND		1710	2640	155* [a]	1630	2760	169* [a]	4	25-118/41
120-83-2	2,4-Dichlorophenol	ND		1710	2800	164* [a]	1630	2950	181* [a]	5	20-111/42
105-67-9	2,4-Dimethylphenol	ND		1710	3270	192* [a]	1630	3460	212* [a]	6	21-124/40
51-28-5	2,4-Dinitrophenol	ND		3410	2040	60	3270	1730	53	16	10-110/54
534-52-1	4,6-Dinitro-o-cresol	ND		1710	888	52	1630	707	43	23	10-111/55
95-48-7	2-Methylphenol	ND		1710	1440	84	1630	1340	82	7	19-105/42
	3&4-Methylphenol	ND		1710	1560	91	1630	1520	93	3	17-108/43
88-75-5	2-Nitrophenol	ND		1710	2880	169* [a]	1630	3110	190* [a]	8	11-103/44
100-02-7	4-Nitrophenol	ND		1710	2280	134	1630	2460	151* [a]	8	10-141/48
87-86-5	Pentachlorophenol	ND		1710	1600	94	1630	1580	97	1	10-114/47
108-95-2	Phenol	ND		1710	1590	93	1630	1540	94	3	16-105/42
58-90-2	2,3,4,6-Tetrachlorophenol	ND		1710	1690	99	1630	1720	105	2	20-116/42
95-95-4	2,4,5-Trichlorophenol	ND		1710	1720	101	1630	1690	103	2	24-116/42
88-06-2	2,4,6-Trichlorophenol	ND		1710	1660	97	1630	1650	101	1	21-117/40
83-32-9	Acenaphthene	ND		1710	1690	99	1630	1720	105	2	25-106/38
208-96-8	Acenaphthylene	ND		1710	1400	82	1630	1440	88	3	21-110/39
98-86-2	Acetophenone	ND		1710	2310	135* [a]	1630	2580	158* [a]	11	13-117/43
120-12-7	Anthracene	45.8		1710	1520	86	1630	1530	91	1	27-123/40
1912-24-9	Atrazine	ND		1710	1780	104	1630	1690	103	5	31-147/39
56-55-3	Benzo(a)anthracene	23.0	J	1710	1460	84	1630	1430	86	2	22-127/44
50-32-8	Benzo(a)pyrene	16.9	J	1710	1490	86	1630	1460	88	2	22-132/42
205-99-2	Benzo(b)fluoranthene	ND		1710	1450	85	1630	1400	86	4	17-141/45
191-24-2	Benzo(g,h,i)perylene	18.0	J	1710	1670	97	1630	1640	99	2	23-129/42
207-08-9	Benzo(k)fluoranthene	ND		1710	1370	80	1630	1360	83	1	20-124/44
101-55-3	4-Bromophenyl phenyl ether	ND		1710	1400	82	1630	1400	86	0	30-116/38
85-68-7	Butyl benzyl phthalate	ND		1710	1630	96	1630	1580	97	3	26-134/40
92-52-4	1,1'-Biphenyl	567		1710	2060	87	1630	2140	96	4	22-114/41
100-52-7	Benzaldehyde	ND		1710	5150	302* [a]	1630	2710	166* [a]	62* [a]	10-115/42
91-58-7	2-Chloronaphthalene	ND		1710	1500	88	1630	1510	92	1	24-101/40
106-47-8	4-Chloroaniline	ND		1710	1890	111* [a]	1630	1680	103	12	15-110/44
86-74-8	Carbazole	ND		1710	1590	93	1630	1600	98	1	27-123/38
105-60-2	Caprolactam	ND		1710	3800	223* [a]	1630	4270	261* [a]	12	10-141/42
218-01-9	Chrysene	41.3		1710	1550	88	1630	1520	91	2	21-131/42
111-91-1	bis(2-Chloroethoxy)methane	ND		1710	2480	145* [a]	1630	2390	146* [a]	4	21-108/40
111-44-4	bis(2-Chloroethyl)ether	ND		1710	1470	86	1630	1470	90	0	13-104/44

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-MS	2M59560.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
OP71561-MSD	2M59561.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
JB55929-2	2M59562.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
JB55929-2	2M59627.D	5	12/23/13	KS	12/19/13	OP71561	E2M2516

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Compound	JB55929-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-60-1	bis(2-Chloroisopropyl)ether	ND		1710	1240	73	1630	1220	75	2	13-110/42
7005-72-3	4-Chlorophenyl phenyl ether	ND		1710	1640	96	1630	1650	101	1	27-111/38
121-14-2	2,4-Dinitrotoluene	ND		1710	1910	112	1630	1920	118	1	20-124/40
606-20-2	2,6-Dinitrotoluene	ND		1710	1500	88	1630	1470	90	2	24-122/38
91-94-1	3,3'-Dichlorobenzidine	ND		3410	2910	85	3270	2530	77	14	10-121/45
123-91-1	1,4-Dioxane	ND		1710	997	58	1630	900	55	10	10-110/48
53-70-3	Dibenzo(a,h)anthracene	ND		1710	1660	97	1630	1630	100	2	26-129/42
132-64-9	Dibenzofuran	122		1710	1710	93	1630	1780	101	4	21-114/39
84-74-2	Di-n-butyl phthalate	ND		1710	1590	93	1630	1610	99	1	29-127/39
117-84-0	Di-n-octyl phthalate	ND		1710	1530	90	1630	1490	91	3	25-140/43
84-66-2	Diethyl phthalate	ND		1710	1690	99	1630	1740	106	3	32-115/37
131-11-3	Dimethyl phthalate	ND		1710	1560	91	1630	1560	95	0	29-115/37
117-81-7	bis(2-Ethylhexyl)phthalate	59.5	J	1710	1950	111	1630	1610	95	19	26-140/43
206-44-0	Fluoranthene	ND		1710	1460	86	1630	1460	89	0	16-134/44
86-73-7	Fluorene	211		1710	1870	97	1630	1960	107	5	24-116/39
118-74-1	Hexachlorobenzene	ND		1710	1350	79	1630	1340	82	1	24-118/41
87-68-3	Hexachlorobutadiene	ND		1710	2420	142* [a]	1630	2530	155* [a]	4	15-110/42
77-47-4	Hexachlorocyclopentadiene	ND		3410	2090	61	3270	473	14	126* [a]	10-110/52
67-72-1	Hexachloroethane	ND		1710	1240	73	1630	1200	73	3	11-110/46
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1710	1610	94	1630	1590	97	1	23-132/43
78-59-1	Isophorone	ND		1710	2770	162* [a]	1630	3020	185* [a]	9	22-105/41
91-57-6	2-Methylnaphthalene	5760 [c]		1710	6860	0* [b]	1630	8350	78	20	16-108/40
88-74-4	2-Nitroaniline	ND		1710	1780	104	1630	1830	112	3	23-130/39
99-09-2	3-Nitroaniline	ND		1710	1560	91	1630	1410	86	10	19-116/40
100-01-6	4-Nitroaniline	ND		1710	1770	104	1630	1760	108	1	18-124/42
91-20-3	Naphthalene	2900		1710	4080	69	1630	4180	78	2	13-103/41
98-95-3	Nitrobenzene	ND		1710	2740	161* [a]	1630	2990	183* [a]	9	14-109/41
621-64-7	N-Nitroso-di-n-propylamine	ND		1710	1380	81	1630	1450	89	5	11-113/41
86-30-6	N-Nitrosodiphenylamine	ND		1710	1570	92	1630	1600	98	2	26-119/38
85-01-8	Phenanthrene	265		1710	1610	79	1630	1620	83	1	19-126/42
129-00-0	Pyrene	65.8		1710	1450	81	1630	1420	83	2	17-136/45
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		1710	1490	87	1630	1510	92	1	22-110/41

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71561-MS	2M59560.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
OP71561-MSD	2M59561.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
JB55929-2	2M59562.D	1	12/21/13	AD	12/19/13	OP71561	E2M2514
JB55929-2	2M59627.D	5	12/23/13	KS	12/19/13	OP71561	E2M2516

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB55929-1, JB55929-2, JB55929-4, JB55929-5, JB55929-6

CAS No.	Surrogate Recoveries	MS	MSD	JB55929-2	JB55929-2	Limits
367-12-4	2-Fluorophenol	97%	98%	91%	82%	13-110%
4165-62-2	Phenol-d5	89%	89%	82%	81%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	91%	84%	73%	20-123%
4165-60-0	Nitrobenzene-d5	186%* [a]	212%* [a]	218%* [a]	132%* [a]	10-110%
321-60-8	2-Fluorobiphenyl	94%	90%	88%	91%	17-110%
1718-51-0	Terphenyl-d14	91%	87%	85%	78%	30-124%

(a) Outside control limits due to matrix interference.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E2M2510-DFTPP
Lab File ID: 2M59455.D
Instrument ID: GCMS2M
Injection Date: 12/18/13
Injection Time: 10:45

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	147289	48.1		Pass
68	Less than 2.0% of mass 69	1721	0.56	(1.32) [a]	Pass
69	Mass 69 relative abundance	130304	42.6		Pass
70	Less than 2.0% of mass 69	770	0.25	(0.59) [a]	Pass
127	40.0 - 60.0% of mass 198	180415	59.0		Pass
197	Less than 1.0% of mass 198	2060	0.67		Pass
198	Base peak, 100% relative abundance	305941	100.0		Pass
199	5.0 - 9.0% of mass 198	20726	6.77		Pass
275	10.0 - 30.0% of mass 198	57144	18.7		Pass
365	1.0 - 100.0% of mass 198	6354	2.08		Pass
441	Present, but less than mass 443	26011	8.50	(73.3) [b]	Pass
442	40.0 - 100.0% of mass 198	186162	60.8		Pass
443	17.0 - 23.0% of mass 442	35487	11.6	(19.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M2510-IC2510	2M59456.D	12/18/13	11:02	00:17	Initial cal 100
E2M2510-IC2510	2M59457.D	12/18/13	11:29	00:44	Initial cal 1
E2M2510-ICC2510	2M59458.D	12/18/13	12:10	01:25	Initial cal 50
E2M2510-IC2510	2M59459.D	12/18/13	12:41	01:56	Initial cal 80
E2M2510-IC2510	2M59460.D	12/18/13	13:09	02:24	Initial cal 25
E2M2510-IC2510	2M59461.D	12/18/13	13:37	02:52	Initial cal 10
E2M2510-IC2510	2M59462.D	12/18/13	14:04	03:19	Initial cal 5
E2M2510-IC2510	2M59463.D	12/18/13	14:32	03:47	Initial cal 2
E2M2510-IC2510	2M59464.D	12/18/13	15:00	04:15	Initial cal 100
E2M2510-IC2510	2M59465.D	12/18/13	15:28	04:43	Initial cal 80
E2M2510-IC2510	2M59466.D	12/18/13	15:55	05:10	Initial cal 50
E2M2510-IC2510	2M59467.D	12/18/13	16:23	05:38	Initial cal 25
E2M2510-IC2510	2M59468.D	12/18/13	16:51	06:06	Initial cal 10
E2M2510-IC2510	2M59469.D	12/18/13	17:19	06:34	Initial cal 5
E2M2510-IC2510	2M59470.D	12/18/13	17:46	07:01	Initial cal 2
E2M2510-IC2510	2M59471.D	12/18/13	18:14	07:29	Initial cal 1
E2M2510-ICV2510	2M59472.D	12/18/13	18:42	07:57	Initial cal verification 50
E2M2510-ICV2510	2M59473.D	12/18/13	19:10	08:25	Initial cal verification 50
E2M2510-ICV2510	2M59474.D	12/18/13	19:38	08:53	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E2M2510-DFTPP
Lab File ID: 2M59455.D
Instrument ID: GCMS2M
Injection Date: 12/18/13
Injection Time: 10:45

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M2510-ICV2510	2M59475.D	12/18/13	20:05	09:20	Initial cal verification 50
E2M2510-ICV2510	2M59476.D	12/18/13	20:34	09:49	Initial cal verification 50
E2M2510-ICV2510	2M59477.D	12/18/13	21:01	10:16	Initial cal verification 50
E2M2510-ICV2510	2M59478.D	12/18/13	21:29	10:44	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E2M2514-DFTPP
Lab File ID: 2M59550.D
Instrument ID: GCMS2M
Injection Date: 12/20/13
Injection Time: 22:24

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	185349	44.0		Pass
68	Less than 2.0% of mass 69	2568	0.61	(1.53) [a]	Pass
69	Mass 69 relative abundance	168143	39.9		Pass
70	Less than 2.0% of mass 69	759	0.18	(0.45) [a]	Pass
127	40.0 - 60.0% of mass 198	249091	59.2		Pass
197	Less than 1.0% of mass 198	3351	0.80		Pass
198	Base peak, 100% relative abundance	421040	100.0		Pass
199	5.0 - 9.0% of mass 198	26884	6.39		Pass
275	10.0 - 30.0% of mass 198	87285	20.7		Pass
365	1.0 - 100.0% of mass 198	10483	2.49		Pass
441	Present, but less than mass 443	42732	10.1	(78.2) [b]	Pass
442	40.0 - 100.0% of mass 198	290754	69.1		Pass
443	17.0 - 23.0% of mass 442	54660	13.0	(18.8) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M2514-CC2510	2M59551.D	12/20/13	22:37	00:13	Continuing cal 25
E2M2514-CC2510	2M59552.D	12/20/13	23:05	00:41	Continuing cal 25
OP71561-MB1	2M59554.D	12/21/13	00:29	02:05	Method Blank
OP71561-BS1	2M59555.D	12/21/13	00:58	02:34	Blank Spike
OP71529-MB1	2M59556.D	12/21/13	01:26	03:02	Method Blank
ZZZZZZ	2M59557.D	12/21/13	01:54	03:30	(unrelated sample)
ZZZZZZ	2M59558.D	12/21/13	02:22	03:58	(unrelated sample)
ZZZZZZ	2M59559.D	12/21/13	02:50	04:26	(unrelated sample)
OP71561-MS	2M59560.D	12/21/13	03:17	04:53	Matrix Spike
OP71561-MSD	2M59561.D	12/21/13	03:45	05:21	Matrix Spike Duplicate
JB55929-2	2M59562.D	12/21/13	04:13	05:49	P-7R (2-2.5)
ZZZZZZ	2M59563.D	12/21/13	04:41	06:17	(unrelated sample)
ZZZZZZ	2M59564.D	12/21/13	05:09	06:45	(unrelated sample)
ZZZZZZ	2M59565.D	12/21/13	05:37	07:13	(unrelated sample)
ZZZZZZ	2M59567.D	12/21/13	06:33	08:09	(unrelated sample)
ZZZZZZ	2M59568.D	12/21/13	07:00	08:36	(unrelated sample)
ZZZZZZ	2M59570.D	12/21/13	07:28	09:04	(unrelated sample)
ZZZZZZ	2M59572.D	12/21/13	08:24	10:00	(unrelated sample)
ZZZZZZ	2M59573.D	12/21/13	08:52	10:28	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E2M2514-DFTPP
Lab File ID: 2M59550.D
Instrument ID: GCMS2M
Injection Date: 12/20/13
Injection Time: 22:24

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	2M59574.D	12/21/13	09:19	10:55	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E2M2516-DFTPP
Lab File ID: 2M59609.D
Instrument ID: GCMS2M
Injection Date: 12/23/13
Injection Time: 09:21

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	95353	40.1		Pass
68	Less than 2.0% of mass 69	1311	0.55	(1.41) [a]	Pass
69	Mass 69 relative abundance	92687	39.0		Pass
70	Less than 2.0% of mass 69	428	0.18	(0.46) [a]	Pass
127	40.0 - 60.0% of mass 198	141688	59.5		Pass
197	Less than 1.0% of mass 198	914	0.38		Pass
198	Base peak, 100% relative abundance	237952	100.0		Pass
199	5.0 - 9.0% of mass 198	15600	6.56		Pass
275	10.0 - 30.0% of mass 198	51378	21.6		Pass
365	1.0 - 100.0% of mass 198	6168	2.59		Pass
441	Present, but less than mass 443	26051	10.9	(73.6) [b]	Pass
442	40.0 - 100.0% of mass 198	188240	79.1		Pass
443	17.0 - 23.0% of mass 442	35385	14.9	(18.8) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M2516-CC2510	2M59610.D	12/23/13	09:35	00:14	Continuing cal 25
E2M2516-CC2510	2M59611.D	12/23/13	10:04	00:43	Continuing cal 25
ZZZZZZ	2M59613.D	12/23/13	11:07	01:46	(unrelated sample)
ZZZZZZ	2M59614.D	12/23/13	11:36	02:15	(unrelated sample)
ZZZZZZ	2M59615.D	12/23/13	12:04	02:43	(unrelated sample)
ZZZZZZ	2M59616.D	12/23/13	12:32	03:11	(unrelated sample)
ZZZZZZ	2M59617.D	12/23/13	13:00	03:39	(unrelated sample)
ZZZZZZ	2M59618.D	12/23/13	13:28	04:07	(unrelated sample)
ZZZZZZ	2M59619.D	12/23/13	13:56	04:35	(unrelated sample)
ZZZZZZ	2M59637.D	12/23/13	15:48	06:27	(unrelated sample)
ZZZZZZ	2M59621.D	12/23/13	16:16	06:55	(unrelated sample)
ZZZZZZ	2M59622.D	12/23/13	16:44	07:23	(unrelated sample)
ZZZZZZ	2M59623.D	12/23/13	17:12	07:51	(unrelated sample)
ZZZZZZ	2M59624.D	12/23/13	17:40	08:19	(unrelated sample)
ZZZZZZ	2M59625.D	12/23/13	18:08	08:47	(unrelated sample)
JB55929-2	2M59627.D	12/23/13	19:03	09:42	P-7R (2-2.5)
JB55929-1	2M59628.D	12/23/13	19:31	10:10	P-6R (2-2.5)
JB55929-4	2M59629.D	12/23/13	19:59	10:38	P-8R (2-2.5)
JB55929-6	2M59631.D	12/23/13	20:55	11:34	P-10R (2-2.5)

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E2M2518-DFTPP
Lab File ID: 2M59660.D
Instrument ID: GCMS2M
Injection Date: 12/24/13
Injection Time: 15:06

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	91707	40.2		Pass
68	Less than 2.0% of mass 69	1212	0.53	(1.41) [a]	Pass
69	Mass 69 relative abundance	85889	37.7		Pass
70	Less than 2.0% of mass 69	589	0.26	(0.69) [a]	Pass
127	40.0 - 60.0% of mass 198	132901	58.3		Pass
197	Less than 1.0% of mass 198	935	0.41		Pass
198	Base peak, 100% relative abundance	228080	100.0		Pass
199	5.0 - 9.0% of mass 198	14770	6.48		Pass
275	10.0 - 30.0% of mass 198	47904	21.0		Pass
365	1.0 - 100.0% of mass 198	5523	2.42		Pass
441	Present, but less than mass 443	24650	10.8	(78.3) [b]	Pass
442	40.0 - 100.0% of mass 198	169800	74.4		Pass
443	17.0 - 23.0% of mass 442	31477	13.8	(18.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2M2518-CC2510	2M59661.D	12/24/13	15:18	00:12	Continuing cal 25
E2M2518-CC2510	2M59662.D	12/24/13	15:46	00:40	Continuing cal 25
ZZZZZZ	2M59664.D	12/24/13	16:50	01:44	(unrelated sample)
ZZZZZZ	2M59665.D	12/24/13	17:17	02:11	(unrelated sample)
ZZZZZZ	2M59666.D	12/24/13	17:45	02:39	(unrelated sample)
JB55929-5	2M59667.D	12/24/13	18:13	03:07	P-9R (2-2.5)
ZZZZZZ	2M59669.D	12/24/13	19:09	04:03	(unrelated sample)
JB55929-4	2M59670.D	12/24/13	19:37	04:31	P-8R (2-2.5)
ZZZZZZ	2M59671.D	12/24/13	20:05	04:59	(unrelated sample)
ZZZZZZ	2M59672.D	12/24/13	20:33	05:27	(unrelated sample)
ZZZZZZ	2M59673.D	12/24/13	21:00	05:54	(unrelated sample)
ZZZZZZ	2M59674.D	12/24/13	21:28	06:22	(unrelated sample)
ZZZZZZ	2M59676.D	12/24/13	21:56	06:50	(unrelated sample)
ZZZZZZ	2M59677.D	12/24/13	22:24	07:18	(unrelated sample)
ZZZZZZ	2M59678.D	12/24/13	22:51	07:45	(unrelated sample)
ZZZZZZ	2M59679.D	12/24/13	23:19	08:13	(unrelated sample)
ZZZZZZ	2M59680.D	12/24/13	23:47	08:41	(unrelated sample)
ZZZZZZ	2M59681.D	12/25/13	00:15	09:09	(unrelated sample)
ZZZZZZ	2M59682.D	12/25/13	00:42	09:36	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E2M2518-DFTPP
Lab File ID: 2M59660.D
Instrument ID: GCMS2M
Injection Date: 12/24/13
Injection Time: 15:06

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	2M59683.D	12/25/13	01:10	10:04	(unrelated sample)
ZZZZZZ	2M59684.D	12/25/13	01:38	10:32	(unrelated sample)
ZZZZZZ	2M59685.D	12/25/13	02:05	10:59	(unrelated sample)
ZZZZZZ	2M59675.D	12/25/13	02:33	11:27	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: EZ4369-DFTPP
Lab File ID: Z87362.D
Instrument ID: GCMSZ
Injection Date: 12/20/13
Injection Time: 10:09

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	37444	52.2		Pass
68	Less than 2.0% of mass 69	210	0.29	(0.72) [a]	Pass
69	Mass 69 relative abundance	29013	40.4		Pass
70	Less than 2.0% of mass 69	112	0.16	(0.39) [a]	Pass
127	40.0 - 60.0% of mass 198	31254	43.6		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	71752	100.0		Pass
199	5.0 - 9.0% of mass 198	4057	5.65		Pass
275	10.0 - 30.0% of mass 198	16358	22.8		Pass
365	1.0 - 100.0% of mass 198	1532	2.14		Pass
441	Present, but less than mass 443	9239	12.9	(85.9) [b]	Pass
442	40.0 - 100.0% of mass 198	61957	86.3		Pass
443	17.0 - 23.0% of mass 442	10755	15.0	(17.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ4369-IC4369	Z87363.D	12/20/13	10:28	00:19	Initial cal 100
EZ4369-IC4369	Z87364.D	12/20/13	10:56	00:47	Initial cal 1
EZ4369-ICC4369	Z87365.D	12/20/13	11:29	01:20	Initial cal 50
EZ4369-IC4369	Z87366.D	12/20/13	11:58	01:49	Initial cal 25
EZ4369-IC4369	Z87367.D	12/20/13	12:25	02:16	Initial cal 80
EZ4369-IC4369	Z87368.D	12/20/13	12:53	02:44	Initial cal 2
EZ4369-IC4369	Z87369.D	12/20/13	13:21	03:12	Initial cal 10
EZ4369-IC4369	Z87370.D	12/20/13	13:49	03:40	Initial cal 5
EZ4369-IC4369	Z87371.D	12/20/13	14:17	04:08	Initial cal 100
EZ4369-IC4369	Z87372.D	12/20/13	14:45	04:36	Initial cal 80
EZ4369-IC4369	Z87373.D	12/20/13	15:13	05:04	Initial cal 50
EZ4369-IC4369	Z87374.D	12/20/13	15:41	05:32	Initial cal 25
EZ4369-IC4369	Z87375.D	12/20/13	16:09	06:00	Initial cal 10
EZ4369-IC4369	Z87376.D	12/20/13	16:37	06:28	Initial cal 5
EZ4369-IC4369	Z87377.D	12/20/13	17:05	06:56	Initial cal 2
EZ4369-IC4369	Z87378.D	12/20/13	18:01	07:52	Initial cal 1
EZ4369-ICV4369	Z87380.D	12/20/13	18:57	08:48	Initial cal verification 50
EZ4369-ICV4369	Z87381.D	12/20/13	19:25	09:16	Initial cal verification 50
EZ4369-ICV4369	Z87382.D	12/20/13	19:53	09:44	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: EZ4369-DFTPP
Lab File ID: Z87362.D
Instrument ID: GCMSZ
Injection Date: 12/20/13
Injection Time: 10:09

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ4369-ICV4369	Z87383.D	12/20/13	20:21	10:12	Initial cal verification 50
EZ4369-ICV4369	Z87384.D	12/20/13	20:49	10:40	Initial cal verification 50
EZ4369-ICV4369	Z87385.D	12/20/13	21:17	11:08	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: EZ4373-DFTPP
Lab File ID: Z87431.D
Instrument ID: GCMSZ
Injection Date: 12/24/13
Injection Time: 08:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	47067	54.0		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	38909	44.7		Pass
70	Less than 2.0% of mass 69	516	0.59	(1.33) [a]	Pass
127	40.0 - 60.0% of mass 198	42495	48.8		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	87122	100.0		Pass
199	5.0 - 9.0% of mass 198	6285	7.21		Pass
275	10.0 - 30.0% of mass 198	19098	21.9		Pass
365	1.0 - 100.0% of mass 198	1808	2.08		Pass
441	Present, but less than mass 443	10515	12.1	(89.4) [b]	Pass
442	40.0 - 100.0% of mass 198	67117	77.0		Pass
443	17.0 - 23.0% of mass 442	11762	13.5	(17.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ4373-CC4369	Z87432.D	12/24/13	09:08	00:13	Continuing cal 25
EZ4373-CC4369	Z87433.D	12/24/13	09:37	00:42	Continuing cal 25
OP71614-MB1	Z87434.D	12/24/13	10:06	01:11	Method Blank
OP71614-BS1	Z87435.D	12/24/13	10:34	01:39	Blank Spike
ZZZZZZ	Z87436.D	12/24/13	11:02	02:07	(unrelated sample)
ZZZZZZ	Z87437.D	12/24/13	11:30	02:35	(unrelated sample)
ZZZZZZ	Z87448.D	12/24/13	11:59	03:04	(unrelated sample)
ZZZZZZ	Z87449.D	12/24/13	12:26	03:31	(unrelated sample)
OP71561-MB1	Z87457.D	12/24/13	12:54	03:59	Method Blank
ZZZZZZ	Z87458.D	12/24/13	13:22	04:27	(unrelated sample)
ZZZZZZ	Z87438.D	12/24/13	13:50	04:55	(unrelated sample)
ZZZZZZ	Z87439.D	12/24/13	14:18	05:23	(unrelated sample)
ZZZZZZ	Z87440.D	12/24/13	14:46	05:51	(unrelated sample)
ZZZZZZ	Z87441.D	12/24/13	15:13	06:18	(unrelated sample)
ZZZZZZ	Z87442.D	12/24/13	15:42	06:47	(unrelated sample)
ZZZZZZ	Z87443.D	12/24/13	16:10	07:15	(unrelated sample)
ZZZZZZ	Z87444.D	12/24/13	16:38	07:43	(unrelated sample)
ZZZZZZ	Z87445.D	12/24/13	17:06	08:11	(unrelated sample)
ZZZZZZ	Z87446.D	12/24/13	17:34	08:39	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: EZ4373-DFTPP
Lab File ID: Z87431.D
Instrument ID: GCMSZ
Injection Date: 12/24/13
Injection Time: 08:55

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	Z87447.D	12/24/13	18:02	09:07	(unrelated sample)
JB56255-1	Z87450.D	12/24/13	18:31	09:36	(used for QC only; not part of job JB55929)
ZZZZZZ	Z87452.D	12/24/13	19:27	10:32	(unrelated sample)
ZZZZZZ	Z87453.D	12/24/13	19:55	11:00	(unrelated sample)
ZZZZZZ	Z87454.D	12/24/13	20:23	11:28	(unrelated sample)
OP71614-MS	Z87455.D	12/24/13	20:52	11:57	Matrix Spike

Semivolatile Internal Standard Area Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std:	E2M2514-CC2510	**Injection Date:**	12/20/13
Lab File ID:	2M59551.D	**Injection Time:**	22:37
Instrument ID:	GCMS2M	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	690445	4.76	2801676	5.90	1481981	8.25	2060439	10.87	1738750	16.04	1586571	18.65
Upper Limit [a]	1380890	5.26	5603352	6.40	2963962	8.75	4120878	11.37	3477500	16.54	3173142	19.15
Lower Limit [b]	345223	4.26	1400838	5.40	740991	7.75	1030220	10.37	869375	15.54	793286	18.15

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP71561-MB1	747861	4.75	3065046	5.90	1613693	8.26	2264115	10.88	1811858	16.03	1593631	18.64
OP71561-BS1	756752	4.75	3224711	5.90	1771898	8.26	2450015	10.89	2188261	16.04	1996885	18.65
OP71529-MB1	663197	4.75	2757087	5.89	1514181	8.26	2194852	10.88	1815130	16.03	1604470	18.64
ZZZZZZ	761400	4.75	3100543	5.89	1682679	8.26	2436804	10.88	2042348	16.03	1815497	18.65
ZZZZZZ	771266	4.75	3177545	5.90	1726840	8.26	2514927	10.88	2075935	16.03	1819432	18.64
ZZZZZZ	713066	4.75	2940202	5.89	1615223	8.26	2364888	10.88	1921573	16.03	1687608	18.64
OP71561-MS	673352	4.75	1373158*	5.90	1156238	8.28	1869725	10.89	1613237	16.04	1491557	18.65
OP71561-MSD	679038	4.76	1240718*	5.91	1105998	8.28	1881353	10.89	1674311	16.04	1542789	18.65
JB55929-2	611534	4.76	1208341*	5.90	1057076	8.28	1800578	10.89	1557645	16.04	1395363	18.65
ZZZZZZ	690236	4.75	2759385	5.89	1437085	8.26	1935730	10.89	1456143	16.05	1334471	18.66
ZZZZZZ	442322	4.76	1150211*	5.91	982778	8.30	1492812	10.93	1079303	16.13	1080848	18.75
ZZZZZZ	685130	4.75	2781856	5.90	1458028	8.26	2051392	10.89	1544972	16.05	1353874	18.67
ZZZZZZ	705278	4.76	2866648	5.90	1507705	8.26	2152767	10.89	1607750	16.05	1400329	18.67
ZZZZZZ	751743	4.76	2869028	5.91	1483393	8.28	2122530	10.93	1264848	16.12	1306656	18.73
ZZZZZZ	658619	4.76	3014781	5.90	1786464	8.26	2732260	10.89	1674971	16.06	1300812	18.68
ZZZZZZ	864351	4.76	3479611	5.90	1818178	8.26	2450633	10.89	1711826	16.05	1500330	18.67
ZZZZZZ	781391	4.76	3415832	5.90	1962089	8.26	2931551	10.90	1703562	16.07	1419826	18.69
ZZZZZZ	684708	4.76	2985145	5.91	1711289	8.27	2571428	10.90	1635436	16.06	1298408	18.67

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std:	E2M2516-CC2510	**Injection Date:**	12/23/13
Lab File ID:	2M59610.D	**Injection Time:**	09:35
Instrument ID:	GCMS2M	**Method:**	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	638950	4.74	2737997	5.89	1532316	8.24	2256501	10.86	1991793	16.02	1451852	18.64
Upper Limit [a]	1277900	5.24	5475994	6.39	3064632	8.74	4513002	11.36	3983586	16.52	2903704	19.14
Lower Limit [b]	319475	4.24	1368999	5.39	766158	7.74	1128251	10.36	995897	15.52	725926	18.14

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	443468	4.75	1852093	5.88	1019619	8.24	1436432	10.86	1090293	16.02	907201	18.64
ZZZZZZ	510446	4.75	2166791	5.89	1182189	8.24	1628262	10.86	1238293	16.04	1042157	18.66
ZZZZZZ	492506	4.75	2064872	5.89	1119217	8.24	1591256	10.87	1179932	16.03	1021133	18.65
ZZZZZZ	508085	4.75	1902556	5.89	1085286	8.25	1503599	10.88	1169788	16.05	992152	18.67
ZZZZZZ	458978	4.75	1903905	5.90	1031329	8.25	1369525	10.89	1080546	16.05	913501	18.66
ZZZZZZ	479204	4.75	1903786	5.89	974239	8.25	1357542	10.87	1114170	16.04	958175	18.65
ZZZZZZ	497391	4.75	914324*	5.92	1074148	8.29	1069459*	10.92	1134008	16.13	981367	18.72
ZZZZZZ	484558	4.75	2069518	5.89	1123707	8.25	1560728	10.87	1223710	16.06	1091872	18.69
ZZZZZZ	592677	4.75	2417451	5.90	1180622	8.25	1469804	10.87	1089242	16.04	1007319	18.65
ZZZZZZ	541208	4.75	2122033	5.89	1061617	8.25	1510817	10.87	1193550	16.04	1025183	18.66
ZZZZZZ	581992	4.75	2296349	5.89	1132724	8.25	1490139	10.87	1186352	16.04	1030102	18.65
ZZZZZZ	513700	4.75	2012994	5.89	1051995	8.25	1498395	10.87	1233803	16.04	1027792	18.66
ZZZZZZ	518609	4.75	2163876	5.89	1189884	8.25	1548862	10.89	1196050	16.11	1037177	18.72
JB55929-2	601101	4.75	1973035	5.90	1131014	8.25	1448778	10.87	1109603	16.04	972499	18.66
JB55929-1	519464	4.75	2124514	5.89	1148473	8.25	1626955	10.87	1272543	16.04	1063289	18.65
JB55929-4	550157	4.75	1361825*	5.91	887079	8.27	1285314	10.89	1109036	16.06	1026201	18.70
JB55929-6	600887	4.74	2449384	5.89	1262641	8.25	1619402	10.87	1162511	16.04	1001118	18.66

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std:	E2M2518-CC2510	**Injection Date:**	12/24/13
Lab File ID:	2M59661.D	**Injection Time:**	15:18
Instrument ID:	GCMS2M	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	515347	4.73	2332415	5.87	1344854	8.22	2118995	10.84	2028330	16.00	1640569	18.62
Upper Limit [a]	1030694	5.23	4664830	6.37	2689708	8.72	4237990	11.34	4056660	16.50	3281138	19.12
Lower Limit [b]	257674	4.23	1166208	5.37	672427	7.72	1059498	10.34	1014165	15.50	820285	18.12

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	424174	4.73	2076852	5.87	1253286	8.22	1982009	10.84	2010348	16.00	1883395	18.61
ZZZZZZ	271352	4.73	1323745	5.87	826472	8.22	1428747	10.84	1593251	15.99	1603019	18.61
ZZZZZZ	373797	4.73	1857888	5.87	1125010	8.22	1732481	10.84	1669256	15.99	1583175	18.61
JB55929-5	485459	4.73	2205438	5.87	1350419	8.22	2142892	10.84	2048465	15.99	1881027	18.61
ZZZZZZ	413220	4.73	1959199	5.87	1172836	8.22	1821148	10.84	1648415	16.00	1524357	18.62
JB55929-4	518084	4.73	2355766	5.87	1409966	8.23	2159858	10.84	1940309	16.00	1574949	18.62
ZZZZZZ	700106	4.73	3095166	5.87	1730967	8.22	2536821	10.84	1939166	16.00	1394620	18.61
ZZZZZZ	543552	4.73	2425376	5.87	1429151	8.22	2157839	10.84	1907555	16.00	1642159	18.61
ZZZZZZ	713389	4.73	3154140	5.87	1781998	8.22	2606057	10.84	2175072	16.00	1570463	18.62
ZZZZZZ	780858	4.73	3258708	5.87	1713997	8.22	2282590	10.84	1457490	16.00	1188976	18.62
ZZZZZZ	654218	4.73	2928147	5.87	1681544	8.22	2539477	10.84	2097479	16.00	1602099	18.62
ZZZZZZ	629042	4.73	2835501	5.87	1653168	8.22	2497956	10.84	2154197	16.00	1572940	18.62
ZZZZZZ	611705	4.73	1304727	5.88	1436961	8.24	2264631	10.85	2072938	16.00	1628546	18.62
ZZZZZZ	658656	4.73	1407959	5.88	1400721	8.25	2388991	10.86	2155103	16.01	1638688	18.62
ZZZZZZ	379915	4.73	1802210	5.87	1081257	8.22	1716807	10.84	1727765	16.00	1492887	18.62
ZZZZZZ	470389	4.73	2200393	5.87	1290079	8.22	1988940	10.84	1864512	16.00	1511743	18.61
ZZZZZZ	420503	4.73	1982991	5.87	1159018	8.22	1848751	10.84	1822726	16.00	1581261	18.61
ZZZZZZ	263503	4.73	1299330	5.87	814322	8.22	1341030	10.84	1507620	15.99	1521875	18.61
ZZZZZZ	434955	4.73	2013265	5.87	1196274	8.22	1858244	10.84	1815606	16.00	1616769	18.61
ZZZZZZ	533387	4.73	2420197	5.87	1407700	8.22	2129582	10.84	1916480	16.00	1442461	18.61
ZZZZZZ	657297	4.73	2678624	5.87	1349556	8.22	1781529	10.84	1432585	16.01	1269187	18.64

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std: EZ4373-CC4369 **Injection Date:** 12/24/13
Lab File ID: Z87432.D **Injection Time:** 09:08
Instrument ID: GCMSZ **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	383920	5.74	1471776	6.91	949660	9.03	1582953	11.21	1584921	15.39	1343814	17.50
Upper Limit [a]	767840	6.24	2943552	7.41	1899320	9.53	3165906	11.71	3169842	15.89	2687628	18.00
Lower Limit [b]	191960	5.24	735888	6.41	474830	8.53	791477	10.71	792461	14.89	671907	17.00

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP71614-MB1	343907	5.74	1299672	6.91	811650	9.02	1358849	11.21	1289410	15.38	1069727	17.49
OP71614-BS1	301735	5.74	1132336	6.91	711360	9.03	1176550	11.21	1157914	15.39	988842	17.49
ZZZZZZ	399806	5.74	1492050	6.91	909766	9.03	1448749	11.21	1319606	15.39	1143717	17.50
ZZZZZZ	364187	5.74	1320395	6.91	814707	9.04	1298115	11.22	1241396	15.41	1105988	17.52
ZZZZZZ	306866	5.74	1131165	6.91	705958	9.03	1133308	11.21	944407	15.39	707137	17.50
ZZZZZZ	342666	5.74	1286219	6.91	788997	9.03	1265956	11.21	1119680	15.39	935180	17.50
OP71561-MB1	394084	5.74	1493478	6.91	942799	9.03	1539783	11.21	1411498	15.39	1130735	17.50
ZZZZZZ	333767	5.74	1259752	6.91	787044	9.02	1227173	11.21	1095237	15.39	927100	17.50
ZZZZZZ	341392	5.74	1281294	6.91	833585	9.03	1371744	11.21	1237522	15.39	983311	17.50
ZZZZZZ	338117	5.74	1244754	6.91	791556	9.03	1267015	11.21	1083856	15.39	916260	17.50
ZZZZZZ	342731	5.74	1289096	6.91	791180	9.03	1248860	11.22	1100614	15.40	935749	17.51
ZZZZZZ	360822	5.74	1264206	6.91	764147	9.05	1206915	11.24	1211045	15.42	1099310	17.53
ZZZZZZ	349439	5.74	1232142	6.92	750072	9.05	1200402	11.25	1189371	15.43	1070919	17.55
ZZZZZZ	267805	5.75	792024	6.94	566686	9.09	814595	11.28	1046058	15.43	940182	17.53
ZZZZZZ	292370	5.75	855317	6.94	625842	9.09	978914	11.27	1122727	15.42	1004951	17.53
ZZZZZZ	298247	5.74	1113039	6.92	679231	9.05	1065576	11.25	1043330	15.44	937427	17.55
ZZZZZZ	292994	5.75	1086757	6.92	674309	9.06	1062765	11.25	1015766	15.44	901358	17.56
ZZZZZZ	350452	5.75	1269613	6.92	791862	9.06	1248982	11.25	1178498	15.44	1053981	17.56
JB56255-1	268255	5.74	991635	6.92	629598	9.05	973651	11.23	814212	15.42	712826	17.53
ZZZZZZ	283416	5.74	1041157	6.92	668389	9.04	1033460	11.23	836072	15.41	676531	17.53
ZZZZZZ	329376	5.75	1054781	6.95	698998	9.09	868266	11.34	865091	15.53	776387	17.61
ZZZZZZ	251974	5.75	847774	6.96	641646	9.08	826468	11.32	885970	15.50	713160	17.59
OP71614-MS	255460	5.74	966194	6.92	605983	9.05	951881	11.24	838615	15.43	689734	17.54

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JB55929-1	2M59628.D	48	49	43	48	49	50
JB55929-2	2M59627.D	82	81	73	132* [a]	91	78
JB55929-2	2M59562.D	91	82	84	218* [a]	88	85
JB55929-4	2M59670.D	75	78	64	104	70	66
JB55929-4	2M59629.D	85	82	79	160* [b]	87	79
JB55929-5	2M59667.D	74	85	45	84	76	78
JB55929-6	2M59631.D	82	79	72	80	83	85
OP71561-BS1	2M59555.D	90	84	92	84	82	92
OP71561-MB1	2M59554.D	83	79	75	81	80	83
OP71561-MB1	Z87457.D	86	83	93	87	85	100
OP71561-MS	2M59560.D	97	89	92	186* [a]	94	91
OP71561-MSD	2M59561.D	98	89	91	212* [a]	90	87

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	13-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	20-123%
S4 = Nitrobenzene-d5	10-110%
S5 = 2-Fluorobiphenyl	17-110%
S6 = Terphenyl-d14	30-124%

(a) Outside control limits due to matrix interference.
(b) Outside control limits due to matrix interference. Confirmed by dilution.

Initial Calibration Summary

Job Number: JB55929 **Sample:** E2M2510-ICC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59458.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Response Factor Report MS2M

Method : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update : Thu Dec 19 09:24:43 2013
Response via : Initial Calibration

Calibration Files
2 =2m59463.D 5 =2m59462.D 25 =2m59460.D 80 =2m59459.D
100 =2m59456.D 50 =2m59458.D 1 =2m59457.D 10 =2m59461.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane	0.674	0.694	0.653	0.635	0.629	0.669	0.627	0.690	0.659	4.08
3) Pyridine	1.891	1.884	1.758	1.734	1.706	1.812	1.797	1.855	1.805	3.82
4) N-Nitrosodim	1.149	1.180	1.129	1.084	1.068	1.145	1.046	1.188	1.124	4.67
5) 2-Fluorophen	1.438	1.519	1.487	1.450	1.402	1.529	1.431	1.562	1.477	3.77
6) Indene	2.829	2.873	2.561	1.984	1.915	2.339	2.654	2.840	2.499	15.30
7) Cumene	3.744	3.829	3.548	3.220	3.082	3.506	3.619	3.840	3.548	7.78
8) Phenol-d5	1.943	2.027	1.922	1.765	1.705	1.931	1.874	2.063	1.904	6.37
9) Phenol	2.294	2.400	2.249	1.895	1.831	2.203	2.192	2.444	2.189	10.06
10) Aniline	2.830	2.729	2.492	1.909	1.832	2.354	2.683	2.714	2.443	15.72
11) bis(2-Chloro	1.620	1.684	1.591	1.504	1.440	1.602	1.547	1.701	1.586	5.53
12) 2-Chlorophen	1.652	1.734	1.629	1.493	1.431	1.624	1.627	1.742	1.617	6.64
13) Decane	1.668	1.677	1.599	1.411	1.384	1.582	1.629	1.711	1.583	7.71
14) 1,3-Dichloro	1.736	1.782	1.657	1.507	1.440	1.635	1.659	1.799	1.652	7.65
15) 1,4-Dichloro	1.772	1.782	1.643	1.500	1.427	1.619	1.680	1.769	1.649	7.97
16) Benzyl alcoh	1.111	1.159	1.102	1.011	0.973	1.119	1.058	1.180	1.089	6.51
17) 1,2-Dichloro	1.661	1.694	1.545	1.358	1.310	1.507	1.555	1.698	1.541	9.52
18) Acetophenone	2.241	2.232	1.976	1.600	1.554	1.848	2.124	2.181	1.970	14.03
19) 2-Methylphen	1.449	1.564	1.441	1.110	1.062	1.326	1.462	1.573	1.373	14.12
20) 2,2'-oxybis(	2.311	2.326	2.213	1.773	1.739	2.107	2.188	2.359	2.127	11.45
21) 3&4-Methylph	1.570	1.623	1.508	1.159	1.134	1.376	1.449	1.662	1.435	13.96
22) n-Nitroso-di	1.242	1.202	1.050	0.798	0.771	0.927	1.112	1.149	1.031	17.48
23) Hexachloroet	0.465	0.490	0.471	0.428	0.408	0.457	0.460	0.497	0.459	6.44
24) I Naphthalene-d8	----------ISTD----------									
25) Nitrobenzene	0.369	0.390	0.364	0.342	0.333	0.366	0.350	0.397	0.364	6.06
26) Nitrobenzene	0.406	0.409	0.385	0.355	0.345	0.382	0.357	0.417	0.382	7.21
27) Quinoline	0.759	0.766	0.712	0.693	0.669	0.740	0.710	0.775	0.728	5.20
28) Isophorone	0.710	0.735	0.698	0.651	0.627	0.702	0.670	0.755	0.693	6.11
29) 2-Nitropheno	0.187	0.200	0.201	0.190	0.185	0.203	0.170	0.216	0.194	7.22
30) 2,4-Dimethyl	0.315	0.340	0.336	0.315	0.309	0.341	0.305	0.352	0.327	5.43
31) Benzoic acid		0.173	0.244	0.286	0.281	0.285		0.225	0.249	18.10
32) bis(2-Chloro	0.446	0.459	0.425	0.396	0.379	0.427	0.412	0.463	0.426	6.91
33) 2,4-Dichloro	0.269	0.295	0.284	0.266	0.253	0.286	0.274	0.307	0.279	6.21
34) 2,6-Dichloro	0.287	0.291	0.276	0.250	0.238	0.275	0.259	0.306	0.273	8.23
35) 1,3,5-Trichl	0.304	0.314	0.288	0.255	0.247	0.282	0.289	0.321	0.287	9.09
36) 1,2,4-Trichl	0.304	0.303	0.283	0.260	0.249	0.280	0.276	0.305	0.282	7.41
37) 1,2,3-Trichl	0.289	0.291	0.275	0.246	0.236	0.266	0.273	0.300	0.272	8.26
38) Naphthalene	1.187	1.211	1.111	0.999	0.957	1.084	1.100	1.200	1.106	8.42
39) 4-Chloroanil	0.499	0.499	0.463	0.405	0.387	0.457	0.454	0.505	0.459	9.57
40) 2,3-Dichloro	0.349	0.342	0.330	0.304	0.294	0.333	0.326	0.356	0.329	6.45
41) Caprolactam	0.159	0.167	0.164	0.169	0.164	0.177	0.125	0.174	0.162	10.00
42) Hexachlorobu	0.136	0.139	0.126	0.115	0.109	0.123	0.125	0.139	0.127	8.73
43) 4-Chloro-3-m	0.303	0.320	0.310	0.288	0.282	0.317	0.299	0.334	0.307	5.61
44) 2-Methylnaph	0.629	0.641	0.588	0.547	0.526	0.594	0.582	0.640	0.593	7.15
45) 1-Methylnaph	0.709	0.711	0.666	0.622	0.593	0.673	0.670	0.726	0.671	6.77

Initial Calibration Summary

Job Number: JB55929 **Sample:** E2M2510-ICC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59458.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
46) Dimethylnaph 0.621 0.633 0.588 0.542 0.518 0.596 0.563 0.636 0.587   7.34

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.178 0.215 0.243 0.234 0.223 0.251 0.166 0.244 0.219  14.41
49) 2,4,6-Trichl 0.317 0.331 0.336 0.307 0.297 0.333 0.297 0.348 0.321   5.94
50) 2,4,5-Trichl 0.315 0.340 0.355 0.339 0.319 0.357 0.292 0.370 0.336   7.67
51) 2-Fluorobiph 1.256 1.313 1.228 1.131 1.074 1.206 1.208 1.298 1.214   6.64
52) 2-Chloronaph 1.182 1.215 1.144 1.031 0.982 1.114 1.102 1.221 1.124   7.58
53) Biphenyl     1.503 1.546 1.475 1.322 1.262 1.431 1.409 1.550 1.437   7.20
54) 2-Nitroanili 0.322 0.356 0.366 0.356 0.347 0.383 0.312 0.380 0.353   7.14
55) Dimethylphth 1.290 1.299 1.246 1.179 1.123 1.263 1.187 1.313 1.238   5.48
56) Acenaphthyle 1.936 1.992 1.908 1.781 1.705 1.892 1.802 2.029 1.881   5.87
57) 2,6-Dinitrot 0.228 0.268 0.276 0.272 0.260 0.291 0.203 0.286 0.261  11.55
58) 3-Nitroanili 0.345 0.364 0.368 0.354 0.346 0.384 0.301 0.383 0.356   7.50
59) Acenaphthene 1.192 1.210 1.142 1.065 1.014 1.143 1.161 1.227 1.144   6.34
60) 2,4-Dinitrop             0.105 0.142 0.146 0.139       0.088 0.124  20.79
            ----- Linear regression -----  Coefficient =  0.9985
              Response Ratio = -0.04428 + 0.15424 *A

61) 4-Nitropheno 0.121 0.121 0.142 0.152 0.152 0.162 0.090 0.138 0.135  17.30
62) Dibenzofuran 1.652 1.684 1.544 1.366 1.305 1.498 1.545 1.652 1.531   8.99
63) 2,4-Dinitrot 0.320 0.357 0.365 0.333 0.324 0.370 0.277 0.382 0.341  10.03
64) 2,3,4,6-Tetr 0.217 0.232 0.250 0.248 0.238 0.263 0.193 0.249 0.236   9.39
65) Diethylphtha 1.268 1.295 1.233 1.149 1.093 1.241 1.198 1.294 1.221   5.84
66) Fluorene     1.318 1.347 1.306 1.226 1.172 1.325 1.226 1.360 1.285   5.30
67) 4-Chlorophen 0.564 0.576 0.547 0.497 0.469 0.542 0.527 0.576 0.537   7.15
68) 4-Nitroanili 0.323 0.340 0.350 0.351 0.352 0.377 0.278 0.369 0.342   8.95

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro-             0.128 0.162 0.159 0.153       0.115 0.143  14.60
71) n-Nitrosodip 0.629 0.661 0.674 0.691 0.649 0.691 0.580 0.678 0.657   5.71
72) 1,2-Diphenyl 0.934 0.989 1.004 1.002 0.947 1.016 0.866 1.016 0.972   5.43
73) 2,4,6-Tribro 0.061 0.068 0.076 0.087 0.081 0.084 0.057 0.074 0.073  14.89
74) 4-Bromopheny 0.178 0.189 0.194 0.210 0.195 0.204 0.168 0.198 0.192   7.10
75) Hexachlorobe 0.181 0.182 0.183 0.195 0.185 0.195 0.170 0.190 0.185   4.38
76) Pentachlorop       0.091 0.113 0.131 0.126 0.130       0.106 0.116  13.71
77) Phenanthrene 1.264 1.261 1.262 1.277 1.227 1.295 1.186 1.276 1.256   2.74
78) Anthracene   1.199 1.263 1.283 1.312 1.235 1.324 1.127 1.301 1.255   5.30
79) Carbazole    1.134 1.190 1.198 1.254 1.222 1.271 1.077 1.224 1.196   5.34
80) Di-n-butylph 1.340 1.434 1.520 1.586 1.499 1.613 1.273 1.496 1.470   7.92
81) Fluoranthene 1.113 1.132 1.200 1.294 1.260 1.320 1.026 1.188 1.192   8.32
82) Octadecane   0.572 0.620 0.650 0.626 0.594 0.645 0.546 0.641 0.612   6.18

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.393 1.533 1.567 1.600 1.455 1.584 1.350 1.579 1.508   6.36
85) Terphenyl-d1 0.795 0.883 0.921 0.953 0.861 0.944 0.787 0.914 0.882   7.22
86) Butylbenzylp 0.628 0.725 0.767 0.781 0.724 0.801 0.634 0.752 0.726   8.85
87) Butyl steara 0.373 0.459 0.523 0.545 0.484 0.544 0.387 0.499 0.477  14.00
88) Benzo[a]anth 1.151 1.198 1.232 1.251 1.211 1.309 1.175 1.214 1.218   3.98
89) 3,3'-Dichlor 0.339 0.382 0.408 0.406 0.405 0.427 0.314 0.397 0.385  10.05
90) Chrysene     1.090 1.140 1.168 1.181 1.145 1.215 0.994 1.152 1.136   5.93
91) bis(2-Ethylh 0.881 0.989 1.081 1.099 0.991 1.120 0.867 1.050 1.010   9.51

92) I   Perylene-d12          ----------------ISTD---------------------
93) Di-n-octylph 1.698 2.014 2.325 2.350 1.941 2.433 1.798 2.172 2.091  12.96
94) Benzo[b]fluo 1.165 1.240 1.409 1.370 1.285 1.460 1.133 1.332 1.299   8.90
95) Benzo[k]fluo 1.206 1.313 1.378 1.314 1.206 1.424 1.157 1.311 1.289   7.13
96) Benzo[a]pyre 0.993 1.108 1.194 1.188 1.129 1.254 0.990 1.142 1.125   8.34
97) Indeno[1,2,3 0.780 0.849 0.960 1.057 1.077 0.999 0.798 0.939 0.932  12.19
98) Dibenz(a,h)a 0.682 0.779 0.879 0.908 0.922 0.894 0.725 0.837 0.828  10.85
```

Initial Calibration Summary

Job Number: JB55929 **Sample:** E2M2510-ICC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59458.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
 99) Dibenz[a,h]a 0.749 0.873 1.038 1.061 1.078 1.023 0.796 0.966 0.948  13.37
100) 7,12-Dimethy 0.446 0.517 0.641 0.614 0.559 0.666 0.466 0.578 0.561  14.26
101) Benzo[g,h,i] 0.830 0.925 1.006 1.038 1.058 0.957 0.828 0.978 0.952   9.16

102)     1,4-Dichlorobenzene-d ----------------ISTD---------------------
103) Benzaldehyde       1.197 0.820 0.746 0.784 0.826       0.766 0.856  19.79

104)     Acenaphthene-d10a     ----------------ISTD---------------------
105) 1,2,4,5-Tetr 0.452 0.438 0.434 0.429 0.442 0.441 0.429 0.421 0.436   2.21
106) 2-bromonapht 0.578 0.585 0.564 0.543 0.549 0.559 0.581 0.575 0.567   2.75

107)     Chrysene-d12a         ----------------ISTD---------------------
108) Benzidine          0.446 0.458 0.547 0.586 0.551       0.296 0.481  22.05
109) 1-chloroocta 0.437 0.521 0.524 0.507 0.544 0.544       0.500 0.511   7.17

110)     Phenanthrene-d10a     ----------------ISTD---------------------
111) Atrazine     0.095 0.104 0.101 0.100 0.100 0.104 0.096 0.106 0.101   3.77
112) o-terphenyl  0.553 0.585 0.561 0.526 0.523 0.559       0.577 0.555   4.25

113) I   Naphthalene-d8a       ----------------ISTD---------------------
114) hydroquinone 0.291 0.298 0.326 0.339 0.338 0.342 0.406 0.354 0.337  10.52
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M2M2510.M         Thu Dec 19 09:40:44 2013   MS2M
```

7.7.1

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** E2M2510-ICV2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59472.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E2M2510\2m59472.D Vial: 18
Acq On : 18 Dec 2013 6:42 pm Operator: kevins
Sample : icv2510-50 Inst : MS2M
Misc : op71232,e2m2510, Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	122	0.00	4.79
3	t	Pyridine	1.805	1.773	1.8	119	0.00	2.68
4	t	N-Nitrosodimethylamine	1.124	1.017	9.5	108	0.00	2.64
11	t	bis(2-Chloroethyl)ether	1.586	1.497	5.6	114	0.00	4.57
14	t	1,3-Dichlorobenzene	1.652	1.484	10.2	111	0.00	4.75
15	t	1,4-Dichlorobenzene	1.649	1.468	11.0	111	0.00	4.80
16	t	Benzyl alcohol	1.089	1.032	5.2	113	0.00	4.89
17	t	1,2-Dichlorobenzene	1.541	1.422	7.7	115	0.00	4.92
20	t	2,2'-oxybis(1-Chloropropa	2.127	2.046	3.8	119	0.00	5.00
22	t	n-Nitroso-di-n-propylamin	1.031	0.970	5.9	128	0.00	5.11
23	t	Hexachloroethane	0.459	0.423	7.8	113	0.00	5.21
24	I	Naphthalene-d8	1.000	1.000	0.0	116	0.00	5.94
26	t	Nitrobenzene	0.382	0.342	10.5	104	0.00	5.26
28	t	Isophorone	0.693	0.615	11.3	102	0.00	5.47
32	t	bis(2-Chloroethoxy)methan	0.426	0.404	5.2	110	0.00	5.68
36	t	1,2,4-Trichlorobenzene	0.282	0.260	7.8	108	0.00	5.88
38	t	Naphthalene	1.106	0.982	11.2	105	0.00	5.96
42	t	Hexachlorobutadiene	0.127	0.118	7.1	111	0.00	6.10
44	t	2-Methylnaphthalene	0.593	0.522	12.0	102	0.00	6.77
47	I	Acenaphthene-d10	1.000	1.000	0.0	106	0.00	8.30
48	t	Hexachlorocyclopentadiene	0.219	0.212	3.2	90	0.00	7.00
52	t	2-Chloronaphthalene	1.124	1.061	5.6	101	0.00	7.44
54	t	2-Nitroaniline	0.353	0.335	5.1	93	0.00	7.60
55	t	Dimethylphthalate	1.238	1.091	11.9	92	0.00	7.90
56	t	Acenaphthylene	1.881	1.617	14.0	91	0.00	8.07
57	t	2,6-Dinitrotoluene	0.261	0.241	7.7	88	0.00	7.98
58	t	3-Nitroaniline	0.356	0.284	20.2	79	0.01	8.25
59	t	Acenaphthene	1.144	1.060	7.3	99	0.00	8.36
62	t	Dibenzofuran	1.531	1.444	5.7	103	0.00	8.64
63	t	2,4-Dinitrotoluene	0.341	0.282	17.3	81	0.00	8.64
65	t	Diethylphthalate	1.221	1.033	15.4	89	0.00	9.10
66	t	Fluorene	1.285	1.175	8.6	94	0.00	9.23
67	t	4-Chlorophenyl-phenylethe	0.537	0.488	9.1	96	0.00	9.26
68	t	4-Nitroaniline	0.342	0.305	10.8	86	0.01	9.29
69	I	Phenanthrene-d10	1.000	1.000	0.0	102	0.00	10.92
71	t	n-Nitrosodiphenylamine	0.657	0.591	10.0	87	0.00	9.47
72	t	1,2-Diphenylhydrazine	0.972	0.922	5.1	93	0.00	9.54
74	t	4-Bromophenyl-phenylether	0.192	0.183	4.7	92	0.00	10.14
75	t	Hexachlorobenzene	0.185	0.171	7.6	90	0.00	10.23

Initial Calibration Verification

Job Number: JB55929 **Sample:** E2M2510-ICV2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59472.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

77	t	Phenanthrene	1.256	1.087	13.5	86	0.00	10.97
78	t	Anthracene	1.255	1.131	9.9	87	0.00	11.06
79	t	Carbazole	1.196	1.096	8.4	88	0.00	11.40
80	t	Di-n-butylphthalate	1.470	1.261	14.2	80	0.00	12.21
81	t	Fluoranthene	1.192	1.000	16.1	77	0.00	13.26
83	I	Chrysene-d12	1.000	1.000	0.0	78	0.00	16.08
84	t	Pyrene	1.508	1.554	-3.1	77	0.00	13.68
86	t	Butylbenzylphthalate	0.726	0.692	4.7	67	0.00	15.14
88	t	Benzo[a]anthracene	1.218	1.119	8.1	67	0.00	16.07
90	t	Chrysene	1.136	1.131	0.4	73	0.00	16.13
91	t	bis(2-Ethylhexyl)phthalat	1.010	0.943	6.6	66	0.00	16.36
92	I	Perylene-d12	1.000	1.000	0.0	77	0.00	18.69
93	t	Di-n-octylphthalate	2.091	1.906	8.8	60	0.00	17.58
94	t	Benzo[b]fluoranthene	1.299	1.160	10.7	61	0.00	18.05
95	t	Benzo[k]fluoranthene	1.289	1.244	3.5	67	0.00	18.10
96	t	Benzo[a]pyrene	1.125	1.129	-0.4	69	0.00	18.59
97	t	Indeno[1,2,3-cd]pyrene	0.932	0.927	0.5	72	0.00	20.42
99	t	Dibenz[a,h]anthracene	0.948	0.998	-5.3	75	0.01	20.47
101	t	Benzo[g,h,i]perylene	0.952	1.021	-7.2	82	0.01	20.88
104		Acenaphthene-d10a	1.000	1.000	0.0	130	0.00	8.30
105		1,2,4,5-Tetrachlorobenzen	0.436	0.408	6.4	120	0.00	7.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59466.D M2M2510.M Thu Dec 19 09:40:24 2013 MS2M

7.7.2

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** E2M2510-ICV2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59473.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2510\2m59473.D          Vial: 19
Acq On    : 18 Dec 2013   7:10 pm                    Operator: kevins
Sample    : icv2510-50                               Inst    : MS2M
Misc      : op71232,e2m2510,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	119	0.00	4.79
2	t	1,4-Dioxane	0.659	0.617	6.4	109	0.01	2.36
6	t	Indene	2.499	2.531	-1.3	129	0.00	5.00
7	t	Cumene	3.548	3.240	8.7	110	0.00	4.19
13	t	Decane	1.583	1.417	10.5	106	0.00	4.66
18	t	Acetophenone	1.970	1.861	5.5	120	0.00	5.11
24	I	Naphthalene-d8	1.000	1.000	0.0	111	0.00	5.93
27	t	Quinoline	0.728	0.641	12.0	96	0.00	6.33
40	t	2,3-Dichloroaniline	0.329	0.257	21.9	85	0.00	7.15
41	t	Caprolactam	0.162	0.134	17.3	84	-0.01	6.38
45	t	1-Methylnaphthalene	0.671	0.600	10.6	99	0.00	6.90
46	t	Dimethylnaphthalene	0.587	0.517	11.9	96	0.00	7.65
47	I	Acenaphthene-d10	1.000	1.000	0.0	97	0.00	8.30
53	t	Biphenyl	1.437	1.438	-0.1	97	0.00	7.42
69	I	Phenanthrene-d10	1.000	1.000	0.0	88	0.00	10.92
82	t	Octadecane	0.612	0.627	-2.5	85	0.00	10.92
92	I	Perylene-d12	1.000	1.000	0.0	74	-0.01	18.69
100	t	7,12-Dimethylbenz(a)anthr	0.561	0.384	31.6#	43#	0.00	18.06
102		1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	130	0.00	4.79
103		Benzaldehyde	0.856	1.147	-34.0#	181	0.00	4.45
110		Phenanthrene-d10a	1.000	1.000	0.0	101	0.00	10.92
111		Atrazine	0.101	0.110	-8.9	107	0.01	10.51

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59466.D M2M2510.M Thu Dec 19 09:40:25 2013 MS2M

7.7.3

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** E2M2510-ICV2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59474.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2510\2m59474.D          Vial: 20
Acq On    : 18 Dec 2013   7:38 pm                    Operator: kevins
Sample    : icv2510-50                               Inst    : MS2M
Misc      : op71232,e2m2510,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	4.78
5	S	2-Fluorophenol	1.477	1.353	8.4	92	0.00	3.80
8	S	Phenol-d5	1.904	1.666	12.5	90	0.00	4.51
24	I	Naphthalene-d8	1.000	1.000	0.0	100	0.00	5.93
25	S	Nitrobenzene-d5	0.364	0.326	10.4	89	0.00	5.24
47	I	Acenaphthene-d10	1.000	1.000	0.0	94	0.00	8.30
51	S	2-Fluorobiphenyl	1.214	1.115	8.2	87	0.00	7.28
69	I	Phenanthrene-d10	1.000	1.000	0.0	96	-0.01	10.92
73	S	2,4,6-Tribromophenol	0.073	0.065	11.0	74	0.00	9.65
83	I	Chrysene-d12	1.000	1.000	0.0	85	-0.01	16.08
85	S	Terphenyl-d14	0.882	0.852	3.4	77	0.00	14.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59466.D M2M2510.M Thu Dec 19 09:40:26 2013 MS2M

7.7.4

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** E2M2510-ICV2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59475.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2510\2m59475.D          Vial: 21
Acq On    : 18 Dec 2013   8:05 pm                    Operator: kevins
Sample    : icv2510-50                               Inst    : MS2M
Misc      : op71232,e2m2510,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	100	0.00	4.79
9	t	Phenol	2.189	2.078	5.1	94	0.00	4.52
12	t	2-Chlorophenol	1.617	1.625	-0.5	100	0.00	4.63
19	t	2-Methylphenol	1.373	1.501	-9.3	113	0.00	4.99
21	t	3&4-Methylphenol	1.435	1.556	-8.4	113	0.00	5.11
24	I	Naphthalene-d8	1.000	1.000	0.0	94	0.00	5.94
29	t	2-Nitrophenol	0.194	0.203	-4.6	94	0.00	5.55
30	t	2,4-Dimethylphenol	0.327	0.346	-5.8	96	0.00	5.59
31	t	Benzoic acid	0.249	0.262	-5.2	86	0.04	5.71
33	t	2,4-Dichlorophenol	0.279	0.291	-4.3	96	0.00	5.79
34	t	2,6-Dichlorophenol	0.273	0.287	-5.1	98	0.00	6.02
43	t	4-Chloro-3-methylphenol	0.307	0.303	1.3	90	-0.01	6.58
47	I	Acenaphthene-d10	1.000	1.000	0.0	89	0.00	8.30
49	t	2,4,6-Trichlorophenol	0.321	0.348	-8.4	93	0.00	7.16
50	t	2,4,5-Trichlorophenol	0.336	0.376	-11.9	94	0.00	7.21
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	100.000	81.210	18.8	58	0.00	8.41
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.135	0.150	-11.1	83	0.00	8.57
64		2,3,4,6-Tetrachlorophenol	0.236	0.250	-5.9	84	0.00	8.86
69	I	Phenanthrene-d10	1.000	1.000	0.0	89	0.00	10.92
70	t	4,6-Dinitro-2-methylpheno	0.143	0.125	12.6	73	0.00	9.34
76	t	Pentachlorophenol	0.116	0.118	1.7	82	0.00	10.60

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59466.D M2M2510.M Thu Dec 19 09:40:27 2013 MS2M

Initial Calibration Verification

Job Number: JB55929 **Sample:** E2M2510-ICV2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59476.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2510\2m59476.D          Vial: 22
Acq On    : 18 Dec 2013   8:34 pm                    Operator: kevins
Sample    : icv2510-50                               Inst    : MS2M
Misc      : op71232,e2m2510,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	144	0.00	4.78
10		Aniline	2.443	2.359	3.4	145	0.00	4.53
24	I	Naphthalene-d8	1.000	1.000	0.0	140	0.00	5.94
39	t	4-Chloroaniline	0.459	0.443	3.5	135	0.00	6.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59466.D M2M2510.M Thu Dec 19 09:40:28 2013 MS2M

7.7.6

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** E2M2510-ICV2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59477.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2510\2m59477.D          Vial: 23
Acq On    : 18 Dec 2013   9:01 pm                    Operator: kevins
Sample    : icv2510-50                               Inst    : MS2M
Misc      : op71232,e2m2510,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83 I	Chrysene-d12	1.000	1.000	0.0	82	-0.02	16.07
89 t	3,3'-Dichlorobenzidine	0.385	0.310	19.5	59	0.00	16.08
107	Chrysene-d12a	1.000	1.000	0.0	101	-0.01	16.07
108	Benzidine	0.481	0.604	-25.6	111	0.00	13.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59466.D M2M2510.M Thu Dec 19 09:40:29 2013 MS2M

7.2.7

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** E2M2510-ICV2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59478.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2510\2m59478.D          Vial: 24
Acq On    : 18 Dec 2013   9:29 pm                    Operator: kevins
Sample    : icv2510-50                               Inst    : MS2M
Misc      : op71232,e2m2510,                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
113 I	Naphthalene-d8a	1.000	1.000	0.0	108	0.00	5.93
114	hydroquinone	0.337	0.284	15.7	90	-0.01	6.39

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59466.D M2M2510.M Thu Dec 19 09:40:30 2013 MS2M

7.7.8

7

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2514-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59551.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2514\2m59551.D          Vial: 2
Acq On    : 20 Dec 2013  10:37 pm                    Operator: ashleyd
Sample    : cc2510-25                                Inst    : MS2M
Misc      : op71232,e2m2514                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	88	-0.03	4.76
2	t	1,4-Dioxane	0.659	0.687	-4.2	92	-0.04	2.32
3	t	Pyridine	1.805	1.786	1.1	89	-0.04	2.64
4	t	N-Nitrosodimethylamine	1.124	1.153	-2.6	90	-0.04	2.60
5	S	2-Fluorophenol	1.477	1.542	-4.4	91	-0.02	3.78
6	t	Indene	2.499	2.527	-1.1	87	-0.04	4.96
7	t	Cumene	3.548	3.594	-1.3	89	-0.03	4.16
8	S	Phenol-d5	1.904	1.925	-1.1	88	-0.02	4.49
9	t	Phenol	2.189	2.188	0.0	85	-0.02	4.50
10		Aniline	2.443	2.324	4.9	82	-0.03	4.50
11	t	bis(2-Chloroethyl)ether	1.586	1.572	0.9	87	-0.03	4.55
12	t	2-Chlorophenol	1.617	1.597	1.2	86	-0.03	4.60
13	t	Decane	1.583	1.559	1.5	86	-0.03	4.63
14	t	1,3-Dichlorobenzene	1.652	1.697	-2.7	90	-0.03	4.71
15	t	1,4-Dichlorobenzene	1.649	1.668	-1.2	89	-0.03	4.77
16	t	Benzyl alcohol	1.089	1.112	-2.1	89	-0.03	4.86
17	t	1,2-Dichlorobenzene	1.541	1.559	-1.2	89	-0.03	4.89
18	t	Acetophenone	1.970	1.954	0.8	87	-0.03	5.08
19	t	2-Methylphenol	1.373	1.372	0.1	84	-0.03	4.96
20	t	2,2'-oxybis(1-Chloropropa	2.127	2.084	2.0	83	-0.03	4.97
21	t	3&4-Methylphenol	1.435	1.546	-7.7	90	-0.03	5.09
22	t	n-Nitroso-di-n-propylamin	1.031	1.069	-3.7	89	-0.03	5.08
23	t	Hexachloroethane	0.459	0.461	-0.4	86	-0.04	5.17
24	I	Naphthalene-d8	1.000	1.000	0.0	85	-0.04	5.90
25	S	Nitrobenzene-d5	0.364	0.372	-2.2	87	-0.04	5.21
26	t	Nitrobenzene	0.382	0.388	-1.6	86	-0.04	5.22
27	t	Quinoline	0.728	0.714	1.9	85	-0.04	6.29
28	t	Isophorone	0.693	0.692	0.1	84	-0.04	5.44
29	t	2-Nitrophenol	0.194	0.203	-4.6	86	-0.04	5.52
30	t	2,4-Dimethylphenol	0.327	0.322	1.5	81	-0.03	5.56
31	t	Benzoic acid	0.249	0.129	48.2#	45#	0.00	5.67
32	t	bis(2-Chloroethoxy)methan	0.426	0.427	-0.2	85	-0.04	5.64
33	t	2,4-Dichlorophenol	0.279	0.285	-2.2	85	-0.03	5.76
34	t	2,6-Dichlorophenol	0.273	0.279	-2.2	86	-0.04	5.99
35		1,3,5-Trichlorobenzene	0.287	0.291	-1.4	86	-0.04	5.53
36	t	1,2,4-Trichlorobenzene	0.282	0.283	-0.4	85	-0.04	5.84
37		1,2,3-Trichlorobenzene	0.272	0.273	-0.4	84	-0.04	6.08
38	t	Naphthalene	1.106	1.121	-1.4	86	-0.04	5.92
39	t	4-Chloroaniline	0.459	0.461	-0.4	84	-0.04	5.98
40	t	2,3-Dichloroaniline	0.329	0.328	0.3	85	-0.04	7.11
41	t	Caprolactam	0.162	0.156	3.7	81	-0.03	6.36

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2514-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59551.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

42	t	Hexachlorobutadiene	0.127	0.122	3.9	82	-0.04	6.06
43	t	4-Chloro-3-methylphenol	0.307	0.310	-1.0	85	-0.03	6.56
44	t	2-Methylnaphthalene	0.593	0.597	-0.7	86	-0.04	6.73
45	t	1-Methylnaphthalene	0.671	0.668	0.4	85	-0.04	6.86
46	t	Dimethylnaphthalene	0.587	0.578	1.5	83	-0.05	7.61
47	I	Acenaphthene-d10	1.000	1.000	0.0	83	-0.05	8.25
48	t	Hexachlorocyclopentadiene	0.219	0.226	-3.2	77	-0.04	6.95
49	t	2,4,6-Trichlorophenol	0.321	0.333	-3.7	83	-0.04	7.13
50	t	2,4,5-Trichlorophenol	0.336	0.350	-4.2	82	-0.04	7.18
51	S	2-Fluorobiphenyl	1.214	1.234	-1.6	84	-0.05	7.23
52	t	2-Chloronaphthalene	1.124	1.158	-3.0	84	-0.04	7.40
53	t	Biphenyl	1.437	1.479	-2.9	83	-0.04	7.38
54	t	2-Nitroaniline	0.353	0.373	-5.7	85	-0.04	7.55
55	t	Dimethylphthalate	1.238	1.247	-0.7	83	-0.04	7.85
56	t	Acenaphthylene	1.881	1.957	-4.0	85	-0.05	8.02
57	t	2,6-Dinitrotoluene	0.261	0.281	-7.7	85	-0.04	7.93
58	t	3-Nitroaniline	0.356	0.381	-7.0	86	-0.04	8.20
59	t	Acenaphthene	1.144	1.165	-1.8	85	-0.05	8.30
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	36.484	27.0#	61	-0.04	8.37
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.135	0.147	-8.9	87	-0.02	8.55
62	t	Dibenzofuran	1.531	1.550	-1.2	83	-0.05	8.59
63	t	2,4-Dinitrotoluene	0.341	0.366	-7.3	83	-0.04	8.59
64		2,3,4,6-Tetrachlorophenol	0.236	0.244	-3.4	81	-0.05	8.82
65	t	Diethylphthalate	1.221	1.243	-1.8	84	-0.05	9.05
66	t	Fluorene	1.285	1.303	-1.4	83	-0.05	9.17
67	t	4-Chlorophenyl-phenylethe	0.537	0.534	0.6	81	-0.05	9.21
68	t	4-Nitroaniline	0.342	0.370	-8.2	88	-0.04	9.23
69	I	Phenanthrene-d10	1.000	1.000	0.0	84	-0.05	10.87
70	t	4,6-Dinitro-2-methylpheno	0.143	0.113	21.0#	75	-0.04	9.30
71	t	n-Nitrosodiphenylamine	0.657	0.658	-0.2	82	-0.05	9.42
72	t	1,2-Diphenylhydrazine	0.972	0.995	-2.4	83	-0.05	9.48
73	S	2,4,6-Tribromophenol	0.073	0.069	5.5	77	-0.05	9.61
74	t	4-Bromophenyl-phenylether	0.192	0.183	4.7	79	-0.04	10.09
75	t	Hexachlorobenzene	0.185	0.173	6.5	79	-0.05	10.18
76	t	Pentachlorophenol	0.116	0.115	0.9	85	-0.04	10.56
77	t	Phenanthrene	1.256	1.253	0.2	83	-0.05	10.92
78	t	Anthracene	1.255	1.268	-1.0	83	-0.05	11.01
79	t	Carbazole	1.196	1.244	-4.0	87	-0.04	11.36
80	t	Di-n-butylphthalate	1.470	1.562	-6.3	86	-0.04	12.16
81	t	Fluoranthene	1.192	1.230	-3.2	86	-0.05	13.21
82	t	Octadecane	0.612	0.625	-2.1	81	-0.05	10.87
83	I	Chrysene-d12	1.000	1.000	0.0	88	-0.05	16.04
84	t	Pyrene	1.508	1.555	-3.1	87	-0.05	13.63
85	S	Terphenyl-d14	0.882	0.885	-0.3	84	-0.05	14.04
86	t	Butylbenzylphthalate	0.726	0.832	-14.6	95	-0.05	15.09
87		Butyl stearate	0.477	0.514	-7.8	86	-0.05	15.34
88	t	Benzo[a]anthracene	1.218	1.278	-4.9	91	-0.05	16.01
89	t	3,3'-Dichlorobenzidine	0.385	0.432	-12.2	93	-0.05	16.04
90	t	Chrysene	1.136	1.214	-6.9	91	-0.05	16.08
91	t	bis(2-Ethylhexyl)phthalat	1.010	1.172	-16.0	95	-0.05	16.31
92	I	Perylene-d12	1.000	1.000	0.0	103	-0.05	18.65
93	t	Di-n-octylphthalate	2.091	2.330	-11.4	103	-0.05	17.53

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2514-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59551.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

94	t	Benzo[b]fluoranthene	1.299	1.351	-4.0	98	-0.05	18.00
95	t	Benzo[k]fluoranthene	1.289	1.325	-2.8	99	-0.04	18.05
96	t	Benzo[a]pyrene	1.125	1.219	-8.4	105	-0.05	18.54
97	t	Indeno[1,2,3-cd]pyrene	0.932	1.099	-17.9	118	-0.06	20.35
98	t	Dibenz(a,h)acridine	0.828	0.959	-15.8	112	-0.06	19.98
99	t	Dibenz[a,h]anthracene	0.948	1.114	-17.5	110	-0.05	20.41
100	t	7,12-Dimethylbenz(a)anthr	0.561	0.588	-4.8	94	-0.04	18.02
101	t	Benzo[g,h,i]perylene	0.952	1.113	-16.9	114	-0.06	20.81

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59467.D M2M2510.M Mon Dec 23 14:21:21 2013 MS2M

7.7.9

7

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2514-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59552.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2514\2m59552.D          Vial: 3
Acq On    : 20 Dec 2013  11:05 pm                    Operator: ashleyd
Sample    : cc2510-25                                Inst    : MS2M
Misc      : op71232,e2m2514                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	104	-0.03	4.75
103	Benzaldehyde	0.856	0.834	2.6	106	-0.03	4.42
104	Acenaphthene-d10a	1.000	1.000	0.0	98	-0.05	8.25
105	1,2,4,5-Tetrachlorobenzen	0.436	0.429	1.6	97	-0.04	6.96
106	Chrysene-d12a	1.000	1.000	0.0	93	-0.05	16.03
107	Benzidine	0.481	0.578	-20.2#	117	-0.04	13.54
108	Phenanthrene-d10a	1.000	1.000	0.0	95	-0.04	10.88
109	Atrazine	0.101	0.099	2.0	93	-0.03	10.47

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59467.D M2M2510.M Tue Dec 24 12:39:28 2013 MS2M

7.7.10

7

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2516-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59610.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E2M2516\2m59610.D Vial: 2
Acq On : 23 Dec 2013 9:35 am Operator: kevins
Sample : cc2510-25 Inst : MS2M
Misc : op71232,e2m2516 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umMon Dec 23 15:38:37 2013
Last Update : Mon Dec 23 15:38:37 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	81	-0.01	4.74
2	t	1,4-Dioxane	0.659	0.568	13.8	71	0.00	2.31
3	t	Pyridine	1.805	1.593	11.7	74	0.00	2.63
4	t	N-Nitrosodimethylamine	1.124	1.039	7.6	75	0.00	2.60
5	S	2-Fluorophenol	1.477	1.332	9.8	73	0.00	3.78
6	t	Indene	2.499	2.665	-6.6	85	0.00	4.95
7	t	Cumene	3.548	3.466	2.3	79	-0.01	4.15
8	S	Phenol-d5	1.904	1.955	-2.7	83	0.00	4.49
9	t	Phenol	2.189	2.272	-3.8	82	0.00	4.50
10		Aniline	2.443	2.419	1.0	79	0.00	4.50
11	t	bis(2-Chloroethyl)ether	1.586	1.536	3.2	79	0.00	4.54
12	t	2-Chlorophenol	1.617	1.572	2.8	78	0.00	4.60
13	t	Decane	1.583	1.628	-2.8	83	-0.01	4.62
14	t	1,3-Dichlorobenzene	1.652	1.567	5.1	77	-0.01	4.70
15	t	1,4-Dichlorobenzene	1.649	1.607	2.5	80	0.00	4.76
16	t	Benzyl alcohol	1.089	1.115	-2.4	82	0.00	4.86
17	t	1,2-Dichlorobenzene	1.541	1.499	2.7	79	0.00	4.88
18	t	Acetophenone	1.970	2.146	-8.9	88	-0.01	5.07
19	t	2-Methylphenol	1.373	1.497	-9.0	84	0.00	4.96
20	t	2,2'-oxybis(1-Chloropropa	2.127	2.440	-14.7	90	-0.01	4.96
21	t	3&4-Methylphenol	1.435	1.608	-12.1	87	0.00	5.09
22	t	n-Nitroso-di-n-propylamin	1.031	1.240	-20.3#	96	0.00	5.07
23	t	Hexachloroethane	0.459	0.412	10.2	71	-0.01	5.16
24	I	Naphthalene-d8	1.000	1.000	0.0	83	-0.01	5.89
25	S	Nitrobenzene-d5	0.364	0.378	-3.8	86	0.00	5.20
26	t	Nitrobenzene	0.382	0.396	-3.7	85	0.00	5.22
27	t	Quinoline	0.728	0.714	1.9	83	0.00	6.28
28	t	Isophorone	0.693	0.724	-4.5	86	0.00	5.43
29	t	2-Nitrophenol	0.194	0.189	2.6	78	0.00	5.51
30	t	2,4-Dimethylphenol	0.327	0.329	-0.6	81	0.00	5.56
31	t	Benzoic acid	0.249	0.178	28.5#	60	-0.02	5.65
32	t	bis(2-Chloroethoxy)methan	0.426	0.425	0.2	83	0.00	5.63
33	t	2,4-Dichlorophenol	0.279	0.272	2.5	80	0.00	5.76
34	t	2,6-Dichlorophenol	0.273	0.272	0.4	82	0.00	5.99
35		1,3,5-Trichlorobenzene	0.287	0.266	7.3	77	-0.01	5.52
36	t	1,2,4-Trichlorobenzene	0.282	0.256	9.2	75	-0.01	5.83
37		1,2,3-Trichlorobenzene	0.272	0.249	8.5	75	0.00	6.07
38	t	Naphthalene	1.106	1.086	1.8	81	-0.01	5.91
39	t	4-Chloroaniline	0.459	0.449	2.2	80	0.00	5.97
40	t	2,3-Dichloroaniline	0.329	0.331	-0.6	83	0.00	7.10
41	t	Caprolactam	0.162	0.177	-9.3	89	0.00	6.36

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2516-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59610.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

42	t	Hexachlorobutadiene	0.127	0.117	7.9	77	-0.01	6.05
43	t	4-Chloro-3-methylphenol	0.307	0.323	-5.2	86	0.00	6.56
44	t	2-Methylnaphthalene	0.593	0.601	-1.3	85	-0.01	6.72
45	t	1-Methylnaphthalene	0.671	0.663	1.2	82	-0.01	6.85
46	t	Dimethylnaphthalene	0.587	0.582	0.9	82	-0.01	7.60
47	I	Acenaphthene-d10	1.000	1.000	0.0	86	-0.01	8.24
48	t	Hexachlorocyclopentadiene	0.219	0.197	10.0	70	-0.01	6.94
49	t	2,4,6-Trichlorophenol	0.321	0.310	3.4	79	0.00	7.12
50	t	2,4,5-Trichlorophenol	0.336	0.311	7.4	75	0.00	7.18
51	S	2-Fluorobiphenyl	1.214	1.166	4.0	82	0.00	7.23
52	t	2-Chloronaphthalene	1.124	1.069	4.9	80	-0.01	7.39
53	t	Biphenyl	1.437	1.423	1.0	83	-0.01	7.37
54	t	2-Nitroaniline	0.353	0.399	-13.0	94	0.00	7.55
55	t	Dimethylphthalate	1.238	1.192	3.7	82	0.00	7.85
56	t	Acenaphthylene	1.881	1.864	0.9	84	0.00	8.01
57	t	2,6-Dinitrotoluene	0.261	0.253	3.1	79	0.00	7.93
58	t	3-Nitroaniline	0.356	0.347	2.5	81	0.00	8.19
59	t	Acenaphthene	1.144	1.138	0.5	86	0.00	8.30
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	37.620	24.8#	66	0.00	8.37
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.135	0.177	-31.1#	108	0.01	8.56
62	t	Dibenzofuran	1.531	1.507	1.6	84	-0.01	8.58
63	t	2,4-Dinitrotoluene	0.341	0.363	-6.5	86	0.00	8.59
64		2,3,4,6-Tetrachlorophenol	0.236	0.220	6.8	75	0.00	8.82
65	t	Diethylphthalate	1.221	1.222	-0.1	85	-0.01	9.04
66	t	Fluorene	1.285	1.281	0.3	84	0.00	9.17
67	t	4-Chlorophenyl-phenylethe	0.537	0.483	10.1	76	-0.01	9.19
68	t	4-Nitroaniline	0.342	0.342	0.0	84	0.00	9.24
69	I	Phenanthrene-d10	1.000	1.000	0.0	92	-0.01	10.86
70	t	4,6-Dinitro-2-methylpheno	0.143	0.101	29.4#	72	0.00	9.30
71	t	n-Nitrosodiphenylamine	0.657	0.590	10.2	81	0.00	9.41
72	t	1,2-Diphenylhydrazine	0.972	0.994	-2.3	91	-0.01	9.47
73	S	2,4,6-Tribromophenol	0.073	0.061	16.4	73	0.00	9.60
74	t	4-Bromophenyl-phenylether	0.192	0.157	18.2	74	-0.02	10.07
75	t	Hexachlorobenzene	0.185	0.148	20.0#	74	-0.01	10.17
76	t	Pentachlorophenol	0.116	0.097	16.4	79	0.00	10.56
77	t	Phenanthrene	1.256	1.156	8.0	84	-0.01	10.91
78	t	Anthracene	1.255	1.164	7.3	84	-0.01	11.00
79	t	Carbazole	1.196	1.132	5.4	87	-0.01	11.35
80	t	Di-n-butylphthalate	1.470	1.475	-0.3	89	-0.02	12.15
81	t	Fluoranthene	1.192	1.137	4.6	87	-0.02	13.19
82	t	Octadecane	0.612	0.716	-17.0	101	-0.02	10.85
83	I	Chrysene-d12	1.000	1.000	0.0	100	-0.02	16.02
84	t	Pyrene	1.508	1.379	8.6	88	-0.01	13.62
85	S	Terphenyl-d14	0.882	0.746	15.4	81	-0.02	14.02
86	t	Butylbenzylphthalate	0.726	0.733	-1.0	96	-0.02	15.08
87		Butyl stearate	0.477	0.526	-10.3	101	-0.02	15.32
88	t	Benzo[a]anthracene	1.218	1.138	6.6	93	-0.01	16.00
89	t	3,3'-Dichlorobenzidine	0.385	0.403	-4.7	99	-0.02	16.03
90	t	Chrysene	1.136	1.002	11.8	86	-0.01	16.07
91	t	bis(2-Ethylhexyl)phthalat	1.010	1.031	-2.1	96	-0.02	16.29
92	I	Perylene-d12	1.000	1.000	0.0	94	-0.01	18.64
93	t	Di-n-octylphthalate	2.091	2.464	-17.8	100	-0.02	17.51

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2516-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59610.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

94	t	Benzo[b]fluoranthene	1.299	1.426	-9.8	95	-0.01	17.99
95	t	Benzo[k]fluoranthene	1.289	1.280	0.7	87	-0.01	18.04
96	t	Benzo[a]pyrene	1.125	1.117	0.7	88	-0.01	18.53
97	t	Indeno[1,2,3-cd]pyrene	0.932	0.841	9.8	82	-0.01	20.34
98	t	Dibenz(a,h)acridine	0.828	0.735	11.2	79	-0.01	19.97
99	t	Dibenz[a,h]anthracene	0.948	0.858	9.5	78	-0.02	20.39
100	t	7,12-Dimethylbenz(a)anthr	0.561	0.618	-10.2	91	-0.02	18.00
101	t	Benzo[g,h,i]perylene	0.952	0.808	15.1	76	-0.02	20.80

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59467.D M2M2510.M Mon Dec 23 17:08:20 2013 MS2M

7.7.11

7

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2516-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59611.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2516\2m59611.D          Vial: 3
Acq On    : 23 Dec 2013  10:04 am                    Operator: kevins
Sample    : cc2510-25                                Inst    : MS2M
Misc      : op71232,e2m2516                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umTue Dec 24 13:01:00 2013
Last Update  : Tue Dec 24 13:01:00 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	96	-0.01	4.75
103	Benzaldehyde	0.856	0.780	8.9	91	-0.04	4.41
104	Acenaphthene-d10a	1.000	1.000	0.0	108	-0.03	8.24
105	1,2,4,5-Tetrachlorobenzen	0.436	0.364	16.5	90	-0.05	6.95
106	Chrysene-d12a	1.000	1.000	0.0	100	-0.05	16.01
107	Benzidine	0.481	0.383	20.4#	84	-0.06	13.53
108	Phenanthrene-d10a	1.000	1.000	0.0	105	-0.04	10.86
109	Atrazine	0.101	0.093	7.9	97	-0.05	10.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59467.D M2M2510.M Tue Dec 24 13:17:26 2013 MS2M

7.7.12

7

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2518-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59661.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2518\2m59661.D          Vial: 2
Acq On    : 24 Dec 2013   3:18 pm                    Operator: kevins
Sample    : cc2510-25                                Inst    : MS2M
Misc      : op71232,e2m2518                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	66	-0.06	4.73
2	t	1,4-Dioxane	0.659	0.551	16.4	55	-0.07	2.28
3	t	Pyridine	1.805	1.627	9.9	61	-0.07	2.61
4	t	N-Nitrosodimethylamine	1.124	1.026	8.7	60	-0.07	2.57
5	S	2-Fluorophenol	1.477	1.361	7.9	60	-0.04	3.77
6	t	Indene	2.499	2.741	-9.7	70	-0.06	4.94
7	t	Cumene	3.548	3.450	2.8	64	-0.06	4.13
8	S	Phenol-d5	1.904	2.012	-5.7	69	-0.03	4.48
9	t	Phenol	2.189	2.348	-7.3	68	-0.03	4.49
10		Aniline	2.443	2.515	-2.9	66	-0.05	4.48
11	t	bis(2-Chloroethyl)ether	1.586	1.576	0.6	65	-0.05	4.53
12	t	2-Chlorophenol	1.617	1.578	2.4	64	-0.05	4.58
13	t	Decane	1.583	1.585	-0.1	65	-0.06	4.61
14	t	1,3-Dichlorobenzene	1.652	1.580	4.4	63	-0.06	4.69
15	t	1,4-Dichlorobenzene	1.649	1.628	1.3	65	-0.05	4.74
16	t	Benzyl alcohol	1.089	1.145	-5.1	68	-0.05	4.84
17	t	1,2-Dichlorobenzene	1.541	1.534	0.5	65	-0.05	4.87
18	t	Acetophenone	1.970	2.258	-14.6	75	-0.06	5.05
19	t	2-Methylphenol	1.373	1.562	-13.8	71	-0.04	4.95
20	t	2,2'-oxybis(1-Chloropropa	2.127	2.476	-16.4	73	-0.06	4.94
21	t	3&4-Methylphenol	1.435	1.635	-13.9	71	-0.04	5.07
22	t	n-Nitroso-di-n-propylamin	1.031	1.328	-28.8#	83	-0.06	5.05
23	t	Hexachloroethane	0.459	0.422	8.1	59	-0.06	5.15
24	I	Naphthalene-d8	1.000	1.000	0.0	71	-0.06	5.87
25	S	Nitrobenzene-d5	0.364	0.377	-3.6	73	-0.06	5.18
26	t	Nitrobenzene	0.382	0.401	-5.0	74	-0.06	5.20
27	t	Quinoline	0.728	0.710	2.5	70	-0.06	6.26
28	t	Isophorone	0.693	0.728	-5.1	74	-0.06	5.41
29	t	2-Nitrophenol	0.194	0.189	2.6	66	-0.06	5.49
30	t	2,4-Dimethylphenol	0.327	0.327	0.0	69	-0.05	5.54
31	t	Benzoic acid	0.249	0.253	-1.6	73	-0.03	5.64
32	t	bis(2-Chloroethoxy)methan	0.426	0.415	2.6	69	-0.06	5.61
33	t	2,4-Dichlorophenol	0.279	0.261	6.5	65	-0.05	5.74
34	t	2,6-Dichlorophenol	0.273	0.263	3.7	67	-0.06	5.96
35		1,3,5-Trichlorobenzene	0.287	0.259	9.8	64	-0.06	5.50
36	t	1,2,4-Trichlorobenzene	0.282	0.252	10.6	63	-0.06	5.81
37		1,2,3-Trichlorobenzene	0.272	0.249	8.5	64	-0.06	6.06
38	t	Naphthalene	1.106	1.073	3.0	68	-0.06	5.89
39	t	4-Chloroaniline	0.459	0.450	2.0	69	-0.06	5.95
40	t	2,3-Dichloroaniline	0.329	0.334	-1.5	72	-0.07	7.08
41	t	Caprolactam	0.162	0.199	-22.8#	86	-0.06	6.33

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2518-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59661.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

42	t	Hexachlorobutadiene	0.127	0.116	8.7	65	-0.07	6.03
43	t	4-Chloro-3-methylphenol	0.307	0.333	-8.5	76	-0.05	6.54
44	t	2-Methylnaphthalene	0.593	0.591	0.3	71	-0.07	6.70
45	t	1-Methylnaphthalene	0.671	0.663	1.2	70	-0.07	6.83
46	t	Dimethylnaphthalene	0.587	0.576	1.9	69	-0.07	7.58
47	I	Acenaphthene-d10	1.000	1.000	0.0	75	-0.08	8.22
48	t	Hexachlorocyclopentadiene	0.219	0.199	9.1	62	-0.07	6.92
49	t	2,4,6-Trichlorophenol	0.321	0.310	3.4	70	-0.06	7.10
50	t	2,4,5-Trichlorophenol	0.336	0.321	4.5	68	-0.06	7.16
51	S	2-Fluorobiphenyl	1.214	1.122	7.6	69	-0.07	7.21
52	t	2-Chloronaphthalene	1.124	1.054	6.2	70	-0.07	7.37
53	t	Biphenyl	1.437	1.383	3.8	71	-0.07	7.34
54	t	2-Nitroaniline	0.353	0.413	-17.0	85	-0.07	7.53
55	t	Dimethylphthalate	1.238	1.208	2.4	73	-0.07	7.82
56	t	Acenaphthylene	1.881	1.845	1.9	73	-0.07	7.99
57	t	2,6-Dinitrotoluene	0.261	0.264	-1.1	72	-0.07	7.91
58	t	3-Nitroaniline	0.356	0.370	-3.9	76	-0.06	8.17
59	t	Acenaphthene	1.144	1.125	1.7	74	-0.07	8.28
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	46.457	7.1	77	-0.06	8.35
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.135	0.193	-43.0#	103	-0.03	8.54
62	t	Dibenzofuran	1.531	1.536	-0.3	75	-0.08	8.56
63	t	2,4-Dinitrotoluene	0.341	0.390	-14.4	81	-0.06	8.57
64		2,3,4,6-Tetrachlorophenol	0.236	0.221	6.4	66	-0.07	8.80
65	t	Diethylphthalate	1.221	1.269	-3.9	78	-0.08	9.02
66	t	Fluorene	1.285	1.288	-0.2	74	-0.08	9.15
67	t	4-Chlorophenyl-phenylethe	0.537	0.493	8.2	68	-0.08	9.17
68	t	4-Nitroaniline	0.342	0.375	-9.6	81	-0.06	9.21
69	I	Phenanthrene-d10	1.000	1.000	0.0	86	-0.09	10.84
70	t	4,6-Dinitro-2-methylpheno	0.143	0.115	19.6	78	-0.06	9.28
71	t	n-Nitrosodiphenylamine	0.657	0.573	12.8	73	-0.07	9.39
72	t	1,2-Diphenylhydrazine	0.972	0.954	1.9	82	-0.08	9.45
73	S	2,4,6-Tribromophenol	0.073	0.060	17.8	68	-0.07	9.58
74	t	4-Bromophenyl-phenylether	0.192	0.148	22.9#	66	-0.08	10.05
75	t	Hexachlorobenzene	0.185	0.150	18.9	71	-0.08	10.15
76	t	Pentachlorophenol	0.116	0.101	12.9	77	-0.07	10.54
77	t	Phenanthrene	1.256	1.117	11.1	76	-0.08	10.89
78	t	Anthracene	1.255	1.138	9.3	77	-0.09	10.98
79	t	Carbazole	1.196	1.139	4.8	82	-0.07	11.32
80	t	Di-n-butylphthalate	1.470	1.455	1.0	83	-0.08	12.13
81	t	Fluoranthene	1.192	1.147	3.8	83	-0.09	13.17
82	t	Octadecane	0.612	0.652	-6.5	87	-0.09	10.83
83	I	Chrysene-d12	1.000	1.000	0.0	102	-0.09	16.00
84	t	Pyrene	1.508	1.291	14.4	84	-0.09	13.60
85	S	Terphenyl-d14	0.882	0.707	19.8	78	-0.08	14.01
86	t	Butylbenzylphthalate	0.726	0.707	2.6	94	-0.09	15.06
87		Butyl stearate	0.477	0.469	1.7	92	-0.09	15.30
88	t	Benzo[a]anthracene	1.218	1.135	6.8	94	-0.09	15.98
89	t	3,3'-Dichlorobenzidine	0.385	0.446	-15.8	112	-0.08	16.01
90	t	Chrysene	1.136	1.006	11.4	88	-0.08	16.05
91	t	bis(2-Ethylhexyl)phthalat	1.010	0.969	4.1	92	-0.09	16.28
92	I	Perylene-d12	1.000	1.000	0.0	106	-0.08	18.62
93	t	Di-n-octylphthalate	2.091	2.171	-3.8	99	-0.09	17.50

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2518-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59661.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

94	t	Benzo[b]fluoranthene	1.299	1.347	-3.7	102	-0.07	17.97
95	t	Benzo[k]fluoranthene	1.289	1.222	5.2	94	-0.07	18.03
96	t	Benzo[a]pyrene	1.125	1.103	2.0	98	-0.07	18.52
97	t	Indeno[1,2,3-cd]pyrene	0.932	0.980	-5.2	108	-0.09	20.33
98	t	Dibenz(a,h)acridine	0.828	0.870	-5.1	105	-0.08	19.96
99	t	Dibenz[a,h]anthracene	0.948	1.022	-7.8	105	-0.09	20.37
100	t	7,12-Dimethylbenz(a)anthr	0.561	0.578	-3.0	96	-0.07	17.98
101	t	Benzo[g,h,i]perylene	0.952	0.978	-2.7	103	-0.09	20.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59467.D M2M2510.M Thu Dec 26 13:10:33 2013 MS2M

7.7.13

7

Continuing Calibration Summary

Job Number: JB55929 **Sample:** E2M2518-CC2510
Account: ENVNJB EnviroTrac **Lab FileID:** 2M59662.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\E2M2518\2m59662.D          Vial: 3
Acq On    : 24 Dec 2013   3:46 pm                    Operator: kevins
Sample    : cc2510-25                                Inst    : MS2M
Misc      : op71232,e2m2518                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M2M2510.M (RTE Integrator)
Title        : Semi Volatile GC/MS, rxi-5sil ms 30mx .25mmx .25umThu Dec 19 09:24:43 2013
Last Update  : Thu Dec 19 09:24:43 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	90	-0.05	4.73
103	Benzaldehyde	0.856	0.790	7.7	87	-0.05	4.40
104	Acenaphthene-d10a	1.000	1.000	0.0	114	-0.08	8.22
105	1,2,4,5-Tetrachlorobenzen	0.436	0.346	20.6#	91	-0.07	6.93
106	Chrysene-d12a	1.000	1.000	0.0	127	-0.09	16.00
107	Benzidine	0.481	0.511	-6.2	142	-0.07	13.51
108	Phenanthrene-d10a	1.000	1.000	0.0	117	-0.09	10.84
109	Atrazine	0.101	0.093	7.9	108	-0.07	10.43

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2m59467.D M2M2510.M Thu Dec 26 13:11:39 2013 MS2M

7.7.14

7

Initial Calibration Summary

Job Number: JB55929 **Sample:** EZ4369-ICC4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87365.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Response Factor Report MSZ

Method : C:\MSDCHEM\1\METHODS\MZ4369.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Mon Dec 23 08:55:08 2013
Response via : Initial Calibration

Calibration Files
100 =z87363.D 80 =z87367.D 50 =z87365.D 25 =z87366.D
10 =z87369.D 5 =z87370.D 2 =z87368.D 1 =z87364.D

Compound	100	80	50	25	10	5	2	1	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane	0.445	0.460	0.546	0.525	0.483	0.472	0.487	0.545	0.495	7.85
3) Pyridine	1.061	1.208	1.456	1.394	1.278	1.161	1.046	0.999	1.200	13.90
4) N-Nitrosodim	0.734	0.755	0.844	0.790	0.792	0.701	0.783	0.669	0.759	7.39
5) 2-Fluorophen	1.151	1.198	1.232	1.167	1.203	1.160	1.100	1.029	1.155	5.59
6) Indene	2.009	2.093	2.531	2.468	2.290	2.239	2.255	2.127	2.251	7.99
7) Cumene	2.864	2.985	3.811	3.679	3.312	3.298	3.122	2.956	3.253	10.57
8) Phenol-d5	1.483	1.539	1.598	1.514	1.583	1.524	1.393	1.286	1.490	6.97
9) Phenol	1.636	1.695	2.029	1.979	1.794	1.720	1.660	1.533	1.756	9.73
10) Aniline	1.521	1.596	2.524	2.474	1.982	1.951	1.944	1.737	1.966	18.82
11) bis(2-Chloro	1.055	1.097	1.236	1.211	1.174	1.120	1.069	1.105	1.133	5.85
12) 2-Chlorophen	1.254	1.315	1.565	1.520	1.432	1.427	1.349	1.227	1.386	8.75
13) Decane	1.678	1.786	2.311	2.401	2.155	2.187	2.035	1.933	2.061	12.20
14) 1,3-Dichloro	1.429	1.499	1.613	1.595	1.648	1.691	1.534	1.518	1.566	5.50
15) 1,4-Dichloro	1.405	1.490	1.598	1.562	1.642	1.657	1.596	1.531	1.560	5.35
16) Benzyl alcoh	0.810	0.854	1.108	1.029	0.889	0.831	0.836	0.694	0.881	14.76
17) 1,2-Dichloro	1.297	1.370	1.475	1.469	1.546	1.599	1.527	1.484	1.471	6.60
18) Acetophenone	1.572	1.653	2.100	2.101	1.895	1.812	1.769	1.668	1.821	10.94
19) 2-Methylphen	1.029	1.079	1.397	1.414	1.207	1.159	1.043	1.046	1.172	13.38
20) 2,2'-oxybis(	0.385	0.396	0.467	0.448	0.422	0.441	0.453	0.336	0.419	10.43
21) 3&4-Methylph	1.150	1.195	1.525	1.480	1.269	1.234	1.174	1.096	1.265	12.30
22) n-Nitroso-di	0.837	0.860	1.009	1.020	1.004	0.987	0.979	0.890	0.948	7.76
23) Hexachloroet	0.543	0.560	0.586	0.585	0.610	0.587	0.590	0.538	0.575	4.40
24) I Naphthalene-d8	----------ISTD----------									
25) Nitrobenzene	0.350	0.360	0.372	0.368	0.389	0.378	0.357	0.326	0.363	5.26
26) Nitrobenzene	0.350	0.361	0.362	0.373	0.400	0.387	0.366	0.346	0.368	4.89
27) Quinoline	0.651	0.676	0.778	0.782	0.730	0.676	0.630	0.640	0.695	8.70
28) Isophorone	0.591	0.616	0.630	0.616	0.661	0.648	0.595	0.570	0.616	4.92
29) 2-Nitropheno	0.201	0.207	0.232	0.230	0.212	0.198	0.175	0.176	0.204	10.48
30) 2,4-Dimethyl	0.333	0.343	0.398	0.405	0.351	0.337	0.273	0.272	0.339	14.47
31) Benzoic Acid	0.281	0.289	0.311	0.276	0.220	0.174			0.259	19.76
32) bis(2-Chloro	0.329	0.342	0.367	0.371	0.362	0.358	0.355	0.318	0.350	5.40
33) 2,4-Dichloro	0.310	0.317	0.367	0.363	0.341	0.319	0.325	0.262	0.326	10.24
34) 2,6-Dichloro	0.289	0.304	0.343	0.351	0.341	0.304	0.303	0.270	0.313	9.18
35) 1,3,5-Trichl	0.326	0.338	0.414	0.421	0.388	0.388	0.377	0.362	0.377	8.94
36) 1,2,4-Trichl	0.328	0.340	0.348	0.352	0.384	0.381	0.367	0.347	0.356	5.58
37) 1,2,3-Trichl	0.304	0.314	0.378	0.393	0.363	0.361	0.357	0.327	0.350	8.96
38) Naphthalene	0.939	0.982	1.147	1.153	1.084	1.068	1.053	0.976	1.050	7.53
39) 4-Chloroanil	0.390	0.406	0.536	0.538	0.450	0.455	0.436	0.373	0.448	13.79
40) 2,3-Dichloro	0.351	0.360	0.431	0.440	0.410	0.398	0.392	0.323	0.388	10.45
41) Caprolactam	0.235	0.240	0.281	0.276	0.248	0.252	0.235	0.221	0.248	8.34
42) Hexachlorobu	0.176	0.183	0.189	0.191	0.211	0.199	0.193	0.190	0.191	5.46
43) 4-Chloro-3-m	0.309	0.323	0.358	0.355	0.333	0.322	0.297	0.260	0.320	9.98
44) 2-Methylnaph	0.570	0.601	0.758	0.788	0.673	0.666	0.625	0.581	0.658	12.22
45) 1-Methylnaph	0.548	0.571	0.687	0.704	0.644	0.646	0.626	0.571	0.625	9.09

Initial Calibration Summary

Job Number: JB55929 **Sample:** EZ4369-ICC4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87365.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

46)	Dimethylnaph	0.621	0.637	0.757	0.765	0.711	0.718	0.645	0.599	0.682	9.36
47)	I Acenaphthene-d10	----------ISTD----------									
48)	Hexachlorocy	0.314	0.329	0.360	0.354	0.340	0.317	0.260	0.219	0.312	15.55
49)	2,4,6-Trichl	0.335	0.348	0.393	0.405	0.376	0.356	0.331	0.312	0.357	9.03
50)	2,4,5-Trichl	0.357	0.371	0.442	0.455	0.384	0.377	0.364	0.365	0.389	9.67
51)	2-Fluorobiph	1.132	1.177	1.244	1.267	1.324	1.297	1.304	1.191	1.242	5.54
52)	2-Chloronaph	0.981	1.037	1.053	1.084	1.159	1.185	1.146	1.036	1.085	6.59
53)	Biphenyl	1.317	1.379	1.642	1.677	1.537	1.544	1.466	1.385	1.493	8.66
54)	2-Nitroanili	0.371	0.382	0.477	0.468	0.387	0.373	0.335	0.334	0.391	13.89
55)	Dimethylphth	1.187	1.224	1.371	1.373	1.354	1.339	1.224	1.239	1.289	6.00
56)	Acenaphthyle	1.622	1.694	2.006	2.033	1.868	1.825	1.688	1.611	1.793	9.25
57)	2,6-Dinitrot	0.279	0.284	0.284	0.285	0.294	0.263	0.243	0.207	0.267	10.92
58)	3-Nitroanili	0.317	0.329	0.406	0.401	0.328	0.293	0.274	0.222	0.321	19.11
59)	Acenaphthene	1.020	1.070	1.266	1.301	1.201	1.160	1.124	1.113	1.157	8.26
60)	2,4-Dinitrop	0.166	0.170	0.189	0.163	0.113				0.160	17.75
61)	4-Nitropheno	0.192	0.197	0.214	0.210	0.194	0.167	0.140		0.188	13.72
62)	Dibenzofuran	1.404	1.486	1.865	1.933	1.667	1.650	1.632	1.542	1.647	10.90
63)	2,4-Dinitrot	0.372	0.388	0.395	0.398	0.405	0.376	0.313	0.266	0.364	13.49
64)	2,3,4,6-Tetr	0.311	0.323	0.355	0.360	0.321	0.304	0.237	0.223	0.304	16.40
65)	Diethylphtha	1.163	1.215	1.321	1.343	1.326	1.254	1.223	1.157	1.250	5.87
66)	Fluorene	1.205	1.269	1.467	1.522	1.390	1.341	1.299	1.164	1.332	9.31
67)	4-Chlorophen	0.561	0.594	0.654	0.676	0.668	0.654	0.638	0.567	0.626	7.33
68)	4-Nitroanili	0.310	0.319	0.391	0.396	0.324	0.344	0.284	0.312	0.335	11.86
69)	I Phenanthrene-d10	----------ISTD----------									
70)	4,6-Dinitro-	0.151	0.155	0.164	0.143	0.124				0.147	10.19
71)	n-Nitrosodip	0.540	0.555	0.614	0.607	0.602	0.584	0.547	0.493	0.568	7.31
72)	1,2-Diphenyl	0.639	0.672	0.679	0.675	0.729	0.696	0.673	0.620	0.673	4.93
73)	2,4,6-Tribro	0.085	0.088	0.087	0.081	0.092	0.083	0.071	0.066	0.082	11.16
74)	4-Bromopheny	0.198	0.204	0.222	0.221	0.221	0.213	0.196	0.163	0.205	9.78
75)	Hexachlorobe	0.182	0.192	0.196	0.191	0.212	0.202	0.204	0.202	0.198	4.72
76)	Pentachlorop	0.140	0.144	0.149	0.142	0.139	0.115	0.090		0.131	16.13
77)	Phenanthrene	1.042	1.100	1.292	1.293	1.220	1.205	1.201	1.108	1.183	7.73
78)	Anthracene	1.065	1.110	1.311	1.326	1.261	1.196	1.147	1.024	1.180	9.55
79)	Carbazole	0.981	1.030	1.186	1.194	1.118	1.058	1.046	0.928	1.068	8.78
80)	Di-n-butylph	1.174	1.216	1.344	1.312	1.288	1.184	1.108	0.951	1.197	10.60
81)	Fluoranthene	1.195	1.237	1.441	1.427	1.343	1.304	1.180	1.052	1.273	10.41
82)	Octadecane	0.578	0.598	0.712	0.720	0.653	0.600	0.555	0.503	0.615	12.26
83)	I Chrysene-d12	----------ISTD----------									
84)	Pyrene	1.274	1.334	1.549	1.522	1.445	1.408	1.301	1.197	1.379	8.97
85)	Butyl steara	0.407	0.421	0.520	0.506	0.421	0.365	0.304		0.421	17.91
86)	Terphenyl-d1	0.789	0.829	0.788	0.774	0.868	0.810	0.761	0.713	0.791	5.83
87)	Butylbenzylp	0.570	0.588	0.637	0.596	0.582	0.523	0.471	0.416	0.548	13.33
88)	Benzo[a]anth	1.057	1.111	1.304	1.288	1.198	1.192	1.116	1.154	1.177	7.35
89)	3,3'-Dichlor	0.376	0.398	0.375	0.363	0.403	0.371	0.331	0.281	0.362	10.94
90)	Chrysene	0.992	1.038	1.206	1.178	1.099	1.068	1.037	0.960	1.072	7.98
91)	bis(2-Ethylh	0.735	0.780	0.834	0.797	0.760	0.693	0.577	0.537	0.714	14.83
92)	I Perylene-d12	----------ISTD----------									
93)	Di-n-octylph	1.470	1.522	1.667	1.547	1.466	1.273	1.080	0.910	1.367	18.89
94)	Benzo[b]fluo	1.215	1.233	1.460	1.396	1.331	1.271	1.235	1.116	1.282	8.54
95)	Benzo[k]fluo	1.019	1.115	1.301	1.331	1.227	1.223	1.181	1.132	1.191	8.57
96)	Benzo[a]pyre	1.029	1.085	1.264	1.216	1.141	1.072	1.008	0.926	1.093	10.16
97)	Indeno[1,2,3	1.112	1.182	1.342	1.230	1.085	1.078	1.168	0.864	1.133	12.26
98)	Dibenz(a,h)a	0.912	0.948	1.079	1.016	0.953	0.844	0.770	0.704	0.903	13.82
99)	Dibenz[a,h]a	1.037	1.075	1.258	1.194	1.126	1.030	0.883	0.833	1.055	13.67
100)	7,12-Dimethy	0.551	0.569	0.684	0.664	0.549	0.467	0.471	0.459	0.552	15.68
101)	Benzo[g,h,i]	1.017	1.060	1.227	1.179	1.082	1.033	0.910	0.816	1.040	12.78

Initial Calibration Summary

Job Number: JB55929 **Sample:** EZ4369-ICC4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87365.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
102)     1,4-Dichlorobenzene-d ----------------ISTD---------------------
103) Benzaldehyde 0.668 0.632 0.824 0.849 0.595 0.933 0.865 0.866 0.779  16.37

104)     Phenanthrene-d10a     ----------------ISTD---------------------
105) Atrazine     0.107 0.106 0.116 0.114 0.107 0.098 0.098 0.081 0.103  10.66
106) o-terphenyl  0.575 0.579 0.635 0.668 0.624 0.630 0.594       0.615   5.50

107)     Chrysene-d12a         ----------------ISTD---------------------
108) Benzidine    0.464 0.416 0.554 0.371 0.124                   0.386  41.88
109) 1-chloroocta 0.477 0.468 0.509 0.528 0.455 0.454 0.404       0.471   8.56

110)     Acenaphthene-d10a     ----------------ISTD---------------------
111) 1,2,4,5-Tetr 0.528 0.520 0.547 0.554 0.528 0.556 0.555 0.530 0.540   2.71

112) I   Naphthalene-d8a       ----------------ISTD---------------------
113) Hydroquinone 0.304 0.307 0.316 0.313 0.286 0.243 0.239 0.271 0.285  10.82
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MZ4369.M          Mon Dec 23 10:29:12 2013   RTE
```

7.7.15

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** EZ4369-ICV4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87380.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\ez4369\z87380.D Vial: 19
Acq On : 20 Dec 2013 6:57 pm Operator: emilyp
Sample : icv4369-50 Inst : MSZ
Misc : op71437,ez4369 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MZ4369.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update : Mon Dec 23 08:55:08 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 202%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	138	0.00	5.76
3	t	Pyridine	1.200	1.245	-3.8	118	0.00	2.95
4	t	N-Nitrosodimethylamine	0.759	0.670	11.7	109	0.01	2.91
11	t	bis(2-Chloroethyl)ether	1.133	1.070	5.6	119	0.00	5.54
14	t	1,3-Dichlorobenzene	1.566	1.463	6.6	125	0.00	5.71
15	t	1,4-Dichlorobenzene	1.560	1.420	9.0	122	0.00	5.78
16	t	Benzyl alcohol	0.881	0.805	8.6	100	0.00	5.88
17	t	1,2-Dichlorobenzene	1.471	1.327	9.8	124	0.00	5.91
20	t	2,2'-oxybis(1-Chloropropa	0.419	0.388	7.4	114	0.00	6.00
22	t	n-Nitroso-di-n-propylamin	0.948	0.834	12.0	114	0.00	6.11
23	t	Hexachloroethane	0.575	0.535	7.0	126	0.00	6.21
24	I	Naphthalene-d8	1.000	1.000	0.0	126	0.00	6.94
26	t	Nitrobenzene	0.368	0.352	4.3	123	0.00	6.26
28	t	Isophorone	0.616	0.579	6.0	116	0.00	6.48
32	t	bis(2-Chloroethoxy)methan	0.350	0.344	1.7	118	0.00	6.68
36	t	1,2,4-Trichlorobenzene	0.356	0.342	3.9	124	0.00	6.88
38	t	Naphthalene	1.050	0.919	12.5	101	0.00	6.96
42	t	Hexachlorobutadiene	0.191	0.186	2.6	124	0.00	7.10
44	t	2-Methylnaphthalene	0.658	0.563	14.4	94	0.00	7.72
47	I	Acenaphthene-d10	1.000	1.000	0.0	117	0.00	9.06
48	t	Hexachlorocyclopentadiene	0.312	0.334	-7.1	108	0.00	7.92
52	t	2-Chloronaphthalene	1.085	1.070	1.4	119	0.00	8.31
54	t	2-Nitroaniline	0.391	0.373	4.6	92	0.00	8.45
55	t	Dimethylphthalate	1.289	1.185	8.1	101	0.00	8.70
56	t	Acenaphthylene	1.793	1.540	14.1	90	0.00	8.86
57	t	2,6-Dinitrotoluene	0.267	0.255	4.5	105	0.00	8.77
58	t	3-Nitroaniline	0.321	0.267	16.8	77	0.00	9.00
59	t	Acenaphthene	1.157	1.069	7.6	99	0.00	9.10
62	t	Dibenzofuran	1.647	1.505	8.6	95	0.00	9.34
63	t	2,4-Dinitrotoluene	0.364	0.327	10.2	97	0.01	9.33
65	t	Diethylphthalate	1.250	1.130	9.6	100	0.00	9.71
66	t	Fluorene	1.332	1.206	9.5	96	0.00	9.84
67	t	4-Chlorophenyl-phenylethe	0.626	0.573	8.5	103	0.00	9.85
68	t	4-Nitroaniline	0.335	0.281	16.1	84	0.02	9.87
69	I	Phenanthrene-d10	1.000	1.000	0.0	113	0.00	11.24
71	t	n-Nitrosodiphenylamine	0.568	0.514	9.5	95	0.00	10.03
72	t	1,2-Diphenylhydrazine	0.673	0.679	-0.9	113	0.00	10.09
74	t	4-Bromophenyl-phenylether	0.205	0.197	3.9	101	0.00	10.58

Initial Calibration Verification

Job Number: JB55929 **Sample:** EZ4369-ICV4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87380.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

75	t	Hexachlorobenzene	0.198	0.184	7.1	106	0.00	10.67
77	t	Phenanthrene	1.183	1.016	14.1	89	0.00	11.28
78	t	Anthracene	1.180	1.066	9.7	92	0.00	11.35
79	t	Carbazole	1.068	1.008	5.6	96	0.01	11.62
80	t	Di-n-butylphthalate	1.197	1.131	5.5	95	0.00	12.25
81	t	Fluoranthene	1.273	1.094	14.1	86	0.00	13.14
83	I	Chrysene-d12	1.000	1.000	0.0	99	0.00	15.42
84	t	Pyrene	1.379	1.314	4.7	84	0.00	13.49
87	t	Butylbenzylphthalate	0.548	0.571	-4.2	89	0.00	14.62
88	t	Benzo[a]anthracene	1.177	1.060	9.9	81	0.00	15.40
90	t	Chrysene	1.072	1.024	4.5	84	0.01	15.46
91	t	bis(2-Ethylhexyl)phthalat	0.714	0.744	-4.2	89	0.00	15.58
92	I	Perylene-d12	1.000	1.000	0.0	95	0.00	17.52
93	t	Di-n-octylphthalate	1.367	1.495	-9.4	86	0.00	16.56
94	t	Benzo[b]fluoranthene	1.282	1.134	11.5	74	0.01	17.01
95	t	Benzo[k]fluoranthene	1.191	1.127	5.4	83	0.00	17.04
96	t	Benzo[a]pyrene	1.093	1.085	0.7	82	0.01	17.45
97	t	Indeno[1,2,3-cd]pyrene	1.133	1.104	2.6	79	0.01	18.87
99	t	Dibenz[a,h]anthracene	1.055	1.035	1.9	79	0.00	18.90
101	t	Benzo[g,h,i]perylene	1.040	1.045	-0.5	81	0.02	19.24
110		Acenaphthene-d10a	1.000	1.000	0.0	122	0.00	9.06
111		1,2,4,5-Tetrachlorobenzen	0.540	0.512	5.2	114	0.00	7.92

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z87373.D MZ4369.M Mon Dec 23 09:14:05 2013 RTE

7.7.16

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** EZ4369-ICV4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87381.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4369\z87381.D          Vial: 20
Acq On    : 20 Dec 2013   7:25 pm                  Operator: emilyp
Sample    : icv4369-50                             Inst    : MSZ
Misc      : op71437,ez4369                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4369.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Mon Dec 23 08:55:08 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	148	0.00	5.76
2		1,4-Dioxane	0.495	0.433	12.5	117	0.02	2.50
6	t	Indene	2.251	2.139	5.0	125	0.00	5.98
7	t	Cumene	3.253	2.991	8.1	116	0.00	5.09
13	t	Decane	2.061	1.790	13.1	114	0.00	5.64
18	t	Acetophenone	1.821	1.678	7.9	118	0.00	6.11
24	I	Naphthalene-d8	1.000	1.000	0.0	139	0.00	6.94
27	t	Quinoline	0.695	0.626	9.9	111	0.00	7.30
40	t	2,3-Dichloroaniline	0.388	0.297	23.5	96	0.00	8.06
41	t	Caprolactam	0.248	0.199	19.8	98	0.01	7.35
45	t	1-Methylnaphthalene	0.625	0.556	11.0	112	0.00	7.84
46	t	Dimethylnaphthalene	0.682	0.601	11.9	110	0.00	8.50
47	I	Acenaphthene-d10	1.000	1.000	0.0	126	0.00	9.06
53	t	Biphenyl	1.493	1.438	3.7	110	0.00	8.30
69	I	Phenanthrene-d10	1.000	1.000	0.0	115	0.00	11.24
82	t	Octadecane	0.615	0.641	-4.2	103	0.00	11.19
92	I	Perylene-d12	1.000	1.000	0.0	88	0.00	17.52
100	t	7,12-Dimethylbenz(a)anthr	0.552	0.389	29.5	50	0.00	17.01
102		1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	143	0.00	5.76
103		Benzaldehyde	0.779	0.960	-23.2	166	0.00	5.39
104		Phenanthrene-d10a	1.000	1.000	0.0	116	0.00	11.24
105		Atrazine	0.103	0.115	-11.7	114	0.01	10.87

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z87373.D MZ4369.M Mon Dec 23 09:14:07 2013 RTE

7.1.17

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** EZ4369-ICV4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87382.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4369\z87382.D          Vial: 21
Acq On    : 20 Dec 2013   7:53 pm                  Operator: emilyp
Sample    : icv4369-50                             Inst    : MSZ
Misc      : op71437,ez4369                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4369.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Mon Dec 23 08:55:08 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	147	0.00	5.76
5	S	2-Fluorophenol	1.155	1.076	6.8	128	0.00	4.62
8	S	Phenol-d5	1.490	1.285	13.8	118	0.00	5.46
24	I	Naphthalene-d8	1.000	1.000	0.0	137	0.00	6.94
25	S	Nitrobenzene-d5	0.363	0.342	5.8	126	0.00	6.24
47	I	Acenaphthene-d10	1.000	1.000	0.0	128	0.00	9.06
51	S	2-Fluorobiphenyl	1.242	1.183	4.8	122	0.00	8.17
69	I	Phenanthrene-d10	1.000	1.000	0.0	120	0.00	11.24
73	S	2,4,6-Tribromophenol	0.082	0.074	9.8	102	0.00	10.19
83	I	Chrysene-d12	1.000	1.000	0.0	106	0.00	15.41
86	S	Terphenyl-d14	0.791	0.835	-5.6	112	0.00	13.79

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 z87373.D   MZ4369.M         Mon Dec 23 09:14:09 2013   RTE
```

7.7.18

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** EZ4369-ICV4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87383.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4369\z87383.D          Vial: 22
Acq On    : 20 Dec 2013   8:21 pm                  Operator: emilyp
Sample    : icv4369-50                             Inst    : MSZ
Misc      : op71437,ez4369                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4369.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Mon Dec 23 08:55:08 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	187	0.00	5.76
10	t	Aniline	1.966	1.848	6.0	137	0.00	5.48
24	I	Naphthalene-d8	1.000	1.000	0.0	180	0.00	6.94
39	t	4-Chloroaniline	0.448	0.407	9.2	137	0.00	7.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z87373.D MZ4369.M Mon Dec 23 09:14:11 2013 RTE

7.7.19

7

Initial Calibration Verification

Job Number: JB55929 **Sample:** EZ4369-ICV4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87384.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4369\z87384.D          Vial: 23
Acq On    : 20 Dec 2013   8:49 pm                   Operator: emilyp
Sample    : icv4369-50                              Inst    : MSZ
Misc      : op71437,ez4369                          Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4369.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Mon Dec 23 08:55:08 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83	I	Chrysene-d12	1.000	1.000	0.0	115	0.00	15.41
89	t	3,3'-Dichlorobenzidine	0.362	0.298	17.7	91	0.00	15.40
107		Chrysene-d12a	1.000	1.000	0.0	115	0.00	15.41
108		Benzidine	0.386	0.610	-58.0#	127	0.00	13.38

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z87373.D MZ4369.M Mon Dec 23 09:14:13 2013 RTE

Initial Calibration Verification

Job Number: JB55929 **Sample:** EZ4369-ICV4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87385.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
  Data File : C:\msdchem\1\DATA\ez4369\z87385.D           Vial: 24
  Acq On    : 20 Dec 2013   9:17 pm                   Operator: emilyp
  Sample    : icv4369-50                              Inst    : MSZ
  Misc      : op71437,ez4369                          Multiplr: 1.00
  MS Integration Params: RTEINT.P

  Method       : C:\MSDCHEM\1\METHODS\MZ4369.M (RTE Integrator)
  Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
  Last Update  : Mon Dec 23 08:55:08 2013
  Response via : Multiple Level Calibration

  Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
  Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
112 I	Naphthalene-d8a	1.000	1.000	0.0	109	0.00	6.94
113	Hydroquinone	0.285	0.262	8.1	90	-0.03	7.35

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z87373.D MZ4369.M Mon Dec 23 09:14:15 2013 RTE

7.7.21

7

Continuing Calibration Summary

Job Number: JB55929 **Sample:** EZ4373-CC4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87432.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4373\z87432.D            Vial: 2
Acq On    : 24 Dec 2013   9:08 am                    Operator: emilyp
Sample    : cc4369-25                                Inst    : MSZ
Misc      : op71437,ez4373                           Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4369.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Mon Dec 23 08:55:08 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	111	-0.02	5.74
2		1,4-Dioxane	0.495	0.470	5.1	99	-0.03	2.45
3	t	Pyridine	1.200	1.235	-2.9	99	-0.04	2.91
4	t	N-Nitrosodimethylamine	0.759	0.707	6.9	100	-0.04	2.85
5	S	2-Fluorophenol	1.155	1.145	0.9	109	-0.02	4.59
6	t	Indene	2.251	2.501	-11.1	113	-0.03	5.96
7	t	Cumene	3.253	3.616	-11.2	109	-0.03	5.06
8	S	Phenol-d5	1.490	1.513	-1.5	111	-0.02	5.45
9	t	Phenol	1.756	1.922	-9.5	108	-0.02	5.46
10	t	Aniline	1.966	2.439	-24.1#	110	-0.02	5.46
11	t	bis(2-Chloroethyl)ether	1.133	1.182	-4.3	109	-0.03	5.51
12	t	2-Chlorophenol	1.386	1.561	-12.6	114	-0.02	5.56
13	t	Decane	2.061	2.385	-15.7	111	-0.03	5.62
14	t	1,3-Dichlorobenzene	1.566	1.565	0.1	109	-0.02	5.69
15	t	1,4-Dichlorobenzene	1.560	1.529	2.0	109	-0.03	5.75
16	t	Benzyl alcohol	0.881	1.053	-19.5	114	-0.02	5.86
17	t	1,2-Dichlorobenzene	1.471	1.452	1.3	110	-0.03	5.88
18	t	Acetophenone	1.821	2.094	-15.0	111	-0.02	6.09
19	t	2-Methylphenol	1.172	1.373	-17.2	108	-0.02	5.96
20	t	2,2'-oxybis(1-Chloropropa	0.419	0.437	-4.3	109	-0.02	5.98
21	t	3&4-Methylphenol	1.265	1.473	-16.4	111	-0.02	6.09
22	t	n-Nitroso-di-n-propylamin	0.948	1.006	-6.1	110	-0.02	6.09
23	t	Hexachloroethane	0.575	0.589	-2.4	112	-0.03	6.18
24	I	Naphthalene-d8	1.000	1.000	0.0	113	-0.03	6.91
25	S	Nitrobenzene-d5	0.363	0.369	-1.7	113	-0.02	6.22
26	t	Nitrobenzene	0.368	0.365	0.8	110	-0.02	6.24
27	t	Quinoline	0.695	0.782	-12.5	113	-0.03	7.28
28	t	Isophorone	0.616	0.617	-0.2	113	-0.02	6.45
29	t	2-Nitrophenol	0.204	0.231	-13.2	113	-0.02	6.53
30	t	2,4-Dimethylphenol	0.339	0.405	-19.5	113	-0.02	6.58
31		Benzoic Acid	0.259	0.223	13.9	91	0.00	6.65
32	t	bis(2-Chloroethoxy)methan	0.350	0.364	-4.0	110	-0.03	6.66
33	t	2,4-Dichlorophenol	0.326	0.361	-10.7	112	-0.02	6.77
34		2,6-Dichlorophenol	0.313	0.350	-11.8	112	-0.03	6.99
35	t	1,3,5-Trichlorobenzene	0.377	0.419	-11.1	112	-0.03	6.55
36	t	1,2,4-Trichlorobenzene	0.356	0.352	1.1	112	-0.03	6.85
37	t	1,2,3-Trichlorobenzene	0.350	0.388	-10.9	111	-0.03	7.09
38	t	Naphthalene	1.050	1.147	-9.2	112	-0.03	6.93
39	t	4-Chloroaniline	0.448	0.539	-20.3#	113	-0.02	6.98
40	t	2,3-Dichloroaniline	0.388	0.446	-14.9	114	-0.03	8.03
41	t	Caprolactam	0.248	0.287	-15.7	117	0.01	7.35

Continuing Calibration Summary

Job Number: JB55929 **Sample:** EZ4373-CC4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87432.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

42	t	Hexachlorobutadiene	0.191	0.194	-1.6	114	-0.03	7.07
43	t	4-Chloro-3-methylphenol	0.320	0.371	-15.9	118	-0.02	7.52
44	t	2-Methylnaphthalene	0.658	0.782	-18.8	112	-0.03	7.69
45	t	1-Methylnaphthalene	0.625	0.694	-11.0	111	-0.03	7.81
46	t	Dimethylnaphthalene	0.682	0.785	-15.1	115	-0.03	8.47
47	I	Acenaphthene-d10	1.000	1.000	0.0	116	-0.03	9.03
48	t	Hexachlorocyclopentadiene	0.312	0.350	-12.2	114	-0.03	7.89
49	t	2,4,6-Trichlorophenol	0.357	0.407	-14.0	116	-0.02	8.04
50	t	2,4,5-Trichlorophenol	0.389	0.430	-10.5	109	-0.02	8.08
51	S	2-Fluorobiphenyl	1.242	1.245	-0.2	114	-0.03	8.14
52	t	2-Chloronaphthalene	1.085	1.062	2.1	113	-0.03	8.28
53	t	Biphenyl	1.493	1.645	-10.2	113	-0.03	8.26
54	t	2-Nitroaniline	0.391	0.477	-22.0#	118	-0.03	8.42
55	t	Dimethylphthalate	1.289	1.350	-4.7	114	-0.03	8.67
56	t	Acenaphthylene	1.793	2.014	-12.3	114	-0.03	8.83
57	t	2,6-Dinitrotoluene	0.267	0.280	-4.9	114	-0.03	8.74
58	t	3-Nitroaniline	0.321	0.406	-26.5#	117	-0.02	8.97
59	t	Acenaphthene	1.157	1.282	-10.8	114	-0.03	9.07
60	t	2,4-Dinitrophenol	0.160	0.153	4.4	108	-0.02	9.12
61	t	4-Nitrophenol	0.188	0.218	-16.0	120	-0.02	9.23
62	t	Dibenzofuran	1.647	1.905	-15.7	114	-0.03	9.31
63	t	2,4-Dinitrotoluene	0.364	0.395	-8.5	115	-0.02	9.30
64		2,3,4,6-Tetrachlorophenol	0.304	0.354	-16.4	114	-0.03	9.50
65	t	Diethylphthalate	1.250	1.347	-7.8	116	-0.03	9.68
66	t	Fluorene	1.332	1.487	-11.6	113	-0.03	9.80
67	t	4-Chlorophenyl-phenylethe	0.626	0.654	-4.5	112	-0.03	9.82
68	t	4-Nitroaniline	0.335	0.385	-14.9	112	-0.02	9.84
69	I	Phenanthrene-d10	1.000	1.000	0.0	114	-0.03	11.21
70	t	4,6-Dinitro-2-methylpheno	0.147	0.145	1.4	116	-0.02	9.90
71	t	n-Nitrosodiphenylamine	0.568	0.618	-8.8	117	-0.03	10.00
72	t	1,2-Diphenylhydrazine	0.673	0.684	-1.6	116	-0.03	10.06
73	S	2,4,6-Tribromophenol	0.082	0.087	-6.1	123	-0.03	10.16
74	t	4-Bromophenyl-phenylether	0.205	0.228	-11.2	118	-0.03	10.55
75	t	Hexachlorobenzene	0.198	0.193	2.5	115	-0.03	10.64
76	t	Pentachlorophenol	0.131	0.135	-3.1	109	-0.03	10.94
77	t	Phenanthrene	1.183	1.289	-9.0	114	-0.03	11.25
78	t	Anthracene	1.180	1.340	-13.6	116	-0.03	11.32
79	t	Carbazole	1.068	1.208	-13.1	116	-0.02	11.59
80	t	Di-n-butylphthalate	1.197	1.373	-14.7	120	-0.03	12.21
81	t	Fluoranthene	1.273	1.471	-15.6	118	-0.03	13.11
82	t	Octadecane	0.615	0.718	-16.7	114	-0.03	11.16
83	I	Chrysene-d12	1.000	1.000	0.0	117	-0.03	15.39
84	t	Pyrene	1.379	1.518	-10.1	117	-0.03	13.45
85		Butyl stearate	0.421	0.522	-24.0#	121	-0.03	14.75
86	S	Terphenyl-d14	0.791	0.764	3.4	116	-0.03	13.76
87	t	Butylbenzylphthalate	0.548	0.638	-16.4	126	-0.03	14.59
88	t	Benzo[a]anthracene	1.177	1.286	-9.3	117	-0.03	15.37
89	t	3,3'-Dichlorobenzidine	0.362	0.365	-0.8	118	-0.03	15.37
90	t	Chrysene	1.072	1.188	-10.8	118	-0.03	15.42
91	t	bis(2-Ethylhexyl)phthalat	0.714	0.830	-16.2	122	-0.03	15.55
92	I	Perylene-d12	1.000	1.000	0.0	115	-0.03	17.50
93	t	Di-n-octylphthalate	1.367	1.722	-26.0#	128	-0.03	16.52
94	t	Benzo[b]fluoranthene	1.282	1.453	-13.3	120	-0.02	16.97
95	t	Benzo[k]fluoranthene	1.191	1.315	-10.4	113	-0.02	17.02
96	t	Benzo[a]pyrene	1.093	1.267	-15.9	120	-0.03	17.41
97	t	Indeno[1,2,3-cd]pyrene	1.133	1.227	-8.3	115	-0.03	18.83

Continuing Calibration Summary

Job Number: JB55929 **Sample:** EZ4373-CC4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87432.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

98	t	Dibenz(a,h)acridine	0.903	1.029	-14.0	116	-0.03	18.53
99	t	Dibenz[a,h]anthracene	1.055	1.187	-12.5	114	-0.03	18.86
100	t	7,12-Dimethylbenz(a)anthr	0.552	0.668	-21.0#	116	-0.02	16.98
101	t	Benzo[g,h,i]perylene	1.040	1.137	-9.3	111	-0.03	19.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z87374.D MZ4369.M Tue Dec 24 14:39:05 2013 RTE

7.7.22

7

Continuing Calibration Summary

Job Number: JB55929 **Sample:** EZ4373-CC4369
Account: ENVNJB EnviroTrac **Lab FileID:** Z87433.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\ez4373\z87433.D          Vial: 3
Acq On    : 24 Dec 2013   9:37 am                  Operator: emilyp
Sample    : cc4369-25                              Inst    : MSZ
Misc      : op71437,ez4373                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MZ4369.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MS 15m x .25mm x .25um
Last Update  : Mon Dec 23 08:55:08 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	113	-0.03	5.73
103	Benzaldehyde	0.779	0.826	-6.0	109	-0.02	5.36
104	Phenanthrene-d10a	1.000	1.000	0.0	119	-0.03	11.21
105	Atrazine	0.103	0.122	-18.4	127	-0.02	10.84
106	Chrysene-d12a	1.000	1.000	0.0	122	-0.03	15.38
107	Benzidine	0.386	0.456	-18.1	151	-0.03	13.35
108	Acenaphthene-d10a	1.000	1.000	0.0	116	-0.03	9.03
109	1,2,4,5-Tetrachlorobenzen	0.540	0.529	2.0	111	-0.03	7.89

(#) = Out of Range SPCC's out = 0 CCC's out = 0
z87374.D MZ4369.M Tue Dec 24 14:39:07 2013 RTE

7.7.23

7

New Jersey

ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:30	MA32966-STD1	1		STDA
08:36	MA32966-STD2	1		STDB
08:42	ZZZZZZ	1		
08:47	ZZZZZZ	1		
08:53	MA32966-ICV1	1		
08:59	MA32966-ICB1	1		
09:05	MA32966-CCV1	1		
09:11	MA32966-CCB1	1		
09:17	MA32966-CRI1	1		
09:22	MA32966-CRID1	1		
09:28	MA32966-CRIA1	1		
09:34	MA32966-ICSA1	1		
09:40	MA32966-ICSAB1	1		
09:46	MA32966-CCV2	1		
09:52	MA32966-CCB2	1		
09:58	MP76886-MB1	1		
10:05	MP76886-B1	1		
10:11	MP76822-LC1	1		Batch to reanalyze for Tl, CRID out
10:17	MP76822-MB1	1		
10:22	MP76822-S1	1		
10:28	MP76822-S2	1		Bad reading on Y
10:34	JB55921-1	1		(sample used for QC only; not part of login JB55929)
10:40	MP76822-SD1	5		
10:46	ZZZZZZ	1		
10:52	MA32966-CCV3	1		
10:57	MA32966-CCB3	1		
11:03	ZZZZZZ	1		
11:09	ZZZZZZ	1		
11:15	ZZZZZZ	1		
11:21	MP76809-B1	1		
11:26	MP76794-B1	1		
11:32	ZZZZZZ	1		
11:38	MP76886-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:44	MP76886-S2	1		
11:49	JB56096-1	1		(sample used for QC only; not part of login JB55929)
11:55	MP76886-SD1	5		
12:01	MA32966-CCV4	1		
12:07	MA32966-CCB4	1		
12:13	ZZZZZZ	1		
12:18	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:30	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:47	ZZZZZZ	1		
12:53	ZZZZZZ	1		
12:59	ZZZZZZ	1		
13:05	ZZZZZZ	1		
13:11	MA32966-CCV5	1		
13:16	MA32966-CCB5	1		
13:22	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:39	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:57	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:09	ZZZZZZ	1		
14:14	MA32966-CCV6	1		
14:20	MA32966-CCB6	1		
14:26	MP76794-MB1	1		
14:32	MP76794-S1	1		High RSD-s. S high. Rerun straight and on dilution
14:38	MP76794-S2	1		High RSD-s. S high. Rerun straight and on dilution
14:44	JB55750-6A	1		(sample used for QC only; not part of login JB55929)
14:49	MP76794-SD1	5		High RSD-s. S high. Rerun straight and on dilution

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:55	ZZZZZZ	1		
15:01	ZZZZZZ	1		
15:07	ZZZZZZ	1		
15:13	ZZZZZZ	1		
15:19	ZZZZZZ	1		
15:25	MA32966-CCV7	1		
15:31	MA32966-CCB7	1		
15:37	ZZZZZZ	1		
15:43	ZZZZZZ	1		
15:48	ZZZZZZ	1		
15:54	ZZZZZZ	1		
16:00	ZZZZZZ	1		
16:05	ZZZZZZ	1		
16:11	ZZZZZZ	1		
16:17	JB55929-8	1		
16:23	JB55929-10	1		
---------->	Last reportable sample/prep for job JB55929			
16:29	ZZZZZZ	1		
16:34	MA32966-CCV8	1		
16:40	MA32966-CCB8	1		
16:46	ZZZZZZ	1		
16:52	MA32966-CRI2	1		
16:58	MA32966-CRIA2	1		
17:04	MA32966-CRID2	1		
17:10	ZZZZZZ	1		
17:16	MA32966-ICSA2	1		
17:22	MA32966-ICSAB2	1		
17:28	MA32966-CCV9	1		
17:33	MA32966-CCB9	1		
---------->	Last reportable CCB for job JB55929			
17:39	MP76865-MB1	1		
17:45	MP76865-MB2	1		
17:51	MP76865-LC1	1		
17:57	MP76865-B1	1		
18:03	MP76865-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:09	MP76865-S2	1		
18:14	JB56256-1	1		(sample used for QC only; not part of login JB55929)
18:20	MP76865-SD1	5		
18:26	ZZZZZZ	1		
18:32	ZZZZZZ	1		
18:38	MA32966-CCV10	1		
18:44	MA32966-CCB10	1		
18:50	ZZZZZZ	1		
18:56	ZZZZZZ	1		
19:02	ZZZZZZ	1		
19:08	ZZZZZZ	1		
19:14	ZZZZZZ	1		
19:19	ZZZZZZ	1		
19:25	ZZZZZZ	1		
19:31	ZZZZZZ	1		
19:37	ZZZZZZ	1		
19:43	ZZZZZZ	1		
19:49	MA32966-CCV11	1		
19:55	MA32966-CCB11	1		
20:01	ZZZZZZ	1		
20:07	ZZZZZZ	1		
20:13	ZZZZZZ	1		
20:19	ZZZZZZ	1		
20:24	ZZZZZZ	1		
20:30	ZZZZZZ	1		
20:36	ZZZZZZ	1		
20:42	MP76949-MB1	1		
20:48	MP76949-SD1	5		
20:54	ZZZZZZ	1		
21:00	ZZZZZZ	1		
21:06	MA32966-CCV12	1		
21:11	MA32966-CCB12	1		
21:17	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:23	ZZZZZZ	1		
21:29	ZZZZZZ	1		
21:35	ZZZZZZ	1		
21:41	ZZZZZZ	1		
21:47	MP76947-MB1	1		
21:53	MP76947-B1	1		
21:59	MP76947-S1	1		
22:05	MP76947-S2	1		
22:11	JB56186-2	1		(sample used for QC only; not part of login JB55929)
22:17	MA32966-CCV13	1		
22:22	MA32966-CCB13	1		
22:28	MP76947-SD1	5		
22:34	ZZZZZZ	1		
22:40	ZZZZZZ	1		
22:46	ZZZZZZ	1		
22:52	ZZZZZZ	1		
22:58	ZZZZZZ	1		
23:04	ZZZZZZ	1		
23:10	MP76809-MB1	1		
23:15	MP76809-S1	1		
23:21	MP76809-S2	1		
23:27	MA32966-CCV14	1		
23:33	MA32966-CCB14	1		
23:39	MA32966-CRI3	1		
23:44	MA32966-CRID3	1		
23:50	MA32966-CRIA3	1		
23:56	ZZZZZZ	1		
00:02	MA32966-ICSA3	1		
00:08	MA32966-ICSAB3	1		
00:14	MA32966-CCV15	1		
00:20	MA32966-CCB15	1		
00:26	JB55237-80A	1		(sample used for QC only; not part of login JB55929)
00:32	MP76809-SD1	5		bad dilution

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
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File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:38	ZZZZZZ	1		
00:43	ZZZZZZ	1		
00:49	ZZZZZZ	1		
00:55	ZZZZZZ	1		
01:01	ZZZZZZ	1		
01:07	ZZZZZZ	1		
01:13	ZZZZZZ	1		
01:18	ZZZZZZ	1		
01:24	MA32966-CCV16	1		
01:30	MA32966-CCB16	1		
01:36	ZZZZZZ	1		
01:42	ZZZZZZ	1		
01:48	ZZZZZZ	1		
01:53	ZZZZZZ	1		
01:59	ZZZZZZ	1		
02:05	ZZZZZZ	1		
02:11	ZZZZZZ	1		
02:17	ZZZZZZ	1		
02:23	ZZZZZZ	1		
02:29	ZZZZZZ	1		
02:35	MA32966-CCV17	1		
02:40	MA32966-CCB17	1		
02:46	ZZZZZZ	1		
02:52	ZZZZZZ	1		
02:58	ZZZZZZ	1		
03:03	MA32966-CCV18	1		
03:09	MA32966-CCB18	1		
03:15	MA32966-CRI4	1		
03:21	MA32966-CRIA4	1		
03:27	MA32966-CCV19	1		
03:33	MA32966-CCB19	1		
03:38	ZZZZZZ	1		
03:44	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:50	ZZZZZZ	1		
03:56	ZZZZZZ	1		
04:02	ZZZZZZ	1		
04:08	ZZZZZZ	1		
04:14	ZZZZZZ	1		
04:20	ZZZZZZ	1		
04:26	ZZZZZZ	1		
04:32	ZZZZZZ	1		
04:38	ZZZZZZ	1		
04:44	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
08:30	MA32966-STD1	1801 R	136950 R	21638 R	5145 R
08:36	MA32966-STD2	1675	130080	21164	4904
08:42	ZZZZZZ	1747	131070	21802	5069
08:47	ZZZZZZ	1840	137520	22093	5259
08:53	MA32966-ICV1	1715	131240	21194	5003
08:59	MA32966-ICB1	1816	136620	21857	5187
09:05	MA32966-CCV1	1712	129950	21279	5021
09:11	MA32966-CCB1	1797	134960	21728	5132
09:17	MA32966-CRI1	1787	134610	21847	5124
09:22	MA32966-CRID1	1799	135540	21759	5147
09:28	MA32966-CRIA1	1809	135170	21799	5173
09:34	MA32966-ICSA1	1625	121180	19390	4649
09:40	MA32966-ICSAB1	1617	126250	19787	4655
09:46	MA32966-CCV2	1725	131920	21320	5027
09:52	MA32966-CCB2	1784	134080	21590	5113
09:58	MP76886-MB1	1756	133380	21347	5054
10:05	MP76886-B1	1764	134190	21357	5150
10:11	MP76822-LC1	1765	134900	21201	5131
10:17	MP76822-MB1	1808	136140	21831	5175
10:22	MP76822-S1	1686	132080	21562	4840
10:28	MP76822-S2	No results reported for the elements associated with this internal standard.			
10:34	JB55921-1	1723	134310	22075	4938
10:40	MP76822-SD1	1744	134430	21022	5047
10:46	ZZZZZZ	1738	134990	21270	5057
10:52	MA32966-CCV3	1734	130420	21335	5046
10:57	MA32966-CCB3	1784	135150	21683	5109
11:03	ZZZZZZ	1728	134000	21409	5024
11:09	ZZZZZZ	1719	134390	21588	4978
11:15	ZZZZZZ	1660	130990	21813	4633
11:21	MP76809-B1	1782	137110	21024	5197
11:26	MP76794-B1	1776	135000	21349	5185
11:32	ZZZZZZ	1677	132740	21647	4760
11:38	MP76886-S1	1800	136200	21142	5150

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:44	MP76886-S2	1799	136740	21477	5146
11:49	JB56096-1	1811	137250	21640	5122
11:55	MP76886-SD1	1790	127760	21573	5127
12:01	MA32966-CCV4	1710	131770	21133	4986
12:07	MA32966-CCB4	1780	135920	21655	5108
12:13	ZZZZZZ	1797	136600	21437	5043
12:18	ZZZZZZ	1803	134310	21467	5101
12:24	ZZZZZZ	1787	134690	21208	5082
12:30	ZZZZZZ	1768	136750	21605	5083
12:36	ZZZZZZ	1759	135780	21466	5054
12:41	ZZZZZZ	1786	136290	21544	5101
12:47	ZZZZZZ	1784	136180	21263	5109
12:53	ZZZZZZ	1879	142750	22178	5062
12:59	ZZZZZZ	1752	134740	21108	5038
13:05	ZZZZZZ	1857	141280	22090	5041
13:11	MA32966-CCV5	1705	132140	20895	4993
13:16	MA32966-CCB5	1769	144640	21082	5101
13:22	ZZZZZZ	1671	132660	21018	4849
13:28	ZZZZZZ	1904	146150	22668	4973
13:34	ZZZZZZ	1761	136210	20872	5033
13:39	ZZZZZZ	1787	137900	21514	4965
13:45	ZZZZZZ	1755	136360	21393	4972
13:51	ZZZZZZ	1731	135060	21229	4977
13:57	ZZZZZZ	1618	129630	20048	4626
14:03	ZZZZZZ	1807	140950	22029	5072
14:09	ZZZZZZ	1724	134950	21168	4996
14:14	MA32966-CCV6	1653	130010	20842	4862
14:20	MA32966-CCB6	1724	133040	21190	4992
14:26	MP76794-MB1	1697	132340	21076	4942
14:32	MP76794-S1	1741	138010	21136	4897
14:38	MP76794-S2	1741	140320	21223	4886
14:44	JB55750-6A	1751	140840	21479	4908
14:49	MP76794-SD1	1743	137170	21254	5032

INTERNAL STANDARD SUMMARY

Login Number: JB55929
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File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:55	ZZZZZZ	1678	131580	19918	4569
15:01	ZZZZZZ	1588	124890	19972	4285
15:07	ZZZZZZ	1574	129810	20545	4302
15:13	ZZZZZZ	1537	125960	19736	4124
15:19	ZZZZZZ	1690	130580	20492	4927
15:25	MA32966-CCV7	1690	130680	20937	4963
15:31	MA32966-CCB7	1697	134010	21367	4924
15:37	ZZZZZZ	1659	131190	20492	4872
15:43	ZZZZZZ	1649	130230	20357	4834
15:48	ZZZZZZ	1709	135590	21157	4943
15:54	ZZZZZZ	1671	132370	20915	4890
16:00	ZZZZZZ	1699	132490	20933	4902
16:05	ZZZZZZ	1679	132970	20448	4774
16:11	ZZZZZZ	1655	132800	21032	4777
16:17	JB55929-8	1715	131420	20800	4990
16:23	JB55929-10	1648	132390	20858	4890
16:29	ZZZZZZ	1631	131270	20795	4828
16:34	MA32966-CCV8	1646	130310	20776	4859
16:40	MA32966-CCB8	1694	127100	21132	4911
16:46	ZZZZZZ	1681	131560	21178	4896
16:52	MA32966-CRI2	1676	131800	21215	4895
16:58	MA32966-CRIA2	1685	132220	20757	4905
17:04	MA32966-CRID2	1690	139910	21728	4914
17:10	ZZZZZZ	1532	123710	18838	4448
17:16	MA32966-ICSA2	1529	123020	18936	4431
17:22	MA32966-ICSAB2	1515	123060	19117	4412
17:28	MA32966-CCV9	1621	128600	20804	4787
17:33	MA32966-CCB9	1683	132890	21234	4899
17:39	MP76865-MB1	1539	125190	21724	4258
17:45	MP76865-MB2	1545	127550	22103	4285
17:51	MP76865-LC1	1673	131860	20667	4934
17:57	MP76865-B1	1529	126100	21760	4240
18:03	MP76865-S1	1535	126840	21834	4258

INTERNAL STANDARD SUMMARY

Login Number: JB55929
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Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:09	MP76865-S2	1506	125700	21693	4175
18:14	JB56256-1	1536	128070	22047	4245
18:20	MP76865-SD1	1637	131900	21596	4743
18:26	ZZZZZZ	1481	124040	21492	4102
18:32	ZZZZZZ	1518	126270	21709	4202
18:38	MA32966-CCV10	1649	130310	20868	4860
18:44	MA32966-CCB10	1701	133930	21281	4925
18:50	ZZZZZZ	1491	124490	21599	4127
18:56	ZZZZZZ	1571	129530	21891	4328
19:02	ZZZZZZ	1570	128840	22012	4341
19:08	ZZZZZZ	1573	130190	22027	4364
19:14	ZZZZZZ	1567	128160	999999 !a	4334
19:19	ZZZZZZ	1571	127890	21041	4324
19:25	ZZZZZZ	1576	128080	21781	4339
19:31	ZZZZZZ	1569	127620	21700	4333
19:37	ZZZZZZ	1584	130180	21702	4362
19:43	ZZZZZZ	1601	129860	22049	4415
19:49	MA32966-CCV11	1685	132110	21106	4941
19:55	MA32966-CCB11	1741	134860	21401	5040
20:01	ZZZZZZ	1563	127350	21848	4305
20:07	ZZZZZZ	1686	130370	20904	5063
20:13	ZZZZZZ	1720	131190	20788	4986
20:19	ZZZZZZ	1808	141490	21980	5071
20:24	ZZZZZZ	1773	139600	21871	4999
20:30	ZZZZZZ	1747	131780	21488	5085
20:36	ZZZZZZ	1728	134830	21324	5015
20:42	MP76949-MB1	1606	128800	22184	4385
20:48	MP76949-SD1	1687	132740	21744	4852
20:54	ZZZZZZ	1591	129250	21998	4363
21:00	ZZZZZZ	1452	124040	21713	4133
21:06	MA32966-CCV12	1672	131720	21134	4915
21:11	MA32966-CCB12	1748	135740	21474	5068
21:17	ZZZZZZ	1529	126000	21728	4213

INTERNAL STANDARD SUMMARY

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Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:23	ZZZZZZ	1578	128000	21882	4308
21:29	ZZZZZZ	1485	124930	21724	4128
21:35	ZZZZZZ	1506	126070	21863	4211
21:41	ZZZZZZ	1538	124940	21657	4200
21:47	MP76947-MB1	1771	134820	21537	5156
21:53	MP76947-B1	1761	136220	21228	5126
21:59	MP76947-S1	1654	132990	21526	4796
22:05	MP76947-S2	1642	132450	21292	4759
22:11	JB56186-2	1647	134010	21517	4781
22:17	MA32966-CCV13	1701	133130	21089	4996
22:22	MA32966-CCB13	1780	131310	21437	5151
22:28	MP76947-SD1	1718	135230	21630	5038
22:34	ZZZZZZ	1719	136660	21466	5060
22:40	ZZZZZZ	1657	133610	21760	4801
22:46	ZZZZZZ	1724	136770	21615	5039
22:52	ZZZZZZ	1670	134930	21435	4883
22:58	ZZZZZZ	1720	136280	21668	5030
23:04	ZZZZZZ	1699	134760	21483	4974
23:10	MP76809-MB1	1771	136490	21369	5126
23:15	MP76809-S1	1757	137290	21140	5251
23:21	MP76809-S2	1738	135500	20767	5265
23:27	MA32966-CCV14	1721	132980	21250	5034
23:33	MA32966-CCB14	1784	136390	21592	5149
23:39	MA32966-CRI3	1770	136440	21620	5138
23:44	MA32966-CRID3	1775	137330	21682	5134
23:50	MA32966-CRIA3	1775	137050	21602	5115
23:56	ZZZZZZ	1596	122500	19223	4596
00:02	MA32966-ICSA3	1594	125310	18708	4595
00:08	MA32966-ICSAB3	1588	126370	19480	4595
00:14	MA32966-CCV15	1716	133100	21261	5028
00:20	MA32966-CCB15	1779	136200	21867	5133
00:26	JB55237-80A	1749	135540	21076	5287
00:32	MP76809-SD1	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
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File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:38	ZZZZZZ	1857	138080	20327	5115
00:43	ZZZZZZ	1881	143510	22082	5176
00:49	ZZZZZZ	1787	136290	20962	5125
00:55	ZZZZZZ	1796	137420	21043	5129
01:01	ZZZZZZ	1809	136760	20822	5146
01:07	ZZZZZZ	1961	160030	23193	5280
01:13	ZZZZZZ	1843	141950	21640	5175
01:18	ZZZZZZ	1879	143030	21616	5179
01:24	MA32966-CCV16	1741	134960	21495	5074
01:30	MA32966-CCB16	1808	138070	21845	5194
01:36	ZZZZZZ	1773	140630	21360	4921
01:42	ZZZZZZ	1784	140300	21361	4995
01:48	ZZZZZZ	1844	132250	20514	5274
01:53	ZZZZZZ	1873	144490	21682	5238
01:59	ZZZZZZ	1721	136620	20972	5043
02:05	ZZZZZZ	1727	136850	21103	5226
02:11	ZZZZZZ	1743	140840	21145	5138
02:17	ZZZZZZ	1743	138330	21399	5175
02:23	ZZZZZZ	1784	137190	21341	5324
02:29	ZZZZZZ	1733	135800	21426	5191
02:35	MA32966-CCV17	1751	138290	21921	5107
02:40	MA32966-CCB17	1815	137520	21863	5214
02:46	ZZZZZZ	1806	139220	21767	5317
02:52	ZZZZZZ	1775	135540	21570	5206
02:58	ZZZZZZ	1771	136040	21520	5190
03:03	MA32966-CCV18	1750	131390	21659	5108
03:09	MA32966-CCB18	1809	137560	21882	5199
03:15	MA32966-CRI4	1780	136070	22197	5152
03:21	MA32966-CRIA4	1806	137120	21888	5189
03:27	MA32966-CCV19	1728	135110	21773	5055
03:33	MA32966-CCB19	1797	138020	21952	5175
03:38	ZZZZZZ	1807	132570	18372	5073
03:44	ZZZZZZ	1781	136700	21862	5270

INTERNAL STANDARD SUMMARY

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Analyst: ND Run ID: MA32966
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:50	ZZZZZZ	1683	134580	21974	4898
03:56	ZZZZZZ	1692	134760	21733	4905
04:02	ZZZZZZ	1793	137300	21886	5162
04:08	ZZZZZZ	1731	138260	21438	5162
04:14	ZZZZZZ	1818	137560	21977	5239
04:20	ZZZZZZ	1808	137730	21900	5208
04:26	ZZZZZZ	1797	137720	21929	5269
04:32	ZZZZZZ	1794	137050	21973	5159
04:38	ZZZZZZ	1795	137630	22036	5172
04:44	ZZZZZZ	1797	137500	21885	5181

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32966 Units: ug/l

Time:			08:59		09:11		09:52		10:57	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	6.6	<200	1.9	<200	35.3	<200	7.7	<200
Antimony	6.0	1.2	0.10	<6.0	0.70	<6.0	0.60	<6.0	1.1	<6.0
Arsenic	3.0	1.1	0.40	<3.0	0.0	<3.0	0.10	<3.0	0.20	<3.0
Barium	200	.09	-0.20	<200	0.30	<200	0.30	<200	0.0	<200
Beryllium	1.0	.01	0.20	<1.0	0.40	<1.0	0.40	<1.0	0.30	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.10	<3.0	-0.10	<3.0	0.20	<3.0	0.10	<3.0
Calcium	5000	8.4	1.4	<5000	6.2	<5000	31.3	<5000	1.1	<5000
Chromium	10	.3	0.30	<10	0.10	<10	0.40	<10	0.50	<10
Cobalt	50	.2	0.0	<50	0.20	<50	0.20	<50	0.0	<50
Copper	10	.6	0.60	<10	1.2	<10	1.8	<10	0.60	<10
Iron	100	6.2	1.9	<100	5.2	<100	17.7	<100	2.9	<100
Lead	3.0	1.2	-0.80	<3.0	-0.50	<3.0	-0.60	<3.0	-1.1	<3.0
Lithium	20	.7								
Magnesium	5000	10	23.2	<5000	16.3	<5000	40.0	<5000	6.6	<5000
Manganese	15	.2	0.20	<15	0.30	<15	0.40	<15	0.20	<15
Molybdenum	20	.3	anr							
Nickel	10	.5	0.0	<10	0.30	<10	0.50	<10	0.20	<10
Palladium	50	.5								
Potassium	10000	17	7.6	<10000	28.1	<10000	9.7	<10000	-3.3	<10000
Selenium	10	1.8	1.7	<10	0.40	<10	0.60	<10	-0.60	<10
Silicon	200	13								
Silver	10	.4	0.0	<10	0.0	<10	-0.10	<10	-0.20	<10
Sodium	10000	5.2	-2.5	<10000	0.80	<10000	0.70	<10000	-1.7	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	0.90	<2.0	1.4	<2.0	0.90	<2.0	2.0	<2.0*(a)
Tin	10	1.1								
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	0.30	<50	0.60	<50	0.50	<50	0.80	<50
Zinc	20	.7	0.10	<20	0.30	<20	0.40	<20	0.40	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32966 Units: ug/l

Time:			08:59		09:11		09:52		10:57	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32966 Units: ug/l

Time:			12:07		13:16		14:20		15:31	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	12.4	<200	15.7	<200	2.4	<200	8.7	<200
Antimony	6.0	1.2	0.60	<6.0	1.1	<6.0	1.7	<6.0	2.1	<6.0
Arsenic	3.0	1.1	0.50	<3.0	0.60	<3.0	-0.10	<3.0	0.60	<3.0
Barium	200	.09	0.40	<200	0.30	<200	0.0	<200	-0.10	<200
Beryllium	1.0	.01	0.60	<1.0	0.50	<1.0	0.20	<1.0	0.20	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.10	<3.0	0.10	<3.0	0.0	<3.0	0.10	<3.0
Calcium	5000	8.4	2.2	<5000	-3.1	<5000	-15	<5000	-9.1	<5000
Chromium	10	.3	0.40	<10	0.20	<10	0.20	<10	0.20	<10
Cobalt	50	.2	0.20	<50	0.30	<50	0.30	<50	0.20	<50
Copper	10	.6	0.30	<10	-1.9	<10	0.80	<10	0.60	<10
Iron	100	6.2	12.8	<100	12.2	<100	8.4	<100	5.4	<100
Lead	3.0	1.2	-0.30	<3.0	-1.3	<3.0	-1.1	<3.0	-0.60	<3.0
Lithium	20	.7								
Magnesium	5000	10	11.0	<5000	15.4	<5000	15.2	<5000	-2.0	<5000
Manganese	15	.2	0.40	<15	0.40	<15	0.30	<15	0.20	<15
Molybdenum	20	.3	anr							
Nickel	10	.5	0.50	<10	0.60	<10	0.90	<10	1.2	<10
Palladium	50	.5								
Potassium	10000	17	12.8	<10000	19.6	<10000	11.9	<10000	-9.2	<10000
Selenium	10	1.8	-0.20	<10	-1.7	<10	-2.7	<10	-2.2	<10
Silicon	200	13								
Silver	10	.4	-0.40	<10	-0.50	<10	-0.70	<10	-0.60	<10
Sodium	10000	5.2	1.9	<10000	-8.2	<10000	-12	<10000	-14	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	2.2	* (a)	2.0	<2.0*(a)	2.3	* (a)	2.2	* (a)
Tin	10	1.1								
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	1.0	<50	1.4	<50	1.2	<50	1.1	<50
Zinc	20	.7	0.20	<20	0.60	<20	0.0	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32966 Units: ug/l

Time:			12:07		13:16		14:20		15:31	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32966 Units: ug/l

Time:			16:40		17:33	
Sample ID:			CCB8		CCB9	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	3.6	2.4	<200	18.7	<200
Antimony	6.0	1.2	2.2	<6.0	2.5	<6.0
Arsenic	3.0	1.1	0.10	<3.0	0.60	<3.0
Barium	200	.09	-0.10	<200	-0.20	<200
Beryllium	1.0	.01	0.10	<1.0	0.20	<1.0
Bismuth	20	.9				
Boron	100	2.8	anr			
Cadmium	3.0	.2	0.10	<3.0	0.0	<3.0
Calcium	5000	8.4	-17	<5000	-4.9	<5000
Chromium	10	.3	0.20	<10	0.40	<10
Cobalt	50	.2	0.20	<50	0.30	<50
Copper	10	.6	2.4	<10	0.70	<10
Iron	100	6.2	3.4	<100	8.8	<100
Lead	3.0	1.2	-0.20	<3.0	-0.30	<3.0
Lithium	20	.7				
Magnesium	5000	10	-4.5	<5000	15.2	<5000
Manganese	15	.2	0.20	<15	0.20	<15
Molybdenum	20	.3	anr			
Nickel	10	.5	1.5	<10	1.3	<10
Palladium	50	.5				
Potassium	10000	17	-7.1	<10000	-13	<10000
Selenium	10	1.8	-1.1	<10	-2.5	<10
Silicon	200	13				
Silver	10	.4	-0.90	<10	-0.90	<10
Sodium	10000	5.2	-19	<10000	-15	<10000
Sulfur	50	2.9				
Strontium	10	.04				
Thallium	2.0	1.6	1.6	<2.0	1.3	<2.0
Tin	10	1.1				
Titanium	10	.2				
Tungsten	50	8.7				
Vanadium	50	.2	1.1	<50	1.4	<50
Zinc	20	.7	0.0	<20	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32966 Units: ug/l

Time:			16:40		17:33	
Sample ID:			CCB8		CCB9	
Metal	RL	IDL	raw	final	raw	final
Zirconium	10	.3				

(*) Outside of QC limits
(anr) Analyte not requested

8.1.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32966 Units: ug/l

Time:		08:53			09:05			09:46	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39400	98.5	40000	38500	96.3	40000	39100	97.8
Antimony	2000	1930	96.5	2000	1970	98.5	2000	1970	98.5
Arsenic	2000	1980	99.0	2000	1960	98.0	2000	1980	99.0
Barium	2000	1950	97.5	2000	1940	97.0	2000	1970	98.5
Beryllium	2000	2020	101.0	2000	2030	101.5	2000	2050	102.5
Bismuth									
Boron	anr								
Cadmium	2000	1950	97.5	2000	1970	98.5	2000	1980	99.0
Calcium	40000	41000	102.5	40000	40100	100.3	40000	39500	98.8
Chromium	2000	2000	100.0	2000	1990	99.5	2000	2030	101.5
Cobalt	2000	1930	96.5	2000	1960	98.0	2000	1990	99.5
Copper	2000	1930	96.5	2000	1940	97.0	2000	1940	97.0
Iron	40000	41900	104.8	40000	39800	99.5	40000	39700	99.3
Lead	2000	1970	98.5	2000	1970	98.5	2000	2020	101.0
Lithium									
Magnesium	40000	43900	109.8*(a	40000	39600	99.0	40000	39100	97.8
Manganese	2000	2030	101.5	2000	2020	101.0	2000	2070	103.5
Molybdenum	anr								
Nickel	2000	1980	99.0	2000	1990	99.5	2000	2020	101.0
Palladium									
Potassium	40000	38400	96.0	40000	38100	95.3	40000	38600	96.5
Selenium	2000	1900	95.0	2000	1950	97.5	2000	1960	98.0
Silicon									
Silver	250	241	96.4	250	238	95.2	250	241	96.4
Sodium	40000	39000	97.5	40000	38400	96.0	40000	39100	97.8
Sulfur									
Strontium									
Thallium	2000	1960	98.0	2000	1980	99.0	2000	2010	100.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1920	96.0	2000	1980	99.0	2000	2010	100.5
Zinc	2000	1990	99.5	2000	1980	99.0	2000	2030	101.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32966 Units: ug/l

Time:		08:53			09:05			09:46	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 90 to 110 percent limits required for SW846 6010. No EPA 200.7 samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32966 Units: ug/l

Time:		10:52			12:01			13:11	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38500	96.3	40000	39000	97.5	40000	39100	97.8
Antimony	2000	1930	96.5	2000	1940	97.0	2000	1900	95.0
Arsenic	2000	1950	97.5	2000	1980	99.0	2000	1950	97.5
Barium	2000	1950	97.5	2000	1960	98.0	2000	1980	99.0
Beryllium	2000	2040	102.0	2000	2060	103.0	2000	2060	103.0
Bismuth									
Boron	anr								
Cadmium	2000	1950	97.5	2000	1960	98.0	2000	1920	96.0
Calcium	40000	39000	97.5	40000	39200	98.0	40000	39000	97.5
Chromium	2000	2040	102.0	2000	2000	100.0	2000	1940	97.0
Cobalt	2000	1960	98.0	2000	1960	98.0	2000	1910	95.5
Copper	2000	1990	99.5	2000	1970	98.5	2000	1980	99.0
Iron	40000	39500	98.8	40000	39900	99.8	40000	40200	100.5
Lead	2000	2010	100.5	2000	2040	102.0	2000	2010	100.5
Lithium									
Magnesium	40000	38600	96.5	40000	39100	97.8	40000	39000	97.5
Manganese	2000	2090	104.5	2000	2050	102.5	2000	2010	100.5
Molybdenum	anr								
Nickel	2000	2010	100.5	2000	2030	101.5	2000	1990	99.5
Palladium									
Potassium	40000	38300	95.8	40000	38800	97.0	40000	39100	97.8
Selenium	2000	1930	96.5	2000	1940	97.0	2000	1910	95.5
Silicon									
Silver	250	245	98.0	250	242	96.8	250	239	95.6
Sodium	40000	39000	97.5	40000	39700	99.3	40000	40300	100.8
Sulfur									
Strontium									
Thallium	2000	2010	100.5	2000	2040	102.0	2000	2030	101.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2040	102.0	2000	2020	101.0	2000	2000	100.0
Zinc	2000	2000	100.0	2000	2020	101.0	2000	1970	98.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32966 Units: ug/l

Time:		10:52			12:01			13:11	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.1.3
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32966 Units: ug/l

Time:		14:14			15:25			16:34	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38700	96.8	40000	38400	96.0	40000	38300	95.8
Antimony	2000	1930	96.5	2000	1860	93.0	2000	1870	93.5
Arsenic	2000	1990	99.5	2000	1920	96.0	2000	1950	97.5
Barium	2000	1960	98.0	2000	1950	97.5	2000	1940	97.0
Beryllium	2000	2040	102.0	2000	2030	101.5	2000	2030	101.5
Bismuth									
Boron	anr								
Cadmium	2000	1950	97.5	2000	1900	95.0	2000	1910	95.5
Calcium	40000	38200	95.5	40000	38000	95.0	40000	37900	94.8
Chromium	2000	1940	97.0	2000	1910	95.5	2000	1880	94.0
Cobalt	2000	1910	95.5	2000	1860	93.0	2000	1850	92.5
Copper	2000	2020	101.0	2000	2010	100.5	2000	2020	101.0
Iron	40000	39700	99.3	40000	39500	98.8	40000	39500	98.8
Lead	2000	2050	102.5	2000	2000	100.0	2000	2030	101.5
Lithium									
Magnesium	40000	38200	95.5	40000	38000	95.0	40000	38000	95.0
Manganese	2000	2030	101.5	2000	2010	100.5	2000	1990	99.5
Molybdenum	anr								
Nickel	2000	2020	101.0	2000	1970	98.5	2000	1980	99.0
Palladium									
Potassium	40000	38900	97.3	40000	38500	96.3	40000	38500	96.3
Selenium	2000	1960	98.0	2000	1890	94.5	2000	1920	96.0
Silicon									
Silver	250	241	96.4	250	240	96.0	250	238	95.2
Sodium	40000	40300	100.8	40000	40000	100.0	40000	40300	100.8
Sulfur									
Strontium									
Thallium	2000	2080	104.0	2000	2030	101.5	2000	2060	103.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2020	101.0	2000	2010	100.5	2000	2000	100.0
Zinc	2000	2000	100.0	2000	1940	97.0	2000	1950	97.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32966 Units: ug/l

Time:		14:14			15:25			16:34	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.1.3
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32966 Units: ug/l

Time:		17:28	
Sample ID:	CCV	CCV9	
Metal	True	Results	% Rec
Aluminum	40000	38600	96.5
Antimony	2000	1920	96.0
Arsenic	2000	1990	99.5
Barium	2000	1970	98.5
Beryllium	2000	2040	102.0
Bismuth			
Boron	anr		
Cadmium	2000	1950	97.5
Calcium	40000	38100	95.3
Chromium	2000	1910	95.5
Cobalt	2000	1890	94.5
Copper	2000	2050	102.5
Iron	40000	39700	99.3
Lead	2000	2070	103.5
Lithium			
Magnesium	40000	38200	95.5
Manganese	2000	2030	101.5
Molybdenum	anr		
Nickel	2000	2020	101.0
Palladium			
Potassium	40000	38700	96.8
Selenium	2000	1970	98.5
Silicon			
Silver	250	242	96.8
Sodium	40000	40500	101.3
Sulfur			
Strontium			
Thallium	2000	2100	105.0
Tin			
Titanium			
Tungsten			
Vanadium	2000	2030	101.5
Zinc	2000	1990	99.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32966 Units: ug/l

Time:		17:28	
Sample ID:	CCV	CCV9	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32966 Units: ug/l

Time:				09:17		09:22		09:28	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	206	103.0	100	100.0	504	100.8
Antimony	6.0	20	3.0	6.1	101.7	3.7	123.3	21.2	106.0
Arsenic	8.0	20	3.0	8.1	101.3	3.1	103.3	21.7	108.5
Barium	200		4.0	188	94.0	3.9	97.5		
Beryllium	2.0		1.0	2.3	115.0	1.2	120.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.1	103.3	0.90	90.0		
Calcium	5000		1000	4870	97.4	998	99.8		
Chromium	10		2.0	10.4	104.0	2.2	110.0		
Cobalt	50		3.0	51.9	103.8	3.2	106.7		
Copper	10		2.0	12.2	122.0	2.4	120.0		
Iron	100	500		105	105.0			519	103.8
Lead	3.0	20	2.5	2.6	86.7	1.8	72.0	21.5	107.5
Lithium	20								
Magnesium	5000		100	5250	105.0	113	113.0		
Manganese	15		3.0	16.4	109.3	3.2	106.7		
Molybdenum	20		4.0	anr					
Nickel	10		4.0	11.0	110.0	4.2	105.0		
Palladium	50								
Potassium	5000		2000	4750	95.0	1860	93.0		
Selenium	10	20	5.0	9.6	96.0	4.9	98.0	20.4	102.0
Silicon	200								
Silver	5.0		1.0	4.8	96.0	1.0	100.0		
Sodium	5000		1000	4890	97.8	954	95.4		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	10.2	102.0	0.30U	0.0* (a)		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	52.3	104.6	2.6	130.0		
Zinc	20		10	23.9	119.5	11.8	118.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32966 Units: ug/l

Time:				09:17		09:22		09:28	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

8.1.4
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32966 Units: ug/l

Time:				16:52		16:58		17:04	
Sample ID:	CRI	CRIA	CRID	CRI2		CRIA2		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	202	101.0	525	105.0	92.6	92.6
Antimony	6.0	20	3.0	7.0	116.7	22.4	112.0		
Arsenic	8.0	20	3.0	7.6	95.0	22.3	111.5	2.7	90.0
Barium	200		4.0	185	92.5			3.6	90.0
Beryllium	2.0		1.0	2.3	115.0			1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.0	100.0			1.0	100.0
Calcium	5000		1000	4680	93.6			911	91.1
Chromium	10		2.0	9.6	96.0			1.9	95.0
Cobalt	50		3.0	48.7	97.4			3.3	110.0
Copper	10		2.0	12.2	122.0				
Iron	100	500		105	105.0	530	106.0		
Lead	3.0	20	2.5	2.4	80.0	21.7	108.5	2.7	108.0
Lithium	20								
Magnesium	5000		100	5130	102.6			107	107.0
Manganese	15		3.0	15.7	104.7			2.9	96.7
Molybdenum	20		4.0	anr					
Nickel	10		4.0	11.9	119.0			5.2	130.0
Palladium	50								
Potassium	5000		2000	4740	94.8			1800	90.0
Selenium	10	20	5.0	8.0	80.0	17.3	86.5		
Silicon	200								
Silver	5.0		1.0	4.1	82.0				
Sodium	5000		1000	5050	101.0			934	93.4
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	12.0	120.0			1.2U	0.0* (a)
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	53.7	107.4				
Zinc	20		10	23.1	115.5			11.4	114.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32966 Units: ug/l

Time:				16:52		16:58		17:04	
Sample ID:	CRI	CRIA	CRID	CRI2		CRIA2		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

8.1.4
8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32966 Units: ug/l

Time:			09:34		09:40		17:16		17:22	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	558000	111.6	490000	98.0	543000	108.6	485000	97.0
Antimony		1000	7.3		971	97.1	6.1		934	93.4
Arsenic		1000	2.5		990	99.0	2.2		986	98.6
Barium		500	-0.20		508	101.6	-0.50		511	102.2
Beryllium		500	0.10		477	95.4	0.10		475	95.0
Bismuth		500	0.60		491	98.2	-3.5		490	98.0
Boron			0.60		0.50		0.40		0.50	
Cadmium		1000	-0.40		947	94.7	-0.80		928	92.8
Calcium	400000	400000	421000	105.3	394000	98.5	403000	100.8	385000	96.3
Chromium		500	1.8		442	88.4	2.1		412	82.4
Cobalt		500	0.70		447	89.4	1.0		424	84.8
Copper		500	4.9		492	98.4	6.8		526	105.2
Iron	200000	200000	216000	108.0	206000	103.0	212000	106.0	208000	104.0
Lead		1000	-0.50		886	88.6	-4.5		908	90.8
Lithium		500	1.7		489	97.8	1.0		485	97.0
Magnesium	500000	500000	492000	98.4	518000	103.6	467000	93.4	511000	102.2
Manganese		500	6.8		463	92.6	0.70		445	89.0
Molybdenum		500	-3.4		476	95.2	-3.4		477	95.4
Nickel		1000	-0.50		865	86.5	1.4		864	86.4
Palladium		500	-8.6		536	107.2	-8.1		517	103.4
Potassium			100		91.4		16.4		68.0	
Selenium		1000	8.9		936	93.6	-7.3		909	90.9
Silicon			-7.9		-10		-5.1		-5.2	
Silver		1000	8.8		975	97.5	-3.6		966	96.6
Sodium			7.9		9.7		-13		-5.5	
Sulfur		500	-12		470	94.0	-9.4		479	95.8
Strontium			-6.9		-6.4		-5.6		-5.4	
Thallium		1000	1.8		923	92.3	0.80		958	95.8
Tin			-1.6		-1.7		-1.1		0.10	
Titanium			0.0		0.10		0.30		0.70	
Tungsten		500	18.3		536	107.2	18.6		529	105.8
Vanadium		500	1.0		447	89.4	3.5		452	90.4
Zinc		1000	0.20		882	88.2	-0.60		862	86.2

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA122913M1.ICP Date Analyzed: 12/29/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32966 Units: ug/l

Time:			09:34		09:40		17:16		17:22	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-11		462	92.4	-9.3		441	88.2

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H8123113S2.CSV Date Analyzed: 12/31/13 Methods: SW846 7471B
Analyst: DP Run ID: MA32979
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:43	MA32979-STD1	1		R=0.9999561, B=1.2335e-4, C=-4.9115e-2.
11:45	MA32979-STD2	1		STDB
11:46	MA32979-STD3	1		STDC
11:47	MA32979-STD4	1		STDD
11:49	MA32979-STD5	1		STDE
11:50	MA32979-STD6	1		STDF
11:54	MA32979-ICV1	1		
11:55	MA32979-ICB1	1		
11:57	MA32979-CCV1	1		
11:58	MA32979-CCB1	1		
11:59	MA32979-CRI1	1		
12:19	MP77001-MB1	1		
12:20	MP77001-LC1	10		
12:21	MP77001-S1	1		
12:23	MP77001-S2	1		
12:24	JB55923-1	1		(sample used for QC only; not part of login JB55929)
12:26	ZZZZZZ	1		
12:27	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:30	MA32979-CCV2	1		
12:31	MA32979-CCB2	1		
12:33	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:35	ZZZZZZ	1		
12:37	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:39	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:42	ZZZZZZ	1		
12:43	ZZZZZZ	1		
12:45	ZZZZZZ	1		
12:46	MA32979-CCV3	1		
12:47	MA32979-CCB3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H8123113S2.CSV Date Analyzed: 12/31/13 Methods: SW846 7471B
Analyst: DP Run ID: MA32979
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:49	ZZZZZZ	1		
12:50	ZZZZZZ	1		
12:52	ZZZZZZ	1		
12:53	ZZZZZZ	1		
12:55	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:57	MP77002-MB1	1		
12:59	MP77002-LC1	10		
13:00	MP77002-S1	1		
13:02	MP77002-S2	1		
13:03	MA32979-CCV4	1		
13:05	MA32979-CCB4	1		
13:06	JB56022-1	1		(sample used for QC only; not part of login JB55929)
13:08	ZZZZZZ	1		
13:09	JB55929-7	1		
13:10	JB55929-8	1		
13:12	JB55929-9	1		
13:13	JB55929-10	1		
----------> Last reportable sample/prep for job JB55929				
13:14	ZZZZZZ	1		
13:16	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:18	ZZZZZZ	1		
13:20	MA32979-CCV5	1		
13:21	MA32979-CCB5	1		
----------> Last reportable CCB for job JB55929				
13:23	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:27	ZZZZZZ	1		
13:28	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:31	ZZZZZZ	1		
13:32	ZZZZZZ	1		
13:34	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H8123113S2.CSV Date Analyzed: 12/31/13 Methods: SW846 7471B
Analyst: DP Run ID: MA32979
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:35	ZZZZZZ	1		
13:37	MA32979-CCV6	1		
13:38	MA32979-CCB6	1		
13:39	MP77003-MB1	1		
13:41	MP77003-LC1	10		
13:42	MP77003-S1	1		
13:44	MP77003-S2	1		
13:45	JB56535-3	1		(sample used for QC only; not part of login JB55929)
13:47	ZZZZZZ	1		
13:48	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:51	ZZZZZZ	1		
13:52	MA32979-CCV7	1		
13:53	MA32979-CCB7	1		
13:55	ZZZZZZ	1		
13:56	ZZZZZZ	1		
13:58	ZZZZZZ	1		
13:59	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:02	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:05	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:08	ZZZZZZ	1		
14:10	MA32979-CCV8	1		
14:11	MA32979-CCB8	1		
14:49	ZZZZZZ	10		
14:50	ZZZZZZ	5		
14:52	ZZZZZZ	2		
14:56	MA32979-CCV9	1		
14:57	MA32979-CCB9	1		

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H8123113S2.CSV Date Analyzed: 12/31/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA32979 Units: ug/l

Time:			11:55		11:58		12:31		12:47	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.023	-0.049	<0.20	-0.049	<0.20	-0.045	<0.20	-0.050	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H8123113S2.CSV Date Analyzed: 12/31/13 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA32979 Units: ug/l

Time:			13:05		13:21	
Sample ID:			CCB4		CCB5	
Metal	RL	IDL	raw	final	raw	final
Mercury	0.20	.023	-0.059	<0.20	-0.12	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

8.2.1
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H8123113S2.CSV Date Analyzed: 12/31/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA32979 Units: ug/l

Time:		11:54			11:57			12:30	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	2.5	2.5	100.0	2.5	2.6	104.0

(*) Outside of QC limits
(anr) Analyte not requested

8.2.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H8123113S2.CSV Date Analyzed: 12/31/13 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA32979 Units: ug/l

Time:		12:46			13:03			13:20	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.5	100.0	2.5	2.5	100.0	2.5	2.4	96.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H8123113S2.CSV Date Analyzed: 12/31/13 Methods: SW846 7471B
QC Limits: 70 to 130 % Recovery Run ID: MA32979 Units: ug/l

Time:			11:59	
Sample ID:	CRI	CRIA	CRI1	
Metal	True	True	Results	% Rec
Mercury	0.20		0.20	100.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:06	MA32983-STD1	1		STDA
17:12	MA32983-STD2	1		STDB
17:18	ZZZZZZ	1		
17:24	ZZZZZZ	1		
17:30	ZZZZZZ	1		
17:35	MA32983-ICV1	1		
17:47	MA32983-ICB1	1		
17:52	MA32983-ICCV1	1		
18:00	MA32983-ICCV2	1		
18:12	MA32983-CCB1	1		
18:17	MA32983-CRIB1	1		
18:23	MA32983-CRID1	1		
18:29	MA32983-CRIA1	1		
18:35	ZZZZZZ	1		
18:41	MA32983-ICSA1	1		
18:47	MA32983-ICSAB1	1		
18:52	MA32983-CCV1	1		
18:58	MA32983-CCB2	1		
19:04	ZZZZZZ	1		
19:10	ZZZZZZ	1		
19:16	ZZZZZZ	1		
19:22	ZZZZZZ	1		
19:28	ZZZZZZ	1		
19:33	ZZZZZZ	1		
19:39	ZZZZZZ	1		
19:45	MA32983-CCV2	1		
19:51	MA32983-CCB3	1		
19:57	MP76900-MB1	1		
20:03	MP76900-LC1	1		
20:09	MP76900-S1	1		Ca > HSTD
20:14	MP76900-S2	1		Ca > HSTD
20:20	JB55895-1	1		(sample used for QC only; not part of login JB55929)
20:26	MP76900-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:32	MP76900-PS1	1		
20:37	MP76900-PS1	5		
20:43	ZZZZZZ	1		
20:49	ZZZZZZ	1		
20:55	MA32983-CCV3	1		
21:01	MA32983-CCB4	1		
21:07	ZZZZZZ	1		
21:12	ZZZZZZ	1		
21:18	ZZZZZZ	1		
21:24	MA32983-CRIB2	1		
21:30	ZZZZZZ	1		
21:36	ZZZZZZ	1		
21:42	ZZZZZZ	1		
21:48	ZZZZZZ	1		
21:54	MP76898-S1	1		
22:00	MP76898-S2	1		
22:06	MA32983-CCV4	1		
22:11	MA32983-CCB5	1		
22:17	MP76898-SD1	5		
22:23	ZZZZZZ	2		
22:29	ZZZZZZ	1		
22:35	ZZZZZZ	1		
22:41	ZZZZZZ	1		
22:47	ZZZZZZ	1		
22:53	ZZZZZZ	1		
22:59	ZZZZZZ	1		
23:05	ZZZZZZ	1		
23:11	MA32983-CCV5	1		
23:16	MA32983-CCB6	1		
23:22	MP76885-S1	1		
23:28	MP76885-S2	1		
23:34	MP76885-SD1	5		
23:40	ZZZZZZ	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:45	ZZZZZZ	5		
23:51	ZZZZZZ	25		
23:57	MP76735-MB2	1		
00:03	ZZZZZZ	1		
00:09	ZZZZZZ	1		
00:15	ZZZZZZ	1		
00:21	MA32983-CCV6	1		
00:26	MA32983-CCB7	1		
00:32	ZZZZZZ	25		
00:38	MP76915-S2	1		
00:44	ZZZZZZ	1		
00:50	ZZZZZZ	1		
00:56	ZZZZZZ	1		
01:02	MP76804-MB1	1		
01:07	MP76804-LC3	1		
01:13	MP76804-LC4	1		
01:19	MP76951-MB1	1		
01:25	MP76951-B1	1		
01:31	MA32983-CCV7	1		
01:36	MA32983-CCB8	1		
01:42	MA32983-CRID2	1		
01:48	MA32983-CRI1	1		
01:54	MA32983-CRIA2	1		
02:00	ZZZZZZ	2		
02:06	MA32983-ICSA2	1		
02:12	MA32983-ICSAB2	1		
02:18	MA32983-CCV8	1		
02:23	MA32983-CCB9	1		
02:29	MP76951-S1	1		
02:35	MP76951-S2	1		
02:41	JB55342-1R	1		(sample used for QC only; not part of login JB55929)
02:47	MP76951-SD1	5		
02:53	JB55929-7A	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:58	JB55929-9A	1		
03:04	ZZZZZZ	1		
03:10	ZZZZZZ	1		
03:16	ZZZZZZ	1		
03:22	ZZZZZZ	1		
03:28	MA32983-CCV9	1		
03:33	MA32983-CCB10	1		
03:39	ZZZZZZ	1		
03:45	ZZZZZZ	1		
03:51	ZZZZZZ	1		
03:57	ZZZZZZ	1		
04:03	MP76794-S1	1		
04:09	MP76794-S1	3		
04:14	MP76794-S2	1		
04:20	MP76794-S2	3		
04:26	JB55750-6A	1		(sample used for QC only; not part of login JB55929)
04:32	JB55750-6A	3		(sample used for QC only; not part of login JB55929)
04:38	MA32983-CCV10	1		
04:43	MA32983-CCB11	1		
04:49	MP76794-SD1	5		
04:55	MP76794-SD1	15		
05:01	ZZZZZZ	1		
05:07	ZZZZZZ	1		
05:13	ZZZZZZ	1		
05:19	ZZZZZZ	1		
05:25	ZZZZZZ	3		
05:31	ZZZZZZ	5		
05:37	ZZZZZZ	1		
05:43	ZZZZZZ	2		
05:49	MA32983-CCV11	1		
05:54	MA32983-CCB12	1		
06:00	MP76911-MB1	1		
06:06	MP76911-B1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:12	MP76911-S1	1		Fe high
06:18	MP76911-S2	1		Fe high
06:24	JB56044-9	1		(sample used for QC only; not part of login JB55929)
06:29	MP76911-SD1	5		Tl hit
06:35	ZZZZZZ	1		
06:41	ZZZZZZ	1		
06:47	ZZZZZZ	1		
06:53	ZZZZZZ	1		
06:59	MA32983-CCV12	1		
07:04	MA32983-CCB13	1		
07:10	ZZZZZZ	1		
07:16	ZZZZZZ	1		
07:22	ZZZZZZ	1		
07:28	ZZZZZZ	1		
07:34	ZZZZZZ	1		
07:40	ZZZZZZ	1		
07:45	ZZZZZZ	1		
07:51	ZZZZZZ	1		
07:57	ZZZZZZ	1		
08:03	JB55929-7	1		
08:09	MA32983-CCV13	1		
08:14	MA32983-CCB14	1		
08:20	JB55929-9	1		neg
---------->	Last reportable sample/prep for job JB55929			
08:26	ZZZZZZ	1		
08:32	ZZZZZZ	1		
08:38	ZZZZZZ	1		
08:44	ZZZZZZ	1		
08:50	MP76930-LC1	1		
08:55	MP76930-MB1	1		
09:01	MP76930-S1	1		
09:07	MP76930-S2	1		
09:13	JB55930-1	1		(sample used for QC only; not part of login JB55929)
09:19	MA32983-CCV14	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	09:24	MA32983-CCB15	1		
	09:30	MA32983-CRI2	1		
	09:36	MA32983-CRID3	1		
	09:42	MA32983-CRIA3	1		
	09:48	MA32983-CRID4	1		
	09:54	MA32983-ICSA3	1		
	10:00	MA32983-ICSAB3	1		
	10:06	MA32983-CCV15	1		
	10:12	MA32983-CCB16	1		
---------->	Last reportable CCB for job JB55929				
	10:17	MP76930-SD1	5		bad dilution?
	10:23	ZZZZZZ	1		
	10:29	ZZZZZZ	1		
	10:35	ZZZZZZ	1		
	10:41	ZZZZZZ	1		
	10:47	ZZZZZZ	1		
	10:53	ZZZZZZ	1		
	10:59	ZZZZZZ	1		
	11:05	ZZZZZZ	1		
	11:11	ZZZZZZ	1		
	11:17	MA32983-CCV16	1		
	11:22	MA32983-CCB17	1		
	11:28	ZZZZZZ	1		
	11:34	ZZZZZZ	1		
	11:40	ZZZZZZ	1		
	11:46	ZZZZZZ	1		
	11:52	ZZZZZZ	1		
	11:58	ZZZZZZ	1		
	12:04	ZZZZZZ	1		
	12:10	ZZZZZZ	1		
	12:16	ZZZZZZ	1		
	12:22	ZZZZZZ	1		
	12:28	MA32983-CCV17	1		
	12:34	MA32983-CCB18	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:40	ZZZZZZ	1		
12:46	ZZZZZZ	1		
12:52	ZZZZZZ	1		
12:57	MP76921-S1	1		CCB out
13:03	MP76921-S2	1		CCB out
13:09	JB55897-1	1		(sample used for QC only; not part of login JB55929)
13:15	MP76921-SD1	5		CCB out
13:21	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:32	MA32983-CCV18	1		
13:38	MA32983-CCB19	1		
13:44	ZZZZZZ	1		
13:50	ZZZZZZ	1		
13:56	MA32983-CRID5	1		
14:02	MA32983-CRI3	1		
14:08	MA32983-CCV19	1		
14:13	MA32983-CCB20	1		
14:19	ZZZZZZ	1		
14:25	ZZZZZZ	1		
14:31	ZZZZZZ	1		
14:37	ZZZZZZ	1		
14:43	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:55	ZZZZZZ	1		
15:01	ZZZZZZ	1		
15:07	ZZZZZZ	1		
15:13	ZZZZZZ	1		
15:19	ZZZZZZ	1		
15:24	ZZZZZZ	1		
15:30	ZZZZZZ	1		
15:36	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:06	MA32983-STD1	2271 R	180210 R	25527 R	5884 R
17:12	MA32983-STD2	2100	169570	24842	5205
17:18	ZZZZZZ	2174	173930	24598	5443
17:24	ZZZZZZ	2270	180610	25129	5898
17:30	ZZZZZZ	2189	175000	24962	5479
17:35	MA32983-ICV1	2187	175420	24946	5487
17:47	MA32983-ICB1	2288	182100	25261	5952
17:52	MA32983-ICCV1	No results reported for the elements associated with this internal standard.			
18:00	MA32983-ICCV2	2191	176680	25105	5490
18:12	MA32983-CCB1	2275	183530	25321	5915
18:17	MA32983-CRIB1	2231	179870	25264	5798
18:23	MA32983-CRID1	2281	182090	24290	5936
18:29	MA32983-CRIA1	2277	181180	25389	5926
18:35	ZZZZZZ	2274	181610	25420	5924
18:41	MA32983-ICSA1	2026	164500	22974	4783
18:47	MA32983-ICSAB1	2019	163400	22928	4781
18:52	MA32983-CCV1	2200	177370	25159	5511
18:58	MA32983-CCB2	2297	183830	25103	5967
19:04	ZZZZZZ	2308	183000	25323	5996
19:10	ZZZZZZ	2294	183180	25428	5966
19:16	ZZZZZZ	2304	183900	25429	5997
19:22	ZZZZZZ	2291	182840	25610	5968
19:28	ZZZZZZ	2323	184500	25521	6045
19:33	ZZZZZZ	2278	182160	25467	5930
19:39	ZZZZZZ	2277	181490	25274	5918
19:45	MA32983-CCV2	2205	177020	25156	5518
19:51	MA32983-CCB3	2308	174050	25218	5999
19:57	MP76900-MB1	2271	181990	24765	5944
20:03	MP76900-LC1	2221	178290	24164	5781
20:09	MP76900-S1	2142	175200	24814	5413
20:14	MP76900-S2	2132	174480	24632	5395
20:20	JB55895-1	2167	176980	24618	5578
20:26	MP76900-SD1	2271	180910	25276	5891

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:32	MP76900-PS1	2037	169700	25134	5065
20:37	MP76900-PS1	2215	178500	25421	5663
20:43	ZZZZZZ	2201	178550	24696	5689
20:49	ZZZZZZ	2210	179660	24687	5712
20:55	MA32983-CCV3	2220	179840	24832	5542
21:01	MA32983-CCB4	2330	185180	25695	6035
21:07	ZZZZZZ	2218	179530	25072	5694
21:12	ZZZZZZ	2219	179820	25198	5716
21:18	ZZZZZZ	2312	184480	25823	6027
21:24	MA32983-CRIB2	2312	183600	24474	5966
21:30	ZZZZZZ	1522 !a	156240	23307	4656
21:36	ZZZZZZ	1617	161580	22991	4690
21:42	ZZZZZZ	1736	160780	23576	4944
21:48	ZZZZZZ	1772	162170	23803	4887
21:54	MP76898-S1	2167	176670	24537	5517
22:00	MP76898-S2	2172	177040	24671	5518
22:06	MA32983-CCV4	2245	179090	25244	5589
22:11	MA32983-CCB5	2328	184190	25288	6017
22:17	MP76898-SD1	2330	185130	25395	6033
22:23	ZZZZZZ	2189	178600	25639	5480
22:29	ZZZZZZ	2352	186160	25631	6074
22:35	ZZZZZZ	2305	184080	24719	6018
22:41	ZZZZZZ	2348	183060	23929	6073
22:47	ZZZZZZ	2061	172060	24902	5140
22:53	ZZZZZZ	2056	172380	25104	5131
22:59	ZZZZZZ	2349	185940	25850	6099
23:05	ZZZZZZ	2313	183400	25899	6025
23:11	MA32983-CCV5	2264	181020	25276	5642
23:16	MA32983-CCB6	2356	186340	25387	6103
23:22	MP76885-S1	2319	185520	24988	5699
23:28	MP76885-S2	2319	185830	25056	5729
23:34	MP76885-SD1	2356	186790	25416	6020
23:40	ZZZZZZ	2212	180270	25458	5525

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:45	ZZZZZZ	2196	180030	25275	5505
23:51	ZZZZZZ	2317	186180	25654	5975
23:57	MP76735-MB2	2344	187430	25671	6092
00:03	ZZZZZZ	2349	186730	25564	6087
00:09	ZZZZZZ	2336	185950	25429	6064
00:15	ZZZZZZ	2321	187840	25803	6077
00:21	MA32983-CCV6	2229	179730	25206	5568
00:26	MA32983-CCB7	2344	186510	25619	6083
00:32	ZZZZZZ	2091	171520	26568	4969
00:38	MP76915-S2	2205	178680	25769	5598
00:44	ZZZZZZ	2249	182130	25915	5820
00:50	ZZZZZZ	2244	181930	25668	5873
00:56	ZZZZZZ	2239	182060	25663	5858
01:02	MP76804-MB1	2294	184240	24974	6006
01:07	MP76804-LC3	2249	181040	24270	5841
01:13	MP76804-LC4	2261	181740	24450	5871
01:19	MP76951-MB1	2330	186590	25264	6094
01:25	MP76951-B1	2329	186280	25208	6083
01:31	MA32983-CCV7	2250	180650	25525	5623
01:36	MA32983-CCB8	2349	186910	25722	6102
01:42	MA32983-CRID2	2342	183780	25493	6077
01:48	MA32983-CRI1	2328	185960	25789	6024
01:54	MA32983-CRIA2	2361	187170	25629	6116
02:00	ZZZZZZ	2353	187010	25746	6091
02:06	MA32983-ICSA2	2067	167460	23182	4862
02:12	MA32983-ICSAB2	2053	166860	23043	4845
02:18	MA32983-CCV8	2253	180180	25257	5623
02:23	MA32983-CCB9	2365	187290	25622	6125
02:29	MP76951-S1	2303	184120	24834	5999
02:35	MP76951-S2	2321	185500	24907	6038
02:41	JB55342-1R	2324	186460	25237	6060
02:47	MP76951-SD1	2371	187760	25638	6140
02:53	JB55929-7A	2322	185220	25022	6061

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:58	JB55929-9A	2337	186300	25145	6071
03:04	ZZZZZZ	2336	187570	25391	6091
03:10	ZZZZZZ	2366	188310	25209	6117
03:16	ZZZZZZ	2335	185690	24909	6069
03:22	ZZZZZZ	2337	186280	25043	6034
03:28	MA32983-CCV9	2289	182310	25267	5691
03:33	MA32983-CCB10	2362	188160	25502	6116
03:39	ZZZZZZ	2335	186670	25178	6092
03:45	ZZZZZZ	2351	187400	25338	6090
03:51	ZZZZZZ	2270	183640	24926	5831
03:57	ZZZZZZ	2361	188400	25535	6149
04:03	MP76794-S1	2341	188460	25245	5494
04:09	MP76794-S1	2366	187600	25261	5816
04:14	MP76794-S2	2347	189200	25317	5504
04:20	MP76794-S2	2360	186820	25374	5800
04:26	JB55750-6A	2398	192100	25480	5632
04:32	JB55750-6A	2383	188830	25561	5896
04:38	MA32983-CCV10	2264	182070	25363	5639
04:43	MA32983-CCB11	2348	187570	25463	6089
04:49	MP76794-SD1	2347	186600	25296	5923
04:55	MP76794-SD1	2381	188550	25707	6093
05:01	ZZZZZZ	2258	182280	24343	5026
05:07	ZZZZZZ	2143	173510	24027	4668
05:13	ZZZZZZ	2119	173760	24605	4687
05:19	ZZZZZZ	2125	172420	24267	4575
05:25	ZZZZZZ	8602 !	455780 !	57824 !	18174 !
05:31	ZZZZZZ	8679 !	438860 !	52357 !	18356 !
05:37	ZZZZZZ	2273	183170	24292	5717
05:43	ZZZZZZ	2305	184430	24861	5840
05:49	MA32983-CCV11	2294	182380	25220	5693
05:54	MA32983-CCB12	2399	188710	25475	6192
06:00	MP76911-MB1	2359	187780	25620	6148
06:06	MP76911-B1	2322	184430	24842	5895

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:12	MP76911-S1	2300	184780	25229	5755
06:18	MP76911-S2	2283	184190	24934	5734
06:24	JB56044-9	2306	186960	24859	5789
06:29	MP76911-SD1	2397	187720	25354	6075
06:35	ZZZZZZ	2396	189190	25567	6128
06:41	ZZZZZZ	2384	187750	25336	6132
06:47	ZZZZZZ	2376	187870	25489	6111
06:53	ZZZZZZ	2386	188270	25422	6121
06:59	MA32983-CCV12	2307	183380	25373	5725
07:04	MA32983-CCB13	2421	190880	25587	6241
07:10	ZZZZZZ	2398	189300	25367	6138
07:16	ZZZZZZ	2390	188580	25474	6140
07:22	ZZZZZZ	2385	188440	25592	6144
07:28	ZZZZZZ	2347	189140	25684	6034
07:34	ZZZZZZ	2387	188050	25347	6104
07:40	ZZZZZZ	2380	188590	25398	6099
07:45	ZZZZZZ	2397	190120	25570	6193
07:51	ZZZZZZ	2402	188900	25527	6162
07:57	ZZZZZZ	2395	189130	25566	6138
08:03	JB55929-7	2381	188610	25152	5957
08:09	MA32983-CCV13	2320	184360	25573	5746
08:14	MA32983-CCB14	2426	192790	25782	6264
08:20	JB55929-9	2325	184180	24547	6001
08:26	ZZZZZZ	2377	189880	25607	5954
08:32	ZZZZZZ	2389	191850	25514	5857
08:38	ZZZZZZ	2041	176700	27676	4698
08:44	ZZZZZZ	2321	187420	25170	5858
08:50	MP76930-LC1	2316	186660	24331	5997
08:55	MP76930-MB1	2367	191110	25124	6209
09:01	MP76930-S1	2171	179810	24994	5451
09:07	MP76930-S2	2155	178360	24838	5425
09:13	JB55930-1	2188	181900	25061	5598
09:19	MA32983-CCV14	2279	184580	25280	5708

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:24	MA32983-CCB15	2391	191690	25483	6236
09:30	MA32983-CRI2	2363	190000	25737	6147
09:36	MA32983-CRID3	2352	188510	25535	6134
09:42	MA32983-CRIA3	2385	190890	25439	6220
09:48	MA32983-CRID4	2366	190280	25459	6180
09:54	MA32983-ICSA3	2095	170740	23079	4933
10:00	MA32983-ICSAB3	2073	170320	22939	4901
10:06	MA32983-CCV15	2279	183930	25331	5709
10:12	MA32983-CCB16	2381	191620	25521	6226
10:17	MP76930-SD1	No results reported for the elements associated with this internal standard.			
10:23	ZZZZZZ	2197	181870	25076	5595
10:29	ZZZZZZ	2251	185290	24745	5848
10:35	ZZZZZZ	2207	182570	24888	5656
10:41	ZZZZZZ	2168	180060	24945	5466
10:47	ZZZZZZ	2174	180560	24942	5513
10:53	ZZZZZZ	2224	183300	24998	5733
10:59	ZZZZZZ	2248	183890	25469	5705
11:05	ZZZZZZ	2218	182380	24901	5647
11:11	ZZZZZZ	2237	183000	25117	5646
11:17	MA32983-CCV16	2329	186190	25297	5791
11:22	MA32983-CCB17	2435	193180	25479	6308
11:28	ZZZZZZ	2300	187090	24720	5936
11:34	ZZZZZZ	2254	184780	25036	5725
11:40	ZZZZZZ	2204	181510	25015	5518
11:46	ZZZZZZ	2203	181430	25055	5560
11:52	ZZZZZZ	2268	185820	24983	5792
11:58	ZZZZZZ	2266	184540	25162	5733
12:04	ZZZZZZ	1938	160200	26308	4436
12:10	ZZZZZZ	1932	160970	26176	4429
12:16	ZZZZZZ	1920	159570	26328	4401
12:22	ZZZZZZ	1917	159060	26279	4386
12:28	MA32983-CCV17	2293	183800	24886	5716
12:34	MA32983-CCB18	2388	191450	25154	6231

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:40	ZZZZZZ	2339	187790	24988	6156
12:46	ZZZZZZ	2296	185830	24427	5984
12:52	ZZZZZZ	2225	182020	25067	5749
12:57	MP76921-S1	2121	176120	24230	5345
13:03	MP76921-S2	2125	175690	24292	5344
13:09	JB55897-1	2159	177740	24250	5533
13:15	MP76921-SD1	2237	185450	23968	5957
13:21	ZZZZZZ	1912	165290	25399	4688
13:26	ZZZZZZ	2078	174160	24966	5023
13:32	MA32983-CCV18	2218	182040	24437	5605
13:38	MA32983-CCB19	2362	189910	24904	6185
13:44	ZZZZZZ	2364	190760	24893	6194
13:50	ZZZZZZ	2373	189250	24948	6187
13:56	MA32983-CRID5	2370	188870	25078	6180
14:02	MA32983-CRI3	2336	188150	25021	6079
14:08	MA32983-CCV19	2275	183820	24805	5694
14:13	MA32983-CCB20	2361	189250	24915	6163
14:19	ZZZZZZ	2311	187590	24990	6121
14:25	ZZZZZZ	2429	184890	20893	5614
14:31	ZZZZZZ	2146	178470	25363	5364
14:37	ZZZZZZ	2175	179730	25130	5438
14:43	ZZZZZZ	2375	189560	25027	6196
14:49	ZZZZZZ	2360	189260	24862	6163
14:55	ZZZZZZ	2353	188420	24943	6144
15:01	ZZZZZZ	2355	189320	24891	6153
15:07	ZZZZZZ	2381	190720	25094	6214
15:13	ZZZZZZ	2336	188450	25024	6183
15:19	ZZZZZZ	2350	189550	25051	6161
15:24	ZZZZZZ	2362	188630	25093	6170
15:30	ZZZZZZ	2364	189550	24954	6164
15:36	ZZZZZZ	2368	189830	25070	6173

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA32983
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4

Istd#4	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

8.3.1

8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				17:47		18:12		18:58	
Sample ID:				ICB1		CCB1		CCB2	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	200	3.6	100	6.7	<200	10.1	<200	20.8	<200
Antimony	6.0	1.2	5.0	0.40	<6.0	0.30	<6.0	0.30	<6.0
Arsenic	3.0	1.1	3.0	0.70	<5.0	0.70	<5.0	0.70	<5.0
Barium	200	.09	10	0.40	<200	0.30	<200	0.40	<200
Beryllium	1.0	.01	1.0	0.10	<2.0	0.10	<2.0	0.20	<2.0
Bismuth	20	.9	10						
Boron	100	2.8	20						
Cadmium	3.0	.2	2.0	0.10	<3.0	0.20	<3.0	0.30	<3.0
Calcium	5000	8.4	200	-4.3	<5000	-4.1	<5000	15.6	<5000
Chromium	10	.3	5.0	-0.10	<10	-0.20	<10	0.10	<10
Cobalt	50	.2	2.0	0.10	<50	0.0	<50	0.10	<50
Copper	10	.6	5.0	0.60	<10	0.70	<10	0.60	<10
Iron	100	6.2	50	2.5	<100	1.7	<100	10.5	<100
Lead	3.0	1.2	3.0	0.50	<5.0	-0.20	<5.0	-0.10	<5.0
Lithium	20	.7	10						
Magnesium	5000	10	100	7.8	<5000	42.0	<5000	41.0	<5000
Manganese	15	.2	2.0	0.10	<15	0.0	<15	0.20	<15
Molybdenum	20	.3	5.0						
Nickel	10	.5	4.0	0.40	<10	0.40	<10	0.50	<10
Palladium	50	.5	10						
Potassium	10000	17	500	-55	<10000	-86	<10000	-56	<10000
Selenium	10	1.8	5.0	0.90	<10	-0.70	<10	0.10	<10
Silicon	200	13	50						
Silver	10	.4	4.0	0.10	<10	-0.40	<10	0.20	<10
Sodium	10000	5.2	100	-60	<10000	-57	<10000	-53	<10000
Sulfur	50	2.9	25						
Strontium	10	.04	2.0						
Thallium	2.0	1.6	2.0	0.50	<5.0	0.60	<5.0	1.2	<5.0
Tin	10	1.1	5.0						
Titanium	10	.2	4.0						
Tungsten	50	8.7	40						
Vanadium	50	.2	4.0	0.40	<50	0.40	<50	0.40	<50
Zinc	20	.7	5.0	-1.2	<20	-1.2	<20	-0.90	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				17:47		18:12		18:58	
Sample ID:				ICB1		CCB1		CCB2	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Zirconium	10	.3	5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.3.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				19:51		21:01		22:11	
Sample ID:				CCB3		CCB4		CCB5	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	200	3.6	100	8.6	<200	4.9	<200	19.0	<200
Antimony	6.0	1.2	5.0	-0.10	<6.0	0.70	<6.0	0.20	<6.0
Arsenic	3.0	1.1	3.0	1.0	<5.0	0.90	<5.0	0.90	<3.0
Barium	200	.09	10	0.50	<200	0.30	<200	0.20	<200
Beryllium	1.0	.01	1.0	0.30	<2.0	0.20	<2.0	0.30	<1.0
Bismuth	20	.9	10						
Boron	100	2.8	20						
Cadmium	3.0	.2	2.0	0.20	<3.0	0.20	<3.0	0.20	<3.0
Calcium	5000	8.4	200	7.6	<5000	5.1	<5000	6.5	<5000
Chromium	10	.3	5.0	0.20	<10	0.0	<10	0.40	<10
Cobalt	50	.2	2.0	0.30	<50	0.0	<50	0.0	<50
Copper	10	.6	5.0	1.4	<10	0.20	<10	0.20	<10
Iron	100	6.2	50	4.6	<100	4.5	<100	6.4	<100
Lead	3.0	1.2	3.0	0.60	<5.0	0.0	<5.0	-0.40	<3.0
Lithium	20	.7	10						
Magnesium	5000	10	100	-7.5	<5000	23.1	<5000	31.4	<5000
Manganese	15	.2	2.0	0.20	<15	0.20	<15	0.30	<15
Molybdenum	20	.3	5.0						
Nickel	10	.5	4.0	0.30	<10	0.10	<10	0.10	<10
Palladium	50	.5	10						
Potassium	10000	17	500	-88	<10000	-34	<10000	-49	<10000
Selenium	10	1.8	5.0	2.0	<10	-0.20	<10	-0.80	<10
Silicon	200	13	50						
Silver	10	.4	4.0	0.0	<10	0.0	<10	0.0	<10
Sodium	10000	5.2	100	-55	<10000	-57	<10000	-48	<10000
Sulfur	50	2.9	25						
Strontium	10	.04	2.0						
Thallium	2.0	1.6	2.0	0.80	<5.0	0.10	<5.0	1.0	<2.0
Tin	10	1.1	5.0						
Titanium	10	.2	4.0						
Tungsten	50	8.7	40						
Vanadium	50	.2	4.0	0.30	<50	0.40	<50	0.40	<50
Zinc	20	.7	5.0	-0.80	<20	-0.50	<20	-0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				19:51		21:01		22:11	
Sample ID:				CCB3		CCB4		CCB5	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Zirconium	10	.3	5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.3.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				23:16		00:26		01:36	
Sample ID:				CCB6		CCB7		CCB8	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	200	3.6	100	6.8	<200	5.8	<200	7.0	<200
Antimony	6.0	1.2	5.0	0.60	<6.0	-0.20	<6.0	-0.40	<500
Arsenic	3.0	1.1	3.0	0.80	<3.0	0.40	<3.0	0.40	<500
Barium	200	.09	10	0.30	<200	0.40	<200	0.30	<1000
Beryllium	1.0	.01	1.0	0.20	<1.0	0.20	<1.0	0.20	<5.0
Bismuth	20	.9	10						
Boron	100	2.8	20						
Cadmium	3.0	.2	2.0	0.30	<3.0	0.30	<3.0	0.30	<5.0
Calcium	5000	8.4	200	2.4	<5000	4.0	<5000	5.2	<5000
Chromium	10	.3	5.0	0.20	<10	0.10	<10	0.10	<10
Cobalt	50	.2	2.0	0.20	<50	0.10	<50	0.10	<50
Copper	10	.6	5.0	-0.20	<10	0.20	<10	0.40	<25
Iron	100	6.2	50	6.0	<100	2.9	<100	4.1	<100
Lead	3.0	1.2	3.0	0.20	<3.0	0.10	<3.0	0.20	<500
Lithium	20	.7	10						
Magnesium	5000	10	100	34.2	<5000	47.8	<5000	63.5	<5000
Manganese	15	.2	2.0	0.20	<15	0.20	<15	0.30	<15
Molybdenum	20	.3	5.0						
Nickel	10	.5	4.0	0.0	<10	0.10	<10	0.10	<40
Palladium	50	.5	10						
Potassium	10000	17	500	-45	<10000	-53	<10000	-53	<10000
Selenium	10	1.8	5.0	0.50	<10	0.20	<10	1.0	<500
Silicon	200	13	50						
Silver	10	.4	4.0	-0.10	<10	0.0	<10	0.0	<10
Sodium	10000	5.2	100	-59	<10000	-57	<10000	-56	<10000
Sulfur	50	2.9	25						
Strontium	10	.04	2.0						
Thallium	2.0	1.6	2.0	0.90	<2.0	0.90	<2.0	1.1	<500
Tin	10	1.1	5.0						
Titanium	10	.2	4.0						
Tungsten	50	8.7	40						
Vanadium	50	.2	4.0	0.30	<50	0.30	<50	0.20	<50
Zinc	20	.7	5.0	-0.50	<20	-0.50	<20	-0.60	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				23:16		00:26		01:36	
Sample ID:				CCB6		CCB7		CCB8	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Zirconium	10	.3	5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.3.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				02:23		03:33		04:43	
Sample ID:				CCB9		CCB10		CCB11	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	200	3.6	100	12.5	<200	13.6	<200	12.1	<200
Antimony	6.0	1.2	5.0	-0.20	<6.0	0.30	<500	-0.10	<6.0
Arsenic	3.0	1.1	3.0	0.60	<3.0	1.0	<500	0.40	<3.0
Barium	200	.09	10	0.30	<200	0.30	<1000	0.30	<200
Beryllium	1.0	.01	1.0	0.20	<1.0	0.10	<5.0	0.20	<1.0
Bismuth	20	.9	10						
Boron	100	2.8	20						
Cadmium	3.0	.2	2.0	0.10	<3.0	0.10	<5.0	0.10	<3.0
Calcium	5000	8.4	200	15.3	<5000	3.9	<5000	2.8	<5000
Chromium	10	.3	5.0	0.10	<10	0.30	<10	0.30	<10
Cobalt	50	.2	2.0	0.0	<50	0.0	<50	0.10	<50
Copper	10	.6	5.0	0.60	<10	0.0	<25	0.40	<10
Iron	100	6.2	50	9.8	<100	2.8	<100	7.8	<100
Lead	3.0	1.2	3.0	-0.40	<3.0	0.60	<500	-0.30	<3.0
Lithium	20	.7	10						
Magnesium	5000	10	100	86.1	<5000	15.2	<5000	11.0	<5000
Manganese	15	.2	2.0	0.20	<15	0.20	<15	0.30	<15
Molybdenum	20	.3	5.0						
Nickel	10	.5	4.0	-0.10	<10	-0.10	<40	-0.20	<10
Palladium	50	.5	10						
Potassium	10000	17	500	-63	<10000	-69	<10000	-48	<10000
Selenium	10	1.8	5.0	1.5	<10	0.20	<500	0.70	<10
Silicon	200	13	50						
Silver	10	.4	4.0	-0.10	<10	0.0	<10	0.40	<10
Sodium	10000	5.2	100	-57	<10000	-60	<10000	-66	<10000
Sulfur	50	2.9	25						
Strontium	10	.04	2.0						
Thallium	2.0	1.6	2.0	1.1	<2.0	0.40	<500	1.0	<2.0
Tin	10	1.1	5.0						
Titanium	10	.2	4.0						
Tungsten	50	8.7	40						
Vanadium	50	.2	4.0	0.40	<50	0.30	<50	0.30	<50
Zinc	20	.7	5.0	-1.0	<20	-0.40	<20	-0.90	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				02:23		03:33		04:43	
Sample ID:				CCB9		CCB10		CCB11	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Zirconium	10	.3	5.0						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				05:54		07:04		08:14	
Sample ID:				CCB12		CCB13		CCB14	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Aluminum	200	3.6	100	14.9	<200	13.7	<200	9.3	<200
Antimony	6.0	1.2	5.0	-0.50	<6.0	-0.10	<6.0	-0.20	<6.0
Arsenic	3.0	1.1	3.0	0.70	<3.0	0.70	<3.0	0.40	<3.0
Barium	200	.09	10	0.70	<200	0.50	<200	0.20	<200
Beryllium	1.0	.01	1.0	0.40	<1.0	0.30	<1.0	0.30	<1.0
Bismuth	20	.9	10						
Boron	100	2.8	20						
Cadmium	3.0	.2	2.0	0.20	<3.0	0.20	<3.0	0.10	<3.0
Calcium	5000	8.4	200	8.9	<5000	3.2	<5000	2.7	<5000
Chromium	10	.3	5.0	0.20	<10	0.30	<10	0.30	<10
Cobalt	50	.2	2.0	0.10	<50	0.30	<50	0.30	<50
Copper	10	.6	5.0	0.10	<10	-0.50	<10	-0.60	<10
Iron	100	6.2	50	12.4	<100	7.9	<100	8.1	<100
Lead	3.0	1.2	3.0	0.90	<3.0	0.90	<3.0	0.20	<3.0
Lithium	20	.7	10						
Magnesium	5000	10	100	60.5	<5000	-13	<5000	-3.8	<5000
Manganese	15	.2	2.0	0.40	<15	0.30	<15	0.30	<15
Molybdenum	20	.3	5.0						
Nickel	10	.5	4.0	-0.10	<10	-0.20	<10	-0.30	<10
Palladium	50	.5	10						
Potassium	10000	17	500	-32	<10000	-39	<10000	-30	<10000
Selenium	10	1.8	5.0	-0.20	<10	0.10	<10	0.10	<10
Silicon	200	13	50						
Silver	10	.4	4.0	0.20	<10	0.20	<10	0.20	<10
Sodium	10000	5.2	100	-52	<10000	-66	<10000	-64	<10000
Sulfur	50	2.9	25						
Strontium	10	.04	2.0						
Thallium	2.0	1.6	2.0	1.3	<2.0	0.90	<2.0	1.2	<2.0
Tin	10	1.1	5.0						
Titanium	10	.2	4.0						
Tungsten	50	8.7	40						
Vanadium	50	.2	4.0	0.50	<50	0.50	<50	0.70	<50
Zinc	20	.7	5.0	-1.0	<20	-1.0	<20	-1.1	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				05:54		07:04		08:14	
Sample ID:				CCB12		CCB13		CCB14	
Metal	RL	IDL	LOD	raw	final	raw	final	raw	final
Zirconium	10	.3	5.0						

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				09:24		10:12	
Sample ID:				CCB15		CCB16	
Metal	RL	IDL	LOD	raw	final	raw	final
Aluminum	200	3.6	100	11.2	<200	13.6	<200
Antimony	6.0	1.2	5.0	-0.20	<6.0	-0.10	<6.0
Arsenic	3.0	1.1	3.0	0.90	<3.0	1.0	<3.0
Barium	200	.09	10	0.20	<200	0.30	<200
Beryllium	1.0	.01	1.0	0.20	<1.0	0.20	<1.0
Bismuth	20	.9	10				
Boron	100	2.8	20				
Cadmium	3.0	.2	2.0	0.20	<3.0	0.20	<3.0
Calcium	5000	8.4	200	7.4	<5000	9.7	<5000
Chromium	10	.3	5.0	0.10	<10	0.10	<10
Cobalt	50	.2	2.0	0.20	<50	0.0	<50
Copper	10	.6	5.0	0.10	<10	0.50	<10
Iron	100	6.2	50	7.4	<100	3.7	<100
Lead	3.0	1.2	3.0	0.10	<3.0	-0.30	<3.0
Lithium	20	.7	10				
Magnesium	5000	10	100	58.2	<5000	10.6	<5000
Manganese	15	.2	2.0	0.30	<15	0.20	<15
Molybdenum	20	.3	5.0				
Nickel	10	.5	4.0	-0.20	<10	-0.20	<10
Palladium	50	.5	10				
Potassium	10000	17	500	-23	<10000	-27	<10000
Selenium	10	1.8	5.0	-0.30	<10	0.40	<10
Silicon	200	13	50				
Silver	10	.4	4.0	0.0	<10	0.20	<10
Sodium	10000	5.2	100	-55	<10000	-64	<10000
Sulfur	50	2.9	25				
Strontium	10	.04	2.0				
Thallium	2.0	1.6	2.0	1.8	<2.0	0.50	<2.0
Tin	10	1.1	5.0				
Titanium	10	.2	4.0				
Tungsten	50	8.7	40				
Vanadium	50	.2	4.0	0.20	<50	0.20	<50
Zinc	20	.7	5.0	-0.90	<20	-1.0	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: result < LOD Run ID: MA32983 Units: ug/l

Time:				09:24		10:12	
Sample ID:				CCB15		CCB16	
Metal	RL	IDL	LOD	raw	final	raw	final
Zirconium	10	.3	5.0				

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: to % Recovery Run ID: MA32983 Units: ug/l

Time:		18:00	
Sample ID:	ICCV	ICCV2	
Metal	True	Results	% Rec
Aluminum	40000	38200	95.5
Antimony	2000	1960	98.0
Arsenic	2000	1960	98.0
Barium	2000	1930	96.5
Beryllium	2000	2040	102.0
Bismuth			
Boron	anr		
Cadmium	2000	1980	99.0
Calcium	40000	39500	98.8
Chromium	2000	1990	99.5
Cobalt	2000	1970	98.5
Copper	2000	1920	96.0
Iron	40000	39200	98.0
Lead	2000	2010	100.5
Lithium			
Magnesium	40000	41300	103.3
Manganese	2000	2090	104.5
Molybdenum			
Nickel	2000	2000	100.0
Palladium			
Potassium	40000	38000	95.0
Selenium	2000	1970	98.5
Silicon			
Silver	250	241	96.4
Sodium	40000	38600	96.5
Sulfur	anr		
Strontium			
Thallium	2000	2020	101.0
Tin			
Titanium			
Tungsten			
Vanadium	2000	1980	99.0
Zinc	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: to % Recovery Run ID: MA32983 Units: ug/l

Time:		18:00	
Sample ID:	ICCV	ICCV2	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

8.3.3

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		17:35			18:52			19:45	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38700	96.8	40000	38300	95.8	40000	38500	96.3
Antimony	2000	1960	98.0	2000	1970	98.5	2000	1970	98.5
Arsenic	2000	1960	98.0	2000	1960	98.0	2000	1960	98.0
Barium	2000	1940	97.0	2000	1930	96.5	2000	1930	96.5
Beryllium	2000	2050	102.5	2000	2030	101.5	2000	2040	102.0
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	1990	99.5	2000	1990	99.5
Calcium	40000	39500	98.8	40000	39700	99.3	40000	39500	98.8
Chromium	2000	2000	100.0	2000	1990	99.5	2000	2010	100.5
Cobalt	2000	1970	98.5	2000	1980	99.0	2000	1990	99.5
Copper	2000	1940	97.0	2000	1930	96.5	2000	1940	97.0
Iron	40000	39500	98.8	40000	39500	98.8	40000	39600	99.0
Lead	2000	2010	100.5	2000	2000	100.0	2000	2000	100.0
Lithium									
Magnesium	40000	40600	101.5	40000	38600	96.5	40000	37600	94.0
Manganese	2000	2090	104.5	2000	2090	104.5	2000	2100	105.0
Molybdenum									
Nickel	2000	2000	100.0	2000	2010	100.5	2000	2010	100.5
Palladium									
Potassium	40000	38500	96.3	40000	37900	94.8	40000	38200	95.5
Selenium	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5
Silicon									
Silver	250	243	97.2	250	241	96.4	250	242	96.8
Sodium	40000	39000	97.5	40000	38300	95.8	40000	38600	96.5
Sulfur	anr								
Strontium									
Thallium	2000	2020	101.0	2000	2050	102.5	2000	2070	103.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1990	99.5	2000	1980	99.0	2000	1980	99.0
Zinc	2000	2020	101.0	2000	2020	101.0	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		17:35			18:52			19:45	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		20:55			22:06			23:11	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39600	99.0	40000	38600	96.5	40000	38400	96.0
Antimony	2000	1980	99.0	2000	1950	97.5	2000	1940	97.0
Arsenic	2000	1970	98.5	2000	1950	97.5	2000	1930	96.5
Barium	2000	1980	99.0	2000	1930	96.5	2000	1920	96.0
Beryllium	2000	2100	105.0	2000	2040	102.0	2000	2040	102.0
Bismuth									
Boron	anr								
Cadmium	2000	2000	100.0	2000	1980	99.0	2000	1960	98.0
Calcium	40000	40900	102.3	40000	39700	99.3	40000	39700	99.3
Chromium	2000	2000	100.0	2000	2010	100.5	2000	2000	100.0
Cobalt	2000	2010	100.5	2000	1980	99.0	2000	1970	98.5
Copper	2000	1910	95.5	2000	1920	96.0	2000	1910	95.5
Iron	40000	40800	102.0	40000	39600	99.0	40000	39500	98.8
Lead	2000	2020	101.0	2000	2000	100.0	2000	1990	99.5
Lithium									
Magnesium	40000	39700	99.3	40000	39700	99.3	40000	40000	100.0
Manganese	2000	2080	104.0	2000	2090	104.5	2000	2090	104.5
Molybdenum									
Nickel	2000	2030	101.5	2000	2010	100.5	2000	1990	99.5
Palladium									
Potassium	40000	39200	98.0	40000	38400	96.0	40000	38300	95.8
Selenium	2000	1970	98.5	2000	1950	97.5	2000	1940	97.0
Silicon									
Silver	250	241	96.4	250	242	96.8	250	240	96.0
Sodium	40000	39600	99.0	40000	39000	97.5	40000	38800	97.0
Sulfur	anr								
Strontium									
Thallium	2000	2080	104.0	2000	2050	102.5	2000	2030	101.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	1960	98.0	2000	1980	99.0	2000	1970	98.5
Zinc	2000	2050	102.5	2000	2020	101.0	2000	2010	100.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		20:55			22:06			23:11	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		00:21			01:31			02:18	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38800	97.0	40000	38500	96.3	40000	38600	96.5
Antimony	2000	1980	99.0	2000	1970	98.5	2000	1970	98.5
Arsenic	2000	1970	98.5	2000	1950	97.5	2000	1950	97.5
Barium	2000	1940	97.0	2000	1930	96.5	2000	1930	96.5
Beryllium	2000	2060	103.0	2000	2040	102.0	2000	2050	102.5
Bismuth									
Boron	anr								
Cadmium	2000	1990	99.5	2000	1980	99.0	2000	1980	99.0
Calcium	40000	39800	99.5	40000	39600	99.0	40000	39800	99.5
Chromium	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Cobalt	2000	2000	100.0	2000	1980	99.0	2000	1990	99.5
Copper	2000	1940	97.0	2000	1940	97.0	2000	1950	97.5
Iron	40000	39900	99.8	40000	39800	99.5	40000	40000	100.0
Lead	2000	2010	100.5	2000	1980	99.0	2000	1990	99.5
Lithium									
Magnesium	40000	38500	96.3	40000	37000	92.5	40000	37100	92.8
Manganese	2000	2090	104.5	2000	2080	104.0	2000	2090	104.5
Molybdenum									
Nickel	2000	2010	100.5	2000	2000	100.0	2000	2000	100.0
Palladium									
Potassium	40000	38800	97.0	40000	38500	96.3	40000	38600	96.5
Selenium	2000	1970	98.5	2000	1960	98.0	2000	1960	98.0
Silicon									
Silver	250	241	96.4	250	240	96.0	250	241	96.4
Sodium	40000	39100	97.8	40000	38800	97.0	40000	38900	97.3
Sulfur	anr								
Strontium									
Thallium	2000	2080	104.0	2000	2080	104.0	2000	2100	105.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1980	99.0	2000	1960	98.0	2000	1980	99.0
Zinc	2000	2030	101.5	2000	2010	100.5	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		00:21			01:31			02:18	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		03:28			04:38			05:49	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38800	97.0	40000	38900	97.3	40000	38900	97.3
Antimony	2000	1950	97.5	2000	1990	99.5	2000	1960	98.0
Arsenic	2000	1940	97.0	2000	1980	99.0	2000	1950	97.5
Barium	2000	1910	95.5	2000	1930	96.5	2000	1920	96.0
Beryllium	2000	2060	103.0	2000	2080	104.0	2000	2080	104.0
Bismuth									
Boron	anr								
Cadmium	2000	1970	98.5	2000	2010	100.5	2000	1980	99.0
Calcium	40000	39900	99.8	40000	40500	101.3	40000	40600	101.5
Chromium	2000	2000	100.0	2000	2030	101.5	2000	2020	101.0
Cobalt	2000	1980	99.0	2000	2020	101.0	2000	2000	100.0
Copper	2000	1920	96.0	2000	1940	97.0	2000	1930	96.5
Iron	40000	40000	100.0	40000	40400	101.0	40000	40500	101.3
Lead	2000	1990	99.5	2000	2020	101.0	2000	2010	100.5
Lithium									
Magnesium	40000	37700	94.3	40000	38500	96.3	40000	39500	98.8
Manganese	2000	2080	104.0	2000	2110	105.5	2000	2100	105.0
Molybdenum									
Nickel	2000	1990	99.5	2000	2030	101.5	2000	2020	101.0
Palladium									
Potassium	40000	38800	97.0	40000	38900	97.3	40000	39100	97.8
Selenium	2000	1940	97.0	2000	1980	99.0	2000	1950	97.5
Silicon									
Silver	250	240	96.0	250	243	97.2	250	243	97.2
Sodium	40000	39000	97.5	40000	39100	97.8	40000	39200	98.0
Sulfur	anr								
Strontium									
Thallium	2000	2070	103.5	2000	2120	106.0	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1960	98.0	2000	2000	100.0	2000	1990	99.5
Zinc	2000	2010	100.5	2000	2040	102.0	2000	2030	101.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		03:28			04:38			05:49	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		06:59			08:09			09:19	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38800	97.0	40000	38400	96.0	40000	39300	98.3
Antimony	2000	1950	97.5	2000	1940	97.0	2000	1990	99.5
Arsenic	2000	1940	97.0	2000	1940	97.0	2000	1970	98.5
Barium	2000	1910	95.5	2000	1890	94.5	2000	1940	97.0
Beryllium	2000	2070	103.5	2000	2050	102.5	2000	2100	105.0
Bismuth									
Boron	anr								
Cadmium	2000	1970	98.5	2000	1970	98.5	2000	2000	100.0
Calcium	40000	40200	100.5	40000	40300	100.8	40000	40300	100.8
Chromium	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Cobalt	2000	1990	99.5	2000	1980	99.0	2000	1990	99.5
Copper	2000	1920	96.0	2000	1910	95.5	2000	1960	98.0
Iron	40000	40000	100.0	40000	39900	99.8	40000	40600	101.5
Lead	2000	2000	100.0	2000	2000	100.0	2000	1990	99.5
Lithium									
Magnesium	40000	39500	98.8	40000	40000	100.0	40000	38300	95.8
Manganese	2000	2090	104.5	2000	2090	104.5	2000	2090	104.5
Molybdenum									
Nickel	2000	2010	100.5	2000	2000	100.0	2000	2000	100.0
Palladium									
Potassium	40000	38900	97.3	40000	38500	96.3	40000	39400	98.5
Selenium	2000	1940	97.0	2000	1930	96.5	2000	1980	99.0
Silicon									
Silver	250	240	96.0	250	240	96.0	250	241	96.4
Sodium	40000	39000	97.5	40000	38600	96.5	40000	39500	98.8
Sulfur	anr								
Strontium									
Thallium	2000	2060	103.0	2000	2050	102.5	2000	2100	105.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1980	99.0	2000	1980	99.0	2000	1980	99.0
Zinc	2000	2020	101.0	2000	2020	101.0	2000	2010	100.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		06:59			08:09			09:19	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		10:06	
Sample ID:	CCV	CCV15	
Metal	True	Results	% Rec
Aluminum	40000	38900	97.3
Antimony	2000	1990	99.5
Arsenic	2000	1950	97.5
Barium	2000	1920	96.0
Beryllium	2000	2070	103.5
Bismuth			
Boron	anr		
Cadmium	2000	1990	99.5
Calcium	40000	39700	99.3
Chromium	2000	1990	99.5
Cobalt	2000	1980	99.0
Copper	2000	1950	97.5
Iron	40000	40200	100.5
Lead	2000	1970	98.5
Lithium			
Magnesium	40000	36100	90.3
Manganese	2000	2070	103.5
Molybdenum			
Nickel	2000	1990	99.5
Palladium			
Potassium	40000	39000	97.5
Selenium	2000	1970	98.5
Silicon			
Silver	250	238	95.2
Sodium	40000	38900	97.3
Sulfur	anr		
Strontium			
Thallium	2000	2110	105.5
Tin			
Titanium			
Tungsten			
Vanadium	2000	1960	98.0
Zinc	2000	2000	100.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA32983 Units: ug/l

Time:		10:06	
Sample ID:	CCV	CCV15	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA32983 Units: ug/l

Time:				18:23		18:29		01:42	
Sample ID:	CRI	CRIA	CRID	CRID1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	113	113.0	479	95.8	99.3	99.3
Antimony	6.0	20	3.0	2.8	93.3	20.1	100.5	2.5	83.3
Arsenic	8.0	20	3.0	3.3	110.0	22.5	112.5	3.8	126.7
Barium	200		4.0	4.4	110.0			3.9	97.5
Beryllium	2.0		1.0	1.2	120.0			1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	1.1	110.0			1.1	110.0
Calcium	5000		1000	1020	102.0			979	97.9
Chromium	10		2.0	2.1	105.0			2.2	110.0
Cobalt	50		3.0	2.9	96.7			2.9	96.7
Copper	10		2.0	2.1	105.0			2.0	100.0
Iron	100	500				498	99.6		
Lead	3.0	20	2.5			20.2	101.0	2.8	112.0
Lithium	20								
Magnesium	5000		100					123	123.0
Manganese	15		3.0	3.3	110.0			3.3	110.0
Molybdenum	20		4.0						
Nickel	10		4.0	4.2	105.0			3.6	90.0
Palladium	50								
Potassium	5000		2000	1890	94.5			1820	91.0
Selenium	10	20	5.0	6.0	120.0	23.8	119.0	5.1	102.0
Silicon	200								
Silver	5.0		1.0	1.0	100.0			1.0	100.0
Sodium	5000		1000	930	93.0			883	88.3
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.4	120.0			1.8	90.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	2.3	115.0			2.1	105.0
Zinc	20		10	9.5	95.0			9.7	97.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA32983 Units: ug/l

Time:				18:23		18:29		01:42	
Sample ID:	CRI	CRIA	CRID	CRID1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA32983 Units: ug/l

Time:				01:48		01:54		09:30	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA2		CRI2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	210	105.0	480	96.0	209	104.5
Antimony	6.0	20	3.0	5.4	90.0	19.9	99.5	5.7	95.0
Arsenic	8.0	20	3.0	7.8	97.5	22.4	112.0	7.4	92.5
Barium	200		4.0	177	88.5			176	88.0
Beryllium	2.0		1.0	2.1	105.0			2.2	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.2	106.7			3.1	103.3
Calcium	5000		1000	4770	95.4			4780	95.6
Chromium	10		2.0	10.1	101.0			10.0	100.0
Cobalt	50		3.0	48.7	97.4			48.8	97.6
Copper	10		2.0	10.8	108.0			10.6	106.0
Iron	100	500		104	104.0	501	100.2	107	107.0
Lead	3.0	20	2.5	2.7	90.0	20.4	102.0	3.3	110.0
Lithium	20								
Magnesium	5000		100	4850	97.0			4860	97.2
Manganese	15		3.0	16.0	106.7			16.0	106.7
Molybdenum	20		4.0						
Nickel	10		4.0	10.1	101.0			9.7	97.0
Palladium	50								
Potassium	5000		2000	4630	92.6			4710	94.2
Selenium	10	20	5.0	11.4	114.0	24.2	121.0	11.5	115.0
Silicon	200								
Silver	5.0		1.0	5.3	106.0			5.3	106.0
Sodium	5000		1000	4750	95.0			4780	95.6
Sulfur	50	50	50	anr					
Strontium	10								
Thallium	10		2.0	8.1	81.0			8.0	80.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	50.1	100.2			49.8	99.6
Zinc	20		10	20.9	104.5			20.7	103.5

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA32983 Units: ug/l

Time:				01:48		01:54		09:30	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA2		CRI2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA32983 Units: ug/l

Time:				09:36		09:42		09:48	
Sample ID:	CRI	CRIA	CRID	CRID3		CRIA3		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	101	101.0	493	98.6	107	107.0
Antimony	6.0	20	3.0	3.0	100.0	20.1	100.5	2.2	73.3
Arsenic	8.0	20	3.0	3.1	103.3	22.1	110.5	3.5	116.7
Barium	200		4.0	3.8	95.0			3.9	97.5
Beryllium	2.0		1.0	1.1	110.0			1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	1.2	120.0			1.1	110.0
Calcium	5000		1000	983	98.3			975	97.5
Chromium	10		2.0	2.1	105.0			2.0	100.0
Cobalt	50		3.0	2.9	96.7			3.1	103.3
Copper	10		2.0	1.9	95.0			1.9	95.0
Iron	100	500				507	101.4		
Lead	3.0	20	2.5	2.4	96.0	20.3	101.5	2.4	96.0
Lithium	20								
Magnesium	5000		100					116	116.0
Manganese	15		3.0	3.3	110.0			3.2	106.7
Molybdenum	20		4.0						
Nickel	10		4.0	3.7	92.5			3.3	82.5
Palladium	50								
Potassium	5000		2000	1820	91.0			1830	91.5
Selenium	10	20	5.0	6.1	122.0	24.1	120.5	6.1	122.0
Silicon	200								
Silver	5.0		1.0	1.0	100.0			1.1	110.0
Sodium	5000		1000	876	87.6			876	87.6
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	1.9	95.0			2.3	115.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	2.2	110.0			2.0	100.0
Zinc	20		10	9.6	96.0			9.6	96.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA32983 Units: ug/l

Time:				09:36		09:42		09:48	
Sample ID:	CRI	CRIA	CRID	CRID3		CRIA3		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32983 Units: ug/l

Time:		18:17		21:24	
Sample ID:	CRIB	CRIB1		CRIB2	
Metal	True	Results	% Rec	Results	% Rec
Aluminum	200	208	104.0	225	112.5
Antimony	6.0	6.0	100.0	5.6	93.3
Arsenic	8.0	7.9	98.8	8.0	100.0
Barium	200	179	89.5	189	94.5
Beryllium	2.0	2.2	110.0	2.3	115.0
Bismuth	20				
Boron	100				
Cadmium	3.0	3.4	113.3	3.2	106.7
Calcium	5000	4810	96.2	5060	101.2
Chromium	10	9.8	98.0	10.0	100.0
Cobalt	50	49.5	99.0	48.8	97.6
Copper	10	11.4	114.0	10.5	105.0
Iron	100	105	105.0	108	108.0
Lead	3.0	2.5	83.3	3.8	126.7*(a
Lithium	20				
Magnesium	5000	5430	108.6	5400	108.0
Manganese	15	16.5	110.0	16.0	106.7
Molybdenum	20				
Nickel	10	10.8	108.0	10.1	101.0
Palladium	50				
Potassium	5000	4590	91.8	4860	97.2
Selenium	10	11.0	110.0	11.2	112.0
Silicon	200				
Silver	5.0	5.0	100.0	4.7	94.0
Sodium	5000	4770	95.4	5010	100.2
Sulfur	50				
Strontium	10				
Thallium	10	7.1	71.0*(a)	7.4	74.0*(a)
Tin	10				
Titanium	10				
Tungsten	50				
Vanadium	50	51.5	103.0	50.2	100.4
Zinc	20	21.2	106.0	21.0	105.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32983 Units: ug/l

Time:		18:17		21:24	
Sample ID:	CRIB	CRIB1		CRIB2	
Metal	True	Results	% Rec	Results	% Rec
Zirconium	10				

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 70 to 130 percent limits required for SW846 6010.

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32983 Units: ug/l

Time:			18:41		18:47		02:06		02:12	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	526000	105.2	523000	104.6	532000	106.4	526000	105.2
Antimony		1000	1.9		972	97.2	2.6		974	97.4
Arsenic		1000	0.20		980	98.0	-2.5		982	98.2
Barium		500	-0.10		541	108.2	-0.10		541	108.2
Beryllium		500	0.0		506	101.2	0.0		510	102.0
Bismuth		500	0.60		484	96.8	1.3		486	97.2
Boron			-0.50		0.90		-0.90		-0.90	
Cadmium		1000	0.70		992	99.2	1.1		993	99.3
Calcium	400000	400000	412000	103.0	406000	101.5	407000	101.8	405000	101.3
Chromium		500	1.8		458	91.6	1.9		458	91.6
Cobalt		500	0.70		470	94.0	0.50		471	94.2
Copper		500	2.4		516	103.2	2.2		515	103.0
Iron	200000	200000	211000	105.5	208000	104.0	213000	106.5	210000	105.0
Lead		1000	-2.4		915	91.5	-0.60		912	91.2
Lithium		500	0.20		517	103.4	-0.10		523	104.6
Magnesium	500000	500000	587000	117.4	593000	118.6	552000	110.4	568000	113.6
Manganese		500	0.50		484	96.8	1.5		485	97.0
Molybdenum		500	-3.8		459	91.8	-3.7		458	91.6
Nickel		1000	0.0		902	90.2	0.10		902	90.2
Palladium		500	-5.3		586	117.2	-6.0		592	118.4
Potassium			53.0		74.1		71.6		38.1	
Selenium		1000	4.6		1120	112.0	3.1		1120	112.0
Silicon			-12		-23		-14		-25	
Silver		1000	3.3		1070	107.0	3.2		1070	107.0
Sodium			-43		-32		-42		-39	
Sulfur		500	6.7		473	94.6	6.0		470	94.0
Strontium			-7.0*		-7.0*		-6.9*		-6.9*	
Thallium		1000	-2.7*(a)		949	94.9	0.30		965	96.5
Tin			-0.20		-0.10		-0.70		-1.0	
Titanium			-0.20		-0.30		0.30		-0.10	
Tungsten		500	19.6		493	98.6	10.4		480	96.0
Vanadium		500	1.1		458	91.6	0.90		455	91.0
Zinc		1000	-0.40		916	91.6	0.0		916	91.6

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32983 Units: ug/l

Time:			18:41		18:47		02:06		02:12	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-7.0*		446	89.2	-6.8*		448	89.6

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 2x RDL required for SW846 6010

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32983 Units: ug/l

Time:			09:54		10:00	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	535000	107.0	531000	106.2
Antimony		1000	2.6		989	98.9
Arsenic		1000	1.5		989	98.9
Barium		500	-0.20		543	108.6
Beryllium		500	0.0		517	103.4
Bismuth		500	0.60		492	98.4
Boron			-1.4		-0.80	
Cadmium		1000	1.1		999	99.9
Calcium	400000	400000	404000	101.0	401000	100.3
Chromium		500	1.8		455	91.0
Cobalt		500	0.50		473	94.6
Copper		500	2.0		517	103.4
Iron	200000	200000	215000	107.5	212000	106.0
Lead		1000	-2.1		905	90.5
Lithium		500	0.50		536	107.2
Magnesium	500000	500000	538000	107.6	546000	109.2
Manganese		500	2.0* (a)		480	96.0
Molybdenum		500	-3.6		459	91.8
Nickel		1000	-0.40		899	89.9
Palladium		500	-6.9		596	119.2
Potassium			86.1		61.8	
Selenium		1000	6.5* (a)		1120	112.0
Silicon			-15		-25	
Silver		1000	4.3* (a)		1060	106.0
Sodium			-58		-49	
Sulfur		500	5.3		468	93.6
Strontium			-6.6*		-6.5*	
Thallium		1000	-0.40		973	97.3
Tin			-1.3		0.30	
Titanium			0.0		-0.40	
Tungsten		500	10.3		482	96.4
Vanadium		500	0.40		451	90.2
Zinc		1000	-0.50		910	91.0

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA123113M2L.ICP Date Analyzed: 12/31/13 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32983 Units: ug/l

Time:			09:54		10:00	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	-6.8*		446	89.2

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 2x RDL required for SW846 6010

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:56	MA32992-STD1	1		STDA
10:02	MA32992-STD2	1		STDB
10:08	ZZZZZZ	1		
10:13	ZZZZZZ	1		
10:20	MA32992-ICV1	1		
10:30	MA32992-ICB1	1		
10:35	MA32992-ICCV1	1		
10:48	MA32992-CCB1	1		
10:56	MA32992-CRI1	1		
11:02	MA32992-CRID1	1		
11:08	MA32992-CRIA1	1		
11:13	MA32992-CRID2	1		
11:22	ZZZZZZ	1		
11:29	ZZZZZZ	1		
11:40	MA32992-ICSA1	1		
11:46	MA32992-ICSAB1	1		
11:52	MA32992-CCV1	1		
11:58	MA32992-CCB2	1		
12:04	ZZZZZZ	1		
12:10	MP76900-S1	5		Bad reading on Y 3710
12:18	MP76900-S2	5		Rerun with S1
12:24	MA32992-CCV2	1		
12:30	MA32992-CCB3	1		
12:37	ZZZZZZ	1		
12:42	ZZZZZZ	1		
12:48	MA32992-CCV3	1		
12:55	MA32992-CCB4	1		
13:01	MP76942-MB1	1		CCB out
13:07	MP76942-MB2	1		CCB out
13:13	MP76942-B1	1		CCB out
13:19	MP76942-LC1	1		CCB out
13:24	MP76942-LC2	1		CCB out
13:30	MP76942-S1	1		ISTD out.Na and S high

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:36	MP76942-S2	1		ISTD out.Na and S high
13:42	JB56073-1	1		(sample used for QC only; not part of login JB55929)
13:48	MP76942-SD1	5		ISTD out.Na and S high
13:54	MA32992-CCV4	1		
14:00	MA32992-CCB5	1		
14:09	MA32992-CCV5	1		
14:19	MA32992-CCB6	1		
14:25	MP76942-S3	1		ISTD out.Na and S high
14:31	MP76942-S4	1		ISTD out.Na and S high
14:36	JB56073-1F	1		(sample used for QC only; not part of login JB55929)
14:43	MP76942-SD2	5		CCB out
14:48	ZZZZZZ	1		
14:54	ZZZZZZ	1		
15:00	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:18	MA32992-CCV6	1		
15:24	MA32992-CCB7	1		
15:29	ZZZZZZ	1		
15:35	ZZZZZZ	1		
15:41	ZZZZZZ	1		
15:47	ZZZZZZ	1		
15:53	ZZZZZZ	1		
15:59	ZZZZZZ	1		
16:05	ZZZZZZ	1		
16:11	ZZZZZZ	1		
16:17	ZZZZZZ	1		
16:23	MA32992-CCV7	1		
16:28	MA32992-CCB8	1		
16:34	ZZZZZZ	1		
16:40	ZZZZZZ	1		
16:46	ZZZZZZ	1		
16:52	MP76930-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	16:58	ZZZZZZ	2		
	17:04	ZZZZZZ	2		
	17:10	ZZZZZZ	1		
	17:15	MP76911-S1	2		
	17:21	MP76911-S2	2		
	17:27	MP76911-SD1	5		
	17:33	MA32992-CCV8	1		
	17:38	MA32992-CCB9	1		
	17:44	JB55929-9	1		Y 3600 out on CCB
---------->	Last reportable sample/prep for job JB55929				
	17:50	ZZZZZZ	5		
	17:56	MP76979-MB1	1		Y 3600 out on CCB
	18:02	MP76979-LC1	1		Y 3600 out on CCB
	18:08	ZZZZZZ	1		
	18:14	ZZZZZZ	1		
	18:19	ZZZZZZ	1		
	18:25	ZZZZZZ	1		
	18:31	ZZZZZZ	1		
	18:37	ZZZZZZ	1		
	18:43	MA32992-CCV9	1		
	18:48	MA32992-CCB10	1		
	18:54	ZZZZZZ	1		
	19:00	ZZZZZZ	1		
	19:06	ZZZZZZ	1		
	19:12	ZZZZZZ	1		
	19:18	ZZZZZZ	1		
	19:24	ZZZZZZ	1		
	19:30	ZZZZZZ	1		
	19:36	ZZZZZZ	1		
	19:42	ZZZZZZ	1		
	19:48	MA32992-CCV10	1		
	19:54	MA32992-CCB11	1		
	19:59	MA32992-CRI2	1		
	20:05	MA32992-CRID3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	20:11	MA32992-CRIA2	1		
	20:17	MA32992-ICSA2	1		
	20:23	MA32992-ICSAB2	1		
	20:29	ZZZZZZ	1		
	20:35	ZZZZZZ	1		
	20:41	ZZZZZZ	1		
	20:47	ZZZZZZ	1		
	20:53	MA32992-CCV11	1		
	20:59	MA32992-CCB12	1		
---------->	Last reportable CCB for job JB55929				
	21:05	MP76973-MB1	1		CCV out
	21:11	MP76973-B1	1		CCV out. Low recovery for Ag
	21:16	MP76973-S1	1		CCV out
	21:22	MP76973-S2	1		CCV out
	21:28	JB56549-25	1		(sample used for QC only; not part of login JB55929)
	21:34	MP76973-SD1	5		CCV out
	21:39	ZZZZZZ	1		
	21:45	ZZZZZZ	1		
	21:51	ZZZZZZ	1		
	21:57	ZZZZZZ	1		
	22:03	MA32992-CCV12	1		
	22:08	MA32992-CCB13	1		
	22:14	ZZZZZZ	1		
	22:20	ZZZZZZ	1		
	22:26	ZZZZZZ	1		
	22:31	ZZZZZZ	1		
	22:37	ZZZZZZ	1		
	22:43	ZZZZZZ	1		
	22:49	ZZZZZZ	1		
	22:55	ZZZZZZ	1		
	23:01	ZZZZZZ	1		
	23:06	ZZZZZZ	1		
	23:12	MA32992-CCV13	1		
	23:18	MA32992-CCB14	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:24	ZZZZZZ	1		
23:29	MP76972-MB1	1		CCV out
23:35	MP76972-B1	1		CCV out. Low recovery for Ag
23:41	MP76972-S1	1		CCV out
23:47	MP76972-S2	1		CCV out
23:53	JB56549-8	1		(sample used for QC only; not part of login JB55929)
23:58	MP76972-SD1	5		CCV out
00:04	ZZZZZZ	1		
00:10	ZZZZZZ	1		
00:16	ZZZZZZ	1		
00:22	MA32992-CCV14	1		
00:27	MA32992-CCB15	1		
00:33	ZZZZZZ	1		
00:39	ZZZZZZ	1		
00:45	ZZZZZZ	1		
00:51	ZZZZZZ	1		
00:57	ZZZZZZ	1		
01:02	ZZZZZZ	1		
01:08	ZZZZZZ	1		
01:14	ZZZZZZ	1		
01:20	ZZZZZZ	1		
01:26	ZZZZZZ	1		
01:32	MA32992-CCV15	1		
01:37	MA32992-CCB16	1		
01:43	ZZZZZZ	1		
01:49	MP76967-MB1	1		
01:55	MP76967-MB2	1		
02:01	MP76967-LC1	1		
02:07	MP76967-LC2	1		
02:12	MP76967-S1	1		
02:18	MP76967-S2	1		
02:24	JB56267-1	1		(sample used for QC only; not part of login JB55929)
02:29	MP76967-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:35	ZZZZZZ	1		
02:41	MA32992-CCV16	1		
02:47	MA32992-CCB17	1		
02:53	ZZZZZZ	1		
02:59	ZZZZZZ	1		
03:05	ZZZZZZ	1		
03:10	ZZZZZZ	1		
03:16	ZZZZZZ	5		
03:22	ZZZZZZ	1		
03:28	ZZZZZZ	1		
03:34	ZZZZZZ	1		
03:40	ZZZZZZ	1		
03:46	ZZZZZZ	1		
03:52	MA32992-CCV17	1		
03:57	MA32992-CCB18	1		
04:03	MA32992-CRI3	1		
04:09	MA32992-CRID4	1		
04:15	MA32992-CRIA3	1		
04:21	MA32992-ICSA3	1		bad reading on In, not used
04:27	MA32992-ICSAB3	1		
04:33	ZZZZZZ	1		
04:39	ZZZZZZ	1		
04:45	ZZZZZZ	1		
04:51	ZZZZZZ	1		
04:57	MA32992-CCV18	1		
05:02	MA32992-CCB19	1		
05:08	ZZZZZZ	1		
05:14	ZZZZZZ	1		
05:20	ZZZZZZ	1		
05:26	ZZZZZZ	1		
05:32	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:43	MP76945-MB1	1		CCV out

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:49	MP76945-MB2	1		CCV out
05:55	MP76945-B1	1		CCV out
06:01	MP76945-LC1	1		CCV out
06:07	MA32992-CCV19	1		
06:12	MA32992-CCB20	1		
06:18	MP76945-LC2	1		CCV out
06:24	MP76945-S1	1		CCV out
06:30	MP76945-S2	1		CCV out. Bad readings on ISTD
06:35	JB56222-2	1		(sample used for QC only; not part of login JB55929)
06:41	MP76945-SD1	5		CCV out
06:47	MP76945-S3	1		CCV out
06:53	MP76945-S4	1		CCV out. High RSD
06:58	JB56222-2F	1		(sample used for QC only; not part of login JB55929)
07:04	MP76945-SD2	5		CCV out
07:10	ZZZZZZ	1		
07:16	MA32992-CCV20	1		
07:22	MA32992-CCB21	1		
07:28	ZZZZZZ	1		
07:34	ZZZZZZ	1		
07:40	ZZZZZZ	1		
07:46	ZZZZZZ	1		
07:53	MA32992-CCV21	1		
07:58	MA32992-CCB22	1		
08:04	MA32992-CRID5	1		
08:10	MA32992-CRI4	1		
08:16	MA32992-CRID6	1		
08:22	MA32992-CRIA4	1		
08:28	MA32992-CCV22	1		
08:34	MA32992-CCB23	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:56	MA32992-STD1	1786 R	129120 R	14969 R	6017 R
10:02	MA32992-STD2	1661	119860	14688	5202
10:08	ZZZZZZ	1704	123150	14634	5455
10:13	ZZZZZZ	1775	128970	14866	6062
10:20	MA32992-ICV1	1710	123310	14694	5482
10:30	MA32992-ICB1	1782	128330	14743	6085
10:35	MA32992-ICCV1	1689	123740	14731	5416
10:48	MA32992-CCB1	1765	128820	14778	6017
10:56	MA32992-CRI1	1748	127920	14786	5909
11:02	MA32992-CRID1	No results reported for the elements associated with this internal standard.			
11:08	MA32992-CRIA1	1770	128460	14712	6039
11:13	MA32992-CRID2	1762	128990	14861	6003
11:22	ZZZZZZ	1558	114280	13350	4652
11:29	ZZZZZZ	1561	114400	13302	4665
11:40	MA32992-ICSA1	1575	114460	12975	4679
11:46	MA32992-ICSAB1	1572	115160	13222	4726
11:52	MA32992-CCV1	1678	121900	14425	5406
11:58	MA32992-CCB2	1745	127450	14611	5991
12:04	ZZZZZZ	1593	100070	10944	6198
12:10	MP76900-S1	1611	95036	10031 !a	5931
12:18	MP76900-S2	1682	119400	13451	5846
12:24	MA32992-CCV2	1665	118730	13738	5473
12:30	MA32992-CCB3	1739	999999 !a	13958	6028
12:37	ZZZZZZ	1718	124820	14286	5906
12:42	ZZZZZZ	1739	125610	14229	6008
12:48	MA32992-CCV3	1656	120640	14062	5411
12:55	MA32992-CCB4	1755	127520	14359	6083
13:01	MP76942-MB1	1723	126960	13995	6020
13:07	MP76942-MB2	1728	126320	13975	6028
13:13	MP76942-B1	1650	122390	14093	5589
13:19	MP76942-LC1	1706	125130	13807	5855
13:24	MP76942-LC2	1686	124260	13720	5796
13:30	MP76942-S1	1242 !a	90597	16073	3475 !a

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:36	MP76942-S2	1244 !a	90460	16047	3485 !a
13:42	JB56073-1	1251	92064	16138	3507 !a
13:48	MP76942-SD1	1486	109500	15468	4533
13:54	MA32992-CCV4	1657	120940	13978	5406
14:00	MA32992-CCB5	1712	125820	14104	5960
14:09	MA32992-CCV5	1641	119470	14003	5376
14:19	MA32992-CCB6	1707	125000	14039	5952
14:25	MP76942-S3	1229 !a	90468	15782	3464 !a
14:31	MP76942-S4	1227 !a	90175 !a	15694	3465 !a
14:36	JB56073-1F	1235 !a	90664	15872	3490 !a
14:43	MP76942-SD2	1461	107970	15151	4485
14:48	ZZZZZZ	1490	111940	13975	4464
14:54	ZZZZZZ	1555	118400	13451	5034
15:00	ZZZZZZ	1537	115850	14219	5029
15:06	ZZZZZZ	1555	116960	13726	5091
15:12	ZZZZZZ	1683	127340	13724	5922
15:18	MA32992-CCV6	1629	119330	13700	5332
15:24	MA32992-CCB7	1700	124950	13935	5924
15:29	ZZZZZZ	1254	93705	15718	3612 !a
15:35	ZZZZZZ	1544	116290	13800	5113
15:41	ZZZZZZ	1540	116120	14252	5058
15:47	ZZZZZZ	1541	116770	14236	5092
15:53	ZZZZZZ	1694	126470	13710	5933
15:59	ZZZZZZ	1670	124770	13719	5812
16:05	ZZZZZZ	1644	122610	13922	5377
16:11	ZZZZZZ	1604	119190	13912	5244
16:17	ZZZZZZ	1595	118690	14089	5214
16:23	MA32992-CCV7	1627	120240	13961	5322
16:28	MA32992-CCB8	1703	125730	14033	5911
16:34	ZZZZZZ	1610	120040	14137	5405
16:40	ZZZZZZ	1491	112760	14400	4771
16:46	ZZZZZZ	1690	125920	13682	5895
16:52	MP76930-SD1	1651	124430	14070	5699

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:58	ZZZZZZ	1650	122840	14111	5587
17:04	ZZZZZZ	1423	116830	13474	5107
17:10	ZZZZZZ	1501	123140	13611	5539
17:15	MP76911-S1	1471	119010	13319	5099
17:21	MP76911-S2	1474	119070	13300	5086
17:27	MP76911-SD1	1502	120390	12993	5299
17:33	MA32992-CCV8	1453	116010	13306	4964
17:38	MA32992-CCB9	1519	123890	13140	5541
17:44	JB55929-9	1495	120100	12957	5280
17:50	ZZZZZZ	1385	999999 !a	13917	4766
17:56	MP76979-MB1	1493	120630	12843	5476
18:02	MP76979-LC1	1492	120090	12886	5366
18:08	ZZZZZZ	1503	120830	12822	5515
18:14	ZZZZZZ	1501	120610	12872	5520
18:19	ZZZZZZ	1443	117930	13028	5076
18:25	ZZZZZZ	1494	120350	13234	5208
18:31	ZZZZZZ	1466	118560	13031	5151
18:37	ZZZZZZ	1432	116760	12943	4907
18:43	MA32992-CCV9	1488	116110	13215	5076
18:48	MA32992-CCB10	1537	999999 !a	13385	5568
18:54	ZZZZZZ	1551	122590	13378	5624
19:00	ZZZZZZ	1514	121890	13436	5514
19:06	ZZZZZZ	1525	121160	13230	5535
19:12	ZZZZZZ	1516	120820	13140	5516
19:18	ZZZZZZ	1526	999999 !	13341	5529
19:24	ZZZZZZ	1537	122770	13407	5574
19:30	ZZZZZZ	1525	121830	13251	5525
19:36	ZZZZZZ	1533	121670	13244	5560
19:42	ZZZZZZ	1537	122500	13312	5575
19:48	MA32992-CCV10	1491	118960	13396	5059
19:54	MA32992-CCB11	1534	123540	13498	5557
19:59	MA32992-CRI2	1513	121310	13528	5438
20:05	MA32992-CRID3	1524	122430	13394	5519

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:11	MA32992-CRIA2	1522	122490	13200	5528
20:17	MA32992-ICSA2	1355	108320	11459	4231
20:23	MA32992-ICSAB2	1386	108580	11792	4346
20:29	ZZZZZZ	1380	117130	12979	5209
20:35	ZZZZZZ	1447	121310	12936	5437
20:41	ZZZZZZ	1431	120330	12857	5341
20:47	ZZZZZZ	1417	119360	12895	5320
20:53	MA32992-CCV11	1356	114350	12966	4750
20:59	MA32992-CCB12	1426	120380	12844	5347
21:05	MP76973-MB1	1423	120330	12716	5359
21:11	MP76973-B1	1400	117040	12718	5033
21:16	MP76973-S1	1390	117300	12374	4677
21:22	MP76973-S2	1408	116810	12620	4747
21:28	JB56549-25	1393	116470	12946	4548
21:34	MP76973-SD1	1421	120690	13235	5047
21:39	ZZZZZZ	1385	117830	12765	4976
21:45	ZZZZZZ	1313	114080	12510	4731
21:51	ZZZZZZ	1443	122770	13059	5202
21:57	ZZZZZZ	1437	123130	13012	5172
22:03	MA32992-CCV12	1406	116050	13264	4870
22:08	MA32992-CCB13	1474	122030	13084	5451
22:14	ZZZZZZ	1433	999999 !a	13209	4958
22:20	ZZZZZZ	1403	119240	12989	4852
22:26	ZZZZZZ	1427	120580	13128	4908
22:31	ZZZZZZ	1421	119920	13074	4917
22:37	ZZZZZZ	1420	119180	12679	5009
22:43	ZZZZZZ	1410	120400	13249	5003
22:49	ZZZZZZ	1380	117540	13152	4880
22:55	ZZZZZZ	1438	121240	13212	5053
23:01	ZZZZZZ	1435	120400	12922	4899
23:06	ZZZZZZ	1421	121480	12953	4992
23:12	MA32992-CCV13	1419	118370	13174	4904
23:18	MA32992-CCB14	1471	122850	13396	5445

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:24	ZZZZZZ	1399	118940	12761	4893
23:29	MP76972-MB1	1494	126160	13589	5553
23:35	MP76972-B1	1419	118440	12703	5064
23:41	MP76972-S1	1436	119060	12450	4903
23:47	MP76972-S2	1453	121770	12760	4911
23:53	JB56549-8	1452	121980	13121	5062
23:58	MP76972-SD1	1479	121700	13101	5312
00:04	ZZZZZZ	1500	125350	13621	5196
00:10	ZZZZZZ	1489	122540	12938	5095
00:16	ZZZZZZ	1345	115210	12611	4909
00:22	MA32992-CCV14	1426	119380	13622	4897
00:27	MA32992-CCB15	1508	125730	13890	5499
00:33	ZZZZZZ	1392	118010	13319	5067
00:39	ZZZZZZ	1424	119780	13229	4978
00:45	ZZZZZZ	1460	122760	13491	5285
00:51	ZZZZZZ	1459	123350	13389	5071
00:57	ZZZZZZ	1475	124850	13459	4984
01:02	ZZZZZZ	1417	118500	13241	4844
01:08	ZZZZZZ	1465	123200	13379	4966
01:14	ZZZZZZ	1489	124250	13534	5154
01:20	ZZZZZZ	1403	120060	13407	4804
01:26	ZZZZZZ	1398	117790	12884	5041
01:32	MA32992-CCV15	1466	119640	13696	5013
01:37	MA32992-CCB16	1501	125660	13854	5447
01:43	ZZZZZZ	1424	119940	13534	4769
01:49	MP76967-MB1	1481	123310	13358	5430
01:55	MP76967-MB2	1499	123990	13267	5506
02:01	MP76967-LC1	1457	119640	12804	5259
02:07	MP76967-LC2	1486	122330	13047	5316
02:12	MP76967-S1	1447	120300	13806	4937
02:18	MP76967-S2	1426	119400	13665	4873
02:24	JB56267-1	1470	124120	13772	5160
02:29	MP76967-SD1	1517	124200	13674	5493

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:35	ZZZZZZ	1462	121060	13547	5206
02:41	MA32992-CCV16	1506	122450	14094	5108
02:47	MA32992-CCB17	1524	123650	13548	5565
02:53	ZZZZZZ	1409	116770	13178	5026
02:59	ZZZZZZ	1425	119210	13482	5107
03:05	ZZZZZZ	1471	123480	13718	5317
03:10	ZZZZZZ	1474	122120	13731	5277
03:16	ZZZZZZ	1451	120950	13193	5265
03:22	ZZZZZZ	1494	121750	13475	5380
03:28	ZZZZZZ	1525	127170	14035	5352
03:34	ZZZZZZ	1466	121280	13611	5220
03:40	ZZZZZZ	1442	117590	14430	4799
03:46	ZZZZZZ	1423	116370	14633	4721
03:52	MA32992-CCV17	1455	119040	13717	4930
03:57	MA32992-CCB18	1534	126310	13819	5583
04:03	MA32992-CRI3	1517	123250	13815	5470
04:09	MA32992-CRID4	1475	122640	13843	5393
04:15	MA32992-CRIA3	1514	125230	13224	5515
04:21	MA32992-ICSA3	No results reported for the elements associated with this internal standard.			
04:27	MA32992-ICSAB3	No results reported for the elements associated with this internal standard.			
04:33	ZZZZZZ	1499	999999 !	13429	5481
04:39	ZZZZZZ	1342	115380	14196	4644
04:45	ZZZZZZ	1500	124480	13125	5475
04:51	ZZZZZZ	1493	123670	12807	5433
04:57	MA32992-CCV18	1423	116730	13517	4867
05:02	MA32992-CCB19	1519	127150	13507	5556
05:08	ZZZZZZ	1385	116660	14237	4569
05:14	ZZZZZZ	1444	122310	13393	5202
05:20	ZZZZZZ	1418	120420	13223	5082
05:26	ZZZZZZ	1427	119170	13553	5026
05:32	ZZZZZZ	1430	120160	13469	5065
05:38	ZZZZZZ	1458	121570	13556	5190
05:43	MP76945-MB1	1518	125410	13098	5515

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
05:49	MP76945-MB2	1511	123900	13088	5507
05:55	MP76945-B1	1455	121490	13517	5143
06:01	MP76945-LC1	1491	123060	12963	5346
06:07	MA32992-CCV19	1476	121680	13525	5028
06:12	MA32992-CCB20	1526	125640	13331	5559
06:18	MP76945-LC2	1499	123430	12617	5365
06:24	MP76945-S1	1453	119840	13426	5050
06:30	MP76945-S2	No results reported for the elements associated with this internal standard.			
06:35	JB56222-2	1494	123610	13489	5359
06:41	MP76945-SD1	1533	126230	13638	5578
06:47	MP76945-S3	1469	121120	13519	5099
06:53	MP76945-S4	1468	121030	13024	5093
06:58	JB56222-2F	1490	123020	13385	5351
07:04	MP76945-SD2	1517	125290	13435	5514
07:10	ZZZZZZ	1544	126120	13304	5630
07:16	MA32992-CCV20	1485	999999 !a	13658	5030
07:22	MA32992-CCB21	1550	125570	13525	5640
07:28	ZZZZZZ	1316	110590	14219	4427
07:34	ZZZZZZ	1384	119220	17147	4630
07:40	ZZZZZZ	1309	114470	14702	4453
07:46	ZZZZZZ	1329	112940	14515	4529
07:53	MA32992-CCV21	1447	122540	14027	5020
07:58	MA32992-CCB22	1520	128030	13723	5660
08:04	MA32992-CRID5	1514	127540	13864	5642
08:10	MA32992-CRI4	1491	126020	13814	5510
08:16	MA32992-CRID6	1491	126580	13773	5580
08:22	MA32992-CRIA4	1513	128760	13908	5643
08:28	MA32992-CCV22	1452	122580	14023	5044
08:34	MA32992-CCB23	1494	126560	13577	5631

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Fe,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			10:30		10:48		11:58		12:30	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.09	anr							
Beryllium	1.0	.01	anr							
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	8.4	anr							
Chromium	10	.3	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	6.2	1.7	<100	0.10	<100	1.4	<100	-0.20	<100
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	anr							
Palladium	50	.5								
Potassium	10000	17	anr							
Selenium	10	1.8	anr							
Silicon	200	13								
Silver	10	.4	anr							
Sodium	10000	5.2	anr							
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	0.40	<2.0	0.70	<2.0	0.50	<2.0	0.10	<5.0
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			10:30		10:48		11:58		12:30	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			12:55		14:00		14:19		15:24	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.09	anr							
Beryllium	1.0	.01	anr							
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	8.4	anr							
Chromium	10	.3	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	6.2	0.90	<100	5.8	<100	11.7	<100	16.3	<100
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	anr							
Palladium	50	.5								
Potassium	10000	17	anr							
Selenium	10	1.8	anr							
Silicon	200	13								
Silver	10	.4	anr							
Sodium	10000	5.2	anr							
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	0.60	<5.0	2.2	* (a)	0.90	<2.0	2.2	* (a)
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			12:55		14:00		14:19		15:24	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			16:28		17:38		18:48		19:54	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.09	anr							
Beryllium	1.0	.01	anr							
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	8.4	anr							
Chromium	10	.3	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	6.2	14.1	<100	11.7	<100	9.7	<100	7.2	<100
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	anr							
Palladium	50	.5								
Potassium	10000	17	anr							
Selenium	10	1.8	anr							
Silicon	200	13								
Silver	10	.4	anr							
Sodium	10000	5.2	anr							
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	2.0	<2.0*(a)	0.90	<2.0	0.60	<2.0	1.2	<2.0
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			16:28		17:38		18:48		19:54	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			20:59	
Sample ID:			CCB12	
Metal	RL	IDL	raw	final
Aluminum	200	3.6	anr	
Antimony	6.0	1.2	anr	
Arsenic	3.0	1.1	anr	
Barium	200	.09	anr	
Beryllium	1.0	.01	anr	
Bismuth	20	.9		
Boron	100	2.8	anr	
Cadmium	3.0	.2	anr	
Calcium	5000	8.4	anr	
Chromium	10	.3	anr	
Cobalt	50	.2	anr	
Copper	10	.6	anr	
Iron	100	6.2	5.0	<100
Lead	3.0	1.2	anr	
Lithium	20	.7		
Magnesium	5000	10	anr	
Manganese	15	.2	anr	
Molybdenum	20	.3		
Nickel	10	.5	anr	
Palladium	50	.5		
Potassium	10000	17	anr	
Selenium	10	1.8	anr	
Silicon	200	13		
Silver	10	.4	anr	
Sodium	10000	5.2	anr	
Sulfur	50	2.9		
Strontium	10	.04		
Thallium	2.0	1.6	0.0	<2.0
Tin	10	1.1	anr	
Titanium	10	.2		
Tungsten	50	8.7		
Vanadium	50	.2	anr	
Zinc	20	.7	anr	

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			20:59	
Sample ID:			CCB12	
Metal	RL	IDL	raw	final
Zirconium	10	.3		

(*) Outside of QC limits
(anr) Analyte not requested

8.4.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		10:35	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	40000	39500	98.8
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur			
Strontium			
Thallium	2000	2090	104.5
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		10:35	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		10:20			11:52			12:24	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	39700	99.3	40000	40100	100.3	40000	41500	103.8
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	2000	2060	103.0	2000	2090	104.5	2000	2050	102.5
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		10:20			11:52			12:24	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.4.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		12:48			13:54			14:09	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40400	101.0	40000	40800	102.0	40000	40800	102.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	2000	2060	103.0	2000	2070	103.5	2000	2080	104.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		12:48			13:54			14:09	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.4.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		15:18			16:23			17:33	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	41700	104.3	40000	40700	101.8	40000	40000	100.0
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	2000	2090	104.5	2000	2090	104.5	2000	2020	101.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		15:18			16:23			17:33	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.4.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		18:43			19:48			20:53	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	40000	40100	100.3	40000	39600	99.0	40000	39800	99.5
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur									
Strontium									
Thallium	2000	1970	98.5	2000	1980	99.0	2000	2020	101.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		18:43			19:48			20:53	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.4.4
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				10:56		11:08		11:13	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		104	104.0	505	101.0		
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0						
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	10.1	101.0			2.1	105.0
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				10:56		11:08		11:13	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.4.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				19:59		20:05		20:11	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		103	103.0			502	100.4
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0						
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	10.3	103.0	1.8	90.0		
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				19:59		20:05		20:11	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32992 Units: ug/l

Time:			11:40		11:46		20:17		20:23	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	547000	109.4	468000	93.6	570000	114.0	487000	97.4
Antimony		1000	9.2		977	97.7	8.2		1040	104.0
Arsenic		1000	-0.70		964	96.4	-2.2		1020	102.0
Barium		500	-0.40		505	101.0	-0.40		565	113.0
Beryllium		500	0.0		470	94.0	0.10		513	102.6
Bismuth		500	1.2		493	98.6	0.30		547	109.4
Boron			-1.0		1.8		-1.3		3.1	
Cadmium		1000	-2.3		910	91.0	-2.7		953	95.3
Calcium	400000	400000	425000	106.3	399000	99.8	432000	108.0	407000	101.8
Chromium		500	-0.60		425	85.0	0.30		431	86.2
Cobalt		500	-0.30		429	85.8	-0.60		430	86.0
Copper		500	-0.60		457	91.4	0.20		475	95.0
Iron	200000	200000	217000	108.5	212000	106.0	231000	115.5	224000	112.0
Lead		1000	5.3		858	85.8	3.2		882	88.2
Lithium		500	0.50		493	98.6	1.1		606	121.2*
Magnesium	500000	500000	527000	105.4	501000	100.2	555000	111.0	522000	104.4
Manganese		500	2.6		443	88.6	1.4		437	87.4
Molybdenum		500	-4.0		462	92.4	-4.5		483	96.6
Nickel		1000	0.50		836	83.6	0.40		851	85.1
Palladium		500	-21		494	98.8	-21		513	102.6
Potassium			118		122		98.7		132	
Selenium		1000	5.4		873	87.3	-2.8		923	92.3
Silicon			-8.2		-16		-14		-18	
Silver		1000	6.6		996	99.6	6.3		985	98.5
Sodium			21.2		18.5		43.0		39.5	
Sulfur		500	7.7		465	93.0	0.20		484	96.8
Strontium			-6.8		-6.4		-5.6		-5.2	
Thallium		1000	3.5		901	90.1	-0.80		891	89.1
Tin			-0.80		-0.20		0.30		-0.60	
Titanium			-0.80		-0.50		-0.70		-0.50	
Tungsten		500	12.5		489	97.8	12.4		503	100.6
Vanadium		500	-1.2		421	84.2	-1.1		433	86.6
Zinc		1000	5.7		849	84.9	4.1		859	85.9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32992 Units: ug/l

Time:			11:40		11:46		20:17		20:23	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	4.0		448	89.6	3.4		459	91.8

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:51	MA32999-STD1	1		STDA
11:56	MA32999-STD2	1		STDB
12:02	ZZZZZZ	1		
12:08	ZZZZZZ	1		
12:20	MA32999-ICV1	1		
12:31	MA32999-ICB1	1		
12:38	MA32999-ICCV1	1		
12:56	MA32999-CCB1	1		
13:02	MA32999-CRI1	1		
13:08	MA32999-CRID1	1		
13:14	ZZZZZZ	2		
13:20	MA32999-CRID2	1		
13:26	MA32999-ICSA1	1		
13:32	MA32999-ICSAB1	1		
13:38	MP76900-S1	5		
13:44	MP76900-S2	5		
13:49	ZZZZZZ	1		
13:55	MA32999-CCV1	1		
14:01	MA32999-CCB2	1		
14:07	MA32999-CRIB1	1		
14:13	ZZZZZZ	1		
14:19	ZZZZZZ	1		
14:24	ZZZZZZ	2		
14:30	ZZZZZZ	5		
14:36	ZZZZZZ	5		
14:42	ZZZZZZ	2		
14:48	MA32999-CCV2	1		
14:54	MA32999-CCB3	1		
15:00	MP76942-MB1	1		
15:06	MP76942-MB2	1		
15:11	MP76942-B1	1		
15:17	MP76942-LC1	1		
15:23	MP76942-LC2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:29	MP76942-S1	10		Tl neg
15:35	MP76942-S2	10		Tl neg
15:40	JB56073-1	10		(sample used for QC only; not part of login JB55929)
15:46	MP76942-SD1	50		Tl neg
15:52	MA32999-CCV3	1		
15:58	MA32999-CCB4	1		
16:04	MP76942-S3	10		Tl neg
16:10	MP76942-S4	10		Tl neg
16:16	JB56073-1F	10		(sample used for QC only; not part of login JB55929)
16:22	MP76942-SD2	50		Tl neg
16:27	ZZZZZZ	1		
16:33	ZZZZZZ	1		
16:39	ZZZZZZ	1		
16:45	ZZZZZZ	1		
16:51	ZZZZZZ	1		
16:57	MA32999-CCV4	1		
17:02	MA32999-CCB5	1		
17:08	ZZZZZZ	1		
17:14	ZZZZZZ	1		
17:20	ZZZZZZ	1		
17:26	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:38	ZZZZZZ	1		
17:44	ZZZZZZ	1		
17:49	ZZZZZZ	1		
17:55	ZZZZZZ	1		
18:01	MA32999-CCV5	1		
18:07	MA32999-CCB6	1		
18:13	ZZZZZZ	1		
18:19	ZZZZZZ	1		
18:25	ZZZZZZ	5		
18:30	ZZZZZZ	5		
18:36	MP76979-MB1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:42	MP76979-LC1	1		
18:48	ZZZZZZ	1		
18:54	ZZZZZZ	1		
19:00	MA32999-CCV6	1		
19:06	MA32999-CCB7	1		
19:12	ZZZZZZ	1		
19:17	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:29	ZZZZZZ	1		
19:35	ZZZZZZ	1		
19:41	ZZZZZZ	1		
19:47	ZZZZZZ	1		
19:53	MA32999-CCV7	1		
19:59	MA32999-CCB8	1		
20:05	MA32999-CRID3	1		
20:11	MA32999-CRI2	1		
20:16	ZZZZZZ	1		
20:22	MA32999-CRID4	1		
20:28	MA32999-ICSA2	1		
20:34	MA32999-ICSAB2	1		
20:40	MA32999-CCV8	1		
20:46	MA32999-CCB9	1		
20:52	MP76945-MB2	1		
20:58	ZZZZZZ	1		
21:04	ZZZZZZ	1		
21:10	ZZZZZZ	1		
21:16	ZZZZZZ	1		
21:22	ZZZZZZ	1		
21:28	ZZZZZZ	1		
21:34	MA32999-CCV9	1		
21:39	MA32999-CCB10	1		
21:45	ZZZZZZ	1		
21:51	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:57	ZZZZZZ	1		
22:03	ZZZZZZ	1		
22:09	ZZZZZZ	1		
22:15	ZZZZZZ	1		
22:21	ZZZZZZ	1		
22:27	JB55929-9	1		
---------->	Last reportable sample/prep for job JB55929			
22:32	ZZZZZZ	5		
22:38	ZZZZZZ	1		
22:44	MA32999-CCV10	1		
22:50	MA32999-CCB11	1		
22:56	MP76973-MB1	1		
23:02	MP76973-B1	1		
23:08	MP76973-S1	1		
23:13	MP76973-S2	1		
23:19	JB56549-25	1		(sample used for QC only; not part of login JB55929)
23:25	MP76973-SD1	5		
23:31	ZZZZZZ	1		
23:36	ZZZZZZ	1		
23:42	ZZZZZZ	1		
23:48	ZZZZZZ	1		
23:54	MA32999-CCV11	1		
00:00	MA32999-CCB12	1		
00:05	ZZZZZZ	1		
00:11	ZZZZZZ	1		
00:17	ZZZZZZ	1		
00:23	ZZZZZZ	1		
00:29	ZZZZZZ	1		
00:34	ZZZZZZ	1		
00:40	ZZZZZZ	1		
00:46	ZZZZZZ	1		
00:52	ZZZZZZ	1		
00:58	ZZZZZZ	1		
01:03	MA32999-CCV12	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:09	MA32999-CCB13	1		
01:15	ZZZZZZ	1		
01:21	ZZZZZZ	1		
01:27	ZZZZZZ	1		
01:33	ZZZZZZ	1		
01:38	ZZZZZZ	1		
01:44	MP76972-MB1	1		
01:50	MP76972-B1	1		To reprep for Ag, low recovery confirmed
01:56	MP76972-S1	1		
02:02	MP76972-S2	1		
02:07	JB56549-8	1		(sample used for QC only; not part of login JB55929)
02:13	MA32999-CCV13	1		
02:19	MA32999-CCB14	1		
02:25	MP76972-SD1	5		
02:30	ZZZZZZ	1		
02:36	ZZZZZZ	1		
02:42	ZZZZZZ	1		
02:48	ZZZZZZ	1		
02:54	ZZZZZZ	1		
03:00	ZZZZZZ	1		
03:06	ZZZZZZ	1		
03:12	ZZZZZZ	1		
03:17	MA32999-CCV14	1		
03:23	MA32999-CCB15	1		
03:29	MA32999-CRI3	1		
03:35	MA32999-CRID5	1		
03:41	ZZZZZZ	1		
03:47	ZZZZZZ	1		
03:52	ZZZZZZ	1		
03:58	ZZZZZZ	1		
04:04	ZZZZZZ	1		
04:10	ZZZZZZ	1		
04:16	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	04:22	MA32999-CCV15	1		
	04:27	MA32999-CCB16	1		
---------->	Last reportable CCB for job JB55929				
	04:33	MA32999-CRI4	1		
	04:39	MA32999-CRID6	1		
	04:45	ZZZZZZ	1		
	04:51	MA32999-CCV16	1		
	04:57	MA32999-CCB17	1		
	05:03	ZZZZZZ	1		
	05:08	ZZZZZZ	1		
	05:14	ZZZZZZ	1		
	05:20	ZZZZZZ	1		
	05:26	ZZZZZZ	1		
	05:32	ZZZZZZ	1		
	05:38	ZZZZZZ	1		
	05:44	ZZZZZZ	1		
	05:50	ZZZZZZ	1		
	05:56	ZZZZZZ	1		
	06:34	ZZZZZZ	1		
	06:51	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:51	MA32999-STD1	2008 R	174750 R	22533 R	6326 R
11:56	MA32999-STD2	1861	163180	21942	5471
12:02	ZZZZZZ	1932	164110	21182	5770
12:08	ZZZZZZ	2008	172990	21826	6348
12:20	MA32999-ICV1	1929	167150	21634	5758
12:31	MA32999-ICB1	2003	174820	21760	6332
12:38	MA32999-ICCV1	1921	167150	21525	5744
12:56	MA32999-CCB1	2015	173550	21389	6375
13:02	MA32999-CRI1	1968	172020	21600	6177
13:08	MA32999-CRID1	No results reported for the elements associated with this internal standard.			
13:14	ZZZZZZ	1987	172390	21231	6293
13:20	MA32999-CRID2	2013	170340	21488	6367
13:26	MA32999-ICSA1	1784	155010	19033	4919
13:32	MA32999-ICSAB1	1780	150750	19316	4961
13:38	MP76900-S1	1951	171230	22074	6108
13:44	MP76900-S2	1953	169710	21766	6111
13:49	ZZZZZZ	1997	173480	21683	6327
13:55	MA32999-CCV1	1892	163790	21442	5667
14:01	MA32999-CCB2	1984	173650	21633	6288
14:07	MA32999-CRIB1	1983	172990	21783	6245
14:13	ZZZZZZ	2017	172710	21545	6351
14:19	ZZZZZZ	1994	175710	21702	6368
14:24	ZZZZZZ	1923	166490	20753	5377
14:30	ZZZZZZ	1871	166160	21387	5421
14:36	ZZZZZZ	1908	165800	21698	5520
14:42	ZZZZZZ	1839	161290	21172	4936
14:48	MA32999-CCV2	1937	168270	21789	5779
14:54	MA32999-CCB3	2035	175270	21916	6424
15:00	MP76942-MB1	2003	175360	21322	6387
15:06	MP76942-MB2	1992	174690	21032	6368
15:11	MP76942-B1	1904	169960	21581	5882
15:17	MP76942-LC1	1974	172020	20792	6175
15:23	MP76942-LC2	1980	173040	21140	6199

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:29	MP76942-S1	1814	159880	23372	5203
15:35	MP76942-S2	1811	158920	23403	5187
15:40	JB56073-1	1823	157580	22983	5235
15:46	MP76942-SD1	1950	168930	22454	5910
15:52	MA32999-CCV3	1935	168330	21801	5783
15:58	MA32999-CCB4	2028	171970	22069	6415
16:04	MP76942-S3	1807	159540	23286	5197
16:10	MP76942-S4	1812	159430	23303	5212
16:16	JB56073-1F	1819	159700	23356	5236
16:22	MP76942-SD2	1947	170070	22822	5911
16:27	ZZZZZZ	1740	156880	21906	4794
16:33	ZZZZZZ	1818	165280	20939	5421
16:39	ZZZZZZ	1810	163840	22307	5431
16:45	ZZZZZZ	1834	164680	22208	5504
16:51	ZZZZZZ	1998	168030	21636	6380
16:57	MA32999-CCV4	1951	169050	21902	5828
17:02	MA32999-CCB5	2046	175510	22093	6450
17:08	ZZZZZZ	1474	130790	24299	3878 !a
17:14	ZZZZZZ	1809	163580	21952	5503
17:20	ZZZZZZ	1838	165160	22486	5505
17:26	ZZZZZZ	1842	165030	22154	5553
17:32	ZZZZZZ	2036	173680	21676	6456
17:38	ZZZZZZ	8288 !	450280 !	50730 !	20352 !
17:44	ZZZZZZ	2001	173730	22015	5941
17:49	ZZZZZZ	1927	168130	22242	5730
17:55	ZZZZZZ	1934	169010	22413	5724
18:01	MA32999-CCV5	1986	170480	22169	5882
18:07	MA32999-CCB6	2057	177760	22270	6450
18:13	ZZZZZZ	1949	167910	22371	5908
18:19	ZZZZZZ	1795	160720	22714	5203
18:25	ZZZZZZ	1944	170170	22123	5758
18:30	ZZZZZZ	1808	157800	23920	5076
18:36	MP76979-MB1	2047	178250	21874	6476

INTERNAL STANDARD SUMMARY

Login Number: JB55929
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Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:42	MP76979-LC1	2016	174420	21835	6272
18:48	ZZZZZZ	2054	178140	21969	6489
18:54	ZZZZZZ	2055	178580	21758	6500
19:00	MA32999-CCV6	2004	172840	22292	5915
19:06	MA32999-CCB7	2087	178550	22332	6520
19:12	ZZZZZZ	2098	178660	22522	6565
19:17	ZZZZZZ	2085	177580	22394	6513
19:23	ZZZZZZ	2095	179000	22403	6527
19:29	ZZZZZZ	2098	179400	22603	6522
19:35	ZZZZZZ	2102	178250	22707	6548
19:41	ZZZZZZ	2107	179280	22438	6556
19:47	ZZZZZZ	2106	178830	22522	6548
19:53	MA32999-CCV7	2028	171810	22310	5970
19:59	MA32999-CCB8	2123	180160	22481	6605
20:05	MA32999-CRID3	2110	179990	22555	6555
20:11	MA32999-CRI2	2073	173630	22420	6395
20:16	ZZZZZZ	2124	176170	22423	6598
20:22	MA32999-CRID4	2109	179040	22583	6552
20:28	MA32999-ICSA2	1871	160150	19932	5079
20:34	MA32999-ICSAB2	1884	160600	20446	5163
20:40	MA32999-CCV8	2030	172800	22366	5969
20:46	MA32999-CCB9	2122	180570	22625	6584
20:52	MP76945-MB2	2129	180740	22473	6634
20:58	ZZZZZZ	2072	177620	21762	6475
21:04	ZZZZZZ	1879	165930	22096	5504
21:10	ZZZZZZ	1759	158630	22518	5134
21:16	ZZZZZZ	1905	159020	22402	5393
21:22	ZZZZZZ	1869	161120	21919	5341
21:28	ZZZZZZ	1878	160880	22221	5369
21:34	MA32999-CCV9	2085	174430	22257	6062
21:39	MA32999-CCB10	2156	178410	22291	6630
21:45	ZZZZZZ	2150	181320	22176	6656
21:51	ZZZZZZ	1918	166420	22136	5573

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:57	ZZZZZZ	2208	188060	24753	5446
22:03	ZZZZZZ	2010	171920	21717	5813
22:09	ZZZZZZ	2135	179250	21974	6614
22:15	ZZZZZZ	2003	171150	22069	5862
22:21	ZZZZZZ	2067	174600	22513	6127
22:27	JB55929-9	2146	181160	22109	6463
22:32	ZZZZZZ	1980	172610	23099	5801
22:38	ZZZZZZ	2174	999999 !	22644	6752
22:44	MA32999-CCV10	2039	169030	21849	5970
22:50	MA32999-CCB11	2131	179530	22365	6608
22:56	MP76973-MB1	2101	180250	22074	6576
23:02	MP76973-B1	2066	176280	21792	6220
23:08	MP76973-S1	2019	174970	21294	5790
23:13	MP76973-S2	2026	174380	21561	5818
23:19	JB56549-25	1987	171760	21553	5550
23:25	MP76973-SD1	2072	175800	22241	6184
23:31	ZZZZZZ	2014	170250	22018	6102
23:36	ZZZZZZ	1980	173640	21831	6002
23:42	ZZZZZZ	2097	179770	21996	6359
23:48	ZZZZZZ	2097	179290	21955	6350
23:54	MA32999-CCV11	1993	170330	22016	5871
00:00	MA32999-CCB12	2119	178900	22440	6588
00:05	ZZZZZZ	2033	174560	22040	5996
00:11	ZZZZZZ	2023	174420	21969	5964
00:17	ZZZZZZ	2017	175120	21722	5939
00:23	ZZZZZZ	2008	177100	21669	5955
00:29	ZZZZZZ	1975	173160	21258	5976
00:34	ZZZZZZ	1988	171840	21492	6001
00:40	ZZZZZZ	1924	170460	21739	5837
00:46	ZZZZZZ	1999	173500	21288	6036
00:52	ZZZZZZ	1998	172760	21658	5885
00:58	ZZZZZZ	2014	175150	21358	6043
01:03	MA32999-CCV12	1989	169140	21239	5872

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
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File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:09	MA32999-CCB13	2087	170100	22327	6500
01:15	ZZZZZZ	1967	171240	21471	5878
01:21	ZZZZZZ	1988	171870	21993	6046
01:27	ZZZZZZ	2028	174420	20746	6132
01:33	ZZZZZZ	2020	174050	21692	6126
01:38	ZZZZZZ	1954	173800	21420	5819
01:44	MP76972-MB1	2062	176930	22073	6489
01:50	MP76972-B1	2020	172890	21053	6118
01:56	MP76972-S1	2027	172920	21367	5937
02:02	MP76972-S2	2061	174650	21166	5988
02:07	JB56549-8	2070	175910	21779	6145
02:13	MA32999-CCV13	1994	168970	21683	5881
02:19	MA32999-CCB14	2105	178140	22325	6552
02:25	MP76972-SD1	2087	176960	21996	6376
02:30	ZZZZZZ	2079	179110	22343	6181
02:36	ZZZZZZ	2092	176240	21537	6148
02:42	ZZZZZZ	1883	168180	20922	5990
02:48	ZZZZZZ	1973	999999 !	20803	6193
02:54	ZZZZZZ	1994	172730	21921	6036
03:00	ZZZZZZ	1978	172200	21264	6173
03:06	ZZZZZZ	2073	173070	21306	6197
03:12	ZZZZZZ	2057	174490	21506	6053
03:17	MA32999-CCV14	1992	169730	22158	5882
03:23	MA32999-CCB15	2100	177140	21863	6547
03:29	MA32999-CRI3	2064	176580	22324	6386
03:35	MA32999-CRID5	2107	178000	22237	6543
03:41	ZZZZZZ	2100	178360	22197	6549
03:47	ZZZZZZ	1992	173240	21843	5919
03:52	ZZZZZZ	2017	175140	21564	5947
03:58	ZZZZZZ	2046	176040	21722	6113
04:04	ZZZZZZ	1992	172300	21648	5915
04:10	ZZZZZZ	1978	172910	21544	6157
04:16	ZZZZZZ	1985	166980	21511	5810

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:22	MA32999-CCV15	2010	171130	21808	5928
04:27	MA32999-CCB16	2093	177230	22165	6536
04:33	MA32999-CRI4	2071	175790	22180	6411
04:39	MA32999-CRID6	2082	177420	21628	6489
04:45	ZZZZZZ	2097	178010	22115	6531
04:51	MA32999-CCV16	1990	170270	21936	5884
04:57	MA32999-CCB17	2094	177790	22295	6538
05:03	ZZZZZZ	1903	165940	22372	5633
05:08	ZZZZZZ	2046	175750	22292	6455
05:14	ZZZZZZ	2230	173460	19049	5979
05:20	ZZZZZZ	1954	165560	22292	5692
05:26	ZZZZZZ	2162	177260	22219	6576
05:32	ZZZZZZ	2115	999999 !	21830	6539
05:38	ZZZZZZ	2144	179530	22212	6544
05:44	ZZZZZZ	2130	176600	22230	6516
05:50	ZZZZZZ	2139	177460	22078	6542
05:56	ZZZZZZ	2115	177560	22418	6472
06:34	ZZZZZZ	2085	175680	22163	6455
06:51	ZZZZZZ	2386	150930	19544	6261

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			12:31		12:56		14:01		14:54	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.09	anr							
Beryllium	1.0	.01	anr							
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	8.4	anr							
Chromium	10	.3	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	6.2	anr							
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	anr							
Palladium	50	.5								
Potassium	10000	17	anr							
Selenium	10	1.8	anr							
Silicon	200	13								
Silver	10	.4	0.20	<10	0.40	<10	0.30	<10	0.40	<10
Sodium	10000	5.2	anr							
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	anr							
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			12:31		12:56		14:01		14:54	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			15:58		17:02		18:07		19:06	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.09	anr							
Beryllium	1.0	.01	anr							
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	8.4	anr							
Chromium	10	.3	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	6.2	anr							
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	anr							
Palladium	50	.5								
Potassium	10000	17	anr							
Selenium	10	1.8	anr							
Silicon	200	13								
Silver	10	.4	0.50	<10	0.40	<10	0.60	<10	0.50	<10
Sodium	10000	5.2	anr							
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	anr							
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			15:58		17:02		18:07		19:06	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			19:59		20:46		21:39		22:50	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.09	anr							
Beryllium	1.0	.01	anr							
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	8.4	anr							
Chromium	10	.3	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	6.2	anr							
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	anr							
Palladium	50	.5								
Potassium	10000	17	anr							
Selenium	10	1.8	anr							
Silicon	200	13								
Silver	10	.4	0.50	<10	0.60	<10	0.70	<10	0.80	<10
Sodium	10000	5.2	anr							
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	anr							
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			19:59		20:46		21:39		22:50	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			00:00		01:09		02:19		03:23	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	anr							
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.1	anr							
Barium	200	.09	anr							
Beryllium	1.0	.01	anr							
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	anr							
Calcium	5000	8.4	anr							
Chromium	10	.3	anr							
Cobalt	50	.2	anr							
Copper	10	.6	anr							
Iron	100	6.2	anr							
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	anr							
Palladium	50	.5								
Potassium	10000	17	anr							
Selenium	10	1.8	anr							
Silicon	200	13								
Silver	10	.4	0.90	<10	1.0	<10	1.1	<10	1.0	<10
Sodium	10000	5.2	anr							
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	anr							
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			00:00		01:09		02:19		03:23	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			04:27	
Sample ID:			CCB16	
Metal	RL	IDL	raw	final
Aluminum	200	3.6	anr	
Antimony	6.0	1.2	anr	
Arsenic	3.0	1.1	anr	
Barium	200	.09	anr	
Beryllium	1.0	.01	anr	
Bismuth	20	.9		
Boron	100	2.8	anr	
Cadmium	3.0	.2	anr	
Calcium	5000	8.4	anr	
Chromium	10	.3	anr	
Cobalt	50	.2	anr	
Copper	10	.6	anr	
Iron	100	6.2	anr	
Lead	3.0	1.2	anr	
Lithium	20	.7		
Magnesium	5000	10	anr	
Manganese	15	.2	anr	
Molybdenum	20	.3		
Nickel	10	.5	anr	
Palladium	50	.5		
Potassium	10000	17	anr	
Selenium	10	1.8	anr	
Silicon	200	13		
Silver	10	.4	1.0	<10
Sodium	10000	5.2	anr	
Sulfur	50	2.9		
Strontium	10	.04		
Thallium	2.0	1.6	anr	
Tin	10	1.1	anr	
Titanium	10	.2		
Tungsten	50	8.7		
Vanadium	50	.2	anr	
Zinc	20	.7	anr	

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			04:27	
Sample ID:			CCB16	
Metal	RL	IDL	raw	final
Zirconium	10	.3		

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		12:38	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	250	242	96.8
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		12:38	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		12:20			13:55			14:48	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	250	242	96.8	250	245	98.0	250	238	95.2
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		12:20			13:55			14:48	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.5.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		15:52			16:57			18:01	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	250	237	94.8	250	236	94.4	250	236	94.4
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		15:52			16:57			18:01	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.5.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		19:00			19:53			20:40	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	250	234	93.6	250	236	94.4	250	233	93.2
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		19:00			19:53			20:40	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.5.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		21:34			22:44			23:54	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	250	237	94.8	250	243	97.2	250	238	95.2
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		21:34			22:44			23:54	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.5.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		01:03			02:13			03:17	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	250	234	93.6	250	233	93.2	250	234	93.6
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		01:03			02:13			03:17	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.5.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		04:22	
Sample ID:	CCV	CCV15	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	250	233	93.2
Sodium	anr		
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		04:22	
Sample ID:	CCV	CCV15	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

8.5.4

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				13:02		13:20		20:05	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0						
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	5.2	104.0	1.2	120.0		
Sodium	5000		1000	anr					
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				13:02		13:20		20:05	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.5.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				20:11		20:22		03:29	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID4		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0						
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	5.5	110.0			5.7	114.0
Sodium	5000		1000	anr					
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				20:11		20:22		03:29	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID4		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.5.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				03:35	
Sample ID:	CRI	CRIA	CRID	CRID5	
Metal	True	True	True	Results	% Rec
Aluminum	200	500	100	anr	
Antimony	6.0	20	3.0	anr	
Arsenic	8.0	20	3.0	anr	
Barium	200		4.0	anr	
Beryllium	2.0		1.0	anr	
Bismuth	20				
Boron	100		10	anr	
Cadmium	3.0		1.0	anr	
Calcium	5000		1000	anr	
Chromium	10		2.0	anr	
Cobalt	50		3.0	anr	
Copper	10		2.0		
Iron	100	500			
Lead	3.0	20	2.5		
Lithium	20				
Magnesium	5000		100	anr	
Manganese	15		3.0	anr	
Molybdenum	20		4.0		
Nickel	10		4.0		
Palladium	50				
Potassium	5000		2000	anr	
Selenium	10	20	5.0		
Silicon	200				
Silver	5.0		1.0		
Sodium	5000		1000	anr	
Sulfur	50	50	50		
Strontium	10				
Thallium	10		2.0	anr	
Tin	10				
Titanium	10				
Tungsten	50				
Vanadium	50		2.0		
Zinc	20		10	anr	

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				03:35	
Sample ID:	CRI	CRIA	CRID	CRID5	
Metal	True	True	True	Results	% Rec
Zirconium	10		5.0		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:		14:07	
Sample ID:	CRIB	CRIB1	
Metal	True	Results	% Rec
Aluminum	200		
Antimony	6.0		
Arsenic	8.0		
Barium	200		
Beryllium	2.0		
Bismuth	20		
Boron	100		
Cadmium	3.0		
Calcium	5000		
Chromium	10		
Cobalt	50		
Copper	10		
Iron	100		
Lead	3.0		
Lithium	20		
Magnesium	5000		
Manganese	15		
Molybdenum	20		
Nickel	10		
Palladium	50		
Potassium	5000		
Selenium	10		
Silicon	200		
Silver	5.0	5.3	106.0
Sodium	5000		
Sulfur	50		
Strontium	10		
Thallium	10		
Tin	10		
Titanium	10		
Tungsten	50		
Vanadium	50		
Zinc	20		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:		14:07	
Sample ID:	CRIB	CRIB1	
Metal	True	Results	% Rec
Zirconium	10		

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32999 Units: ug/l

Time:			13:26		13:32		20:28		20:34	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	589000	117.8	511000	102.2	571000	114.2	493000	98.6
Antimony		1000	8.6		1010	101.0	8.0		988	98.8
Arsenic		1000	-3.3		984	98.4	-1.4		968	96.8
Barium		500	-0.80		533	106.6	-0.40		514	102.8
Beryllium		500	-0.10		493	98.6	-0.10		475	95.0
Bismuth		500	1.1		498	99.6	2.5		485	97.0
Boron			-1.2		-2.6		-2.5		-5.1	
Cadmium		1000	0.90		927	92.7	1.1		924	92.4
Calcium	400000	400000	449000	112.3	426000	106.5	447000	111.8	416000	104.0
Chromium		500	-1.2		438	87.6	-1.4		413	82.6
Cobalt		500	-1.7		440	88.0	-1.0		449	89.8
Copper		500	1.6		501	100.2	1.7		475	95.0
Iron	200000	200000	224000	112.0	220000	110.0	215000	107.5	208000	104.0
Lead		1000	0.80		845	84.5	0.20		829	82.9
Lithium		500	1.4		510	102.0	-0.10		464	92.8
Magnesium	500000	500000	554000	110.8	527000	105.4	546000	109.2	514000	102.8
Manganese		500	0.10		454	90.8	1.3		436	87.2
Molybdenum		500	-4.1		472	94.4	-4.3		466	93.2
Nickel		1000	-0.10		847	84.7	-0.60		846	84.6
Palladium		500	-45		515	103.0	-52		478	95.6
Potassium			49.2		60.5		19.1		19.1	
Selenium		1000	-2.7		896	89.6	-0.50		876	87.6
Silicon			-14		-23		-16		-26	
Silver		1000	1.8		1060	106.0	5.2		994	99.4
Sodium			-8.2		-3.1		1.9		11.9	
Sulfur		500	10.3		474	94.8	7.4		459	91.8
Strontium			-7.9		-7.5		-8.4		-8.0	
Thallium		1000	3.3		939	93.9	2.9		953	95.3
Tin			1.2		0.40		-0.40		1.2	
Titanium			-0.80		-0.80		-1.1		-0.90	
Tungsten		500	-14		497	99.4	-26		478	95.6
Vanadium		500	-0.80		443	88.6	-1.5		419	83.8
Zinc		1000	1.3		853	85.3	1.5		865	86.5

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32999 Units: ug/l

Time:			13:26		13:32		20:28		20:34	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	8.8		477	95.4	9.2		441	88.2

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:08	MA33017-STD1	1		STDA
13:14	MA33017-STD2	1		STDB
13:20	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:34	MA33017-ICV1	1		
13:47	MA33017-ICB1	1		
13:54	MA33017-ICCV1	1		
14:05	MA33017-CCB1	1		
14:09	MA33017-CRI1	1		
14:16	MA33017-CRID1	1		
14:22	MA33017-CRIA1	1		
14:28	MA33017-CRID2	1		
14:35	MA33017-ICSA1	1		
14:41	MA33017-ICSAB1	1		
14:47	MA33017-CCV1	1		
14:53	MA33017-CCB2	1		
15:00	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:18	ZZZZZZ	1		
15:25	ZZZZZZ	1		
15:31	ZZZZZZ	10		
15:37	ZZZZZZ	1		
15:44	ZZZZZZ	1		
15:50	ZZZZZZ	1		
15:56	MA33017-CCV2	1		
16:02	MA33017-CCB3	1		
16:09	ZZZZZZ	1		
16:15	MP77021-MB3	1		Tl DL raised for the batch
16:21	MP77021-MB4	1		
16:27	MP77021-LC3	1		
16:34	MP77021-LC4	1		
16:40	MP77021-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:46	MP77021-S2	1		
16:52	JB56693-2	1		(sample used for QC only; not part of login JB55929)
16:58	MP77021-SD1	5		
17:04	MA33017-CCV3	1		
17:10	MA33017-CCB4	1		
17:16	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:35	MP77059-MB1	1		
17:41	MP77059-B1	1		
17:47	ZZZZZZ	1		
17:54	ZZZZZZ	1		
18:00	ZZZZZZ	1		
18:06	ZZZZZZ	1		
18:13	MA33017-CCV4	1		
18:19	MA33017-CCB5	1		
18:25	MP77059-S1	1		
18:31	MP77059-S1	2		
18:38	MP77059-S2	1		
18:44	MP77059-S2	2		
18:50	JB56577-1	1		(sample used for QC only; not part of login JB55929)
18:56	JB56577-1	2		(sample used for QC only; not part of login JB55929)
19:03	MP77059-SD1	5		
19:09	MP77059-SD1	10		
19:15	ZZZZZZ	1		
19:21	MA33017-CCV5	1		
19:27	MA33017-CCB6	1		
19:34	ZZZZZZ	1		
19:40	MP76911-S1	2		
19:46	MP76911-S2	2		
19:52	ZZZZZZ	1		
19:58	ZZZZZZ	1		
20:04	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:10	ZZZZZZ	1		
20:17	ZZZZZZ	1		
20:23	ZZZZZZ	1		
20:29	MA33017-CCV6	1		
20:35	MA33017-CCB7	1		
20:42	MA33017-CRI2	1		
20:48	MA33017-CRID3	1		
20:54	MA33017-CRIA2	1		
21:00	ZZZZZZ	5		
21:07	MA33017-ICSA2	1		
21:13	MA33017-ICSAB2	1		
21:19	MA33017-CCV7	1		
21:26	MA33017-CCB8	1		
21:32	MP77022-MB1	1		
21:38	MP77022-LC1	1		
21:44	MP77022-S1	1		
21:50	MP77022-S2	1		
21:56	JB56674-1	1		(sample used for QC only; not part of login JB55929)
22:03	MP77022-SD1	5		
22:09	ZZZZZZ	1		
22:15	ZZZZZZ	5		
22:21	ZZZZZZ	1		
22:28	MA33017-CCV8	1		
22:34	MA33017-CCB9	1		
22:40	ZZZZZZ	5		
22:46	ZZZZZZ	1		
22:53	ZZZZZZ	1		
22:59	MP77044-S1	1		Y 3600 and In out. Na and S very high
23:05	MP77044-S2	1		Y 3600 and In out. Na and S very high
23:11	JB56641-1	1		(sample used for QC only; not part of login JB55929)
23:18	MP77044-SD1	5		Y 3600 and In out. Na and S very high
23:24	ZZZZZZ	1		
23:30	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:37	MA33017-CCV9	1		
23:43	MA33017-CCB10	1		
23:49	ZZZZZZ	1		
23:55	ZZZZZZ	1		
00:01	ZZZZZZ	1		
00:08	ZZZZZZ	1		
00:14	ZZZZZZ	1		
00:20	ZZZZZZ	1		
00:27	ZZZZZZ	1		
00:33	ZZZZZZ	1		
00:39	ZZZZZZ	1		
00:45	MA33017-CCV10	1		
00:51	MA33017-CCB11	1		
00:58	ZZZZZZ	1		
01:04	ZZZZZZ	1		
01:10	ZZZZZZ	1		
01:17	ZZZZZZ	1		
01:23	ZZZZZZ	1		
01:29	ZZZZZZ	1		
01:35	ZZZZZZ	1		
01:42	ZZZZZZ	1		
01:48	ZZZZZZ	1		
01:54	MA33017-CCV11	1		
02:00	MA33017-CCB12	1		
02:07	ZZZZZZ	1		
02:13	ZZZZZZ	1		
02:19	MP77060-MB1	1		
02:25	MP77060-B1	1		
02:32	MP77060-S1	1		
02:38	MP77060-S2	1		
02:44	JB54933-1R	1		(sample used for QC only; not part of login JB55929)
02:50	MP77060-SD1	5		
02:56	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:02	MA33017-CCV12	1		
03:08	MA33017-CCB13	1		
03:15	MA33017-CRI3	1		
03:21	ZZZZZZ	5		
03:27	MA33017-CRIA3	1		
03:34	MA33017-CRID4	1		
03:40	MA33017-ICSA3	1		
03:46	MA33017-ICSAB3	1		Bad reading on ISTD , refer to ICSA for IEC information.
03:53	MA33017-CCV13	1		
03:59	MA33017-CCB14	1		
04:05	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:17	ZZZZZZ	1		
04:23	ZZZZZZ	1		
04:30	ZZZZZZ	1		
04:36	ZZZZZZ	1		
04:42	ZZZZZZ	1		
04:48	ZZZZZZ	1		
04:55	ZZZZZZ	1		
05:01	MA33017-CCV14	1		
05:07	MA33017-CCB15	1		
05:13	ZZZZZZ	1		
05:19	ZZZZZZ	1		
05:25	ZZZZZZ	1		
05:32	ZZZZZZ	1		
05:38	MP77018-MB1	1		CCV out
05:44	MP77018-B1	1		CCV out
05:50	MP77018-S1	1		CCV out
05:56	MP77018-S2	1		CCV out
06:02	JB56657-3A	1		(sample used for QC only; not part of login JB55929)
06:08	MA33017-CCV15	1		
06:14	MA33017-CCB16	1		
06:21	MP77018-SD1	5		CCV out

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:27	ZZZZZZ	1		
06:33	ZZZZZZ	1		
06:40	MA33017-ICSA4	1		
06:46	MA33017-ICSAB4	1		
06:52	MA33017-ICSAB5	1		
06:58	ZZZZZZ	1		
07:05	ZZZZZZ	1		
07:11	ZZZZZZ	1		
07:17	MA33017-CCV16	1		
07:23	MA33017-CCB17	1		
07:30	ZZZZZZ	1		
07:36	ZZZZZZ	1		
07:42	ZZZZZZ	1		
07:49	ZZZZZZ	2		
07:55	MP76911-MB2	1		
08:01	MP76911-B2	1		
08:07	JB56044-9	2		(sample used for QC only; not part of login JB55929)
08:13	MP76911-SD1	10		
---------->	Last reportable sample/prep for job JB55929			
08:20	ZZZZZZ	5		
08:26	MA33017-CCV17	1		
08:32	MA33017-CCB18	1		
08:38	ZZZZZZ	1		
08:44	MA33017-CRI4	1		
08:51	MA33017-CRID5	1		
08:59	ZZZZZZ	1		
09:05	MA33017-CCV18	1		
09:11	MA33017-CCB19	1		
---------->	Last reportable CCB for job JB55929			

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:08	MA33017-STD1	1921 R	113760 R	14663 R	6439 R
13:14	MA33017-STD2	1768	103830	14366	5582
13:20	ZZZZZZ	1815	107450	14653	5779
13:26	ZZZZZZ	1905	113130	14796	6389
13:34	MA33017-ICV1	1827	108390	14602	5809
13:47	MA33017-ICB1	1915	114560	14778	6417
13:54	MA33017-ICCV1	1815	107190	14558	5803
14:05	MA33017-CCB1	1908	114150	14640	6419
14:09	MA33017-CRI1	1873	112250	14838	6257
14:16	MA33017-CRID1	No results reported for the elements associated with this internal standard.			
14:22	MA33017-CRIA1	1915	113760	14879	6401
14:28	MA33017-CRID2	1885	112690	15303	6318
14:35	MA33017-ICSA1	1690	98275	13748	5173
14:41	MA33017-ICSAB1	1688	100300	13998	5196
14:47	MA33017-CCV1	1846	109050	14623	5874
14:53	MA33017-CCB2	1930	115380	14982	6454
15:00	ZZZZZZ	1893	115000	14849	6348
15:06	ZZZZZZ	1894	111050	14649	6140
15:12	ZZZZZZ	1632	95274	14487	4930
15:18	ZZZZZZ	1578	93984	14408	4763
15:25	ZZZZZZ	1917	114740	14712	6436
15:31	ZZZZZZ	1670	96424	14246	4950
15:37	ZZZZZZ	1902	113980	15013	6421
15:44	ZZZZZZ	1911	114330	15149	6110
15:50	ZZZZZZ	1906	113820	14570	6448
15:56	MA33017-CCV2	1849	105970	14586	5900
16:02	MA33017-CCB3	1912	114530	15173	6430
16:09	ZZZZZZ	2175	127640	16963	6117
16:15	MP77021-MB3	1892	116480	15025	6370
16:21	MP77021-MB4	1911	114630	14789	6449
16:27	MP77021-LC3	1888	113190	14551	6246
16:34	MP77021-LC4	1892	112930	14625	6239
16:40	MP77021-S1	1784	107350	14427	5630

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:46	MP77021-S2	1803	106910	14472	5683
16:52	JB56693-2	1825	109460	13950	5865
16:58	MP77021-SD1	1906	114290	14715	6288
17:04	MA33017-CCV3	1857	110260	14520	5886
17:10	MA33017-CCB4	1937	115100	14695	6477
17:16	ZZZZZZ	1828	109180	14514	5815
17:23	ZZZZZZ	1824	108480	14470	5809
17:29	ZZZZZZ	1940	117230	14741	6494
17:35	MP77059-MB1	1889	116750	14402	6544
17:41	MP77059-B1	1828	110830	14618	6102
17:47	ZZZZZZ	1544	92465	13934	4620
17:54	ZZZZZZ	1643	96405	14272	4941
18:00	ZZZZZZ	1607	94946	13955	4864
18:06	ZZZZZZ	1626	95623	14275	4906
18:13	MA33017-CCV4	1858	109780	14203	5900
18:19	MA33017-CCB5	1941	115490	13923	6492
18:25	MP77059-S1	1487	89374	13938	4692
18:31	MP77059-S1	1609	97379	13306	5101
18:38	MP77059-S2	1501	92664	13470	4732
18:44	MP77059-S2	1609	97951	13714	5083
18:50	JB56577-1	1504	92431	13373	4746
18:56	JB56577-1	1607	99047	13552	5095
19:03	MP77059-SD1	1735	104600	13908	5585
19:09	MP77059-SD1	1814	108320	14237	5889
19:15	ZZZZZZ	1923	115490	14579	6464
19:21	MA33017-CCV5	1856	108580	14149	5899
19:27	MA33017-CCB6	1939	115170	14412	6495
19:34	ZZZZZZ	1922	115080	14483	6483
19:40	MP76911-S1	1886	110000	14183	6128
19:46	MP76911-S2	1871	107370	14455	6091
19:52	ZZZZZZ	1890	112720	14312	6266
19:58	ZZZZZZ	1906	113230	14293	6298
20:04	ZZZZZZ	1898	112480	14324	6299

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:10	ZZZZZZ	1900	113170	14286	6458
20:17	ZZZZZZ	1949	114850	14242	6527
20:23	ZZZZZZ	1942	114590	14223	6536
20:29	MA33017-CCV6	1863	105980	14227	5926
20:35	MA33017-CCB7	1933	117980	14668	6453
20:42	MA33017-CRI2	1933	114430	14393	6401
20:48	MA33017-CRID3	1950	115270	14347	6501
20:54	MA33017-CRIA2	1965	115800	14283	6559
21:00	ZZZZZZ	1945	115160	14341	6496
21:07	MA33017-ICSA2	1706	98864	13308	5232
21:13	MA33017-ICSAB2	1700	99026	13456	5233
21:19	MA33017-CCV7	1857	108450	13939	5921
21:26	MA33017-CCB8	1940	114390	14466	6495
21:32	MP77022-MB1	1947	115500	14571	6570
21:38	MP77022-LC1	1902	110270	14325	6312
21:44	MP77022-S1	1831	106360	14210	5914
21:50	MP77022-S2	1808	106630	14353	5850
21:56	JB56674-1	1862	110110	14362	6157
22:03	MP77022-SD1	1920	113030	14268	6416
22:09	ZZZZZZ	1888	111100	14712	5449
22:15	ZZZZZZ	1892	111350	14390	6023
22:21	ZZZZZZ	1666	98406	13720	5124
22:28	MA33017-CCV8	1862	108260	13913	5925
22:34	MA33017-CCB9	1976	114060	14205	6601
22:40	ZZZZZZ	1848	107890	13942	5933
22:46	ZZZZZZ	999999 !	115210	14220	999999 !
22:53	ZZZZZZ	1917	113450	14227	6335
22:59	MP77044-S1	1408	81202	12800	3839 !a
23:05	MP77044-S2	1416	81194	12751	3866 !a
23:11	JB56641-1	1383	79615 !a	12618	3816 !a
23:18	MP77044-SD1	1693	97445	13461	4987
23:24	ZZZZZZ	1795	107540	13533	5695
23:30	ZZZZZZ	1776	104640	13513	5672

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:37	MA33017-CCV9	1863	108750	13720	5929
23:43	MA33017-CCB10	1971	112630	14301	6591
23:49	ZZZZZZ	1803	107670	13730	5815
23:55	ZZZZZZ	1834	108100	13796	5960
00:01	ZZZZZZ	1838	108320	13382	5912
00:08	ZZZZZZ	1841	109030	13853	5855
00:14	ZZZZZZ	1922	115560	13751	6211
00:20	ZZZZZZ	1851	109690	13704	5722
00:27	ZZZZZZ	1944	115630	13661	6321
00:33	ZZZZZZ	1937	114940	13660	6231
00:39	ZZZZZZ	2033	119350	13696	6708
00:45	MA33017-CCV10	1955	113970	13486	6087
00:51	MA33017-CCB11	2034	120940	999999 !a	6660
00:58	ZZZZZZ	2057	121930	13763	6719
01:04	ZZZZZZ	1779	103270	13080	5206
01:10	ZZZZZZ	1939	112850	13393	5851
01:17	ZZZZZZ	2062	122970	13541	6717
01:23	ZZZZZZ	1815	105390	13097	5285
01:29	ZZZZZZ	1937	112600	13556	5830
01:35	ZZZZZZ	2108	125610	13461	6823
01:42	ZZZZZZ	1921	111920	13018	5824
01:48	ZZZZZZ	2013	118830	13280	6185
01:54	MA33017-CCV11	2061	120270	13114	6263
02:00	MA33017-CCB12	2136	124200	13400	6845
02:07	ZZZZZZ	1955	115400	13064	5831
02:13	ZZZZZZ	1957	113740	12954	5638
02:19	MP77060-MB1	2128	126470	13464	6829
02:25	MP77060-B1	2144	126080	13289	6836
02:32	MP77060-S1	2131	126500	13334	6724
02:38	MP77060-S2	2137	124400	13394	6746
02:44	JB54933-1R	2143	126230	13264	6782
02:50	MP77060-SD1	2181	128600	13287	6921
02:56	ZZZZZZ	2156	127270	13297	6800

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:02	MA33017-CCV12	2099	124200	13211	6295
03:08	MA33017-CCB13	2179	130380	13391	6898
03:15	MA33017-CRI3	2177	128700	12906	6806
03:21	ZZZZZZ	2205	128270	13062	6939
03:27	MA33017-CRIA3	2208	130130	13094	6960
03:34	MA33017-CRID4	2220	130150	13177	6960
03:40	MA33017-ICSA3	1989	113480	12203	5711
03:46	MA33017-ICSAB3	No results reported for the elements associated with this internal standard.			
03:53	MA33017-CCV13	2155	120950	12990	6412
03:59	MA33017-CCB14	2230	130780	13035	6999
04:05	ZZZZZZ	2203	129280	13054	6866
04:11	ZZZZZZ	2188	127610	12538	6821
04:17	ZZZZZZ	2215	130480	13165	6802
04:23	ZZZZZZ	2209	128870	12914	6849
04:30	ZZZZZZ	2207	129720	13073	6893
04:36	ZZZZZZ	2209	126590	12939	6860
04:42	ZZZZZZ	2245	129580	12750	6932
04:48	ZZZZZZ	2246	131960	12905	6922
04:55	ZZZZZZ	2224	129940	12914	6798
05:01	MA33017-CCV14	2153	125200	12884	6350
05:07	MA33017-CCB15	2289	130820	12407	7126
05:13	ZZZZZZ	2256	132740	13048	6965
05:19	ZZZZZZ	2249	131150	12529	6866
05:25	ZZZZZZ	2260	135550	12956	6992
05:32	ZZZZZZ	2232	132500	12932	6906
05:38	MP77018-MB1	No results reported for the elements associated with this internal standard.			
05:44	MP77018-B1	No results reported for the elements associated with this internal standard.			
05:50	MP77018-S1	No results reported for the elements associated with this internal standard.			
05:56	MP77018-S2	No results reported for the elements associated with this internal standard.			
06:02	JB56657-3A	No results reported for the elements associated with this internal standard.			
06:08	MA33017-CCV15	2210	125630	12950	6493
06:14	MA33017-CCB16	2304	134350	12797	7148
06:21	MP77018-SD1	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:27	ZZZZZZ	2293	134750	12863	7100
06:33	ZZZZZZ	2274	133220	12634	7040
06:40	MA33017-ICSA4	2049	115340	11932	5792
06:46	MA33017-ICSAB4	No results reported for the elements associated with this internal standard.			
06:52	MA33017-ICSAB5	2095	119150	12202	5940
06:58	ZZZZZZ	2323	131980	12489	7193
07:05	ZZZZZZ	2143	124500	12514	6271
07:11	ZZZZZZ	2073	120240	12433	5952
07:17	MA33017-CCV16	2255	128550	12600	6596
07:23	MA33017-CCB17	2326	134740	12512	7194
07:30	ZZZZZZ	2059	117180	12596	5877
07:36	ZZZZZZ	2067	119040	12383	5910
07:42	ZZZZZZ	2094	118970	11903	5958
07:49	ZZZZZZ	2354	134560	13262	6362
07:55	MP76911-MB2	2335	134590	12856	7230
08:01	MP76911-B2	2281	129130	12491	6846
08:07	JB56044-9	2297	127970	12854	6945
08:13	MP76911-SD1	2347	131420	12808	7198
08:20	ZZZZZZ	2313	127890	12590	6742
08:26	MA33017-CCV17	2217	120290	12563	6642
08:32	MA33017-CCB18	2301	126750	12902	7273
08:38	ZZZZZZ	2310	127470	13118	999999 !
08:44	MA33017-CRI4	2246	126460	12832	7020
08:51	MA33017-CRID5	2234	125760	12944	7089
08:59	ZZZZZZ	2243	118820	13169	7205
09:05	MA33017-CCV18	2104	114450	12932	6449
09:11	MA33017-CCB19	2204	118670	13452	7112

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			13:47		14:05		14:53		16:02	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	anr							
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	anr							
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	-1.4	<2.0	-1.3	<2.0	-1.6	<2.0	-0.40	<2.0
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			13:47		14:05		14:53		16:02	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			17:10		18:19		19:27		20:35	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	anr							
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	anr							
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	0.40	<2.0	0.10	<2.0	-0.10	<2.0	0.50	<2.0
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			17:10		18:19		19:27		20:35	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			21:26		22:34		23:43		00:51	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	anr							
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	anr							
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	0.60	<2.0	1.2	<2.0	0.30	<2.0	0.40	<2.0
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			21:26		22:34		23:43		00:51	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			02:00		03:08		03:59		05:07	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	anr							
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	anr							
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	0.80	<2.0	0.50	<500	0.40	<500	0.30	<500
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			02:00		03:08		03:59		05:07	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

8.6.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			06:14		07:23		08:32		09:11	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	anr							
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	anr							
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	0.50	<2.0	-0.30	<2.0	-0.40	<2.0	0.50	<2.0
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			06:14		07:23		08:32		09:11	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		13:54	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur	anr		
Strontium			
Thallium	2000	2090	104.5
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		13:54	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		13:34			14:47			15:56	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2080	104.0	2000	2060	103.0	2000	2060	103.0
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		13:34			14:47			15:56	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		17:04			18:13			19:21	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2070	103.5	2000	2070	103.5	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		17:04			18:13			19:21	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		20:29			21:19			22:28	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2080	104.0	2000	2100	105.0	2000	2090	104.5
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		20:29			21:19			22:28	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		23:37			00:45			01:54	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2100	105.0	2000	2100	105.0	2000	2030	101.5
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		23:37			00:45			01:54	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		03:02			03:53			05:01	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2000	100.0	2000	1960	98.0	2000	1960	98.0
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		03:02			03:53			05:01	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		06:08			07:17			08:26	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	1920	96.0	2000	1910	95.5	2000	1950	97.5
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		06:08			07:17			08:26	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		09:05	
Sample ID:	CCV	CCV18	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur	anr		
Strontium			
Thallium	2000	2060	103.0
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		09:05	
Sample ID:	CCV	CCV18	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				14:09		14:22		14:28	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0	anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50	50	50	anr					
Strontium	10								
Thallium	10		2.0	9.2	92.0			1.6	80.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				14:09		14:22		14:28	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.6.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				20:42		20:48		20:54	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0	anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50	50	50	anr					
Strontium	10								
Thallium	10		2.0	9.0	90.0	2.4	120.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				20:42		20:48		20:54	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.6.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				03:15		03:27		03:34	
Sample ID:	CRI	CRIA	CRID	CRI3		CRIA3		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0	anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50	50	50	anr					
Strontium	10								
Thallium	10		2.0	9.9	99.0			2.1	105.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				03:15		03:27		03:34	
Sample ID:	CRI	CRIA	CRID	CRI3		CRIA3		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.6.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				08:44		08:51	
Sample ID:	CRI	CRIA	CRID	CRI4		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr			
Antimony	6.0	20	3.0	anr			
Arsenic	8.0	20	3.0	anr			
Barium	200		4.0	anr			
Beryllium	2.0		1.0	anr			
Bismuth	20						
Boron	100		10	anr			
Cadmium	3.0		1.0	anr			
Calcium	5000		1000	anr			
Chromium	10		2.0	anr			
Cobalt	50		3.0	anr			
Copper	10		2.0	anr			
Iron	100	500		anr			
Lead	3.0	20	2.5	anr			
Lithium	20						
Magnesium	5000		100	anr			
Manganese	15		3.0	anr			
Molybdenum	20		4.0	anr			
Nickel	10		4.0	anr			
Palladium	50						
Potassium	5000		2000	anr			
Selenium	10	20	5.0	anr			
Silicon	200						
Silver	5.0		1.0	anr			
Sodium	5000		1000	anr			
Sulfur	50	50	50	anr			
Strontium	10						
Thallium	10		2.0	10.0	100.0	1.5	75.0
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	anr			
Zinc	20		10	anr			

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				08:44		08:51	
Sample ID:	CRI	CRIA	CRID	CRI4		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10		5.0				

(*) Outside of QC limits
(anr) Analyte not requested

8.6.5

8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33017 Units: ug/l

Time:			14:35		14:41		21:07		21:13	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	521000	104.2	437000	87.4	540000	108.0	452000	90.4
Antimony		1000	3.6		992	99.2	3.1		998	99.8
Arsenic		1000	2.2		986	98.6	4.1		970	97.0
Barium		500	-1.2		478	95.6	-1.2		489	97.8
Beryllium		500	-0.30		449	89.8	-0.30		452	90.4
Bismuth		500	0.80		498	99.6	1.4		500	100.0
Boron			-14		-15		-16		-16	
Cadmium		1000	1.9		965	96.5	1.9		984	98.4
Calcium	400000	400000	395000	98.8	362000	90.5	394000	98.5	366000	91.5
Chromium		500	-0.30		429	85.8	-1.0		433	86.6
Cobalt		500	5.2		460	92.0	4.7		471	94.2
Copper		500	6.3		488	97.6	4.5		473	94.6
Iron	200000	200000	199000	99.5	188000	94.0	193000	96.5	185000	92.5
Lead		1000	2.0		906	90.6	5.4		912	91.2
Lithium		500	3.0		444	88.8	3.0		471	94.2
Magnesium	500000	500000	485000	97.0	443000	88.6	476000	95.2	443000	88.6
Manganese		500	-2.4		452	90.4	-1.7		468	93.6
Molybdenum		500	-0.70		469	93.8	-0.40		480	96.0
Nickel		1000	0.60		882	88.2	0.70		897	89.7
Palladium		500	-16		499	99.8	-16		518	103.6
Potassium			13.0		23.8		-15		-28	
Selenium		1000	3.6		899	89.9	10.8		884	88.4
Silicon			-3.6		-1.8		-3.2		-3.5	
Silver		1000	5.1		956	95.6	4.7		994	99.4
Sodium			-14		-9.1		-11		-13	
Sulfur		500	-40		443	88.6	-37		451	90.2
Strontium			-1.0		-1.0		-0.90		-1.1	
Thallium		1000	0.70		935	93.5	0.40		956	95.6
Tin			5.7		4.8		7.2		3.8	
Titanium			1.6		5.0		1.6		5.2	
Tungsten		500	21.7		504	100.8	12.8		505	101.0
Vanadium		500	-0.40		413	82.6	0.0		434	86.8
Zinc		1000	-2.9		906	90.6	-3.7		926	92.6

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33017 Units: ug/l

Time:			14:35		14:41		21:07		21:13	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-10		415	83.0	-10		436	87.2

(*) Outside of QC limits
(anr) Analyte not requested

8.6.6

8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33017 Units: ug/l

Time:			03:40		06:40		06:52	
Sample ID:	ICSA	ICSAB	ICSA3		ICSA4		ICSAB5	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	480000	96.0	467000	93.4	401000	80.2
Antimony		1000	2.8		1.5		871	87.1
Arsenic		1000	0.40		2.7		1000	100.0
Barium		500	-0.60		-0.30		445	89.0
Beryllium		500	-0.30		-0.30		402	80.4
Bismuth		500	1.6		0.80		424	84.8
Boron			-17		-17		-14	
Cadmium		1000	2.0		2.0		818	81.8
Calcium	400000	400000	389000	97.3	385000	96.3	361000	90.3
Chromium		500	0.20		0.20		451	90.2
Cobalt		500	5.8		5.8		424	84.8
Copper		500	-1.0		-1.3		492	98.4
Iron	200000	200000	173000	86.5	169000	84.5	164000	82.0
Lead		1000	-2.9		-5.8		909	90.9
Lithium		500	2.1		2.7		434	86.8
Magnesium	500000	500000	456000	91.2	451000	90.2	425000	85.0
Manganese		500	-7.2		-9.4		411	82.2
Molybdenum		500	-0.10		0.0		410	82.0
Nickel		1000	0.80		0.80		847	84.7
Palladium		500	-12		-10		394	78.8*
Potassium			-21		-2.3		4.5	
Selenium		1000	-5.9		-12		855	85.5
Silicon			-2.8		-2.9		-1.0	
Silver		1000	-5.3		-8.6		793	79.3*(a)
Sodium			-15		-28		-21	
Sulfur		500	-38		-45		386	77.2*(a)
Strontium			-0.20		-0.10		-0.20	
Thallium		1000	3.7		-1.8		861	86.1
Tin			4.2		4.4		3.7	
Titanium			1.4		1.3		4.5	
Tungsten		500	6.3		5.5		443	88.6
Vanadium		500	-0.10		0.30		351	70.2*(a)
Zinc		1000	-2.5		-2.2		899	89.9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33017 Units: ug/l

Time:			03:40		06:40		06:52	
Sample ID:	ICSA	ICSAB	ICSA3		ICSA4		ICSAB5	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-6.9		-6.2		354	70.8*

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

8.6.6

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/19/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.36	1.5	5.2	<50
Antimony	2.0	.12	.23	0.089	<2.0
Arsenic	2.0	.11	.23	0.069	<2.0
Barium	20	.0089	.053	0.040	<20
Beryllium	0.20	.00099	.015	0.0099	<0.20
Bismuth	2.0	.089	.14		
Boron	9.9	.28	.14		
Cadmium	0.50	.02	.07	-0.0099	<0.50
Calcium	500	.83	8.3	14.9	<500
Chromium	0.99	.03	.073	0.030	<0.99
Cobalt	5.0	.02	.065	0.040	<5.0
Copper	2.5	.059	.082	0.16	<2.5
Iron	50	.61	2.8	7.3	<50
Lead	2.0	.12	.21	0.089	<2.0
Lithium	2.0	.069	.14		
Magnesium	500	1	9.2	4.0	<500
Manganese	1.5	.02	.053	0.12	<1.5
Molybdenum	2.0	.03	.14		
Nickel	4.0	.05	.078	0.15	<4.0
Palladium	5.0	.05	.26		
Potassium	990	1.6	6	0.46	<990
Selenium	2.0	.18	.26	-0.14	<2.0
Silicon	20	1.3	3.6		
Silver	0.50	.04	.1	-0.030	<0.50
Sodium	990	.51	2	-1.3	<990
Strontium	0.99	.004	.024		
Sulfur	5.0	.29	.33		
Thallium	0.99	.16	.29	0.24	<0.99
Tin	5.0	.11	.76		
Titanium	0.99	.02	.092		
Tungsten	5.0	.86	1.7		
Vanadium	5.0	.02	.072	0.099	<5.0
Zinc	2.0	.069	.23	1.2	<2.0 (a)

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/19/13

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.03	.056		

Associated samples MP76794: JB55929-8, JB55929-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All reported results <RL or >10x MB value.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/19/13

Metal	JB55750-6A Original	MS	Spikelot MPIOS5	% Rec	QC Limits
Aluminum	21100	29500	5360	156.6N(a	75-125
Antimony	0.34	25.1	99.3	25.3N(a)	75-125
Arsenic	11.5	356	397	86.7	75-125
Barium	49.0	404	397	89.5	75-125
Beryllium	1.2	10.3	9.93	91.6	75-125
Bismuth					
Boron	anr				
Cadmium	0.14	7.9	9.93	77.7	75-125
Calcium	2170	3190	1240	94.2	75-125
Chromium	39.1	70.2	39.7	84.6	75-125
Cobalt	12.5	92.2	99.3	80.2	75-125
Copper	17.8	59.1	49.7	83.2	75-125
Iron	35100	38600	5170	67.8 (b)	75-125
Lead	28.3	117	99.3	89.3	75-125
Lithium					
Magnesium	7320	9180	1240	149.8(b)	75-125
Manganese	526	674	99.3	149.0(b)	75-125
Molybdenum					
Nickel	27.0	112	99.3	85.3	75-125
Palladium					
Potassium	3480	5340	1240	157.0N(a	75-125
Selenium	0.92	327	397	82.1	75-125
Silicon					
Silver	0.0	9.2	9.93	92.6	75-125
Sodium	2730	4120	1240	111.9	75-125
Strontium					
Thallium	0.0	370	397	93.1	75-125
Tin					
Titanium					
Tungsten					
Vanadium	41.1	125	99.3	84.5	75-125
Zinc	90.6	167	99.3	76.9	75-125
Zirconium					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 12/19/13

Metal	JB55750-6A Original MS	Spikelot MPIOS5	% Rec	QC Limits

Associated samples MP76794: JB55929-8, JB55929-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/19/13

Metal	JB55750-6A Original	MSD	Spikelot MPIOS5	% Rec	MSD RPD	QC Limit
Aluminum	21100	29700	5330	161.2N(a	0.7	20
Antimony	0.34	24.3	98.8	24.6N(a)	3.2	20
Arsenic	11.5	364	395	89.2	6.2	20
Barium	49.0	411	395	91.8	1.7	20
Beryllium	1.2	10.5	9.88	94.2	0.0	20
Bismuth						
Boron	anr					
Cadmium	0.14	8.0	9.88	79.2	1.3	20
Calcium	2170	3280	1230	102.1	2.8	20
Chromium	39.1	74.7	39.5	96.4	6.2	20
Cobalt	12.5	94.6	98.8	83.1	2.6	20
Copper	17.8	62.2	49.4	89.9	5.1	20
Iron	35100	38500	5140	66.2 (b)	0.3	20
Lead	28.3	124	98.8	96.9	12.0	20
Lithium						
Magnesium	7320	9210	1230	153.1(b)	0.3	20
Manganese	526	626	98.8	101.2	7.4	20
Molybdenum						
Nickel	27.0	116	98.8	89.8	3.5	20
Palladium						
Potassium	3480	5400	1230	162.8N(a	1.1	20
Selenium	0.92	336	395	84.8	0.3	20
Silicon						
Silver	0.0	9.5	9.88	96.2	9.0	20
Sodium	2730	4060	1230	107.7	1.5	20
Strontium						
Thallium	0.0	377	395	95.4	1.9	20
Tin						
Titanium						
Tungsten						
Vanadium	41.1	126	98.8	86.0	0.8	20
Zinc	90.6	173	98.8	83.4	3.5	20
Zirconium						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 12/19/13

Metal	JB55750-6A Original MSD	Spikelot MPIOS5	% Rec	MSD RPD	QC Limit

Associated samples MP76794: JB55929-8, JB55929-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/19/13

Metal	BSP Result	Spikelot MPIOS5	% Rec	QC Limits
Aluminum	5040	5290	95.2	80-120
Antimony	88.9	98	90.7	80-120
Arsenic	366	392	93.3	80-120
Barium	359	392	91.5	80-120
Beryllium	9.6	9.8	97.9	80-120
Bismuth				
Boron	anr			
Cadmium	9.2	9.8	93.8	80-120
Calcium	1140	1230	93.0	80-120
Chromium	38.0	39.2	96.9	80-120
Cobalt	90.0	98	91.8	80-120
Copper	42.3	49	86.3	80-120
Iron	4970	5100	97.5	80-120
Lead	93.0	98	94.9	80-120
Lithium				
Magnesium	1240	1230	101.2	80-120
Manganese	96.3	98	98.2	80-120
Molybdenum				
Nickel	93.0	98	94.9	80-120
Palladium				
Potassium	1120	1230	91.4	80-120
Selenium	333	392	84.9	80-120
Silicon				
Silver	9.7	9.8	98.9	80-120
Sodium	1150	1230	93.8	80-120
Strontium				
Sulfur				
Thallium	357	392	91.0	80-120
Tin				
Titanium				
Tungsten				
Vanadium	90.4	98	92.2	80-120
Zinc	94.7	98	96.6	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/19/13

Metal	BSP Result	Spikelot MPIOS5	% Rec	QC Limits
Zirconium				

Associated samples MP76794: JB55929-8, JB55929-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/19/13

Metal	JB55750-6A Original	SDL 1:5	%DIF	QC Limits
Aluminum	209000	226000	8.1	0-10
Antimony	3.40	8.50	NC	0-10
Arsenic	114	119	4.4	0-10
Barium	485	523	9.1	0-10
Beryllium	11.6	12.0	3.4	0-10
Bismuth				
Boron	anr			
Cadmium	1.40	0.00	100.0(a)	0-10
Calcium	21500	22400	12.4*(b)	0-10
Chromium	387	380	4.8	0-10
Cobalt	124	112	10.0	0-10
Copper	176	179	2.0	0-10
Iron	347000	403000	16.2*(b)	0-10
Lead	280	307	9.6	0-10
Lithium				
Magnesium	72400	78100	7.8	0-10
Manganese	5210	5660	8.8	0-10
Molybdenum				
Nickel	267	258	4.5	0-10
Palladium				
Potassium	34500	35300	5.0	0-10
Selenium	9.10	12.6	38.5 (a)	0-10
Silicon				
Silver	0.00	3.20	NC	0-10
Sodium	27000	28600	5.6	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	406	426	4.7	0-10
Zinc	897	992	10.7*(b)	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76794 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date: 12/19/13

Metal	JB55750-6A Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP76794: JB55929-8, JB55929-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/26/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.36	1.5	1.5	<50
Antimony	2.0	.089	.23	-0.060	<2.0
Arsenic	2.0	.11	.23	0.12	<2.0
Barium	20	.009	.053	0.040	<20
Beryllium	0.20	.001	.015	0.010	<0.20
Bismuth	2.0	.09	.14		
Boron	9.9	.12	.14		
Cadmium	0.50	.02	.07	0.0	<0.50
Calcium	500	.84	8.3	3.8	<500
Chromium	0.99	.03	.073	0.010	<1.0
Cobalt	5.0	.02	.065	0.020	<5.0
Copper	2.5	.06	.082	0.010	<2.5
Iron	50	.62	2.8	1.4	<50
Lead	2.0	.12	.21	0.10	<2.0
Lithium	2.0	.059	.14		
Magnesium	500	1	9.2	-0.37	<500
Manganese	1.5	.02	.053	0.020	<1.5
Molybdenum	2.0	.03	.14		
Nickel	4.0	.04	.078	0.010	<4.0
Palladium	5.0	.05	.26		
Potassium	990	1.7	6	-3.9	<1000
Selenium	2.0	.15	.26	0.14	<2.0
Silicon	20	.73	3.6		
Silver	0.50	.04	.1	-0.010	<0.50
Sodium	990	.52	2	-5.6	<1000
Strontium	0.99	.004	.024		
Sulfur	5.0	.29	.33		
Thallium	0.99	.16	.29	0.20	<1.0
Tin	5.0	.099	.76		
Titanium	0.99	.02	.092		
Tungsten	5.0	.35	1.7		
Vanadium	5.0	.02	.072	0.020	<5.0
Zinc	2.0	.07	.23	0.86	<2.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/26/13

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.03	.056		

Associated samples MP76911: JB55929-7, JB55929-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/26/13

Metal	JB56044-9 Original	MS	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	12300	20400	6500	124.7	75-125
Antimony	0.73	55.8	120	45.8N(a)	75-125
Arsenic	31.2	497	481	96.8	75-125
Barium	44.0	515	481	97.9	75-125
Beryllium	1.3	13.9	12	104.7	75-125
Bismuth					
Boron					
Cadmium	0.15	12.1	12	99.3	75-125
Calcium	1310	3010	1500	113.0	75-125
Chromium	115	173	48.1	120.5	75-125
Cobalt	4.2	118	120	94.6	75-125
Copper	10.1	66.9	60.2	94.4	75-125
Iron	48300	60000	6260	187.0(b)	75-125
Lead	52.4	166	120	94.4	75-125
Lithium					
Magnesium	3180	5120	1500	129.0N(a	75-125
Manganese	115	246	120	108.9	75-125
Molybdenum					
Nickel	8.6	123	120	95.1	75-125
Palladium					
Potassium	8320	11000	1500	178.2(b)	75-125
Selenium	0.53	441	481	91.5	75-125
Silicon					
Silver	0.0	8.8	12	73.1N(a)	75-125
Sodium	31.3	1520	1500	99.0	75-125
Strontium					
Sulfur					
Thallium	1.6	444	481	92.3	75-125
Tin					
Titanium					
Tungsten					
Vanadium	64.3	178	120	94.5	75-125
Zinc	98.8	214	120	95.8	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 12/26/13

Metal	JB56044-9 Original MS	Spikelot MPIRS1	% Rec	QC Limits
Zirconium				

Associated samples MP76911: JB55929-7, JB55929-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/26/13

Metal	JB56044-9 Original	MSD	Spikelot MPIRS1	% Rec	MSD RPD	QC Limit
Aluminum	12300	20500	6310	130.0N(a	0.5	20
Antimony	0.73	57.1	117	48.3N(a)	2.3	20
Arsenic	31.2	493	467	98.8	0.8	20
Barium	44.0	513	467	100.4	0.4	20
Beryllium	1.3	13.9	11.7	107.9	0.0	20
Bismuth						
Boron						
Cadmium	0.15	12.0	11.7	101.5	0.8	20
Calcium	1310	2800	1460	102.1	7.2	20
Chromium	115	175	46.7	128.4N(a	1.1	20
Cobalt	4.2	117	117	96.6	0.9	20
Copper	10.1	66.8	58.4	97.1	0.1	20
Iron	48300	61000	6070	209.1(b)	1.7	20
Lead	52.4	164	117	95.5	1.2	20
Lithium						
Magnesium	3180	5190	1460	137.7N(a	1.4	20
Manganese	115	257	117	121.6	4.4	20
Molybdenum						
Nickel	8.6	122	117	97.1	0.8	20
Palladium						
Potassium	8320	11100	1460	190.4(b)	0.9	20
Selenium	0.53	436	467	93.2	1.1	20
Silicon						
Silver	0.0	9.2	11.7	78.8	4.4	20
Sodium	31.3	1470	1460	98.5	3.3	20
Strontium						
Sulfur						
Thallium	1.6	442	467	94.6	1.3	20
Tin						
Titanium						
Tungsten						
Vanadium	64.3	182	117	100.8	2.2	20
Zinc	98.8	218	117	102.1	1.9	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 12/26/13

Metal	JB56044-9 Original MSD	Spikelot MPIRS1	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP76911: JB55929-7, JB55929-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/26/13

Metal	BSP Result	Spikelot MPIRS1	% Rec	QC Limits
Aluminum	5460	5400	101.1	80-120
Antimony	94.5	100	94.5	80-120
Arsenic	391	400	97.8	80-120
Barium	380	400	95.0	80-120
Beryllium	10.5	10	105.0	80-120
Bismuth				
Boron				
Cadmium	10	10	100.0	80-120
Calcium	1250	1250	100.0	80-120
Chromium	41.3	40	103.3	80-120
Cobalt	97.9	100	97.9	80-120
Copper	45.4	50	90.8	80-120
Iron	5390	5200	103.7	80-120
Lead	98.8	100	98.8	80-120
Lithium				
Magnesium	1340	1250	107.2	80-120
Manganese	106	100	106.0	80-120
Molybdenum				
Nickel	99.3	100	99.3	80-120
Palladium				
Potassium	1230	1250	98.4	80-120
Selenium	375	400	93.8	80-120
Silicon				
Silver	8.7	10	87.0	80-120
Sodium	1240	1250	99.2	80-120
Strontium				
Sulfur				
Thallium	416	400	104.0	80-120
Tin				
Titanium				
Tungsten				
Vanadium	95.5	100	95.5	80-120
Zinc	103	100	103.0	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 12/26/13

Metal	BSP Result	Spikelot MPIRS1	% Rec	QC Limits
Zirconium				

Associated samples MP76911: JB55929-7, JB55929-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/26/13

Metal	JB56044-9 Original	SDL 1:5	%DIF	QC Limits
Aluminum	107000	104000	3.0	0-10
Antimony	6.30	0.00	100.0(a)	0-10
Arsenic	271	271	0.3	0-10
Barium	381	369	3.0	0-10
Beryllium	11.5	11.6	0.9	0-10
Bismuth				
Boron				
Cadmium	1.30	0.00	100.0(a)	0-10
Calcium	11300	11700	3.5	0-10
Chromium	998	1060	5.8	0-10
Cobalt	36.8	38.0	3.3	0-10
Copper	87.1	87.6	0.6	0-10
Iron	418000	441000	5.5	0-10
Lead	454	478	5.4	0-10
Lithium				
Magnesium	27500	26700	3.1	0-10
Manganese	1000	1040	4.1	0-10
Molybdenum				
Nickel	74.4	90.6	21.8*(b)	0-10
Palladium				
Potassium	72100	69100	4.2	0-10
Selenium	4.60	0.00	100.0(a)	0-10
Silicon				
Silver	0.00	7.40	NC	0-10
Sodium	271	424	56.3*(b)	0-10
Strontium				
Sulfur				
Thallium	16.3	0.00	100.0(a)	0-10
Tin				
Titanium				
Tungsten				
Vanadium	557	579	4.0	0-10
Zinc	856	1240	45.1*(b)	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76911
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/26/13

Metal	JB56044-9 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP76911: JB55929-7, JB55929-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	3.6	11		
Antimony	500	1.2	1.8		
Arsenic	500	1.1	1.5		
Barium	1000	.09	.36		
Beryllium	5.0	.01	.17	0.10	<5.0
Bismuth	20	.9	.98		
Boron	100	2.8	2		
Cadmium	5.0	.2	.24		
Calcium	5000	8.4	55		
Chromium	10	.3	.92		
Cobalt	50	.2	.48		
Copper	25	.6	1		
Iron	100	6.2	13		
Lead	500	1.2	2.4	7.1	<500
Lithium	20	.7	2.4		
Magnesium	5000	10	23		
Manganese	15	.2	.15		
Molybdenum	20	.3	2		
Nickel	40	.5	1.6	1.8	<40
Palladium	50	.5	1.5		
Potassium	10000	17	41		
Selenium	500	1.8	2.4		
Silicon	200	13	29		
Silver	10	.4	1.5		
Sodium	10000	5.2	58		
Strontium	10	.04	.59		
Sulfur	50	2.9	5.9		
Thallium	500	1.6	1.3		
Tin	10	1.1	3.7		
Titanium	10	.2	1.2		
Tungsten	50	8.7	6.5		
Vanadium	50	.2	.72		
Zinc	20	.7	4.4		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	RL	IDL	MDL	MB raw	final
Zirconium	10	.3	1.2		

Associated samples MP76951: JB55929-7A, JB55929-9A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	JB55342-1R Original	MS	Spikelot MPITCLP2	% Rec	QC Limits
Aluminum	anr				
Antimony					
Arsenic					
Barium					
Beryllium	0.0	54.1	50	108.2	75-125
Bismuth					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead	0.0	2010	2000	100.5	75-125
Lithium					
Magnesium					
Manganese	anr				
Molybdenum					
Nickel	8.0	525	500	103.4	75-125
Palladium					
Potassium					
Selenium					
Silicon					
Silver	anr				
Sodium					
Strontium					
Sulfur					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	JB55342-1R Original MS	Spikelot MPITCLP2 % Rec	QC Limits
Zirconium			

Associated samples MP76951: JB55929-7A, JB55929-9A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	JB55342-1R Original	MSD	Spikelot MPITCLP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony						
Arsenic						
Barium						
Beryllium	0.0	54.0	50	108.0	0.2	20
Bismuth						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead	0.0	2000	2000	100.0	0.5	20
Lithium						
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	8.0	522	500	102.8	0.6	20
Palladium						
Potassium						
Selenium						
Silicon						
Silver	anr					
Sodium						
Strontium						
Sulfur						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	JB55342-1R Original MSD	Spikelot MPITCLP2 % Rec	MSD RPD	QC Limit
Zirconium				

Associated samples MP76951: JB55929-7A, JB55929-9A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	BSP Result	Spikelot MPITCLP2	% Rec	QC Limits
Aluminum	anr			
Antimony				
Arsenic				
Barium				
Beryllium	52.3	50	104.6	80-120
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	1970	2000	98.5	80-120
Lithium				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	506	500	101.2	80-120
Palladium				
Potassium				
Selenium				
Silicon				
Silver	anr			
Sodium				
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	BSP Result	Spikelot MPITCLP2 % Rec	QC Limits
Zirconium			

Associated samples MP76951: JB55929-7A, JB55929-9A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	JB55342-1R Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony				
Arsenic				
Barium				
Beryllium	0.00	0.00	NC	0-10
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	0.00	6.00	NC	0-10
Lithium				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	8.00	8.60	7.5	0-10
Palladium				
Potassium				
Selenium				
Silicon				
Silver	anr			
Sodium				
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc				

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76951
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	JB55342-1R Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP76951: JB55929-7A, JB55929-9A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP77002 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 12/31/13

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0038	.0063	-0.013	<0.033

Associated samples MP77002: JB55929-7, JB55929-8, JB55929-9, JB55929-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP77002 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 12/31/13

Metal	JB56022-1 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.0	0.30	0.326	92.1	75-125

Associated samples MP77002: JB55929-7, JB55929-8, JB55929-9, JB55929-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP77002 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 12/31/13

Metal	JB56022-1 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.29	0.318	91.2	3.4	20

Associated samples MP77002: JB55929-7, JB55929-8, JB55929-9, JB55929-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP77002
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 12/31/13

Metal	LCS Result	Spikelot HGLCS54080	% Rec	QC Limits
Mercury	19.4	19.9	97.5	69-130

Associated samples MP77002: JB55929-7, JB55929-8, JB55929-9, JB55929-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

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General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Total Organic Carbon	GP76798/GN97232	1000	0.00	mg/kg	20000	21200	106.0	80-120%

Associated Samples:
Batch GP76798: JB55929-2, JB55929-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Total Organic Carbon	GP76798/GN96964	JB55473-5	mg/kg	28100	24100	15.3	0-40%

Associated Samples:
Batch GP76798: JB55929-2, JB55929-9
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Total Organic Carbon	GP76798/GN96964	JB55473-5	mg/kg	28100	43600	60300	73.8	46.9-123.4%

Associated Samples:
Batch GP76798: JB55929-2, JB55929-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: D31220S1.TXT Date Analyzed: 12/20/13 Methods: CORP ENG 81M/SW9060M
Analyst: VA Run ID: GN96964
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:12	GN96964-STD1	1		STDA
09:24	GN96964-STD2	1		STDB
09:43	GN96964-STD3	1		STDC
09:57	GN96964-STD4	1		STDD
10:08	GN96964-STD5	1		STDE
10:24	GN96964-STD6	1		STDF
10:34	GN96964-STD7	1		STDG
09:07	GN96964-CRI1	1		
09:31	GN96964-HSTD1	1		
10:03	GN96964-ICV1	1		
10:30	GN96964-CCV1	1		
11:12	GP76798-MB1	1		
11:29	GP76798-B1	1		
11:50	ZZZZZZ	1		
12:23	JB55473-5	1		(sample used for QC only; not part of login JB55929)
12:48	ZZZZZZ	1		
13:12	ZZZZZZ	1		
14:22	ZZZZZZ	1		
14:47	GP76798-D1	1		
15:08	GP76798-S1	1		
15:38	GN96964-CCV2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: D31220S1.TXT Date Analyzed: 12/20/13 Methods: CORP ENG 81M/SW9060M
Run ID: GN96964 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN96964-CRI1	Total Organic Carbon	1040	1000	840	1000	104.0	70-130
GN96964-HSTD1	Total Organic Carbon	49600	1000	840	50000	99.2	90-110
GN96964-ICV1	Total Organic Carbon	19700	1000	840	20000	98.5	90-110
GN96964-CCV1	Total Organic Carbon	24800	1000	840	25000	99.2	90-110
GN96964-CCV2	Total Organic Carbon	25000	1000	840	25000	100.0	90-110

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: E31226S1.TXT Date Analyzed: 12/26/13 Methods: CORP ENG 81M/SW9060M
Analyst: VA Run ID: GN97232
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:18	GN97232-STD1	1		STDA
09:37	GN97232-STD2	1		STDB
09:52	GN97232-STD3	1		STDC
10:08	GN97232-STD4	1		STDD
10:22	GN97232-STD5	1		STDE
10:35	GN97232-STD6	1		STDF
11:17	GN97232-STD7	1		STDG
09:14	GN97232-CRI1	1		
09:30	GN97232-HSTD1	1		
09:49	GN97232-ICV1	1		
10:55	GN97232-CCV1	1		
11:09	GP76798-MB3	1		
11:38	GP76798-B3	1		
12:01	ZZZZZZ	1		
12:56	ZZZZZZ	1		
13:09	ZZZZZZ	1		
13:23	ZZZZZZ	1		
14:39	ZZZZZZ	1		
14:50	JB55929-2	1		
15:14	JB55929-9	1		Multiple injections indicate possible sample non-homogeneity.
15:49	ZZZZZZ	1		
16:01	GN97232-CCV2	1		
16:14	ZZZZZZ	1		
16:26	ZZZZZZ	1		
16:39	GN97232-CCV3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JB55929
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: E31226S1.TXT Date Analyzed: 12/26/13 Methods: CORP ENG 81M/SW9060M
Run ID: GN97232 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN97232-CRI1	Total Organic Carbon	1290	1000	840	1000	129.0	70-130
GN97232-HSTD1	Total Organic Carbon	52600	1000	840	50000	105.2	90-110
GN97232-ICV1	Total Organic Carbon	21400	1000	840	20000	107.0	90-110
GN97232-CCV1	Total Organic Carbon	26600	1000	840	25000	106.4	90-110
GN97232-CCV2	Total Organic Carbon	26500	1000	840	25000	106.0	90-110
GN97232-CCV3	Total Organic Carbon	26000	1000	840	25000	104.0	90-110

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: JB55929-1 **Analyzed:** 24-DEC-13 by BM **Method:** ASTM 4643-00
ClientID: P-6R (2-2.5)

Wet Weight (Total)	35.66	g
Tare Weight	27.72	g
Dry Weight (Total)	35.25	g
Solids, Percent	94.8	%

Sample: JB55929-2 **Analyzed:** 24-DEC-13 by BM **Method:** ASTM 4643-00
ClientID: P-7R (2-2.5)

Wet Weight (Total)	34.76	g
Tare Weight	27.45	g
Dry Weight (Total)	34.27	g
Solids, Percent	93.3	%

Sample: JB55929-3 **Analyzed:** 24-DEC-13 by BM **Method:** ASTM 4643-00
ClientID: P-7R (5.5-6.0)

Wet Weight (Total)	32.11	g
Tare Weight	24.1	g
Dry Weight (Total)	30.85	g
Solids, Percent	84.3	%

Sample: JB55929-4 **Analyzed:** 24-DEC-13 by BM **Method:** ASTM 4643-00
ClientID: P-8R (2-2.5)

Wet Weight (Total)	35.58	g
Tare Weight	26.5	g
Dry Weight (Total)	34.95	g
Solids, Percent	93.1	%

Sample: JB55929-5 **Analyzed:** 24-DEC-13 by BM **Method:** ASTM 4643-00
ClientID: P-9R (2-2.5)

Wet Weight (Total)	35.67	g
Tare Weight	27.8	g
Dry Weight (Total)	35.36	g
Solids, Percent	96.1	%

Sample: JB55929-6 **Analyzed:** 24-DEC-13 by BM **Method:** ASTM 4643-00
ClientID: P-10R (2-2.5)

Wet Weight (Total)	27.61	g
Tare Weight	20.64	g
Dry Weight (Total)	27.3	g
Solids, Percent	95.6	%

Percent Solids Raw Data Summary

Job Number: JB55929
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: JB55929-7 **Analyzed:** 24-DEC-13 by BM **Method:** ASTM 4643-00
ClientID: P-12 (2-2.5)

Wet Weight (Total)	35.26	g
Tare Weight	25.88	g
Dry Weight (Total)	34.95	g
Solids, Percent	96.7	%

Sample: JB55929-8 **Analyzed:** 24-DEC-13 by BM **Method:** ASTM 4643-00
ClientID: P-12 (4-4.5)

Wet Weight (Total)	35.28	g
Tare Weight	27.1	g
Dry Weight (Total)	34.04	g
Solids, Percent	84.8	%

Sample: JB55929-9 **Analyzed:** 27-DEC-13 by GL **Method:** SM2540 G-97
ClientID: P-13 (2-2.5)

Wet Weight (Total)	33.53	g
Tare Weight	24.18	g
Dry Weight (Total)	32.8	g
Solids, Percent	92.2	%

Sample: JB55929-10 **Analyzed:** 24-DEC-13 by BM **Method:** ASTM 4643-00
ClientID: P-13 (4-4.5)

Wet Weight (Total)	35.06	g
Tare Weight	25.55	g
Dry Weight (Total)	33.73	g
Solids, Percent	86	%

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06/17/14

Technical Report for

EnviroTrac

Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Accutest Job Number: JB56243

Sampling Dates: 12/18/13 - 12/19/13

Report to:

EnviroTrac

sarahd@envirotrac.com

ATTN: Sarah Dyson

Total number of pages in report: **381**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

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Accutest LabLink@800250 12:14 17-Jun-2014

Sample Summary

EnviroTrac

Job No: JB56243

Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB56243-1	12/19/13	09:30	SO	12/20/13	AQ	Ground Water	QC-TW-1
JB56243-2	12/18/13	14:58	SO	12/20/13	SO	Soil	QC-TW-1 (2.5-3.0)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	EnviroTrac	**Job No**	JB56243
Site:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ	**Report Date**	1/8/2014 3:56:03 PM

On 12/20/2013, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 5 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB56243 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** V1A5854

- All samples were analyzed within the recommended method holding time.
- Sample(s) JB56362-1MS, JB56362-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP71691

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ **Batch ID:** OP71691A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP76945

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB56222-2FSDL, JB56222-2MS, JB56222-2MSD, JB56222-2SDL, JB56222-2FSDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Silver, Arsenic, Beryllium, Cadmium, Nickel, Zinc, Aluminum, Iron, Manganese are outside control limits. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JB56243-1 for Iron: Elevated detection limit due to dilution required for high interfering element.
- MP76945-SD2 for Manganese: Serial dilution indicates possible matrix interference.
- JB56243-1 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JB56243-1 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JB56243-1 for Lead: Elevated detection limit due to dilution required for high interfering element.

Metals By Method SW846 7470A

Matrix: AQ	**Batch ID:** MP76986

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB56143-1MS, JB56143-1MSD were used as the QC samples for metals.

Wet Chemistry By Method CORP ENG 81M/SW9060M

Matrix: SO	**Batch ID:** GP77025

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB53358-4RTDUP, JB53358-4RTMS were used as the QC samples for Total Organic Carbon.

Wet Chemistry By Method SM2540 G-97

Matrix: SO	**Batch ID:** GN97347

- The data for SM2540 G-97 meets quality control requirements.

Wet Chemistry By Method SM4500NH3 H-11LACHAT

Matrix: AQ	**Batch ID:** GP76991

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB56222-2MS, JB56222-2MSD were used as the QC samples for Nitrogen, Ammonia.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: JB56243
Account: EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Collected: 12/18/13 thru 12/19/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB56243-1	**QC-TW-1**					
Benzene		1.8	1.0	0.28	ug/l	SW846 8260B
Cyclohexane		0.44 J	5.0	0.18	ug/l	SW846 8260B
1,1-Dichloroethane		0.40 J	1.0	0.26	ug/l	SW846 8260B
1,1-Dichloroethene		0.41 J	1.0	0.34	ug/l	SW846 8260B
Methyl Tert Butyl Ether		50.2	1.0	0.29	ug/l	SW846 8260B
1,1,1-Trichloroethane		0.66 J	1.0	0.25	ug/l	SW846 8260B
Trichlorofluoromethane		3.9 J	5.0	0.33	ug/l	SW846 8260B
Total TIC, Volatile		5.7 J			ug/l	
Naphthalene		0.288	0.10	0.036	ug/l	SW846 8270D BY SIM
Total TIC, Semi-Volatile		50.2 J			ug/l	
Aluminum		123000	200		ug/l	SW846 6010C
Arsenic [a]		34.2	6.0		ug/l	SW846 6010C
Barium		4200	200		ug/l	SW846 6010C
Beryllium		22.3	1.0		ug/l	SW846 6010C
Cadmium		4.3	3.0		ug/l	SW846 6010C
Calcium		154000	5000		ug/l	SW846 6010C
Chromium		119	10		ug/l	SW846 6010C
Cobalt		114	50		ug/l	SW846 6010C
Copper		206	10		ug/l	SW846 6010C
Iron [a]		139000	300		ug/l	SW846 6010C
Lead [a]		85.0	6.0		ug/l	SW846 6010C
Magnesium		87400	5000		ug/l	SW846 6010C
Manganese		15900	45		ug/l	SW846 6010C
Mercury		9.6	1.2		ug/l	SW846 7470A
Nickel		198	10		ug/l	SW846 6010C
Potassium		15800	10000		ug/l	SW846 6010C
Sodium		227000	10000		ug/l	SW846 6010C
Vanadium		244	50		ug/l	SW846 6010C
Zinc		456	20		ug/l	SW846 6010C
Nitrogen, Ammonia		0.61	0.20		mg/l	SM4500NH3 H-11LACHAT
JB56243-2	**QC-TW-1 (2.5-3.0)**					
Total Organic Carbon		8110	1200		mg/kg	CORP ENG 81M/SW9060M

(a) Elevated detection limit due to dilution required for high interfering element.

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	QC-TW-1		
Lab Sample ID:	JB56243-1	**Date Sampled:**	12/19/13
Matrix:	AQ - Ground Water	**Date Received:**	12/20/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A135711.D	1	12/27/13	CC	n/a	n/a	V1A5854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	1.8	1.0	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	4.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	ND	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	0.44	5.0	0.18	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	0.40	1.0	0.26	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	0.41	1.0	0.34	ug/l	J
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	QC-TW-1		
Lab Sample ID:	JB56243-1	**Date Sampled:**	12/19/13
Matrix:	AQ - Ground Water	**Date Received:**	12/20/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	50.2	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	0.66	1.0	0.25	ug/l	J
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	3.9	5.0	0.33	ug/l	J
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		79-117%
17060-07-0	1,2-Dichloroethane-D4	86%		72-123%
2037-26-5	Toluene-D8	98%		82-118%
460-00-4	4-Bromofluorobenzene	94%		75-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	1H-indene-dihydro-methyl	18.51	5.7	ug/l	J
	Total TIC, Volatile		5.7	ug/l	J
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	QC-TW-1		
Lab Sample ID:	JB56243-1	**Date Sampled:**	12/19/13
Matrix:	AQ - Ground Water	**Date Received:**	12/20/13
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P3238.D	1	12/28/13	ALS	12/26/13	OP71691	E6P128
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List without PAH

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.97	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.8	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.5	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	17	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	0.99	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.0	ug/l	
	3&4-Methylphenol	ND	2.0	0.93	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.5	ug/l	
100-02-7	4-Nitrophenol	ND	10	5.2	ug/l	
108-95-2	Phenol	ND	2.0	1.3	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.3	ug/l	
98-86-2	Acetophenone	ND	2.0	0.29	ug/l	
1912-24-9	Atrazine	ND	2.0	0.49	ug/l	
100-52-7	Benzaldehyde	ND	5.0	3.3	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.36	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.29	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.30	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.53	ug/l	
86-74-8	Carbazole	ND	1.0	0.36	ug/l	
105-60-2	Caprolactam	ND	2.0	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.45	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.31	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.43	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.46	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.36	ug/l	
123-91-1	1,4-Dioxane	ND	1.0	0.27	ug/l	

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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	QC-TW-1		
Lab Sample ID:	JB56243-1	**Date Sampled:**	12/19/13
Matrix:	AQ - Ground Water	**Date Received:**	12/20/13
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

ABN TCL List without PAH

CAS No.	Compound	Result	RL	MDL	Units	Q
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.56	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.31	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.33	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.28	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.59	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	7.1	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.55	ug/l	
78-59-1	Isophorone	ND	2.0	0.27	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.38	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.7	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.42	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.30	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.31	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.31	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		10-110%
4165-62-2	Phenol-d5	32%		10-110%
118-79-6	2,4,6-Tribromophenol	72%		29-139%
4165-60-0	Nitrobenzene-d5	79%		28-131%
321-60-8	2-Fluorobiphenyl	76%		30-121%
1718-51-0	Terphenyl-d14	82%		16-147%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	2.15	5.4	ug/l	J
	system artifact	3.01	9.4	ug/l	J
	system artifact/aldol-condensation	3.74	54	ug/l	J
	unknown	5.65	46	ug/l	J
	Indan, -methyl-	6.24	4.2	ug/l	J
	Total TIC, Semi-Volatile		50.2	ug/l	J
	Total Alkanes		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	QC-TW-1		
Lab Sample ID:	JB56243-1	**Date Sampled:**	12/19/13
Matrix:	AQ - Ground Water	**Date Received:**	12/20/13
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M43422.D	1	12/30/13	AD	12/26/13	OP71691A	E3M1950
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
87-86-5	Pentachlorophenol	ND	0.30	0.10	ug/l	
83-32-9	Acenaphthene	ND	0.10	0.020	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.024	ug/l	
120-12-7	Anthracene	ND	0.10	0.020	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.10	0.012	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.012	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.010	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.016	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.015	ug/l	
218-01-9	Chrysene	ND	0.10	0.012	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.017	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.013	ug/l	
86-73-7	Fluorene	ND	0.10	0.017	ug/l	
118-74-1	Hexachlorobenzene	ND	0.020	0.017	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.014	ug/l	
91-20-3	Naphthalene	0.288	0.10	0.036	ug/l	
85-01-8	Phenanthrene	ND	0.10	0.021	ug/l	
129-00-0	Pyrene	ND	0.10	0.015	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	54%		10-110%
4165-62-2	Phenol-d5	39%		10-110%
118-79-6	2,4,6-Tribromophenol	116%		10-157%
4165-60-0	Nitrobenzene-d5	97%		23-131%
321-60-8	2-Fluorobiphenyl	89%		24-120%
1718-51-0	Terphenyl-d14	92%		10-125%

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RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	QC-TW-1		
Lab Sample ID:	JB56243-1	**Date Sampled:**	12/19/13
Matrix:	AQ - Ground Water	**Date Received:**	12/20/13
		Percent Solids:	n/a
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	123000	200	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Antimony	< 6.0	6.0	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Arsenic [a]	34.2	6.0	ug/l	2	12/27/13	01/08/14	KK	SW846 6010C [4]	SW846 3010A [5]
Barium	4200	200	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Beryllium	22.3	1.0	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Cadmium	4.3	3.0	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Calcium	154000	5000	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Chromium	119	10	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Cobalt	114	50	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Copper	206	10	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Iron [a]	139000	300	ug/l	3	12/27/13	01/04/14	ND	SW846 6010C [3]	SW846 3010A [5]
Lead [a]	85.0	6.0	ug/l	2	12/27/13	01/08/14	KK	SW846 6010C [4]	SW846 3010A [5]
Magnesium	87400	5000	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Manganese	15900	45	ug/l	3	12/27/13	01/04/14	ND	SW846 6010C [3]	SW846 3010A [5]
Mercury	9.6	1.2	ug/l	1	12/30/13	12/30/13	JW	SW846 7470A [1]	SW846 7470A [6]
Nickel	198	10	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Potassium	15800	10000	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Selenium	< 10	10	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Silver	< 10	10	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Sodium	227000	10000	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Thallium [a]	< 4.0	4.0	ug/l	2	12/27/13	01/08/14	KK	SW846 6010C [4]	SW846 3010A [5]
Vanadium	244	50	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]
Zinc	456	20	ug/l	1	12/27/13	01/03/14	ND	SW846 6010C [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA32969
(2) Instrument QC Batch: MA32999
(3) Instrument QC Batch: MA33003
(4) Instrument QC Batch: MA33017
(5) Prep QC Batch: MP76945
(6) Prep QC Batch: MP76986

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	QC-TW-1		
Lab Sample ID:	JB56243-1	**Date Sampled:**	12/19/13
Matrix:	AQ - Ground Water	**Date Received:**	12/20/13
		Percent Solids:	n/a
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	0.61	0.20	mg/l	1	12/31/13 08:30	CV	SM4500NH3 H-11LACHAT

RL = Reporting Limit

Report of Analysis

Client Sample ID:	QC-TW-1 (2.5-3.0)		
Lab Sample ID:	JB56243-2	**Date Sampled:**	12/18/13
Matrix:	SO - Soil	**Date Received:**	12/20/13
		Percent Solids:	83.1
Project:	Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	83.1		%	1	12/28/13 16:00	KP	SM2540 G-97
Total Organic Carbon	8110	1200	mg/kg	1	12/31/13 15:22	VA	CORP ENG 81M/SW9060M

RL = Reporting Limit

New Jersey

ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST LABORATORIES

GW
SO

CHAIN OF CUSTODY

PAGE ___ OF ___ PW

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JB56243

Client / Reporting Information

Company Name: EnviroTec
Street Address: 6 Terri Ln, Suite 300
City State Zip: Burlington NJ 08016
Project Contact: Dave Cardson davec@enviotec.c
E-mail:
Phone #: 609-387-5553 Fax #:
Sampler(s) Name(s): Sarah Dyson Phone #:

Project Information

Project Name: P001 - Hess Port Reading Complex - QC Lab
Street:
City State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	TCL VOC + TICs	TCL SVOC + TICs	Tal Metals	Ammonia	TOC	LAB USE ONLY
1	QC-TW-1		12/19/2013	9:30	SD	SO	7	X		X	X					X	X	X	X		E3 A14 G46T4 2132 G7T2
2	QC-TW-1(2.5-3.0)		12/18/2013	11:58	SD	SO	1					X								X	

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] other _____

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format _____
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Sarah Dyson	12/19/13	1 STORAGE	2 [signature]	12/20/13	2 [signature]
3 [signature]	12/20/13 1400	3 [signature]	4		4
5		5			

Custody Seal # | Intact / Not Intact | Preserved where applicable | On Ice | Cooler Temp.

2COOLERS 1.) 04.3C° 2.) 05.0C°

DB Dominic

DNB

5.1 5

JB56243: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB56243 **Client:** ENVIROTRAC **Project:** HESS PORT READING COMPLEX

Date / Time Received: 12/20/2013 19:00 **Delivery Method:** Accutest Courier **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (4.3/4.3); #2: (5/5); 0

Cooler Security	Y or N		Y or N
1. Custody Seals Present:	☑ ☐	3. COC Present:	☑ ☐
2. Custody Seals Intact:	☑ ☐	4. Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1. Temp criteria achieved:	☑ ☐
2. Cooler temp verification:	IR Gun
3. Cooler media:	Ice (Bag)
4. No, Coolers	3

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y or N
1. Sample labels present on bottles:	☑ ☐
2. Container labeling complete:	☑ ☐
3. Sample container label / COC agree:	☑ ☐

Sample Integrity - Condition	Y or N
1. Sample recvd within HT:	☑ ☐
2. All containers accounted for:	☑ ☐
3. Condition of sample:	Intact

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☑	☐	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments Rec'd 1x 8 oz nab of soil not on COC. Rec'd 3 different jobs in 2 coolers but all samples accounted for. No data on label. Placed on ROBO shelf until verified

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB56243: Chain of Custody
Page 2 of 3

Sample Receipt Summary - Problem Resolution

Accutest Job Number: JB56243

CSR: M Cordova **Response Date:** 12/23/2013

Response: Please discard per Sarah Dyson

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB56243: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

EnviroTrac

Job No: JB56243

Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JB56243-1 QC-TW-1	Collected: 19-DEC-13 09:30 By: SO		Received: 20-DEC-13 By: AS			
JB56243-1	SW846 8260B	27-DEC-13 19:25	CC			V8260TCL20+
JB56243-1	SW846 8270D	28-DEC-13 19:01	ALS	26-DEC-13	NP	AB8270NJTCL20+
JB56243-1	SW846 7470A	30-DEC-13 14:58	JW	30-DEC-13	JW	HG
JB56243-1	SW846 8270D BY SIM	30-DEC-13 18:58	AD	26-DEC-13	NP	AB8270SIMNJ
JB56243-1	SM4500NH3 H-11LACHAT	31-DEC-13 08:30	CV	30-DEC-13	BS	AMN
JB56243-1	SW846 6010C	03-JAN-14 21:57	ND	27-DEC-13	AH	AG,AL,BA,BE,CA,CD,CO,CR,CU,K,MG,NA,NI,SB,SE,V,ZN
JB56243-1	SW846 6010C	04-JAN-14 18:31	ND	27-DEC-13	AH	FE,MN
JB56243-1	SW846 6010C	08-JAN-14 07:49	KK	27-DEC-13	AH	ASNJ,PB,TLNJ
JB56243-2 QC-TW-1 (2.5-3.0)	Collected: 18-DEC-13 14:58 By: SO		Received: 20-DEC-13 By: AS			
JB56243-2	SM2540 G-97	28-DEC-13 16:00	KP			%SOL
JB56243-2	CORP ENG 81M/SW9060-D	30-DEC-13 15:22	VA	31-DEC-13	VA	TOC

Accutest Internal Chain of Custody

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Received: 12/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB56243-1.1	Secured Storage	Harpreet Kaur	12/24/13 06:43	Retrieve from Storage
JB56243-1.1	Harpreet Kaur		12/24/13 15:35	Depleted
JB56243-1.1.1	Harpreet Kaur	Organics Prep	12/24/13 06:44	Extract from JB56243-1.1
JB56243-1.2	Secured Storage	Sheila Kore	12/26/13 14:41	Retrieve from Storage
JB56243-1.2	Sheila Kore		12/26/13 21:42	Depleted
JB56243-1.2.1	Sheila Kore	Organics Prep	12/26/13 14:53	Extract from JB56243-1.2
JB56243-1.2.1	Organics Prep	Nikita Permiuov	12/27/13 01:13	Extract from JB56243-1.2
JB56243-1.2.1	Nikita Permiuov	Extract Storage	12/27/13 01:13	Return to Storage
JB56243-1.2.1	Extract Storage	Elwira Antonik	12/27/13 10:56	Retrieve from Storage
JB56243-1.2.1	Elwira Antonik	GCMS3M	12/27/13 10:56	Load on Instrument
JB56243-1.2.1	GCMS3M	Nina Pandya	01/02/14 09:18	Unload from Instrument
JB56243-1.2.1	Nina Pandya	Extract Freezer	01/02/14 09:18	Return to Storage
JB56243-1.2.1	Extract Freezer		02/05/14 09:00	Disposed
JB56243-1.3	Secured Storage	Todd Shoemaker	12/27/13 11:06	Retrieve from Storage
JB56243-1.3	Todd Shoemaker	Secured Staging Area	12/27/13 11:07	Return to Storage
JB56243-1.3	Secured Staging Area	Gina Montenegro	12/27/13 11:08	Retrieve from Storage
JB56243-1.3	Gina Montenegro	Secured Storage	12/27/13 12:00	Return to Storage
JB56243-1.3	Secured Storage	Ana Maria Moreta	12/29/13 15:17	Retrieve from Storage
JB56243-1.3	Ana Maria Moreta	Secured Staging Area	12/29/13 15:17	Return to Storage
JB56243-1.3	Secured Staging Area	Jieyu Wang	12/30/13 08:10	Retrieve from Storage
JB56243-1.3	Jieyu Wang	Secured Storage	12/30/13 16:06	Return to Storage
JB56243-1.3	Shirley Grzybowski		02/03/14 11:58	Disposed
JB56243-1.3.1	Gina Montenegro	Metals Digestion	12/27/13 11:57	Digestate from JB56243-1.3
JB56243-1.3.1	Metals Digestion	Gina Montenegro	12/27/13 11:59	Digestate from JB56243-1.3
JB56243-1.3.1	Gina Montenegro	Metals Digestate Storage	12/27/13 11:59	Return to Storage
JB56243-1.3.1	Metals Digestate Storage		03/05/14 09:00	Disposed
JB56243-1.4	Secured Storage	Ana Maria Moreta	12/29/13 15:09	Retrieve from Storage
JB56243-1.4	Ana Maria Moreta	Secured Staging Area	12/29/13 15:09	Return to Storage
JB56243-1.4	Secured Staging Area	Brian Schneller	12/30/13 08:11	Retrieve from Storage
JB56243-1.4	Brian Schneller	Secured Storage	12/30/13 14:44	Return to Storage
JB56243-1.4	Shirley Grzybowski		02/03/14 11:58	Disposed
JB56243-2.1	Secured Storage	Trushna R. Patel	12/24/13 12:38	Retrieve from Storage
JB56243-2.1	Trushna R. Patel	Secured Staging Area	12/24/13 12:38	Return to Storage
JB56243-2.1	Secured Staging Area	Vaidehi Amin	12/24/13 12:40	Retrieve from Storage
JB56243-2.1	Vaidehi Amin	Secured Storage	12/24/13 17:14	Return to Storage
JB56243-2.1	Secured Storage	Steve Magda	12/28/13 09:20	Retrieve from Storage
JB56243-2.1	Steve Magda	Secured Staging Area	12/28/13 09:21	Return to Storage

Accutest Internal Chain of Custody

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ
Received: 12/20/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB56243-2.1	Secured Staging Area	Krimesh Patel	12/28/13 09:39	Retrieve from Storage
JB56243-2.1	Krimesh Patel	Secured Storage	12/28/13 15:33	Return to Storage
JB56243-2.1	Shirley Grzybowski		02/03/14 11:58	Disposed

New Jersey
ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A5854-MB	1A135694.D	1	12/27/13	CC	n/a	n/a	V1A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB56243-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	1.0	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	4.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	ND	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	

Method Blank Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A5854-MB	1A135694.D	1	12/27/13	CC	n/a	n/a	V1A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB56243-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	79-117%
17060-07-0	1,2-Dichloroethane-D4	88%	72-123%
2037-26-5	Toluene-D8	99%	82-118%
460-00-4	4-Bromofluorobenzene	96%	75-118%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A5854-BS	1A135695.D	1	12/27/13	CC	n/a	n/a	V1A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB56243-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	42.1	84	49-153
71-43-2	Benzene	50	50.0	100	80-119
74-97-5	Bromochloromethane	50	53.5	107	84-123
75-27-4	Bromodichloromethane	50	54.3	109	83-127
75-25-2	Bromoform	50	51.5	103	71-133
74-83-9	Bromomethane	50	53.6	107	62-143
78-93-3	2-Butanone (MEK)	50	46.8	94	64-136
75-15-0	Carbon disulfide	50	47.6	95	71-127
56-23-5	Carbon tetrachloride	50	52.8	106	78-138
108-90-7	Chlorobenzene	50	52.9	106	83-118
75-00-3	Chloroethane	50	57.8	116	67-143
67-66-3	Chloroform	50	54.8	110	81-124
74-87-3	Chloromethane	50	59.9	120	56-146
110-82-7	Cyclohexane	50	55.8	112	69-134
96-12-8	1,2-Dibromo-3-chloropropane	50	51.3	103	63-137
124-48-1	Dibromochloromethane	50	52.9	106	79-125
106-93-4	1,2-Dibromoethane	50	52.2	104	79-122
95-50-1	1,2-Dichlorobenzene	50	53.0	106	81-120
541-73-1	1,3-Dichlorobenzene	50	51.2	102	81-120
106-46-7	1,4-Dichlorobenzene	50	51.5	103	81-117
75-71-8	Dichlorodifluoromethane	50	61.9	124	43-143
75-34-3	1,1-Dichloroethane	50	54.5	109	80-129
107-06-2	1,2-Dichloroethane	50	50.2	100	75-133
75-35-4	1,1-Dichloroethene	50	50.3	101	74-127
156-59-2	cis-1,2-Dichloroethene	50	52.7	105	79-123
156-60-5	trans-1,2-Dichloroethene	50	51.0	102	75-123
78-87-5	1,2-Dichloropropane	50	51.8	104	80-125
10061-01-5	cis-1,3-Dichloropropene	50	56.7	113	76-118
10061-02-6	trans-1,3-Dichloropropene	50	56.1	112	79-123
100-41-4	Ethylbenzene	50	52.5	105	82-119
76-13-1	Freon 113	50	58.3	117	58-140
591-78-6	2-Hexanone	50	48.5	97	60-136
98-82-8	Isopropylbenzene	50	54.9	110	77-127
79-20-9	Methyl Acetate	50	52.1	104	37-156
108-87-2	Methylcyclohexane	50	54.8	110	63-136
1634-04-4	Methyl Tert Butyl Ether	100	105	105	75-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A5854-BS	1A135695.D	1	12/27/13	CC	n/a	n/a	V1A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB56243-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	50	50.2	100	67-133
75-09-2	Methylene chloride	50	52.5	105	74-123
100-42-5	Styrene	50	51.7	103	80-120
79-34-5	1,1,2,2-Tetrachloroethane	50	52.8	106	69-125
127-18-4	Tetrachloroethene	50	49.9	100	73-134
108-88-3	Toluene	50	54.7	109	82-120
87-61-6	1,2,3-Trichlorobenzene	50	55.6	111	63-138
120-82-1	1,2,4-Trichlorobenzene	50	57.9	116	74-136
71-55-6	1,1,1-Trichloroethane	50	55.0	110	80-131
79-00-5	1,1,2-Trichloroethane	50	55.3	111	79-124
79-01-6	Trichloroethene	50	52.5	105	84-126
75-69-4	Trichlorofluoromethane	50	61.3	123	67-145
75-01-4	Vinyl chloride	50	60.0	120	57-132
	m,p-Xylene	100	103	103	81-119
95-47-6	o-Xylene	50	52.8	106	82-120
1330-20-7	Xylene (total)	150	156	104	82-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	79-117%
17060-07-0	1,2-Dichloroethane-D4	91%	72-123%
2037-26-5	Toluene-D8	99%	82-118%
460-00-4	4-Bromofluorobenzene	96%	75-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB56362-1MS	1A135700.D	1	12/27/13	CC	n/a	n/a	V1A5854
JB56362-1MSD	1A135701.D	1	12/27/13	CC	n/a	n/a	V1A5854
JB56362-1	1A135697.D	1	12/27/13	CC	n/a	n/a	V1A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB56243-1

CAS No.	Compound	JB56362-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	43.9	88	50	44.7	89	2	45-157/19
71-43-2	Benzene	ND		50	48.6	97	50	47.0	94	3	49-138/12
74-97-5	Bromochloromethane	ND		50	51.4	103	50	51.2	102	0	75-130/12
75-27-4	Bromodichloromethane	ND		50	52.5	105	50	51.2	102	3	73-132/13
75-25-2	Bromoform	ND		50	53.9	108	50	54.0	108	0	61-138/13
74-83-9	Bromomethane	ND		50	46.6	93	50	45.2	90	3	49-146/18
78-93-3	2-Butanone (MEK)	ND		50	47.2	94	50	47.1	94	0	58-144/14
75-15-0	Carbon disulfide	ND		50	43.9	88	50	42.9	86	2	47-140/18
56-23-5	Carbon tetrachloride	ND		50	50.9	102	50	49.4	99	3	57-147/16
108-90-7	Chlorobenzene	ND		50	51.5	103	50	50.5	101	2	69-129/12
75-00-3	Chloroethane	ND		50	50.8	102	50	48.5	97	5	52-145/17
67-66-3	Chloroform	ND		50	51.4	103	50	50.6	101	2	68-131/13
74-87-3	Chloromethane	ND		50	52.3	105	50	48.4	97	8	43-145/17
110-82-7	Cyclohexane	ND		50	51.2	102	50	50.0	100	2	39-152/18
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	55.6	111	50	55.8	112	0	58-143/14
124-48-1	Dibromochloromethane	ND		50	52.5	105	50	52.2	104	1	71-131/12
106-93-4	1,2-Dibromoethane	ND		50	52.8	106	50	52.3	105	1	72-130/12
95-50-1	1,2-Dichlorobenzene	ND		50	52.1	104	50	51.9	104	0	71-128/12
541-73-1	1,3-Dichlorobenzene	ND		50	50.7	101	50	50.0	100	1	70-128/13
106-46-7	1,4-Dichlorobenzene	ND		50	50.4	101	50	50.0	100	1	70-126/12
75-71-8	Dichlorodifluoromethane	ND		50	55.1	110	50	52.3	105	5	35-161/21
75-34-3	1,1-Dichloroethane	ND		50	51.7	103	50	50.4	101	3	64-136/14
107-06-2	1,2-Dichloroethane	ND		50	49.4	99	50	48.0	96	3	69-138/12
75-35-4	1,1-Dichloroethene	ND		50	47.5	95	50	46.8	94	1	50-141/17
156-59-2	cis-1,2-Dichloroethene	ND		50	49.5	99	50	49.1	98	1	60-135/13
156-60-5	trans-1,2-Dichloroethene	ND		50	49.5	99	50	48.8	98	1	58-134/15
78-87-5	1,2-Dichloropropane	ND		50	50.6	101	50	49.0	98	3	69-132/12
10061-01-5	cis-1,3-Dichloropropene	ND		50	57.6	115	50	55.5	111	4	73-129/13
10061-02-6	trans-1,3-Dichloropropene	ND		50	55.6	111	50	53.5	107	4	72-129/13
100-41-4	Ethylbenzene	ND		50	50.4	101	50	49.5	99	2	48-139/13
76-13-1	Freon 113	ND		50	52.4	105	50	50.6	101	3	43-153/20
591-78-6	2-Hexanone	ND		50	54.4	109	50	54.3	109	0	55-146/15
98-82-8	Isopropylbenzene	ND		50	53.7	107	50	53.4	107	1	61-138/14
79-20-9	Methyl Acetate	ND		50	54.5	109	50	52.0	104	5	43-158/14
108-87-2	Methylcyclohexane	ND		50	55.0	110	50	53.2	106	3	42-153/18
1634-04-4	Methyl Tert Butyl Ether	ND		50	53.2	106	50	52.8	106	1	63-134/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB56362-1MS	1A135700.D	1	12/27/13	CC	n/a	n/a	V1A5854
JB56362-1MSD	1A135701.D	1	12/27/13	CC	n/a	n/a	V1A5854
JB56362-1	1A135697.D	1	12/27/13	CC	n/a	n/a	V1A5854

The QC reported here applies to the following samples: **Method:** SW846 8260B

JB56243-1

CAS No.	Compound	JB56362-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	57.7	115	50	57.4	115	1	62-144/13
75-09-2	Methylene chloride	ND		50	49.2	98	50	49.2	98	0	64-131/13
100-42-5	Styrene	ND		50	50.7	101	50	49.2	98	3	62-133/13
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	55.0	110	50	55.4	111	1	65-134/12
127-18-4	Tetrachloroethene	ND		50	49.0	98	50	48.0	96	2	53-144/15
108-88-3	Toluene	ND		50	52.6	105	50	50.8	102	3	54-138/13
87-61-6	1,2,3-Trichlorobenzene	ND		50	57.7	115	50	58.7	117	2	55-142/15
120-82-1	1,2,4-Trichlorobenzene	ND		50	57.4	115	50	57.3	115	0	64-138/14
71-55-6	1,1,1-Trichloroethane	ND		50	50.8	102	50	49.9	100	2	60-143/15
79-00-5	1,1,2-Trichloroethane	ND		50	54.7	109	50	52.9	106	3	71-130/12
79-01-6	Trichloroethene	ND		50	51.0	102	50	49.2	98	4	59-140/14
75-69-4	Trichlorofluoromethane	ND		50	55.7	111	50	53.9	108	3	50-158/20
75-01-4	Vinyl chloride	ND		50	51.3	103	50	48.8	98	5	41-151/18
	m,p-Xylene	ND		100	99.9	100	100	97.5	98	2	49-138/13
95-47-6	o-Xylene	ND		50	51.3	103	50	50.5	101	2	59-134/12
1330-20-7	Xylene (total)	ND		150	151	101	150	148	99	2	53-136/12

CAS No.	Surrogate Recoveries	MS	MSD	JB56362-1	Limits
1868-53-7	Dibromofluoromethane	93%	93%	92%	79-117%
17060-07-0	1,2-Dichloroethane-D4	87%	88%	85%	72-123%
2037-26-5	Toluene-D8	99%	98%	98%	82-118%
460-00-4	4-Bromofluorobenzene	99%	99%	96%	75-118%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: V1A5834-BFB
Lab File ID: 1A135301.D
Instrument ID: GCMS1A
Injection Date: 12/16/13
Injection Time: 17:31

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	12924	19.1		Pass
75	30.0 - 60.0% of mass 95	32445	47.9		Pass
95	Base peak, 100% relative abundance	67797	100.0		Pass
96	5.0 - 9.0% of mass 95	4404	6.50		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	57109	84.2		Pass
175	5.0 - 9.0% of mass 174	4342	6.40	(7.60) [a]	Pass
176	95.0 - 101.0% of mass 174	55861	82.4	(97.8) [a]	Pass
177	5.0 - 9.0% of mass 176	3709	5.47	(6.64) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A5834-IC5834	1A135302.D	12/16/13	18:01	00:30	Initial cal 0.5
V1A5834-IC5834	1A135303.D	12/16/13	18:30	00:59	Initial cal 1
V1A5834-IC5834	1A135304.D	12/16/13	18:59	01:28	Initial cal 2
V1A5834-IC5834	1A135305.D	12/16/13	19:29	01:58	Initial cal 5
V1A5834-IC5834	1A135306.D	12/16/13	19:58	02:27	Initial cal 10
V1A5834-IC5834	1A135307.D	12/16/13	20:28	02:57	Initial cal 20
V1A5834-ICC5834	1A135308.D	12/16/13	20:57	03:26	Initial cal 50
V1A5834-IC5834	1A135309.D	12/16/13	21:26	03:55	Initial cal 100
V1A5834-IC5834	1A135310.D	12/16/13	21:56	04:25	Initial cal 200

Instrument Performance Check (BFB)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: V1A5854-BFB
Lab File ID: 1A135691.D
Instrument ID: GCMS1A
Injection Date: 12/27/13
Injection Time: 09:15

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	12678	19.7		Pass
75	30.0 - 60.0% of mass 95	31168	48.4		Pass
95	Base peak, 100% relative abundance	64450	100.0		Pass
96	5.0 - 9.0% of mass 95	4504	6.99		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	53573	83.1		Pass
175	5.0 - 9.0% of mass 174	4127	6.40	(7.70) [a]	Pass
176	95.0 - 101.0% of mass 174	52610	81.6	(98.2) [a]	Pass
177	5.0 - 9.0% of mass 176	3450	5.35	(6.56) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1A5854-CC5834	1A135693.D	12/27/13	10:14	00:59	Continuing cal 20
V1A5854-MB	1A135694.D	12/27/13	11:01	01:46	Method Blank
V1A5854-BS	1A135695.D	12/27/13	11:30	02:15	Blank Spike
ZZZZZZ	1A135696.D	12/27/13	12:01	02:46	(unrelated sample)
JB56362-1	1A135697.D	12/27/13	12:31	03:16	(used for QC only; not part of job JB56243)
ZZZZZZ	1A135698.D	12/27/13	13:00	03:45	(unrelated sample)
ZZZZZZ	1A135699.D	12/27/13	13:30	04:15	(unrelated sample)
JB56362-1MS	1A135700.D	12/27/13	14:00	04:45	Matrix Spike
JB56362-1MSD	1A135701.D	12/27/13	14:29	05:14	Matrix Spike Duplicate
ZZZZZZ	1A135703.D	12/27/13	15:28	06:13	(unrelated sample)
ZZZZZZ	1A135704.D	12/27/13	15:58	06:43	(unrelated sample)
ZZZZZZ	1A135705.D	12/27/13	16:27	07:12	(unrelated sample)
ZZZZZZ	1A135706.D	12/27/13	16:57	07:42	(unrelated sample)
ZZZZZZ	1A135707.D	12/27/13	17:26	08:11	(unrelated sample)
ZZZZZZ	1A135709.D	12/27/13	18:25	09:10	(unrelated sample)
ZZZZZZ	1A135710.D	12/27/13	18:55	09:40	(unrelated sample)
JB56243-1	1A135711.D	12/27/13	19:25	10:10	QC-TW-1
ZZZZZZ	1A135712.D	12/27/13	19:54	10:39	(unrelated sample)
ZZZZZZ	1A135713.D	12/27/13	20:24	11:09	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std:	V1A5854-CC5834	**Injection Date:**	12/27/13
Lab File ID:	1A135693.D	**Injection Time:**	10:14
Instrument ID:	GCMS1A	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	70567	7.58	147097	10.03	225334	10.98	217925	14.33	112499	16.81
Upper Limit [a]	141134	8.08	294194	10.53	450668	11.48	435850	14.83	224998	17.31
Lower Limit [b]	35284	7.08	73549	9.53	112667	10.48	108963	13.83	56250	16.31

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V1A5854-MB	80113	7.58	178151	10.03	250355	10.98	235234	14.33	128287	16.81
V1A5854-BS	60517	7.58	135662	10.03	216115	10.98	214902	14.33	111177	16.81
ZZZZZZ	75727	7.58	176473	10.03	253952	10.98	232581	14.33	127921	16.81
JB56362-1	80846	7.59	173792	10.03	248613	10.98	231895	14.33	127000	16.81
ZZZZZZ	65857	7.58	154232	10.03	223599	10.98	233415	14.33	124348	16.81
ZZZZZZ	117926	7.49	153486	10.03	233491	10.98	230309	14.33	127004	16.81
JB56362-1MS	75812	7.58	155406	10.03	238030	10.98	234007	14.33	118874	16.80
JB56362-1MSD	77830	7.58	159539	10.03	245725	10.98	236946	14.33	120099	16.81
ZZZZZZ	92741	7.59	192399	10.03	272578	10.98	255415	14.33	140749	16.81
ZZZZZZ	88979	7.58	186251	10.03	264333	10.99	248071	14.33	136494	16.81
ZZZZZZ	85394	7.59	183884	10.03	263223	10.99	243085	14.33	134762	16.81
ZZZZZZ	85006	7.58	180475	10.03	259838	10.99	240313	14.33	132884	16.81
ZZZZZZ	74730	7.57	159768	10.03	235272	10.98	227322	14.33	120700	16.81
ZZZZZZ	88271	7.59	187250	10.03	268834	10.99	249537	14.33	137407	16.81
ZZZZZZ	86970	7.59	182355	10.03	262789	10.99	244735	14.33	134492	16.81
JB56243-1	81827	7.58	171805	10.03	249460	10.99	234331	14.33	129117	16.81
ZZZZZZ	81722	7.58	172471	10.03	246954	10.99	233711	14.33	127141	16.81
ZZZZZZ	83762	7.58	174592	10.03	249929	10.98	235532	14.33	129845	16.81

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JB56243-1	1A135711.D	93	86	98	94
JB56362-1MS	1A135700.D	93	87	99	99
JB56362-1MSD	1A135701.D	93	88	98	99
V1A5854-BS	1A135695.D	96	91	99	96
V1A5854-MB	1A135694.D	93	88	99	96

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	79-117%
S2 = 1,2-Dichloroethane-D4	72-123%
S3 = Toluene-D8	82-118%
S4 = 4-Bromofluorobenzene	75-118%

Initial Calibration Summary

Job Number: JB56243 **Sample:** V1A5834-ICC5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135308.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Response Factor Report MS1A

```
Method       : C:\MSDCHEM\1\METHODS\M1A5834.M (RTE Integrator)
Title        : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update  : Tue Dec 17 11:54:12 2013
Response via : Initial Calibration

Calibration Files
1   =1a135303.D  0.5 =1a135302.D  100 =1a135309.D  50  =1a135308.D
20  =1a135307.D  200 =1a135310.D  5   =1a135305.D  2   =1a135304.D
10  =1a135306.D      =
```

Compound	1	0.5	100	50	20	200	5	2	10	Avg	%RSD
1) tert butyl alcohol-d9 ----------ISTD----------											
2) tertiary butyl alcohol			1.414	1.382	1.273	1.264	1.442	1.125	1.377	1.325	8.39
3) Ethanol	0.089		0.111	0.114	0.117	0.080	0.113	0.113	0.108	0.106	12.80
4) 1,4-dioxane			0.143	0.137	0.121	0.138	0.107		0.104	0.125	13.50
5) I pentafluorobenzene ----------ISTD----------											
6) chlorodifluoromethane			0.722	0.812	0.730	0.665	0.698	0.553	0.670	0.693	11.41
7) dichlorodifluoromethane			1.118	1.144	1.178	1.017	0.859		0.972	1.048	11.57
8) chloromethane	1.245	1.098	1.258	1.368	1.478	1.105	1.126	1.108	1.276	1.229	10.86
9) vinyl chloride	1.103		1.132	1.232	1.366	0.969	1.035	1.064	1.196	1.137	11.02
10) bromomethane	0.700	0.644	0.448	0.604	0.742		0.631	0.607	0.709	0.636	14.31
11) chloroethane	0.468		0.461	0.528	0.595		0.477	0.436	0.535	0.500	11.03
12) trichlorofluoromethane	0.933		1.033	1.091	1.195	0.880	0.981	0.928	1.063	1.013	10.17
13) Pentane										0.000#	-1.00
14) ethyl ether	0.313		0.412	0.437	0.438	0.374	0.371	0.360	0.384	0.386	10.86
15) acrolein	0.176			0.162	0.166		0.155	0.151	0.154	0.161	5.70
16) 1,1-dichloroethene	0.513		0.631	0.678	0.668	0.575	0.621	0.553	0.633	0.609	9.39
17) acetone			0.071	0.073	0.068	0.060			0.052	0.065	13.43
18) allyl chloride	0.261		0.412	0.437	0.406	0.381	0.410	0.370	0.421	0.387	14.21
19) acetonitrile			0.062	0.066	0.062	0.059	0.069		0.058	0.063	6.37
20) iodomethane	0.997		1.216	1.294	1.257	1.133	1.117	1.051	1.174	1.155	8.76
21) carbon disulfide	2.298	2.504	2.361	2.553	2.487	2.175	2.310	2.281	2.360	2.370	5.17
22) methylene chloride	0.667	0.622	0.741	0.796	0.788	0.688	0.717	0.692	0.734	0.716	7.82
23) methyl acetate											

Initial Calibration Summary

Job Number: JB56243 **Sample:** V1A5834-ICC5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135308.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
                        0.515 0.530 0.502 0.500 0.416       0.397   0.477   11.69
24)  methyl tert butyl ether
            1.690 1.512 2.003 2.144 2.118 1.869 1.930 1.905 1.971   1.905   10.48
25)  trans-1,2-dichloroethene
            0.602 0.484 0.669 0.724 0.707 0.614 0.658 0.635 0.673   0.641   11.11
26)  di-isopropyl ether
            2.040 1.727 2.428 2.635 2.531 2.220 2.466 1.905 2.335   2.254   13.58
27)  2-butanone
                        0.079 0.075 0.065 0.073             0.044   0.067   20.89
             ----- Linear regression -----  Coefficient =  0.9965
               Response Ratio = -0.00126 + 0.07426 *A

28)  1,1-dichloroethane
            1.124 0.898 1.282 1.375 1.356 1.185 1.273 1.226 1.258   1.220   11.76
29)  chloroprene
            0.764       1.018 1.108 1.032 0.957 1.031 0.814 0.971   0.962   12.13
30)  acrylonitrile
                        0.259 0.274 0.256 0.251 0.244 0.226 0.231   0.249    6.74
31)  vinyl acetate
                        0.109 0.108 0.087 0.108             0.058   0.094   23.61
             ----- Linear regression -----  Coefficient =  0.9995
               Response Ratio = -0.00718 + 0.11064 *A

32)  ethyl tert-butyl ether
            1.932 1.786 2.328 2.499 2.372 2.187 2.293 1.872 2.203   2.164   11.35
33)  ethyl acetate
                        0.085 0.086 0.080 0.082 0.045       0.070   0.074   21.04
             ----- Linear regression -----  Coefficient =  0.9994
               Response Ratio = -0.00095 + 0.08302 *A

34)  2,2-dichloropropane
            0.909 0.741 0.961 1.052 1.024 0.865 0.974 0.969 0.979   0.942    9.92
35)  cis-1,2-dichloroethene
            0.631       0.743 0.798 0.778 0.689 0.692 0.711 0.727   0.721    7.34
36)  methylacrylate
                        0.703 0.706 0.514 0.684 0.334       0.435   0.562   28.26
             ----- Linear regression -----  Coefficient =  0.9989
               Response Ratio = -0.03518 + 0.69921 *A

37)  propionitrile
                        0.095 0.099 0.094 0.093 0.085       0.081   0.091    7.71
38)  bromochloromethane
            0.253       0.367 0.384 0.366 0.345 0.330 0.325 0.336   0.338   11.80
39)  tetrahydrofuran
                        0.212 0.243 0.217 0.208 0.208       0.221   0.218    6.09
40)  chloroform
            0.679 0.488 0.763 0.817 0.795 0.715 0.749 0.760 0.749   0.724   13.43
41)  T-BUTYL FORMATE
                        0.620 0.659 0.613 0.589 0.586 0.440 0.565   0.582   11.90
42)  dibromofluoromethane (s)
            0.688 0.618 0.608 0.617 0.617 0.589 0.548 0.529 0.558   0.597    7.99
43)  1,2-dichloroethane-d4 (s)
            0.867 0.808 0.715 0.714 0.743 0.694 0.706 0.686 0.694   0.737    8.36
44)  freon 113
                        0.433 0.456 0.451 0.405 0.450       0.424   0.437    4.50
45)  methacrylonitrile
                        0.399 0.396 0.341 0.398 0.215       0.275   0.338   22.89
             ----- Linear regression -----  Coefficient =  0.9998
               Response Ratio = -0.01902 + 0.40459 *A
```

Initial Calibration Summary

Job Number: JB56243 **Sample:** V1A5834-ICC5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135308.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
46)  1,1,1-trichloroethane
           0.846       1.017 1.075 0.998 0.954 0.943 0.927 0.955   0.964    7.02
47)  cyclohexane
           0.884 0.736 0.971 1.025 0.937 0.903 0.943 0.949 0.947   0.922    8.72
48)  iso-butyl alcohol
                       0.027 0.027 0.023 0.026 0.024       0.022   0.025    7.41

49) I   1,4-difluorobenzene   ----------------ISTD--------------------
50)  epichlorohydrin
                       0.045 0.045 0.040 0.042 0.047       0.044   0.044    5.35
51)  n-butyl alcohol
                       0.012 0.012 0.010 0.012 0.010       0.010   0.011    8.73
52)  carbon tetrachloride
           0.516 0.412 0.557 0.605 0.589 0.516 0.566 0.583 0.565   0.546   10.71
53)  1,1-dichloropropene
           0.528       0.577 0.628 0.607 0.539 0.572 0.600 0.575   0.578    5.82
54)  hexane
           0.431       0.540 0.583 0.558 0.513 0.574 0.443 0.528   0.521   10.90
55)  benzene
           1.629 1.363 1.649 1.797 1.768 1.486 1.713 1.720 1.676   1.644    8.44
56)  tert-amyl methyl ether
           0.271       0.291 0.316 0.322 0.265 0.359 0.292 0.318   0.304   10.06
57)  heptane
           0.220       0.298 0.316 0.292 0.288 0.306 0.235 0.276   0.279   12.16
58)  isopropyl acetate
                       0.899 0.926 0.861 0.843 0.674       0.706   0.818   12.71
59)  1,2-dichloroethane
           0.462       0.530 0.577 0.579 0.477 0.542 0.562 0.538   0.533    8.14
60)  trichloroethene
           0.335       0.449 0.471 0.446 0.419 0.403 0.407 0.410   0.418    9.85
61)  2-nitropropane
                       0.075 0.077 0.078 0.076 0.050       0.057   0.069   17.92
             ----- Linear regression -----  Coefficient =  0.9997
               Response Ratio = -0.00166 + 0.07638 *A

62)  2-chloroethyl vinyl ether
           0.190       0.261 0.274 0.263 0.232 0.264 0.199 0.233   0.239   13.23
63)  methyl methacrylate
                       0.259 0.261 0.252 0.247 0.197       0.225   0.240   10.22
64)  1,2-dichloropropane
           0.408       0.452 0.487 0.481 0.414 0.422 0.442 0.439   0.443    6.57
65)  dibromomethane
           0.204       0.260 0.275 0.272 0.245 0.249 0.242 0.249   0.250    8.84
66)  methylcyclohexane
           0.626 0.502 0.715 0.783 0.744 0.658 0.754 0.625 0.688   0.677   12.72
67)  bromodichloromethane
           0.463       0.602 0.625 0.602 0.569 0.535 0.535 0.545   0.560    9.27
68)  cis-1,3-dichloropropene
           0.636 0.522 0.733 0.769 0.751 0.685 0.663 0.672 0.689   0.680   10.79
69)  toluene-d8 (s)
                       1.464 1.544 1.587 1.353 1.480 1.499 1.436   1.480    5.11
70)  4-methyl-2-pentanone
                       0.169 0.177 0.174 0.162 0.147       0.153   0.164    7.17
71)  toluene
           0.929 0.739 1.026 1.103 1.057 0.943 1.008 1.009 0.998   0.979   10.67
72)  3-methyl-1-butanol
                       0.018 0.019 0.018 0.017 0.019 0.015 0.018   0.018    7.36
73)  trans-1,3-dichloropropene
           0.593 0.457 0.647 0.679 0.670 0.601 0.620 0.628 0.611   0.612   10.66
74)  ethyl methacrylate
```

Initial Calibration Summary

Job Number: JB56243 **Sample:** V1A5834-ICC5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135308.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
                        0.540 0.571 0.553 0.501 0.464 0.421 0.503   0.507   10.39
 75)  1,1,2-trichloroethane
            0.267       0.325 0.340 0.330 0.304 0.306 0.299 0.303   0.309    7.32
 76)  2-hexanone
                        0.136 0.139 0.148 0.125 0.146       0.113   0.134    9.76

 77) I   chlorobenzene-d5      ----------------ISTD--------------------
 78)  tetrachloroethene
            0.345       0.390 0.409 0.396 0.356 0.373 0.374 0.375   0.378    5.51
 79)  1,3-dichloropropane
            0.602       0.652 0.685 0.698 0.597 0.656 0.664 0.659   0.652    5.48
 80)  butyl acetate
            0.238       0.280 0.290 0.270 0.265 0.242       0.243   0.261    7.81
 81)  3,3-DIMETHYL-1-BUTANOL
            0.037       0.043 0.046 0.043 0.043 0.046 0.036 0.040   0.042    9.29
 82)  dibromochloromethane
            0.383       0.477 0.485 0.469 0.455 0.425 0.419 0.428   0.443    7.84
 83)  1,2-dibromoethane
            0.337       0.420 0.433 0.426 0.402 0.389 0.391 0.395   0.399    7.57
 84)  chlorobenzene
            1.129 1.005 1.261 1.314 1.283 1.180 1.172 1.173 1.187   1.189    7.74
 85)  1,1,1,2-tetrachloroethane
            0.377 0.326 0.453 0.491 0.478 0.409 0.431 0.424 0.442   0.426   11.98
 86)  ethylbenzene
            1.836 1.636 2.022 2.171 2.158 1.824 2.006 2.018 2.021   1.966    8.73
 87)  m,p-xylene
            0.733 0.631 0.773 0.832 0.825 0.697 0.800 0.796 0.790   0.764    8.60
 88)  o-xylene
            0.725 0.622 0.863 0.922 0.906 0.784 0.839 0.812 0.852   0.814   11.52
 89)  styrene
            1.154       1.352 1.429 1.425 1.227 1.304 1.262 1.314   1.308    7.24
 90)  bromoform
            0.238       0.346 0.346 0.327 0.343 0.279 0.276 0.291   0.306   13.20

 91) I   1,4-dichlorobenzene-d ----------------ISTD--------------------
 92)  isopropylbenzene
            3.417 2.995 4.190 4.432 4.246 3.808 3.870 3.901 3.932   3.866   11.35
 93)  4-bromofluorobenzene (s)
                        1.132 1.137 1.172 1.102 1.116 1.219 1.079   1.137    4.11
 94)  cyclohexanone
            0.065       0.063 0.065 0.068 0.043 0.072 0.062 0.060   0.062   13.69
 95)  bromobenzene
            0.944 0.734 1.005 1.058 1.030 0.928 0.976 0.996 0.972   0.960    9.79
 96)  1,1,2,2-tetrachloroethane
            0.944 0.820 1.062 1.105 1.071 1.014 1.025 1.027 1.018   1.010    8.34
 97)  trans-1,4-dichloro-2-butene
                        0.283 0.288 0.279 0.274 0.245 0.251 0.253   0.268    6.46
 98)  1,2,3-trichloropropane
            0.204       0.268 0.284 0.272 0.255 0.251 0.244 0.260   0.255    9.48
 99)  n-propylbenzene
            4.170 3.705 4.424 4.760 4.575 3.985 4.491 4.510 4.448   4.341    7.56
100)  2-chlorotoluene
            0.871 0.670 0.972 1.021 0.986 0.878 0.928 0.926 0.915   0.907   11.19
101)  4-chlorotoluene
            2.729 2.713 2.973 3.023 2.982 2.832 2.849 2.926 2.804   2.870    3.90
102)  1,3,5-trimethylbenzene
            3.008 2.726 3.398 3.622 3.495 3.083 3.232 3.305 3.260   3.237    8.34
103)  tert-butylbenzene
            2.670 2.348 3.118 3.254 3.022 2.959 2.771 2.852 2.811   2.867    9.27
104)  pentachloroethane
```

Initial Calibration Summary

Job Number: JB56243 **Sample:** V1A5834-ICC5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135308.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
            0.513       0.660 0.705 0.661 0.647 0.572 0.591 0.599   0.618    9.92
105)  1,2,4-trimethylbenzene
            3.124 2.719 3.478 3.647 3.531 3.204 3.238 3.296 3.288   3.281    8.23
106)  sec-butylbenzene
            4.001 3.564 4.599 4.876 4.599 4.261 4.341 4.317 4.239   4.311    8.78
107)  1,2,3-trimethylbenzene
            2.959 2.567 3.280 3.488 3.418 3.010 2.969 3.126 3.177   3.111    8.94
108)  1,3-dichlorobenzene
            1.895 1.943 2.047 2.090 2.025 1.951 1.869 1.958 1.867   1.960    4.04
109)  p-isopropyltoluene
            3.245 2.888 3.881 4.084 3.864 3.586 3.566 3.627 3.561   3.589    9.94
110)  1,4-dichlorobenzene
            1.938 1.950 1.986 2.069 2.008 1.834 1.848 1.950 1.851   1.937    4.13
111)  benzyl chloride
            1.617 1.682 1.989 2.042 1.841 1.858 1.761 1.487 1.653   1.770   10.18
112)  1,2-dichlorobenzene
            1.798 1.793 2.107 2.188 2.096 1.969 1.849 1.916 1.897   1.957    7.32
113)  n-butylbenzene
                        2.074 2.156 1.998 1.937 1.734 1.709 1.795   1.915    9.05
114)  1,2-dibromo-3-chloropropane
                        0.203 0.225 0.202 0.198 0.168       0.171   0.194   10.98
115)  1,3,5-TRICHLOROBENZENE
            1.389       1.787 2.030 1.906 1.611 1.569 1.526 1.661   1.685   12.50
116)  1,2,4-trichlorobenzene
                        1.471 1.814 1.653 1.314 1.247       1.363   1.477   14.75
117)  hexachlorobutadiene
            0.732 0.715 0.738 0.918 0.860 0.683 0.801 0.812 0.792   0.783    9.53
118)  naphthalene
            1.644       2.519 3.375 3.042 2.340 2.283 2.076 2.541   2.477   21.80
        ----- Quadratic regression -----                Coefficient =  0.9949
            Response Ratio = -0.00500 + 3.06992 *A + -0.18585 *A^2

119)  1,2,3-trichlorobenzene
            0.845 0.826 1.020 1.485 1.381 0.899 1.057 0.977 1.155   1.072   21.57
        ----- Quadratic regression -----                Coefficient =  0.9914
            Response Ratio = 0.00796 + 1.33264 *A + -0.11086 *A^2

120)  hexachloroethane
                        0.701 0.744 0.654 0.679 0.534 0.526 0.566   0.629   13.81
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M1A5834.M         Tue Dec 17 12:09:58 2013   RPT1
```

Initial Calibration Verification

Job Number: JB56243 **Sample:** V1A5834-ICV5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135319.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1A135319.D Vial: 19
Acq On : 17 Dec 2013 9:44 am Operator: Cathleen
Sample : icv5834-50 Inst : MS1A
Misc : MS59913,V1A5834,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1A5834.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Tue Dec 17 11:54:12 2013
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	103	0.00	7.59
2	M	tertiary butyl alcohol	1.325	1.299	2.0	97	0.00	7.72
3		Ethanol	0.106	0.121	-14.2	109	0.00	6.18
4	M	1,4-dioxane	0.125	0.135	-8.0	102	0.00	11.74
5	I	pentafluorobenzene	1.000	1.000	0.0	108	0.00	10.03
6	M	chlorodifluoromethane	0.693	0.677	2.3	90	0.00	3.86
7	M	dichlorodifluoromethane	1.048	1.250	-19.3	117	0.00	3.84
8	M	chloromethane	1.229	1.303	-6.0	102	0.00	4.18
9	M	vinyl chloride	1.137	1.093	3.9	95	0.00	4.45
10	M	bromomethane	0.636	0.526	17.3	94	0.00	5.13
11	M	chloroethane	0.500	0.510	-2.0	104	0.00	5.32
12	M	trichlorofluoromethane	1.013	0.987	2.6	97	0.00	5.83
13		Pentane		----------NA----------				
14	M	ethyl ether	0.386	0.422	-9.3	104	0.00	6.30
15	M	acrolein	0.161	0.153	5.0	102	0.00	6.57
16	M	1,1-dichloroethene	0.609	0.593	2.6	94	0.00	6.75
17	M	acetone	0.065	0.115	-76.9#	169	0.00	6.86
18	M	allyl chloride	0.387	0.411	-6.2	101	0.00	7.35
19	M	acetonitrile	0.063	0.064	-1.6	104	0.00	7.34
20	M	iodomethane	1.155	1.142	1.1	95	0.00	7.05
21	M	carbon disulfide	2.370	2.216	6.5	93	0.00	7.19
22	M	methylene chloride	0.716	0.723	-1.0	98	0.00	7.56
23	M	methyl acetate	0.477	0.476	0.2	97	0.00	7.38
24	M	methyl tert butyl ether	1.905	1.904	0.1	96	0.00	7.95
25	M	trans-1,2-dichloroethene	0.641	0.623	2.8	92	0.00	8.00
26	M	di-isopropyl ether	2.254	2.370	-5.1	97	0.00	8.63
		----------	True	Calc.	% Drift	----------		
27	M	2-butanone	50.000	68.978	-38.0#	146	0.00	9.45
		----------	AvgRF	CCRF	% Dev	----------		
28	M	1,1-dichloroethane	1.220	1.269	-4.0	99	0.00	8.63
29	M	chloroprene	0.962	0.980	-1.9	95	0.00	8.75
30	M	acrylonitrile	0.249	0.253	-1.6	99	0.00	7.95
		----------	True	Calc.	% Drift	----------		
31	M	vinyl acetate	50.000	54.047	-8.1	112	0.00	8.65
		----------	AvgRF	CCRF	% Dev	----------		
32	M	ethyl tert-butyl ether	2.164	2.259	-4.4	97	0.00	9.14

Initial Calibration Verification

Job Number: JB56243 **Sample:** V1A5834-ICV5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135319.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

		----------	True	Calc.	% Drift	----------		
33	M	ethyl acetate	50.000	50.613	-1.2	104	0.00	9.46
		----------	AvgRF	CCRF	% Dev	----------		
34	M	2,2-dichloropropane	0.942	1.012	-7.4	103	0.00	9.43
35	M	cis-1,2-dichloroethene	0.721	0.719	0.3	97	0.00	9.44
		----------	True	Calc.	% Drift	----------		
36		methylacrylate	50.000	51.275	-2.5	104	0.00	9.55
		----------	AvgRF	CCRF	% Dev	----------		
37	M	propionitrile	0.091	0.097	-6.6	105	0.00	9.51
38	M	bromochloromethane	0.338	0.344	-1.8	97	0.00	9.78
39	M	tetrahydrofuran	0.218	0.214	1.8	94	0.00	9.84
40	M	chloroform	0.724	0.743	-2.6	98	0.00	9.84
41	M	T-BUTYL FORMATE	0.582	0.658	-13.1	107	0.00	9.88
42	S	dibromofluoromethane (s)	0.597	0.552	7.5	96	0.00	10.06
43	S	1,2-dichloroethane-d4 (s)	0.737	0.659	10.6	99	0.00	10.50
44	M	freon 113	0.437	0.461	-5.5	109	0.00	6.73
		----------	True	Calc.	% Drift	----------		
45	M	methacrylonitrile	50.000	49.104	1.8	103	0.00	9.72
		----------	AvgRF	CCRF	% Dev	----------		
46	M	1,1,1-trichloroethane	0.964	0.953	1.1	95	0.00	10.10
47	M	cyclohexane	0.922	0.929	-0.8	97	0.00	10.17
48		iso-butyl alcohol	0.025	0.026	-4.0	103	0.00	10.36
49	I	1,4-difluorobenzene	1.000	1.000	0.0	112	0.00	10.98
50	M	epichlorohydrin	0.044	0.043	2.3	107	0.00	12.31
51	M	n-butyl alcohol	0.011	0.011	0.0	99	0.00	11.15
52	M	carbon tetrachloride	0.546	0.523	4.2	97	0.00	10.32
53	M	1,1-dichloropropene	0.578	0.515	10.9	92	0.00	10.30
54	M	hexane	0.521	0.575	-10.4	111	0.00	8.34
55	M	benzene	1.644	1.576	4.1	98	0.00	10.57
56	M	tert-amyl methyl ether	0.304	0.280	7.9	99	0.00	10.62
57	M	heptane	0.279	0.301	-7.9	107	0.00	10.77
58	M	isopropyl acetate	0.818	0.805	1.6	98	0.00	10.52
59	M	1,2-dichloroethane	0.533	0.519	2.6	101	0.00	10.59
60	M	trichloroethene	0.418	0.413	1.2	98	0.00	11.33
		----------	True	Calc.	% Drift	----------		
61	M	2-nitropropane	50.000	50.582	-1.2	110	0.00	12.51
		----------	AvgRF	CCRF	% Dev	----------		
62	M	2-chloroethyl vinyl ether	0.239	0.248	-3.8	102	0.00	12.18
63	M	methyl methacrylate	0.240	0.240	0.0	103	0.00	11.64
64	M	1,2-dichloropropane	0.443	0.428	3.4	99	0.00	11.60
65	M	dibromomethane	0.250	0.248	0.8	101	0.00	11.77
66	M	methylcyclohexane	0.677	0.695	-2.7	100	0.00	11.55
67	M	bromodichloromethane	0.560	0.554	1.1	99	0.00	11.91
68	M	cis-1,3-dichloropropene	0.680	0.657	3.4	96	0.00	12.40
69	S	toluene-d8 (s)	1.480	1.332	10.0	97	0.00	12.70
70	M	4-methyl-2-pentanone	0.164	0.165	-0.6	104	0.00	12.51
71	M	toluene	0.979	0.960	1.9	98	0.00	12.78
72	M	3-methyl-1-butanol	0.018	0.017	5.6	100	0.00	12.55
73	M	trans-1,3-dichloropropene	0.612	0.630	-2.9	104	0.00	13.01
74	M	ethyl methacrylate	0.507	0.509	-0.4	100	0.00	13.01
75	M	1,1,2-trichloroethane	0.309	0.311	-0.6	103	0.00	13.23
76	M	2-hexanone	0.134	0.179	-33.6#	145	0.00	13.43

Initial Calibration Verification

Job Number: JB56243 **Sample:** V1A5834-ICV5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135319.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

77	I	chlorobenzene-d5	1.000	1.000	0.0	111	0.00	14.33
78	M	tetrachloroethene	0.378	0.349	7.7	94	0.00	13.41
79	M	1,3-dichloropropane	0.652	0.638	2.1	103	0.00	13.42
80	M	butyl acetate	0.261	0.269	-3.1	103	0.00	13.51
81	M	3,3-DIMETHYL-1-BUTANOL	0.042	0.041	2.4	98	0.00	13.61
82	M	dibromochloromethane	0.443	0.442	0.2	101	0.00	13.70
83	M	1,2-dibromoethane	0.399	0.395	1.0	101	0.00	13.86
84	M	chlorobenzene	1.189	1.172	1.4	99	0.00	14.36
85	M	1,1,1,2-tetrachloroethane	0.426	0.423	0.7	95	0.00	14.42
86	M	ethylbenzene	1.966	1.919	2.4	98	0.00	14.42
87	M	m,p-xylene	0.764	0.737	3.5	98	0.00	14.54
88	M	o-xylene	0.814	0.804	1.2	97	0.00	14.98
89	M	styrene	1.308	1.278	2.3	99	0.00	15.00
90	M	bromoform	0.306	0.309	-1.0	99	0.00	15.27
91	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	16.81
92	M	isopropylbenzene	3.866	3.900	-0.9	95	0.00	15.35
93	S	4-bromofluorobenzene (s)	1.137	1.023	10.0	98	0.00	15.57
94		cyclohexanone	0.062	0.076	-22.6#	127	0.00	15.51
95	M	bromobenzene	0.960	0.947	1.4	97	0.00	15.77
96	M	1,1,2,2-tetrachloroethane	1.010	0.992	1.8	97	0.00	15.68
97	M	trans-1,4-dichloro-2-bute	0.268	0.289	-7.8	109	0.00	15.72
98	M	1,2,3-trichloropropane	0.255	0.251	1.6	96	0.00	15.75
99	M	n-propylbenzene	4.341	4.393	-1.2	100	0.00	15.78
100	M	2-chlorotoluene	0.907	0.911	-0.4	97	0.00	15.94
101	M	4-chlorotoluene	2.870	2.730	4.9	98	0.00	16.04
102	M	1,3,5-trimethylbenzene	3.237	3.226	0.3	97	0.00	15.94
103	M	tert-butylbenzene	2.867	2.870	-0.1	96	0.00	16.31
104	M	pentachloroethane	0.618	0.645	-4.4	99	0.00	16.40
105	M	1,2,4-trimethylbenzene	3.281	3.344	-1.9	99	0.00	16.36
106	M	sec-butylbenzene	4.311	4.312	-0.0	96	0.00	16.53
107		1,2,3-trimethylbenzene	3.111	2.978	4.3	93	0.00	16.83
108	M	1,3-dichlorobenzene	1.960	1.885	3.8	98	0.00	16.74
109	M	p-isopropyltoluene	3.589	3.728	-3.9	99	0.00	16.66
110	M	1,4-dichlorobenzene	1.937	1.873	3.3	98	0.00	16.83
111		benzyl chloride	1.770	2.355	-33.1#	125	0.00	16.95
112	M	1,2-dichlorobenzene	1.957	1.950	0.4	97	0.00	17.25
113	M	n-butylbenzene	1.915	1.978	-3.3	99	0.00	17.10
114	M	1,2-dibromo-3-chloropropa	0.194	0.211	-8.8	102	0.00	18.08
115		1,3,5-TRICHLOROBENZENE	1.685	1.878	-11.5	100	0.00	18.28
116	M	1,2,4-trichlorobenzene	1.477	1.639	-11.0	98	0.00	18.97
117	M	hexachlorobutadiene	0.783	0.815	-4.1	96	0.00	19.09
		----------	True	Calc.	% Drift	----------		
118	M	naphthalene	50.000	53.529	-7.1	99	0.00	19.27
119	M	1,2,3-trichlorobenzene	50.000	56.528	-13.1	100	0.00	19.53
		----------	AvgRF	CCRF	% Dev	----------		
120	m	hexachloroethane	0.629	0.661	-5.1	96	0.00	17.53

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1a135308.D M1A5834.M Tue Dec 17 12:12:58 2013 RPT1

Continuing Calibration Summary

Job Number: JB56243 **Sample:** V1A5854-CC5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135693.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1A135693.D Vial: 3
Acq On : 27 Dec 2013 10:14 am Operator: Cathleen
Sample : cc5834-20 Inst : MS1A
Misc : MS60832,V1A5854,W,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1A5834.M (RTE Integrator)
Title : Method SW846 8260B, ZB624 60mx0.25mmx1.4um
Last Update : Fri Dec 20 18:24:04 2013
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1		tert butyl alcohol-d9	1.000	1.000	0.0	100	0.00	7.58
2	M	tertiary butyl alcohol	1.325	1.237	6.6	97	0.00	7.72
3		Ethanol	0.106	0.152	-43.4#	130	0.00	6.18
4	M	1,4-dioxane	0.125	0.116	7.2	96	0.01	11.75
5	I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	10.03
6	M	chlorodifluoromethane	0.693	0.750	-8.2	102	0.00	3.86
7	M	dichlorodifluoromethane	1.048	1.187	-13.3	100	0.00	3.83
8	M	chloromethane	1.229	1.353	-10.1	91	-0.01	4.17
9	M	vinyl chloride	1.137	1.282	-12.8	93	-0.01	4.43
10	M	bromomethane	0.636	0.697	-9.6	93	0.00	5.13
11	M	chloroethane	0.500	0.553	-10.6	93	0.00	5.32
12	M	trichlorofluoromethane	1.013	1.173	-15.8	98	0.00	5.83
13		Pentane		----------NA----------				
14	M	ethyl ether	0.386	0.411	-6.5	93	0.00	6.31
15	M	acrolein	0.161	0.140	13.0	84	0.00	6.59
16	M	1,1-dichloroethene	0.609	0.580	4.8	86	0.00	6.75
17	M	acetone	0.065	0.053	18.5	78	0.02	6.88
18	M	allyl chloride	0.387	0.391	-1.0	96	0.00	7.35
19	M	acetonitrile	0.063	0.068	-7.9	108	0.00	7.35
20	M	iodomethane	1.155	1.076	6.8	85	0.00	7.05
21	M	carbon disulfide	2.370	2.098	11.5	84	0.00	7.19
22	M	methylene chloride	0.716	0.726	-1.4	92	0.00	7.57
23	M	methyl acetate	0.477	0.523	-9.6	104	0.02	7.40
24	M	methyl tert butyl ether	1.905	2.058	-8.0	97	0.00	7.95
25	M	trans-1,2-dichloroethene	0.641	0.642	-0.2	90	0.00	8.00
26	M	di-isopropyl ether	2.254	2.556	-13.4	101	0.00	8.63
		----------	True	Calc.	% Drift		----------	
27	M	2-butanone	20.000	17.158	14.2	93	0.04	9.49
		----------	AvgRF	CCRF	% Dev		----------	
28	M	1,1-dichloroethane	1.220	1.308	-7.2	96	0.00	8.63
29	M	chloroprene	0.962	0.998	-3.7	96	0.00	8.76
30	M	acrylonitrile	0.249	0.281	-12.9	109	0.02	7.97
		----------	True	Calc.	% Drift		----------	
31	M	vinyl acetate	20.000	19.850	0.7	106	0.03	8.69
		----------	AvgRF	CCRF	% Dev		----------	
32	M	ethyl tert-butyl ether	2.164	2.334	-7.9	98	0.00	9.14

Continuing Calibration Summary

Job Number: JB56243 **Sample:** V1A5854-CC5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135693.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

		----------	True	Calc.	% Drift	----------		
33	M	ethyl acetate	20.000	22.658	-13.3	114	0.02	9.48
		----------	AvgRF	CCRF	% Dev	----------		
34	M	2,2-dichloropropane	0.942	1.019	-8.2	99	0.00	9.43
35	M	cis-1,2-dichloroethene	0.721	0.717	0.6	92	0.00	9.45
		----------	True	Calc.	% Drift	----------		
36		methylacrylate	20.000	21.463	-7.3	128	0.05	9.60
		----------	AvgRF	CCRF	% Dev	----------		
37	M	propionitrile	0.091	0.096	-5.5	102	0.02	9.54
38	M	bromochloromethane	0.338	0.356	-5.3	97	0.00	9.78
39	M	tetrahydrofuran	0.218	0.241	-10.6	111	0.00	9.85
40	M	chloroform	0.724	0.763	-5.4	95	0.00	9.84
41	M	T-BUTYL FORMATE	0.582	0.581	0.2	94	0.00	9.89
42	S	dibromofluoromethane (s)	0.597	0.562	5.9	90	0.00	10.06
43	S	1,2-dichloroethane-d4 (s)	0.737	0.694	5.8	93	0.00	10.50
44	M	freon 113	0.437	0.453	-3.7	100	0.00	6.72
		----------	True	Calc.	% Drift	----------		
45	M	methacrylonitrile	20.000	20.036	-0.2	104	0.02	9.74
		----------	AvgRF	CCRF	% Dev	----------		
46	M	1,1,1-trichloroethane	0.964	0.944	2.1	94	0.00	10.10
47	M	cyclohexane	0.922	0.925	-0.3	98	-0.01	10.17
48		iso-butyl alcohol	0.025	0.026	-4.0	112	0.02	10.38
49	I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	10.98
50	M	epichlorohydrin	0.044	0.046	-4.5	119	0.01	12.32
51	M	n-butyl alcohol	0.011	0.010	9.1	104	0.02	11.17
52	M	carbon tetrachloride	0.546	0.539	1.3	95	0.00	10.32
53	M	1,1-dichloropropene	0.578	0.553	4.3	95	0.00	10.30
54	M	hexane	0.521	0.581	-11.5	108	0.00	8.34
55	M	benzene	1.644	1.633	0.7	96	0.00	10.58
56	M	tert-amyl methyl ether	0.304	0.294	3.3	95	0.00	10.62
57	M	heptane	0.279	0.310	-11.1	111	0.00	10.77
58	M	isopropyl acetate	0.818	0.770	5.9	93	0.01	10.53
59	M	1,2-dichloroethane	0.533	0.551	-3.4	99	0.00	10.60
60	M	trichloroethene	0.418	0.415	0.7	97	0.00	11.34
		----------	True	Calc.	% Drift	----------		
61	M	2-nitropropane	20.000	23.761	-18.8	115	0.00	12.52
		----------	AvgRF	CCRF	% Dev	----------		
62	M	2-chloroethyl vinyl ether	0.239	0.300	-25.5#	119	0.00	12.18
63	M	methyl methacrylate	0.240	0.272	-13.3	112	0.02	11.65
64	M	1,2-dichloropropane	0.443	0.465	-5.0	101	0.00	11.61
65	M	dibromomethane	0.250	0.263	-5.2	101	0.00	11.78
66	M	methylcyclohexane	0.677	0.706	-4.3	99	0.00	11.55
67	M	bromodichloromethane	0.560	0.586	-4.6	102	0.00	11.92
68	M	cis-1,3-dichloropropene	0.680	0.757	-11.3	105	0.01	12.41
69	S	toluene-d8 (s)	1.480	1.466	0.9	96	0.00	12.71
70	M	4-methyl-2-pentanone	0.164	0.168	-2.4	101	0.01	12.52
71	M	toluene	0.979	1.007	-2.9	99	0.00	12.79
72	M	3-methyl-1-butanol	0.018	0.017	5.6	100	0.01	12.56
73	M	trans-1,3-dichloropropene	0.612	0.674	-10.1	105	0.00	13.01
74	M	ethyl methacrylate	0.507	0.543	-7.1	102	0.00	13.01
75	M	1,1,2-trichloroethane	0.309	0.339	-9.7	107	0.00	13.23
76	M	2-hexanone	0.134	0.137	-2.2	97	0.01	13.44

Continuing Calibration Summary

Job Number: JB56243 **Sample:** V1A5854-CC5834
Account: ENVNJB EnviroTrac **Lab FileID:** 1A135693.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

77	I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	14.33
78	M	tetrachloroethene	0.378	0.367	2.9	98	0.00	13.42
79	M	1,3-dichloropropane	0.652	0.707	-8.4	107	0.00	13.43
80	M	butyl acetate	0.261	0.279	-6.9	109	0.01	13.52
81	M	3,3-DIMETHYL-1-BUTANOL	0.042	0.039	7.1	95	0.00	13.62
82	M	dibromochloromethane	0.443	0.462	-4.3	104	0.00	13.71
83	M	1,2-dibromoethane	0.399	0.419	-5.0	104	0.00	13.87
84	M	chlorobenzene	1.189	1.221	-2.7	100	0.00	14.36
85	M	1,1,1,2-tetrachloroethane	0.426	0.441	-3.5	97	0.00	14.43
86	M	ethylbenzene	1.966	2.029	-3.2	99	0.00	14.42
87	M	m,p-xylene	0.764	0.780	-2.1	100	0.00	14.54
88	M	o-xylene	0.814	0.837	-2.8	97	0.00	14.98
89	M	styrene	1.308	1.332	-1.8	99	0.00	15.00
90	M	bromoform	0.306	0.311	-1.6	100	0.00	15.28
91	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	16.81
92	M	isopropylbenzene	3.866	4.143	-7.2	97	0.00	15.35
93	S	4-bromofluorobenzene (s)	1.137	1.114	2.0	95	0.00	15.57
94		cyclohexanone	0.062	0.039	37.1#	56	0.00	15.52
95	M	bromobenzene	0.960	1.022	-6.5	99	0.00	15.77
96	M	1,1,2,2-tetrachloroethane	1.010	1.112	-10.1	103	0.00	15.68
97	M	trans-1,4-dichloro-2-bute	0.268	0.186	30.6#	67	0.00	15.72
98	M	1,2,3-trichloropropane	0.255	0.281	-10.2	103	0.00	15.75
99	M	n-propylbenzene	4.341	4.563	-5.1	99	0.00	15.78
100	M	2-chlorotoluene	0.907	0.962	-6.1	97	0.00	15.94
101	M	4-chlorotoluene	2.870	2.969	-3.4	99	0.00	16.05
102	M	1,3,5-trimethylbenzene	3.237	3.353	-3.6	95	0.00	15.94
103	M	tert-butylbenzene	2.867	2.976	-3.8	98	0.00	16.31
104	M	pentachloroethane	0.618	0.663	-7.3	100	0.00	16.40
105	M	1,2,4-trimethylbenzene	3.281	3.424	-4.4	96	0.00	16.36
106	M	sec-butylbenzene	4.311	4.491	-4.2	97	0.00	16.54
107		1,2,3-trimethylbenzene	3.111	3.192	-2.6	93	0.00	16.83
108	M	1,3-dichlorobenzene	1.960	1.980	-1.0	97	0.00	16.74
109	M	p-isopropyltoluene	3.589	3.714	-3.5	96	0.00	16.66
110	M	1,4-dichlorobenzene	1.937	1.947	-0.5	96	0.00	16.83
111		benzyl chloride	1.770	2.028	-14.6	110	0.00	16.95
112	M	1,2-dichlorobenzene	1.957	2.029	-3.7	96	0.00	17.25
113	M	n-butylbenzene	1.915	1.957	-2.2	97	0.00	17.10
114	M	1,2-dibromo-3-chloropropa	0.194	0.201	-3.6	99	0.00	18.08
115		1,3,5-TRICHLOROBENZENE	1.685	1.784	-5.9	93	0.00	18.29
116	M	1,2,4-trichlorobenzene	1.477	1.577	-6.8	95	0.00	18.97
117	M	hexachlorobutadiene	0.783	0.807	-3.1	93	0.00	19.09
		----------	True	Calc.	% Drift	----------		
118	M	naphthalene	20.000	19.926	0.4	97	0.00	19.27
119	M	1,2,3-trichlorobenzene	20.000	20.483	-2.4	96	0.00	19.53
		----------	AvgRF	CCRF	% Dev	----------		
120	m	hexachloroethane	0.629	0.611	2.9	93	0.00	17.53

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1a135307.D M1A5834.M Fri Dec 27 15:31:38 2013 RPT1

New Jersey
ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71691-MB1	6P3217.D	1	12/28/13	ALS	12/26/13	OP71691	E6P128

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB56243-1

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.97	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.8	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.5	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	17	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	0.99	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.0	ug/l	
	3&4-Methylphenol	ND	2.0	0.93	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.5	ug/l	
100-02-7	4-Nitrophenol	ND	10	5.2	ug/l	
108-95-2	Phenol	ND	2.0	1.3	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.3	ug/l	
98-86-2	Acetophenone	ND	2.0	0.29	ug/l	
1912-24-9	Atrazine	ND	2.0	0.49	ug/l	
100-52-7	Benzaldehyde	ND	5.0	3.3	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.36	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.29	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.30	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.53	ug/l	
86-74-8	Carbazole	ND	1.0	0.36	ug/l	
105-60-2	Caprolactam	ND	2.0	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.45	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.31	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.43	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.46	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.36	ug/l	
123-91-1	1,4-Dioxane	ND	1.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.56	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.31	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.33	ug/l	

Method Blank Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71691-MB1	6P3217.D	1	12/28/13	ALS	12/26/13	OP71691	E6P128

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB56243-1

CAS No.	Compound	Result	RL	MDL	Units	Q
131-11-3	Dimethyl phthalate	ND	2.0	0.28	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.59	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	7.1	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.55	ug/l	
78-59-1	Isophorone	ND	2.0	0.27	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.38	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.7	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.42	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.30	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.31	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.31	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	45%	10-110%
4165-62-2	Phenol-d5	29%	10-110%
118-79-6	2,4,6-Tribromophenol	87%	29-139%
4165-60-0	Nitrobenzene-d5	90%	28-131%
321-60-8	2-Fluorobiphenyl	77%	30-121%
1718-51-0	Terphenyl-d14	83%	16-147%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	3.74	45	ug/l	J
	Internal standard added for SIM test	7.31	4.4	ug/l	J
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71691-MB1	R105932.D	1	01/02/14	SP	12/26/13	OP71691	ER4224

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB56243-1

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.97	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.8	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.5	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	17	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	0.99	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.0	ug/l	
	3&4-Methylphenol	ND	2.0	0.93	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.5	ug/l	
100-02-7	4-Nitrophenol	ND	10	5.2	ug/l	
108-95-2	Phenol	ND	2.0	1.3	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.3	ug/l	
98-86-2	Acetophenone	ND	2.0	0.29	ug/l	
1912-24-9	Atrazine	ND	2.0	0.49	ug/l	
100-52-7	Benzaldehyde	ND	5.0	3.3	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.36	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.29	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.30	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.53	ug/l	
86-74-8	Carbazole	ND	1.0	0.36	ug/l	
105-60-2	Caprolactam	ND	2.0	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.45	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.31	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.43	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.46	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	2.0	0.36	ug/l	
123-91-1	1,4-Dioxane	ND	1.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.56	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.31	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.33	ug/l	

Method Blank Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71691-MB1	R105932.D	1	01/02/14	SP	12/26/13	OP71691	ER4224

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB56243-1

CAS No.	Compound	Result	RL	MDL	Units	Q
131-11-3	Dimethyl phthalate	ND	2.0	0.28	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.59	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	7.1	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.55	ug/l	
78-59-1	Isophorone	ND	2.0	0.27	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.38	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.7	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.42	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.30	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.31	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.31	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	45%	10-110%
4165-62-2	Phenol-d5	24%	10-110%
118-79-6	2,4,6-Tribromophenol	94%	29-139%
4165-60-0	Nitrobenzene-d5	98%	28-131%
321-60-8	2-Fluorobiphenyl	82%	30-121%
1718-51-0	Terphenyl-d14	92%	16-147%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	3.05	57	ug/l	J
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71691A-MB1	3M43365.D	1	12/27/13	NAP	12/26/13	OP71691A	E3M1948

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

JB56243-1

CAS No.	Compound	Result	RL	MDL	Units	Q
87-86-5	Pentachlorophenol	ND	0.30	0.10	ug/l	
83-32-9	Acenaphthene	ND	0.10	0.020	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.024	ug/l	
120-12-7	Anthracene	ND	0.10	0.020	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.10	0.012	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.012	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.010	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.016	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.015	ug/l	
218-01-9	Chrysene	ND	0.10	0.012	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.017	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.013	ug/l	
86-73-7	Fluorene	ND	0.10	0.017	ug/l	
118-74-1	Hexachlorobenzene	ND	0.020	0.017	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.014	ug/l	
91-20-3	Naphthalene	ND	0.10	0.036	ug/l	
85-01-8	Phenanthrene	ND	0.10	0.021	ug/l	
129-00-0	Pyrene	ND	0.10	0.015	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	50%	10-110%
4165-62-2	Phenol-d5	26%	10-110%
118-79-6	2,4,6-Tribromophenol	106%	10-157%
4165-60-0	Nitrobenzene-d5	94%	23-131%
321-60-8	2-Fluorobiphenyl	85%	24-120%
1718-51-0	Terphenyl-d14	93%	10-125%

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71691-BS1	6P3218.D	1	12/28/13	ALS	12/26/13	OP71691	E6P128
OP71691-BSD	6P3219.D	1	12/28/13	ALS	12/26/13	OP71691	E6P128

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB56243-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	50	36.0	72	37.4	75	4	42-110/30
59-50-7	4-Chloro-3-methyl phenol	50	39.3	79	40.7	81	4	49-120/30
120-83-2	2,4-Dichlorophenol	50	40.3	81	42.1	84	4	47-114/30
105-67-9	2,4-Dimethylphenol	50	39.5	79	41.1	82	4	48-129/30
51-28-5	2,4-Dinitrophenol	100	82.5	83	85.8	86	4	26-153/30
534-52-1	4,6-Dinitro-o-cresol	50	44.4	89	46.2	92	4	44-132/30
95-48-7	2-Methylphenol	50	33.1	66	33.9	68	2	39-110/30
	3&4-Methylphenol	50	29.9	60	30.5	61	2	36-110/30
88-75-5	2-Nitrophenol	50	42.9	86	45.4	91	6	45-110/30
100-02-7	4-Nitrophenol	50	21.1	42	22.7	45	7	10-110/30
108-95-2	Phenol	50	16.0	32	16.1	32	1	10-110/30
58-90-2	2,3,4,6-Tetrachlorophenol	50	42.9	86	44.1	88	3	47-119/30
95-95-4	2,4,5-Trichlorophenol	50	41.9	84	43.2	86	3	52-119/30
88-06-2	2,4,6-Trichlorophenol	50	41.3	83	42.9	86	4	51-118/30
98-86-2	Acetophenone	50	43.1	86	44.6	89	3	39-125/30
1912-24-9	Atrazine	50	53.4	107	53.9	108	1	58-153/30
100-52-7	Benzaldehyde	50	58.1	116	60.5	121* [a]	4	32-119/30
101-55-3	4-Bromophenyl phenyl ether	50	40.5	81	41.4	83	2	55-120/30
85-68-7	Butyl benzyl phthalate	50	46.6	93	49.0	98	5	42-138/30
92-52-4	1,1'-Biphenyl	50	38.8	78	40.4	81	4	41-123/30
91-58-7	2-Chloronaphthalene	50	32.1	64	34.0	68	6	38-107/30
106-47-8	4-Chloroaniline	50	23.1	46	23.8	48	3	38-110/30
86-74-8	Carbazole	50	44.5	89	45.4	91	2	55-121/30
105-60-2	Caprolactam	50	10.6	21	10.1	20	5	10-113/30
111-91-1	bis(2-Chloroethoxy)methane	50	43.7	87	45.9	92	5	48-117/30
111-44-4	bis(2-Chloroethyl)ether	50	43.2	86	45.1	90	4	40-108/30
108-60-1	bis(2-Chloroisopropyl)ether	50	40.0	80	41.1	82	3	37-107/30
7005-72-3	4-Chlorophenyl phenyl ether	50	37.2	74	38.1	76	2	48-117/30
121-14-2	2,4-Dinitrotoluene	50	45.5	91	46.9	94	3	53-129/30
606-20-2	2,6-Dinitrotoluene	50	46.6	93	48.5	97	4	57-126/30
91-94-1	3,3'-Dichlorobenzidine	100	55.7	56	57.5	58	3	41-109/30
123-91-1	1,4-Dioxane	50	20.4	41	20.7	41	1	10-110/30
132-64-9	Dibenzofuran	50	35.3	71	36.3	73	3	46-112/30
84-74-2	Di-n-butyl phthalate	50	47.1	94	48.4	97	3	54-127/30
117-84-0	Di-n-octyl phthalate	50	42.7	85	43.6	87	2	55-142/30
84-66-2	Diethyl phthalate	50	41.9	84	43.1	86	3	35-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71691-BS1	6P3218.D	1	12/28/13	ALS	12/26/13	OP71691	E6P128
OP71691-BSD	6P3219.D	1	12/28/13	ALS	12/26/13	OP71691	E6P128

The QC reported here applies to the following samples: **Method:** SW846 8270D

JB56243-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
131-11-3	Dimethyl phthalate	50	41.3	83	42.8	86	4	26-132/30
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.5	97	50.6	101	4	58-135/30
87-68-3	Hexachlorobutadiene	50	23.2	46	26.5	53	13	10-111/30
77-47-4	Hexachlorocyclopentadiene	100	53.3	53	57.2	57	7	10-116/30
67-72-1	Hexachloroethane	50	24.7	49	28.1	56	13	14-110/30
78-59-1	Isophorone	50	43.3	87	45.1	90	4	45-119/30
91-57-6	2-Methylnaphthalene	50	28.7	57	29.9	60	4	30-112/30
88-74-4	2-Nitroaniline	50	44.0	88	45.6	91	4	46-136/30
99-09-2	3-Nitroaniline	50	27.6	55	28.1	56	2	46-113/30
100-01-6	4-Nitroaniline	50	42.3	85	42.9	86	1	47-129/30
98-95-3	Nitrobenzene	50	41.5	83	44.0	88	6	40-115/30
621-64-7	N-Nitroso-di-n-propylamine	50	43.3	87	44.7	89	3	40-118/30
86-30-6	N-Nitrosodiphenylamine	50	41.3	83	42.8	86	4	54-112/30
95-94-3	1,2,4,5-Tetrachlorobenzene	50	24.8	50	27.0	54	8	28-111/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	52%	52%	10-110%
4165-62-2	Phenol-d5	35%	35%	10-110%
118-79-6	2,4,6-Tribromophenol	98%	99%	29-139%
4165-60-0	Nitrobenzene-d5	92%	96%	28-131%
321-60-8	2-Fluorobiphenyl	81%	85%	30-121%
1718-51-0	Terphenyl-d14	97%	99%	16-147%

(a) Outside of in house control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP71691A-BS12	3M43366.D	1	12/27/13	NAP	12/26/13	OP71691A	E3M1948
OP71691A-BSD12	3M43367.D	1	12/27/13	NAP	12/26/13	OP71691A	E3M1948

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

JB56243-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
87-86-5	Pentachlorophenol	5	4.11	82	4.39	88	7	10-180/30
83-32-9	Acenaphthene	1	1.02	102	1.07	107	5	45-125/30
208-96-8	Acenaphthylene	1	0.854	85	0.916	92	7	37-118/30
120-12-7	Anthracene	1	1.04	104	1.08	108	4	48-136/30
56-55-3	Benzo(a)anthracene	1	0.951	95	1.04	104	9	33-136/30
50-32-8	Benzo(a)pyrene	1	0.880	88	0.970	97	10	44-123/30
205-99-2	Benzo(b)fluoranthene	1	1.02	102	1.16	116	13	32-146/30
191-24-2	Benzo(g,h,i)perylene	1	0.995	100	1.09	109	9	47-129/30
207-08-9	Benzo(k)fluoranthene	1	0.898	90	0.980	98	9	34-154/30
218-01-9	Chrysene	1	1.09	109	1.18	118	8	43-143/30
53-70-3	Dibenzo(a,h)anthracene	1	0.976	98	1.06	106	8	43-144/30
206-44-0	Fluoranthene	1	1.03	103	1.08	108	5	46-122/30
86-73-7	Fluorene	1	0.995	100	1.05	105	5	49-125/30
118-74-1	Hexachlorobenzene	1	0.985	99	1.01	101	3	30-138/30
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.950	95	1.03	103	8	45-142/30
91-20-3	Naphthalene	1	0.908	91	0.947	95	4	36-128/30
85-01-8	Phenanthrene	1	1.04	104	1.10	110	6	41-129/30
129-00-0	Pyrene	1	1.00	100	1.10	110	10	47-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	48%	57%	10-110%
4165-62-2	Phenol-d5	30%	33%	10-110%
118-79-6	2,4,6-Tribromophenol	120%	127%	10-157%
4165-60-0	Nitrobenzene-d5	103%	111%	23-131%
321-60-8	2-Fluorobiphenyl	95%	99%	24-120%
1718-51-0	Terphenyl-d14	102%	112%	10-125%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E3M1927-DFTPP
Lab File ID: 3M42842.D
Instrument ID: GCMS3M
Injection Date: 12/01/13
Injection Time: 13:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	59461	42.6		Pass
68	Less than 2.0% of mass 69	1256	0.90	(1.70) [a]	Pass
69	Mass 69 relative abundance	73712	52.8		Pass
70	Less than 2.0% of mass 69	111	0.08	(0.15) [a]	Pass
127	40.0 - 60.0% of mass 198	78253	56.1		Pass
197	Less than 1.0% of mass 198	864	0.62		Pass
198	Base peak, 100% relative abundance	139485	100.0		Pass
199	5.0 - 9.0% of mass 198	10235	7.34		Pass
275	10.0 - 30.0% of mass 198	23865	17.1		Pass
365	1.0 - 100.0% of mass 198	2565	1.84		Pass
441	Present, but less than mass 443	13154	9.43	(77.5) [b]	Pass
442	40.0 - 100.0% of mass 198	87448	62.7		Pass
443	17.0 - 23.0% of mass 442	16981	12.2	(19.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E3M1927-ICC1927	3M42843.D	12/01/13	13:28	00:11	Initial cal 0.5
E3M1927-IC1927	3M42854.D	12/01/13	14:27	01:10	Initial cal 1.0
E3M1927-IC1927	3M42845.D	12/01/13	14:56	01:39	Initial cal .2
E3M1927-IC1927	3M42846.D	12/01/13	15:26	02:09	Initial cal .1
E3M1927-IC1927	3M42847.D	12/01/13	15:55	02:38	Initial cal .05
E3M1927-IC1927	3M42848.D	12/01/13	16:24	03:07	Initial cal .02
E3M1927-IC1927	3M42849.D	12/01/13	16:54	03:37	Initial cal .01
E3M1927-IC1927	3M42850.D	12/01/13	17:23	04:06	Initial cal 5.0
E3M1927-IC1927	3M42851.D	12/01/13	17:52	04:35	Initial cal 2.5
E3M1927-ICV1927	3M42852.D	12/01/13	18:22	05:05	Initial cal verification 1.0
E3M1927-ICV1927	3M42853.D	12/01/13	18:51	05:34	Initial cal verification 1.0

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E3M1948-DFTPP
Lab File ID: 3M43362.D
Instrument ID: GCMS3M
Injection Date: 12/27/13
Injection Time: 07:55

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	60000	46.2		Pass
68	Less than 2.0% of mass 69	857	0.66	(1.29) [a]	Pass
69	Mass 69 relative abundance	66224	51.0		Pass
70	Less than 2.0% of mass 69	221	0.17	(0.33) [a]	Pass
127	40.0 - 60.0% of mass 198	73229	56.3		Pass
197	Less than 1.0% of mass 198	927	0.71		Pass
198	Base peak, 100% relative abundance	129957	100.0		Pass
199	5.0 - 9.0% of mass 198	8219	6.32		Pass
275	10.0 - 30.0% of mass 198	24357	18.7		Pass
365	1.0 - 100.0% of mass 198	3821	2.94		Pass
441	Present, but less than mass 443	15408	11.9	(81.9) [b]	Pass
442	40.0 - 100.0% of mass 198	96075	73.9		Pass
443	17.0 - 23.0% of mass 442	18819	14.5	(19.6) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E3M1948-CC1927	3M43363.D	12/27/13	08:09	00:14	Continuing cal 1.0
ZZZZZZ	3M43364.D	12/27/13	08:42	00:47	(unrelated sample)
OP71691A-MB1	3M43365.D	12/27/13	09:12	01:17	Method Blank
OP71691A-BS12	3M43366.D	12/27/13	09:41	01:46	Blank Spike
OP71691A-BSD12	3M43367.D	12/27/13	10:11	02:16	Blank Spike Duplicate
ZZZZZZ	3M43368.D	12/27/13	10:40	02:45	(unrelated sample)
ZZZZZZ	3M43370.D	12/27/13	11:39	03:44	(unrelated sample)
ZZZZZZ	3M43371.D	12/27/13	12:09	04:14	(unrelated sample)
ZZZZZZ	3M43372.D	12/27/13	12:38	04:43	(unrelated sample)
ZZZZZZ	3M43373.D	12/27/13	13:08	05:13	(unrelated sample)
ZZZZZZ	3M43374.D	12/27/13	13:37	05:42	(unrelated sample)
OP71685A-MB1	3M43380.D	12/27/13	15:35	07:40	Method Blank
ZZZZZZ	3M43382.D	12/27/13	16:34	08:39	(unrelated sample)
OP71685A-BS12	3M43387.D	12/27/13	17:04	09:09	Blank Spike
ZZZZZZ	3M43383.D	12/27/13	17:33	09:38	(unrelated sample)
ZZZZZZ	3M43384.D	12/27/13	18:03	10:08	(unrelated sample)
ZZZZZZ	3M43385.D	12/27/13	18:32	10:37	(unrelated sample)
ZZZZZZ	3M43386.D	12/27/13	19:02	11:07	(unrelated sample)
ZZZZZZ	3M43378.D	12/27/13	19:32	11:37	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E3M1950-DFTPP
Lab File ID: 3M43415.D
Instrument ID: GCMS3M
Injection Date: 12/30/13
Injection Time: 14:20

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	47510	45.6		Pass
68	Less than 2.0% of mass 69	861	0.83	(1.59) [a]	Pass
69	Mass 69 relative abundance	54276	52.1		Pass
70	Less than 2.0% of mass 69	36	0.03	(0.07) [a]	Pass
127	40.0 - 60.0% of mass 198	59645	57.2		Pass
197	Less than 1.0% of mass 198	560	0.54		Pass
198	Base peak, 100% relative abundance	104219	100.0		Pass
199	5.0 - 9.0% of mass 198	7000	6.72		Pass
275	10.0 - 30.0% of mass 198	17766	17.0		Pass
365	1.0 - 100.0% of mass 198	2467	2.37		Pass
441	Present, but less than mass 443	10941	10.5	(80.3) [b]	Pass
442	40.0 - 100.0% of mass 198	71334	68.4		Pass
443	17.0 - 23.0% of mass 442	13618	13.1	(19.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E3M1950-CC1927	3M43416.D	12/30/13	14:32	00:12	Continuing cal 0.5
OP71741A-MB1	3M43424.D	12/30/13	16:30	02:10	Method Blank
OP71741A-BS12	3M43425.D	12/30/13	17:00	02:40	Blank Spike
OP71741A-BSD12	3M43426.D	12/30/13	17:29	03:09	Blank Spike Duplicate
ZZZZZZ	3M43421.D	12/30/13	18:28	04:08	(unrelated sample)
JB56243-1	3M43422.D	12/30/13	18:58	04:38	QC-TW-1
ZZZZZZ	3M43427.D	12/30/13	19:57	05:37	(unrelated sample)
ZZZZZZ	3M43428.D	12/30/13	20:27	06:07	(unrelated sample)
ZZZZZZ	3M43429.D	12/30/13	20:56	06:36	(unrelated sample)
ZZZZZZ	3M43430.D	12/30/13	21:26	07:06	(unrelated sample)
ZZZZZZ	3M43431.D	12/30/13	21:55	07:35	(unrelated sample)
ZZZZZZ	3M43432.D	12/30/13	22:24	08:04	(unrelated sample)
ZZZZZZ	3M43433.D	12/30/13	22:54	08:34	(unrelated sample)
ZZZZZZ	3M43434.D	12/30/13	23:23	09:03	(unrelated sample)
ZZZZZZ	3M43435.D	12/30/13	23:53	09:33	(unrelated sample)
ZZZZZZ	3M43436.D	12/31/13	00:22	10:02	(unrelated sample)
ZZZZZZ	3M43437.D	12/31/13	00:51	10:31	(unrelated sample)
ZZZZZZ	3M43438.D	12/31/13	01:20	11:00	(unrelated sample)
ZZZZZZ	3M43439.D	12/31/13	01:50	11:30	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E6P118-DFTPP
Lab File ID: 6P2889.D
Instrument ID: GCMS6P
Injection Date: 12/18/13
Injection Time: 12:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	84949	30.2		Pass
68	Less than 2.0% of mass 69	1691	0.60	(1.29) [a]	Pass
69	Mass 69 relative abundance	131144	46.7		Pass
70	Less than 2.0% of mass 69	645	0.23	(0.49) [a]	Pass
127	40.0 - 60.0% of mass 198	163728	58.3		Pass
197	Less than 1.0% of mass 198	738	0.26		Pass
198	Base peak, 100% relative abundance	280965	100.0		Pass
199	5.0 - 9.0% of mass 198	18526	6.59		Pass
275	10.0 - 30.0% of mass 198	65523	23.3		Pass
365	1.0 - 100.0% of mass 198	8009	2.85		Pass
441	Present, but less than mass 443	33712	12.0	(71.5) [b]	Pass
442	40.0 - 100.0% of mass 198	239467	85.2		Pass
443	17.0 - 23.0% of mass 442	47165	16.8	(19.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E6P118-IC118	6P2890.D	12/18/13	12:44	00:25	Initial cal 100
E6P118-IC118	6P2891.D	12/18/13	13:12	00:53	Initial cal 1
E6P118-ICC118	6P2892.D	12/18/13	13:42	01:23	Initial cal 50
E6P118-IC118	6P2893.D	12/18/13	14:10	01:51	Initial cal 25
E6P118-IC118	6P2894.D	12/18/13	14:38	02:19	Initial cal 80
E6P118-IC118	6P2895.D	12/18/13	15:07	02:48	Initial cal 10
E6P118-IC118	6P2896.D	12/18/13	15:35	03:16	Initial cal 5
E6P118-IC118	6P2897.D	12/18/13	16:03	03:44	Initial cal 2
E6P118-IC118	6P2898.D	12/18/13	16:31	04:12	Initial cal 100
E6P118-IC118	6P2899.D	12/18/13	17:00	04:41	Initial cal 80
E6P118-IC118	6P2900.D	12/18/13	17:28	05:09	Initial cal 50
E6P118-IC118	6P2901.D	12/18/13	17:56	05:37	Initial cal 25
E6P118-IC118	6P2902.D	12/18/13	18:24	06:05	Initial cal 10
E6P118-IC118	6P2903.D	12/18/13	18:53	06:34	Initial cal 5
E6P118-IC118	6P2904.D	12/18/13	19:21	07:02	Initial cal 2
E6P118-IC118	6P2905.D	12/18/13	19:49	07:30	Initial cal 1
E6P118-ICV118	6P2906.D	12/18/13	20:17	07:58	Initial cal verification 50
E6P118-ICV118	6P2907.D	12/18/13	20:46	08:27	Initial cal verification 50
E6P118-ICV118	6P2908.D	12/18/13	21:14	08:55	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E6P118-DFTPP
Lab File ID: 6P2889.D
Instrument ID: GCMS6P
Injection Date: 12/18/13
Injection Time: 12:19

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E6P118-ICV118	6P2909.D	12/18/13	21:43	09:24	Initial cal verification 50
E6P118-ICV118	6P2910.D	12/18/13	22:11	09:52	Initial cal verification 50
E6P118-ICV118	6P2911.D	12/18/13	22:39	10:20	Initial cal verification 50
E6P118-ICV118	6P2912.D	12/18/13	23:07	10:48	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: E6P128-DFTPP
Lab File ID: 6P3214.D
Instrument ID: GCMS6P
Injection Date: 12/28/13
Injection Time: 09:44

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	49935	32.5		Pass
68	Less than 2.0% of mass 69	915	0.59	(1.35) [a]	Pass
69	Mass 69 relative abundance	67944	44.2		Pass
70	Less than 2.0% of mass 69	373	0.24	(0.55) [a]	Pass
127	40.0 - 60.0% of mass 198	86160	56.0		Pass
197	Less than 1.0% of mass 198	359	0.23		Pass
198	Base peak, 100% relative abundance	153875	100.0		Pass
199	5.0 - 9.0% of mass 198	10003	6.50		Pass
275	10.0 - 30.0% of mass 198	35215	22.9		Pass
365	1.0 - 100.0% of mass 198	5228	3.40		Pass
441	Present, but less than mass 443	19335	12.6	(75.2) [b]	Pass
442	40.0 - 100.0% of mass 198	140851	91.5		Pass
443	17.0 - 23.0% of mass 442	25718	16.7	(18.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E6P128-CC118	6P3215.D	12/28/13	09:56	00:12	Continuing cal 25
E6P128-CC118	6P3216.D	12/28/13	10:25	00:41	Continuing cal 25
OP71691-MB1	6P3217.D	12/28/13	10:53	01:09	Method Blank
OP71691-BS1	6P3218.D	12/28/13	11:21	01:37	Blank Spike
OP71691-BSD	6P3219.D	12/28/13	11:50	02:06	Blank Spike Duplicate
ZZZZZZ	6P3220.D	12/28/13	12:18	02:34	(unrelated sample)
ZZZZZZ	6P3221.D	12/28/13	12:47	03:03	(unrelated sample)
ZZZZZZ	6P3222.D	12/28/13	13:16	03:32	(unrelated sample)
ZZZZZZ	6P3223.D	12/28/13	13:45	04:01	(unrelated sample)
ZZZZZZ	6P3224.D	12/28/13	14:14	04:30	(unrelated sample)
ZZZZZZ	6P3225.D	12/28/13	14:42	04:58	(unrelated sample)
ZZZZZZ	6P3226.D	12/28/13	15:11	05:27	(unrelated sample)
ZZZZZZ	6P3227.D	12/28/13	15:40	05:56	(unrelated sample)
ZZZZZZ	6P3228.D	12/28/13	16:08	06:24	(unrelated sample)
ZZZZZZ	6P3232.D	12/28/13	18:04	08:20	(unrelated sample)
ZZZZZZ	6P3237.D	12/28/13	18:32	08:48	(unrelated sample)
JB56243-1	6P3238.D	12/28/13	19:01	09:17	QC-TW-1
ZZZZZZ	6P3233.D	12/28/13	19:30	09:46	(unrelated sample)
ZZZZZZ	6P3234.D	12/28/13	19:58	10:14	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample:	E6P128-DFTPP	**Injection Date:**	12/28/13
Lab File ID:	6P3214.D	**Injection Time:**	09:44
Instrument ID:	GCMS6P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	6P3236.D	12/28/13	20:55	11:11	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: ER4197-DFTPP
Lab File ID: R105192.D
Instrument ID: GCMSR
Injection Date: 12/10/13
Injection Time: 21:46

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	33002	51.6		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	29994	46.9		Pass
70	Less than 2.0% of mass 69	182	0.28	(0.61) [a]	Pass
127	40.0 - 60.0% of mass 198	29845	46.7		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	63914	100.0		Pass
199	5.0 - 9.0% of mass 198	4637	7.26		Pass
275	10.0 - 30.0% of mass 198	14018	21.9		Pass
365	1.0 - 100.0% of mass 198	1329	2.08		Pass
441	Present, but less than mass 443	5670	8.87	(96.0) [b]	Pass
442	40.0 - 100.0% of mass 198	33581	52.5		Pass
443	17.0 - 23.0% of mass 442	5907	9.24	(17.6) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ER4197-ICC4197	R105193.D	12/10/13	21:59	00:13	Initial cal 50
ER4197-IC4197	R105194.D	12/10/13	22:27	00:41	Initial cal 100
ER4197-IC4197	R105195.D	12/10/13	22:56	01:10	Initial cal 1
ER4197-IC4197	R105196.D	12/10/13	23:25	01:39	Initial cal 80
ER4197-IC4197	R105197.D	12/10/13	23:53	02:07	Initial cal 2
ER4197-IC4197	R105198.D	12/11/13	00:22	02:36	Initial cal 5
ER4197-IC4197	R105199.D	12/11/13	00:50	03:04	Initial cal 25
ER4197-IC4197	R105200.D	12/11/13	01:18	03:32	Initial cal 10
ER4197-ICV4197	R105209.D	12/11/13	05:32	07:46	Initial cal verification 50
ER4197-ICV4197	R105210.D	12/11/13	06:00	08:14	Initial cal verification 50
ER4197-ICV4197	R105211.D	12/11/13	06:29	08:43	Initial cal verification 50
ER4197-ICV4197	R105212.D	12/11/13	06:57	09:11	Initial cal verification 50
ER4197-ICV4197	R105213.D	12/11/13	07:25	09:39	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: ER4198-DFTPP
Lab File ID: R105216.D
Instrument ID: GCMSR
Injection Date: 12/11/13
Injection Time: 16:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	35977	44.1		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	33814	41.5		Pass
70	Less than 2.0% of mass 69	133	0.16	(0.39) [a]	Pass
127	40.0 - 60.0% of mass 198	35932	44.1		Pass
197	Less than 1.0% of mass 198	681	0.83		Pass
198	Base peak, 100% relative abundance	81562	100.0		Pass
199	5.0 - 9.0% of mass 198	5236	6.42		Pass
275	10.0 - 30.0% of mass 198	20940	25.7		Pass
365	1.0 - 100.0% of mass 198	1383	1.70		Pass
441	Present, but less than mass 443	6885	8.44	(74.3) [b]	Pass
442	40.0 - 100.0% of mass 198	45930	56.3		Pass
443	17.0 - 23.0% of mass 442	9271	11.4	(20.2) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ER4198-IC4198	R105217.D	12/11/13	16:23	00:10	Initial cal 100
ER4198-IC4198	R105218.D	12/11/13	16:52	00:39	Initial cal 80
ER4198-ICC4198	R105219.D	12/11/13	17:20	01:07	Initial cal 50
ER4198-IC4198	R105220.D	12/11/13	17:48	01:35	Initial cal 25
ER4198-IC4198	R105221.D	12/11/13	18:17	02:04	Initial cal 10
ER4198-IC4198	R105222.D	12/11/13	18:45	02:32	Initial cal 5
ER4198-IC4198	R105223.D	12/11/13	19:13	03:00	Initial cal 2
ER4198-IC4198	R105224.D	12/11/13	19:42	03:29	Initial cal 1
ER4198-ICV4198	R105225.D	12/11/13	20:10	03:57	Initial cal verification 50
ER4198-ICV4198	R105226.D	12/11/13	20:38	04:25	Initial cal verification 50
ER4198-ICV4198	R105227.D	12/11/13	21:07	04:54	Initial cal verification 50
ER4198-ICV4198	R105228.D	12/11/13	21:35	05:22	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: ER4224-DFTPP
Lab File ID: R105908.D
Instrument ID: GCMSR
Injection Date: 01/02/14
Injection Time: 09:09

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	45121	46.2		Pass
68	Less than 2.0% of mass 69	208	0.21	(0.52) [a]	Pass
69	Mass 69 relative abundance	40220	41.2		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	45042	46.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	97725	100.0		Pass
199	5.0 - 9.0% of mass 198	6449	6.60		Pass
275	10.0 - 30.0% of mass 198	23723	24.3		Pass
365	1.0 - 100.0% of mass 198	2817	2.88		Pass
441	Present, but less than mass 443	10470	10.7	(97.5) [b]	Pass
442	40.0 - 100.0% of mass 198	59576	61.0		Pass
443	17.0 - 23.0% of mass 442	10735	11.0	(18.0) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ER4224-CC4197	R105909.D	01/02/14	09:20	00:11	Continuing cal 25
ER4224-CC4198	R105910.D	01/02/14	09:49	00:40	Continuing cal 25
ZZZZZZ	R105914.D	01/02/14	11:21	02:12	(unrelated sample)
ZZZZZZ	R105930.D	01/02/14	14:40	05:31	(unrelated sample)
ZZZZZZ	R105931.D	01/02/14	15:14	06:05	(unrelated sample)
ZZZZZZ	R105934.D	01/02/14	15:43	06:34	(unrelated sample)
ZZZZZZ	R105921.D	01/02/14	16:40	07:31	(unrelated sample)
ZZZZZZ	R105940.D	01/02/14	17:08	07:59	(unrelated sample)
ZZZZZZ	R105924.D	01/02/14	18:34	09:25	(unrelated sample)
ZZZZZZ	R105925.D	01/02/14	19:02	09:53	(unrelated sample)
ZZZZZZ	R105926.D	01/02/14	19:31	10:22	(unrelated sample)
OP71691-MB1	R105932.D	01/02/14	20:28	11:19	Method Blank

Semivolatile Internal Standard Area Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std:	E3M1948-CC1927	**Injection Date:**	12/27/13
Lab File ID:	3M43363.D	**Injection Time:**	08:09
Instrument ID:	GCMS3M	**Method:**	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	121595	8.23	168166	11.19	222154	15.39	192326	20.01
Upper Limit [a]	243190	8.73	336332	11.69	444308	15.89	384652	20.51
Lower Limit [b]	60798	7.73	84083	10.69	111077	14.89	96163	19.51

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
ZZZZZZ	114423	8.23	161010	11.18	226186	15.39	192245	20.01
OP71691A-MB1	109450	8.23	153130	11.18	210803	15.39	179392	20.01
OP71691A-BS12	101709	8.23	139709	11.18	183248	15.39	151958	20.01
OP71691A-BSD12	100185	8.23	139972	11.18	185676	15.39	150847	20.01
ZZZZZZ	104767	8.23	130076	11.19	171328	15.39	145014	20.01
ZZZZZZ	98327	8.23	126663	11.19	182476	15.41	154459	20.01
ZZZZZZ	99864	8.23	135934	11.19	189219	15.39	163904	20.01
ZZZZZZ	93019	8.23	130191	11.19	176429	15.39	153465	20.01
ZZZZZZ	87867	8.23	121846	11.19	170423	15.39	144281	20.01
ZZZZZZ	88311	8.23	148154	11.19	174257	15.41	148647	20.01
OP71685A-MB1	91188	8.23	125672	11.19	175196	15.39	149409	20.01
ZZZZZZ	96330	8.23	129487	11.19	181967	15.39	152324	20.01
OP71685A-BS12	86853	8.23	120644	11.19	166747	15.39	142240	20.01
ZZZZZZ	87379	8.23	115659	11.19	166813	15.39	139096	20.01
ZZZZZZ	96446	8.23	134953	11.19	190895	15.39	172399	20.01
ZZZZZZ	90905	8.23	125595	11.19	177150	15.39	158046	20.01
ZZZZZZ	107612	8.23	135360	11.19	178830	15.41	153489	20.01
ZZZZZZ	74175	8.23	104789	11.19	151341	15.39	133896	20.01

IS 1 = 1-Methylnaphthalene-d10
IS 2 = Fluorene-d10
IS 3 = Fluoranthene-d10
IS 4 = Benzo(a)pyrene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std:	E3M1950-CC1927	**Injection Date:**	12/30/13
Lab File ID:	3M43416.D	**Injection Time:**	14:32
Instrument ID:	GCMS3M	**Method:**	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	121783	8.30	176270	11.26	249517	15.47	205048	20.09
Upper Limit [a]	243566	8.80	352540	11.76	499034	15.97	410096	20.59
Lower Limit [b]	60892	7.80	88135	10.76	124759	14.97	102524	19.59

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
OP71741A-MB1	102498	8.30	139680	11.26	201026	15.47	165698	20.09
OP71741A-BS12	95148	8.30	141804	11.26	193848	15.47	159925	20.09
OP71741A-BSD12	95784	8.30	135861	11.26	183006	15.47	148766	20.09
ZZZZZZ	130371	8.30	151729	11.26	216345	15.47	177971	20.09
JB56243-1	108614	8.30	157496	11.26	223018	15.47	180771	20.09
ZZZZZZ	93381	8.30	146902	11.26	177359	15.47	146863	20.09
ZZZZZZ	94062	8.30	127939	11.26	183010	15.47	147729	20.09
ZZZZZZ	104715	8.30	346705	11.25	202642	15.47	165008	20.09
ZZZZZZ	113360	8.30	152372	11.26	215909	15.47	176178	20.09
ZZZZZZ	98520	8.30	133678	11.26	191464	15.47	161095	20.09
ZZZZZZ	104036	8.30	142135	11.26	195995	15.47	169292	20.09
ZZZZZZ	89297	8.30	123887	11.26	177097	15.47	150625	20.09
ZZZZZZ	109875	8.30	153757	11.26	217759	15.47	180646	20.09
ZZZZZZ	107442	8.30	152484	11.26	214642	15.47	179850	20.09
ZZZZZZ	98059	8.30	136958	11.26	198056	15.47	162713	20.09
ZZZZZZ	104029	8.30	137973	11.26	203132	15.47	168193	20.09
ZZZZZZ	102546	8.30	138869	11.26	202701	15.47	165576	20.09
ZZZZZZ	99797	8.30	131148	11.26	200785	15.47	161853	20.09

IS 1 = 1-Methylnaphthalene-d10
IS 2 = Fluorene-d10
IS 3 = Fluoranthene-d10
IS 4 = Benzo(a)pyrene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std: E6P128-CC118 **Injection Date:** 12/28/13
Lab File ID: 6P3215.D **Injection Time:** 09:56
Instrument ID: GCMS6P **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	494090	5.36	1941419	6.48	1119242	8.54	1595553	10.70	1507440	14.88	1429307	17.00
Upper Limit [a]	988180	5.86	3882838	6.98	2238484	9.04	3191106	11.20	3014880	15.38	2858614	17.50
Lower Limit [b]	247045	4.86	970710	5.98	559621	8.04	797777	10.20	753720	14.38	714654	16.50

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP71691-MB1	526859	5.36	2113757	6.48	1233515	8.54	1836045	10.70	1790711	14.88	1650865	17.00
OP71691-BS1	510482	5.36	2040329	6.49	1144303	8.54	1603363	10.70	1456238	14.89	1430724	17.00
OP71691-BSD	498182	5.36	1978965	6.49	1109145	8.54	1544685	10.70	1359295	14.89	1341869	17.01
ZZZZZZ	470593	5.36	1894771	6.49	1087106	8.54	1609390	10.70	1528218	14.89	1413207	17.00
ZZZZZZ	495802	5.36	1962228	6.49	1131844	8.54	1666131	10.70	1584874	14.89	1465745	17.01
ZZZZZZ	505301	5.36	1979001	6.49	1166401	8.54	1704622	10.70	1651582	14.89	1517779	17.01
ZZZZZZ	483353	5.36	1896338	6.49	1104612	8.54	1630030	10.70	1566217	14.89	1448059	17.01
ZZZZZZ	512673	5.36	2038447	6.49	1190654	8.55	1755201	10.71	1685386	14.89	1556518	17.01
ZZZZZZ	534360	5.36	2101465	6.49	1157289	8.55	1684518	10.71	1560003	14.89	1435155	17.01
ZZZZZZ	529800	5.36	2056437	6.49	1149275	8.54	1645647	10.71	1530541	14.89	1365976	17.01
ZZZZZZ	479038	5.36	1887667	6.49	1034989	8.54	1494985	10.70	1410654	14.89	1267587	17.01
ZZZZZZ	504265	5.36	1978748	6.49	1108934	8.54	1653095	10.70	1563359	14.89	1441353	17.01
ZZZZZZ	207443*	5.42	908107*	6.49	321787*	8.54	687469*	10.70	614236*	14.88	526035*	17.00
ZZZZZZ	347182	5.36	1419688	6.48	791919	8.54	1135847	10.70	962462	14.88	823360	17.00
JB56243-1	400840	5.36	1610265	6.48	879544	8.54	1303893	10.70	1103547	14.88	974103	17.00
ZZZZZZ	499060	5.36	1988316	6.48	1115472	8.54	1652487	10.70	1443033	14.88	1281870	17.00
ZZZZZZ	402776	5.36	1606249	6.48	914464	8.54	1360214	10.70	1202433	14.88	1084465	17.00
ZZZZZZ	459396	5.36	1809884	6.48	1028518	8.54	1515247	10.70	1343195	14.88	1198765	17.00

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Check Std:	ER4224-CC4197	**Injection Date:**	01/02/14
Lab File ID:	R105909.D	**Injection Time:**	09:20
Instrument ID:	GCMSR	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	145287	4.32	505604	5.36	282136	7.52	497773	10.05	481384	15.16	461554	17.76
Upper Limit [a]	290574	4.82	1011208	5.86	564272	8.02	995546	10.55	962768	15.66	923108	18.26
Lower Limit [b]	72644	3.82	252802	4.86	141068	7.02	248887	9.55	240692	14.66	230777	17.26

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	95218	4.32	329469	5.35	184749	7.52	290955	10.05	259333	15.15	243102	17.76
ZZZZZZ	111551	4.33	627068	5.43	238509	7.54	460889	10.12	482892	15.19	419118	17.79
ZZZZZZ	101050	4.32	364718	5.35	199625	7.52	330552	10.06	377522	15.16	444715	17.77
ZZZZZZ	89399	4.32	326191	5.35	189804	7.52	314019	10.06	316990	15.16	367725	17.76
ZZZZZZ	121372	4.32	417781	5.36	218979	7.52	344562	10.05	312532	15.16	341214	17.77
ZZZZZZ	98938	4.32	426582	5.37	235483	7.53	399072	10.06	379807	15.16	400342	17.77
ZZZZZZ	112024	4.32	384307	5.35	206179	7.52	320766	10.05	296887	15.16	291684	17.76
ZZZZZZ	106801	4.32	362895	5.35	184052	7.52	298595	10.05	265144	15.16	247119	17.76
ZZZZZZ	102126	4.32	364956	5.35	189617	7.52	301972	10.05	279758	15.15	263100	17.76
OP71691-MB1	121368	4.32	426784	5.35	243210	7.52	396841	10.05	374939	15.16	356962	17.77

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Method: SW846 8270D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JB56243-1	6P3238.D	42	32	72	79	76	82
OP71691-BS1	6P3218.D	52	35	98	92	81	97
OP71691-BSD	6P3219.D	52	35	99	96	85	99
OP71691-MB1	6P3217.D	45	29	87	90	77	83
OP71691-MB1	R105932.D	45	24	94	98	82	92

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	10-110%
S2 = Phenol-d5	10-110%
S3 = 2,4,6-Tribromophenol	29-139%
S4 = Nitrobenzene-d5	28-131%
S5 = 2-Fluorobiphenyl	30-121%
S6 = Terphenyl-d14	16-147%

Semivolatile Surrogate Recovery Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Method: SW846 8270D BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JB56243-1	3M43422.D	54	39	116	97	89	92
OP71691A-BS12	3M43366.D	48	30	120	103	95	102
OP71691A-BSD12	3M43367.D	57	33	127	111	99	112
OP71691A-MB1	3M43365.D	50	26	106	94	85	93

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	10-110%
S2 = Phenol-d5	10-110%
S3 = 2,4,6-Tribromophenol	10-157%
S4 = Nitrobenzene-d5	23-131%
S5 = 2-Fluorobiphenyl	24-120%
S6 = Terphenyl-d14	10-125%

Initial Calibration Summary

Job Number: JB56243 **Sample:** E3M1927-ICC1927
Account: ENVNJB EnviroTrac **Lab FileID:** 3M42843.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Response Factor Report MS3M

```
Method       : C:\MSDCHEM\1\METHODS\M1927SIM.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Tue Dec 03 10:19:37 2013
Response via : Initial Calibration

Calibration Files
2.5 =3m42851.D   1.0 =3m42854.D   0.5 =3m42843.D   0.2 =3m42845.D
0.1 =3m42846.D   0.05=3m42847.D   0.02=3m42848.D   0.01=3m42849.D
5   =3m42850.D       =                =                =

Compound
        2.5   1.0   0.5   0.2   0.1   0.05  0.02  0.01  5            Avg   %RSD
-------------------------------------------------------------------------------

1) I   1-Methylnaphthalene-d ----------------ISTD---------------------
2)  2-Fluorophenol
     0.616 0.625 0.619 0.656 0.544 0.546 0.652 0.665 0.539        0.607    8.39
3)  Phenol-d5
     0.777 0.911 0.919 0.958 0.742 0.718             0.635        0.808   15.04
4)  Phenol
     1.073 1.119 1.162 1.171 0.932 0.891             0.897        1.035   12.06
5)  bis(2-Chloroethyl)ether
     0.844 0.882 0.924 0.891 0.724 0.723 0.861 0.896 0.665        0.824   11.36
6)  Nitrobenzene-d5
     0.716 0.789 0.830 0.840 0.671 0.667 0.781 0.792 0.657        0.749    9.64
7)  Naphthalene
     2.608 2.632 2.655 2.793 2.390 2.436 2.952 3.152 2.426        2.672    9.59
8)  Hexachlorobutadiene
     0.333 0.338 0.350 0.368 0.314 0.312 0.363       0.323        0.338    6.30
9)  2-Methylnaphthalene
     1.473 1.445 1.496 1.517 1.335 1.390 1.722 1.623 1.402        1.489    8.11
10)  1-Methylnaphthalene
     1.344 1.350 1.387 1.411 1.193 1.180 1.511 1.529 1.267        1.352    9.19
11)  Hexachlorocyclopentadiene
                                                                 0.000    0.00

12) I   Fluorene-d10          ----------------ISTD---------------------
13)  2-Fluorobiphenyl
     0.973 1.101 1.168 1.277 1.061 1.086             0.793        1.065   14.32
14)  Acenaphthylene
     1.633 1.695 1.736 1.721 1.424 1.394 1.737 1.764 1.514        1.624    8.83
15)  Acenaphthene
     1.004 1.025 1.035 1.080 0.909 0.941 1.140 1.210 0.915        1.029    9.91
16)  Fluorene
     1.157 1.203 1.225 1.257 1.044 1.086 1.248 1.269 1.060        1.172    7.55
17)  2,4,6-Tribromophenol
     0.167 0.183 0.185 0.172 0.128 0.124 0.144 0.142 0.149        0.155   14.68

18)     Fluoranthene-d10      ----------------ISTD---------------------
19)  Hexachlorobenzene
     0.260 0.257 0.248 0.272 0.232 0.228 0.292 0.305 0.248        0.260    9.89
20)  Pentachlorophenol
     0.128 0.118 0.118 0.081 0.058 0.049             0.137        0.098   35.96
        ----- Quadratic regression -----                Coefficient =  0.9999
             Response Ratio = -0.00724 + 0.12240 *A + 0.00253 *A^2

21)  Phenanthrene
     1.203 1.165 1.142 1.218 1.061 1.035 1.348 1.367 1.162        1.189    9.48
```

Initial Calibration Summary

Job Number: JB56243 **Sample:** E3M1927-ICC1927
Account: ENVNJB EnviroTrac **Lab FileID:** 3M42843.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
22)  Anthracene
      1.155 1.073 1.064 1.078 0.923 0.874 1.100 1.135 1.143        1.060    9.26
23)  Fluoranthene
      1.285 1.229 1.199 1.275 1.100 1.152             1.222        1.209    5.44
24)  Pyrene
      1.284 1.238 1.212 1.265 1.084 1.069             1.240        1.199    7.24
25)  Terphenyl-d14
      0.615 0.675 0.679 0.721 0.583 0.582             0.483        0.620   12.86
26)  Benzo[a]anthracene
      1.072 1.029 1.070 1.093 0.916                   1.070        1.042    6.22
27)  Chrysene
      1.022 1.002 0.932 0.994 0.831                   0.976        0.959    7.29

28) I   Benzo(a)pyrene-d12    ----------------ISTD---------------------
29)  Benzo[b]fluoranthene
      1.372 1.383 1.382 1.382 1.191                   1.343        1.342    5.62
30)  Benzo[k]fluoranthene
      1.309 1.259 1.251 1.237 1.072                   1.285        1.235    6.82
31)  Benzo[a]pyrene
      1.309 1.236 1.274 1.329 1.214 1.314             1.268        1.278    3.32
32)  Indeno[1,2,3-cd]pyrene
      1.540 1.502 1.457 1.531 1.336                   1.479        1.474    5.05
33)  Dibenz[a,h]anthracene
      1.247 1.145 1.051 1.176 1.015                   1.208        1.140    7.93
34)  Benzo[g,h,i]perylene
      1.282 1.222 1.185 1.293 1.132                   1.230        1.224    4.92
-------------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M1927SIM.M        Tue Dec 03 22:14:19 2013   RPT1
```

7.6.1

7

Initial Calibration Verification

Job Number: JB56243 **Sample:** E3M1927-ICV1927
Account: ENVNJB EnviroTrac **Lab FileID:** 3M42852.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e3m1927\3m42852.D          Vial: 11
Acq On    :  1 Dec 2013   6:22 pm                    Operator: ashleyd
Sample    : icv1927-1.0                              Inst    : MS3M
Misc      : op70839a,e3m1927                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M1927SIM.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Tue Dec 03 10:19:37 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1-Methylnaphthalene-d10	1.000	1.000	0.0	110	0.00	8.44
5	t	bis(2-Chloroethyl)ether	0.824	0.897	-8.9	112	0.00	4.41
7	t	Naphthalene	2.672	2.674	-0.1	112	0.00	6.99
8	t	Hexachlorobutadiene	0.338	0.343	-1.5	111	0.00	7.28
9	t	2-Methylnaphthalene	1.489	1.407	5.5	107	0.00	8.32
12	I	Fluorene-d10	1.000	1.000	0.0	104	0.00	11.40
14	t	Acenaphthylene	1.624	1.573	3.1	97	0.00	10.05
15	t	Acenaphthene	1.029	1.079	-4.9	110	0.00	10.41
16	t	Fluorene	1.172	1.228	-4.8	107	0.00	11.44
18		Fluoranthene-d10	1.000	1.000	0.0	98	0.00	15.59
19	t	Hexachlorobenzene	0.260	0.263	-1.2	101	0.00	12.56
21	t	Phenanthrene	1.189	1.207	-1.5	102	0.00	13.34
22	t	Anthracene	1.060	1.079	-1.8	99	0.00	13.44
23	t	Fluoranthene	1.209	1.251	-3.5	100	0.00	15.62
24	t	Pyrene	1.199	1.202	-0.3	96	0.00	16.01
26	t	Benzo[a]anthracene	1.042	0.972	6.7	93	0.00	18.11
27	t	Chrysene	0.959	0.941	1.9	92	0.00	18.16
28	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	89	0.00	20.20
29	t	Benzo[b]fluoranthene	1.342	1.372	-2.2	88	0.00	19.78
30	t	Benzo[k]fluoranthene	1.235	1.238	-0.2	88	0.00	19.81
31	t	Benzo[a]pyrene	1.278	1.271	0.5	92	0.00	20.23
32	t	Indeno[1,2,3-cd]pyrene	1.474	1.431	2.9	85	0.00	21.68
33	t	Dibenz[a,h]anthracene	1.140	1.147	-0.6	89	0.00	21.72
34	t	Benzo[g,h,i]perylene	1.224	1.267	-3.5	92	0.00	22.03

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 3m42854.D  M1927SIM.M       Tue Dec 03 10:32:49 2013   RPT1
```

Initial Calibration Verification

Job Number: JB56243 **Sample:** E3M1927-ICV1927
Account: ENVNJB EnviroTrac **Lab FileID:** 3M42853.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e3m1927\3m42853.D          Vial: 12
Acq On    :  1 Dec 2013   6:51 pm                    Operator: ashleyd
Sample    : icv1927-1.0                              Inst    : MS3M
Misc      : op70839a,e3m1927                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M1927SIM.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Tue Dec 03 10:19:37 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1-Methylnaphthalene-d10	1.000	1.000	0.0	118	0.00	8.44
4		Phenol	1.035	1.292	-24.8	137	0.00	4.32
12	I	Fluorene-d10	1.000	1.000	0.0	125	0.00	11.40
18		Fluoranthene-d10	1.000	1.000	0.0	120	0.00	15.59
		----------	True	Calc.	% Drift	----------		
20	t	Pentachlorophenol	5.000	5.035	-0.7	123	-0.02	12.98
		----------	AvgRF	CCRF	% Dev	----------		
28	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	108	0.00	20.20

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 3m42854.D  M1927SIM.M       Tue Dec 03 22:12:32 2013   RPT1
```

Continuing Calibration Summary

Job Number: JB56243 **Sample:** E3M1948-CC1927
Account: ENVNJB EnviroTrac **Lab FileID:** 3M43363.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e3m1948\3m43363.D          Vial: 2
Acq On    : 27 Dec 2013   8:09 am                     Operator: ninap
Sample    : cc1927-1.0                                Inst    : MS3M
Misc      : op71669a,e3m1948                          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M1927SIM.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Thu Dec 26 17:13:59 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1-Methylnaphthalene-d10	1.000	1.000	0.0	89	0.00	8.23
2	S	2-Fluorophenol	0.607	0.734	-20.9#	104	-0.02	3.00
3	S	Phenol-d5	0.808	0.812	-0.5	79	-0.02	4.19
4		Phenol	1.035	1.065	-2.9	84	-0.02	4.21
5	t	bis(2-Chloroethyl)ether	0.824	0.878	-6.6	88	0.00	4.24
6	S	Nitrobenzene-d5	0.749	0.829	-10.7	93	0.00	5.50
7	t	Naphthalene	2.672	2.619	2.0	88	0.00	6.80
8	t	Hexachlorobutadiene	0.338	0.367	-8.6	96	0.00	7.09
9	t	2-Methylnaphthalene	1.489	1.497	-0.5	92	0.00	8.11
10	t	1-Methylnaphthalene	1.352	1.360	-0.6	89	0.00	8.30
12	I	Fluorene-d10	1.000	1.000	0.0	82	0.00	11.19
13	S	2-Fluorobiphenyl	1.065	1.140	-7.0	85	-0.02	8.88
14	t	Acenaphthylene	1.624	1.724	-6.2	84	0.00	9.85
15	t	Acenaphthene	1.029	1.063	-3.3	85	0.00	10.21
16	t	Fluorene	1.172	1.221	-4.2	84	-0.01	11.23
17	S	2,4,6-Tribromophenol	0.155	0.186	-20.0	84	0.00	11.74
18		Fluoranthene-d10	1.000	1.000	0.0	76	-0.02	15.39
19	t	Hexachlorobenzene	0.260	0.291	-11.9	86	0.00	12.35
		----------	True	Calc.	% Drift	----------		
20	t	Pentachlorophenol	5.000	4.876	2.5	75	-0.02	12.79
		----------	AvgRF	CCRF	% Dev	----------		
21	t	Phenanthrene	1.189	1.266	-6.5	83	0.00	13.13
22	t	Anthracene	1.060	1.161	-9.5	82	0.00	13.23
23	t	Fluoranthene	1.209	1.316	-8.9	81	-0.02	15.42
24	t	Pyrene	1.199	1.329	-10.8	82	0.00	15.82
25	S	Terphenyl-d14	0.620	0.684	-10.3	77	0.00	16.21
26	t	Benzo[a]anthracene	1.042	1.091	-4.7	81	-0.02	17.91
27	t	Chrysene	0.959	1.082	-12.8	82	0.00	17.97
28	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	80	0.00	20.01
29	t	Benzo[b]fluoranthene	1.342	1.462	-8.9	84	0.00	19.59
30	t	Benzo[k]fluoranthene	1.235	1.256	-1.7	80	0.00	19.62
31	t	Benzo[a]pyrene	1.278	1.296	-1.4	84	0.00	20.04
32	t	Indeno[1,2,3-cd]pyrene	1.474	1.615	-9.6	86	-0.01	21.47
33	t	Dibenz[a,h]anthracene	1.140	1.264	-10.9	88	0.00	21.51
34	t	Benzo[g,h,i]perylene	1.224	1.356	-10.8	88	0.00	21.81

Continuing Calibration Summary

Job Number: JB56243 **Sample:** E3M1948-CC1927
Account: ENVNJB EnviroTrac **Lab FileID:** 3M43363.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
--------------------------------------------------------------------------

   (#) = Out of Range                SPCC's out = 0  CCC's out = 0
    3m42854.D  M1927SIM.M       Fri Dec 27 08:35:03 2013   RPT1
```

Continuing Calibration Summary

Job Number: JB56243 **Sample:** E3M1950-CC1927
Account: ENVNJB EnviroTrac **Lab FileID:** 3M43416.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e3m1950\3m43416.D          Vial: 2
Acq On    : 30 Dec 2013   2:32 pm                    Operator: ashleyd
Sample    : cc1927-0.5                               Inst    : MS3M
Misc      : op71669a,e3m1950                         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\MSDCHEM\1\METHODS\M1927SIM.M (RTE Integrator)
Title        : Semi Volatile Extractables by GC/MS
Last Update  : Thu Dec 26 17:13:59 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1-Methylnaphthalene-d10	1.000	1.000	0.0	91	0.07	8.30
2	S	2-Fluorophenol	0.607	0.744	-22.6#	109	0.04	3.06
3	S	Phenol-d5	0.808	0.942	-16.6	93	0.04	4.24
4		Phenol	1.035	1.119	-8.1	87	0.04	4.26
5	t	bis(2-Chloroethyl)ether	0.824	0.760	7.8	74	0.06	4.30
6	S	Nitrobenzene-d5	0.749	0.932	-24.4#	102	0.07	5.57
7	t	Naphthalene	2.672	2.886	-8.0	98	0.07	6.87
8	t	Hexachlorobutadiene	0.338	0.401	-18.6	104	0.07	7.16
9	t	2-Methylnaphthalene	1.489	1.486	0.2	90	0.07	8.18
10	t	1-Methylnaphthalene	1.352	1.514	-12.0	99	0.07	8.37
12	I	Fluorene-d10	1.000	1.000	0.0	88	0.07	11.26
13	S	2-Fluorobiphenyl	1.065	1.221	-14.6	92	0.06	8.96
14	t	Acenaphthylene	1.624	1.736	-6.9	88	0.08	9.93
15	t	Acenaphthene	1.029	1.110	-7.9	94	0.08	10.29
16	t	Fluorene	1.172	1.264	-7.8	91	0.07	11.32
17	S	2,4,6-Tribromophenol	0.155	0.180	-16.1	85	0.08	11.83
18		Fluoranthene-d10	1.000	1.000	0.0	83	0.06	15.47
19	t	Hexachlorobenzene	0.260	0.267	-2.7	90	0.08	12.42
		----------	True	Calc.	% Drift	----------		
20	t	Pentachlorophenol	2.500	2.113	15.5	66	0.06	12.87
		----------	AvgRF	CCRF	% Dev	----------		
21	t	Phenanthrene	1.189	1.228	-3.3	90	0.08	13.21
22	t	Anthracene	1.060	1.119	-5.6	88	0.08	13.30
23	t	Fluoranthene	1.209	1.272	-5.2	89	0.06	15.50
24	t	Pyrene	1.199	1.302	-8.6	90	0.08	15.90
25	S	Terphenyl-d14	0.620	0.693	-11.8	85	0.08	16.29
26	t	Benzo[a]anthracene	1.042	1.064	-2.1	83	0.06	17.99
27	t	Chrysene	0.959	1.044	-8.9	94	0.08	18.05
28	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	85	0.08	20.09
29	t	Benzo[b]fluoranthene	1.342	1.503	-12.0	93	0.08	19.67
30	t	Benzo[k]fluoranthene	1.235	1.286	-4.1	87	0.08	19.70
31	t	Benzo[a]pyrene	1.278	1.286	-0.6	86	0.08	20.12
32	t	Indeno[1,2,3-cd]pyrene	1.474	1.609	-9.2	94	0.08	21.57
33	t	Dibenz[a,h]anthracene	1.140	1.289	-13.1	104	0.08	21.59
34	t	Benzo[g,h,i]perylene	1.224	1.351	-10.4	97	0.10	21.91

Continuing Calibration Summary

Job Number: JB56243 **Sample:** E3M1950-CC1927
Account: ENVNJB EnviroTrac **Lab FileID:** 3M43416.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 3m43337.D  M1927SIM.M       Mon Dec 30 16:51:28 2013   RPT1
```

Initial Calibration Summary

Job Number: JB56243 **Sample:** E6P118-ICC118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2892.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Response Factor Report MS6P

Method : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update : Thu Dec 19 08:58:40 2013
Response via : Initial Calibration

Calibration Files
100 =6p2890.D 80 =6p2894.D 50 =6p2892.D 25 =6p2893.D
10 =6p2895.D 5 =6p2896.D 2 =6p2897.D 1 =6p2891.D

Compound	100	80	50	25	10	5	2	1	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------									
2) 1,4-Dioxane	0.615	0.657	0.745	0.800	0.832	0.841	0.655	0.942	0.761	14.86
3) Pyridine	1.642	1.766	2.065	2.057	2.011	1.931	1.685	1.458	1.827	12.22
4) N-Nitrosodim	1.023	1.093	1.162	1.167	1.215	1.197	1.053	1.080	1.124	6.31
5) 2-Fluorophen	1.412	1.521	1.510	1.516	1.689	1.603	1.472	1.461	1.523	5.72
6) Indene	2.338	2.527	3.029	3.144	3.069	3.027	2.804	2.681	2.827	10.28
7) Cumene	3.368	3.533	4.389	4.513	4.280	4.277	4.106	3.771	4.030	10.46
8) Phenol-d5	1.820	1.910	1.984	2.048	2.332	2.355	2.146	2.059	2.082	9.09
9) Phenol	1.859	2.027	2.335	2.723	2.734	2.665	2.523	2.405	2.409	13.47
10) Aniline	2.126	2.206	3.337	3.497	2.994	3.077	3.033	2.789	2.882	17.07
11) bis(2-Chloro	1.600	1.648	1.800	1.869	1.949	1.950	1.843	1.722	1.798	7.29
12) 2-Chlorophen	1.372	1.450	1.696	1.742	1.747	1.720	1.597	1.515	1.605	9.03
13) Decane	0.874	0.962	1.227	1.328	1.323	1.323	1.269	1.302	1.201	14.94
14) 1,3-Dichloro	1.371	1.449	1.505	1.552	1.773	1.757	1.659	1.570	1.579	9.02
15) 1,4-Dichloro	1.329	1.448	1.503	1.554	1.768	1.777	1.760	1.552	1.586	10.49
16) Benzyl alcoh	0.784	0.846	1.222	1.325	1.226	1.158	1.053	1.010	1.078	17.72
17) 1,2-Dichloro	1.096	1.232	1.367	1.454	1.657	1.668	1.607	1.504	1.448	14.25
18) Acetophenone	2.023	2.115	2.539	2.629	2.536	2.456	2.315	2.298	2.364	9.09
19) 2-Methylphen	1.198	1.270	1.689	1.811	1.686	1.629	1.529	1.440	1.532	14.06
20) 2,2'-oxybis(	0.425	0.455	0.520	0.551	0.600	0.579	0.548	0.526	0.526	11.25
21) 3&4-Methylph	1.422	1.505	1.873	1.943	1.813	1.712	1.622	1.585	1.684	10.88
22) n-Nitroso-di	1.006	1.049	1.202	1.265	1.308	1.272	1.179	1.177	1.183	9.04
23) Hexachloroet	0.395	0.415	0.429	0.436	0.485	0.485	0.470	0.455	0.446	7.39
24) I Naphthalene-d8	----------ISTD----------									
25) Nitrobenzene	0.407	0.419	0.432	0.437	0.476	0.454	0.418	0.415	0.432	5.29
26) Nitrobenzene	0.404	0.416	0.428	0.443	0.496	0.479	0.439	0.457	0.445	6.98
27) Quinoline	0.690	0.720	0.804	0.812	0.798	0.769	0.735	0.694	0.753	6.60
28) Isophorone	0.719	0.743	0.768	0.773	0.862	0.848	0.766	0.743	0.778	6.51
29) 2-Nitropheno	0.176	0.187	0.216	0.220	0.213	0.194	0.178	0.156	0.192	11.84
30) 2,4-Dimethyl	0.350	0.362	0.427	0.440	0.408	0.373	0.329	0.338	0.378	11.10
31) Benzoic Acid	0.323	0.335	0.349	0.308	0.240				0.311	13.63
32) bis(2-Chloro	0.461	0.478	0.529	0.543	0.572	0.548	0.519	0.526	0.522	7.02
33) 2,4-Dichloro	0.256	0.273	0.317	0.317	0.322	0.299	0.265	0.264	0.289	9.56
34) 2,6-Dichloro	0.240	0.258	0.303	0.316	0.313	0.301	0.283	0.274	0.286	9.43
35) 1,3,5-Trichl	0.231	0.251	0.311	0.330	0.329	0.325	0.307	0.297	0.298	12.45
36) 1,2,4-Trichl	0.240	0.257	0.267	0.279	0.317	0.310	0.297	0.280	0.281	9.41
37) 1,2,3-Trichl	0.217	0.234	0.290	0.309	0.294	0.299	0.292	0.275	0.276	11.88
38) Naphthalene	0.956	1.029	1.231	1.275	1.267	1.246	1.197	1.138	1.167	10.10
39) 4-Chloroanil	0.376	0.409	0.559	0.587	0.530	0.515	0.489	0.468	0.491	14.71
40) 2,3-Dichloro	0.302	0.321	0.383	0.391	0.385	0.369	0.350	0.349	0.356	9.01
41) Caprolactam	0.148	0.150	0.173	0.170	0.164	0.153	0.144	0.148	0.156	7.08
42) Hexachlorobu	0.113	0.119	0.126	0.133	0.151	0.148	0.141	0.142	0.134	10.14
43) 4-Chloro-3-m	0.326	0.340	0.378	0.384	0.381	0.354	0.318	0.329	0.351	7.67
44) 2-Methylnaph	0.506	0.547	0.698	0.725	0.668	0.653	0.634	0.593	0.628	11.94
45) 1-Methylnaph	0.495	0.529	0.633	0.657	0.637	0.628	0.604	0.569	0.594	9.70

Initial Calibration Summary

Job Number: JB56243 **Sample:** E6P118-ICC118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2892.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
46) Dimethylnaph 0.529 0.567 0.684 0.710 0.692 0.676 0.639 0.629 0.641   9.97

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.237 0.255 0.282 0.286 0.295 0.262 0.223 0.210 0.256  12.02
49) 2,4,6-Trichl 0.279 0.298 0.338 0.348 0.346 0.331 0.296 0.291 0.316   8.77
50) 2,4,5-Trichl 0.310 0.327 0.386 0.388 0.356 0.341 0.306 0.297 0.339  10.44
51) 2-Fluorobiph 1.078 1.167 1.228 1.260 1.415 1.372 1.361 1.288 1.271   8.89
52) 2-Chloronaph 0.935 1.016 1.056 1.086 1.244 1.235 1.209 1.153 1.117  10.02
53) Biphenyl     1.217 1.314 1.602 1.672 1.639 1.626 1.589 1.537 1.524  10.93
54) 2-Nitroanili 0.360 0.377 0.451 0.454 0.401 0.379 0.328 0.308 0.382  13.71
55) Dimethylphth 1.105 1.168 1.255 1.280 1.340 1.298 1.246 1.187 1.235   6.23
56) Acenaphthyle 1.681 1.783 2.075 2.119 2.033 2.011 1.856 1.805 1.920   8.30
57) 2,6-Dinitrot 0.269 0.283 0.272 0.265 0.292 0.262 0.209 0.187 0.255  14.47
58) 3-Nitroanili 0.335 0.349 0.424 0.418 0.368 0.345 0.282 0.274 0.349  15.71
59) Acenaphthene 1.003 1.080 1.248 1.288 1.284 1.266 1.231 1.158 1.195   8.80
60) 2,4-Dinitrop 0.145 0.152 0.168 0.148 0.108                 0.144  15.27
61) 4-Nitropheno 0.182 0.186 0.191 0.181 0.167 0.142           0.175  10.26
62) Dibenzofuran 1.279 1.394 1.774 1.876 1.736 1.742 1.735 1.610 1.643  12.46
63) 2,4-Dinitrot 0.315 0.342 0.347 0.364 0.397 0.364 0.299 0.258 0.336  12.99
64) 2,3,4,6-Tetr 0.248 0.263 0.285 0.284 0.270 0.240 0.198 0.188 0.247  14.98
65) Diethylphtha 1.107 1.175 1.255 1.267 1.316 1.285 1.212 1.161 1.222   5.80
66) Fluorene     1.148 1.233 1.438 1.478 1.452 1.435 1.355 1.270 1.351   8.95
67) 4-Chlorophen 0.449 0.486 0.529 0.547 0.582 0.572 0.554 0.532 0.531   8.37
68) 4-Nitroanili 0.334 0.345 0.414 0.419 0.363 0.329 0.275 0.234 0.339  18.58

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro- 0.148 0.153 0.153 0.138 0.118 0.086           0.133  19.78
71) n-Nitrosodip 0.617 0.647 0.671 0.674 0.707 0.686 0.644 0.592 0.655   5.73
72) 1,2-Diphenyl 0.994 1.035 1.032 1.048 1.178 1.143 1.055 0.983 1.058   6.45
73) 2,4,6-Tribro 0.112 0.115 0.109 0.101 0.106 0.093 0.079 0.075 0.099  15.40
74) 4-Bromopheny 0.190 0.196 0.208 0.206 0.212 0.210 0.195 0.187 0.200   4.82
75) Hexachlorobe 0.212 0.224 0.216 0.220 0.248 0.243 0.236 0.224 0.228   5.72
76) Pentachlorop 0.125 0.132 0.130 0.123 0.118 0.091           0.120  12.55
77) Phenanthrene 1.077 1.134 1.284 1.308 1.286 1.303 1.253 1.173 1.227   7.14
78) Anthracene   1.092 1.151 1.307 1.336 1.311 1.300 1.185 1.121 1.225   8.01
79) Carbazole    1.135 1.185 1.312 1.341 1.311 1.272 1.163 1.119 1.230   7.21
80) Di-n-butylph 1.361 1.425 1.502 1.506 1.486 1.379 1.174 1.151 1.373  10.26
81) Fluoranthene 1.127 1.172 1.315 1.343 1.296 1.247 1.126 1.059 1.211   8.58
82) Octadecane   0.479 0.512 0.616 0.645 0.617 0.605 0.526 0.527 0.566  10.86

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.422 1.436 1.563 1.553 1.473 1.435 1.324 1.221 1.428   7.93
85) Butyl steara 0.403 0.412 0.500 0.502 0.450 0.363 0.248 0.375 0.406  20.37
86) Terphenyl-d1 0.874 0.877 0.789 0.770 0.888 0.857 0.798 0.712 0.821   7.70
87) Butylbenzylp 0.740 0.742 0.739 0.719 0.713 0.606 0.466 0.586 0.664  15.25
88) Benzo[a]anth 1.185 1.200 1.311 1.297 1.230 1.177 1.087 1.153 1.205   6.11
89) 3,3'-Dichlor 0.391 0.409 0.367 0.363 0.409 0.377 0.295 0.363 0.372   9.77
90) Chrysene     1.123 1.139 1.261 1.249 1.196 1.157 1.091 1.057 1.159   6.24
91) bis(2-Ethylh 1.016 1.032 1.033 0.984 0.962 0.797 0.579 0.734 0.892  18.97

92) I   Perylene-d12          ----------------ISTD---------------------
93) Di-n-octylph 1.593 1.676 1.827 1.740 1.700 1.384 0.881       1.543  20.97
          ----- Quadratic regression -----                Coefficient =  0.9996
               Response Ratio = -0.08421 + 2.08520 *A + -0.18253 *A^2

94) Benzo[b]fluo 1.121 1.191 1.350 1.365 1.368 1.243 1.125 1.170 1.242   8.54
95) Benzo[k]fluo 1.022 1.073 1.316 1.362 1.296 1.291 1.161 1.215 1.217  10.04
96) Benzo[a]pyre 1.017 1.062 1.255 1.259 1.185 1.099 0.969 1.024 1.109  10.07
97) Indeno[1,2,3 1.215 1.295 1.435 1.357 1.262 1.161 1.020 0.975 1.215  13.04
98) Dibenz(a,h)a 0.983 1.029 1.160 1.137 1.067 0.989 0.826 0.857 1.006  11.90
```

Initial Calibration Summary

Job Number: JB56243 **Sample:** E6P118-ICC118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2892.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
 99) Dibenz[a,h]a 1.120 1.183 1.372 1.354 1.292 1.207 1.105 1.044 1.209   9.94
100) 7,12-Dimethy 0.470 0.493 0.599 0.623 0.552 0.487 0.412 0.468 0.513  14.03
101) Benzo[g,h,i] 1.145 1.202 1.355 1.325 1.262 1.182 1.073 1.048 1.199   9.26

102)     1,4-Dichlorobenzene-d ----------------ISTD---------------------
103) Benzaldehyde 0.882 0.832 1.115 1.153 0.808 1.237 1.243 1.171 1.055  17.38

104)     Phenanthrene-d10a     ----------------ISTD---------------------
105) Atrazine     0.103 0.102 0.113 0.110 0.100 0.092 0.079 0.065 0.096  16.95
106) o-terphenyl  0.516 0.529 0.605 0.653 0.611 0.625 0.607       0.592   8.51

107)     Chrysene-d12a         ----------------ISTD---------------------
108) Benzidine    0.515 0.493 0.630 0.460 0.135                   0.447  41.57
109) 1-chloroocta 0.424 0.430 0.495 0.515 0.448 0.429 0.378       0.446  10.37

110)     Acenaphthene-d10a     ----------------ISTD---------------------
111) 1,2,4,5-Tetr 0.442 0.445 0.476 0.479 0.471 0.503 0.485 0.462 0.470   4.38

112) I   Naphthalene-d8a       ----------------ISTD---------------------
113) Hydroquinone 0.405 0.410 0.426 0.412 0.375 0.311 0.273 0.329 0.368  15.30
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M6P118.M          Thu Dec 19 09:45:33 2013   RPT1
```

7.6.6

7

Initial Calibration Verification

Job Number: JB56243 **Sample:** E6P118-ICV118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2906.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e6p118\6p2906.D            Vial: 18
Acq On    : 18 Dec 2013   8:17 pm                    Operator: emilyp
Sample    : icv118-50                                Inst    : MS6P
Misc      : op71279,e6p118,                          Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update  : Thu Dec 19 08:58:40 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	128	0.00	5.42
9	t	Phenol	2.409	2.315	3.9	127	0.00	5.16
12	t	2-Chlorophenol	1.605	1.615	-0.6	122	0.00	5.25
19	t	2-Methylphenol	1.532	1.631	-6.5	123	0.00	5.66
21	t	3&4-Methylphenol	1.684	1.692	-0.5	116	0.00	5.79
24	I	Naphthalene-d8	1.000	1.000	0.0	125	0.00	6.56
29	t	2-Nitrophenol	0.192	0.207	-7.8	120	0.00	6.20
30	t	2,4-Dimethylphenol	0.378	0.409	-8.2	120	0.00	6.26
31		Benzoic Acid	0.311	0.284	8.7	102	0.06	6.39
33	t	2,4-Dichlorophenol	0.289	0.302	-4.5	119	0.00	6.43
34		2,6-Dichlorophenol	0.286	0.299	-4.5	124	0.00	6.65
43	t	4-Chloro-3-methylphenol	0.351	0.357	-1.7	118	0.00	7.16
47	I	Acenaphthene-d10	1.000	1.000	0.0	122	0.00	8.62
49	t	2,4,6-Trichlorophenol	0.316	0.337	-6.6	121	0.00	7.66
50	t	2,4,5-Trichlorophenol	0.339	0.356	-5.0	112	-0.01	7.70
60	t	2,4-Dinitrophenol	0.144	0.118	18.1	86	0.00	8.72
61	t	4-Nitrophenol	0.175	0.186	-6.3	119	-0.01	8.86
64		2,3,4,6-Tetrachlorophenol	0.247	0.262	-6.1	112	0.00	9.10
69	I	Phenanthrene-d10	1.000	1.000	0.0	119	0.00	10.80
70	t	4,6-Dinitro-2-methylpheno	0.133	0.138	-3.8	108	0.00	9.49
76	t	Pentachlorophenol	0.120	0.134	-11.7	124	0.00	10.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p2900.D M6P118.M Thu Dec 19 09:21:10 2013 RPT1

Initial Calibration Verification

Job Number: JB56243 **Sample:** E6P118-ICV118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2907.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\e6p118\6p2907.D Vial: 19
Acq On : 18 Dec 2013 8:46 pm Operator: emilyp
Sample : icv118-50 Inst : MS6P
Misc : op71279,e6p118, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update : Thu Dec 19 08:58:40 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 202%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	128	0.00	5.42
3	t	Pyridine	1.827	1.884	-3.1	117	-0.03	2.36
4	t	N-Nitrosodimethylamine	1.124	1.054	6.2	116	0.00	2.33
11	t	bis(2-Chloroethyl)ether	1.798	1.716	4.6	122	0.00	5.21
14	t	1,3-Dichlorobenzene	1.579	1.472	6.8	125	0.00	5.37
15	t	1,4-Dichlorobenzene	1.586	1.488	6.2	127	0.00	5.44
16	t	Benzyl alcohol	1.078	1.084	-0.6	114	0.00	5.56
17	t	1,2-Dichlorobenzene	1.448	1.368	5.5	128	0.00	5.56
20	t	2,2'-oxybis(1-Chloropropa	0.526	0.509	3.2	125	0.00	5.67
22	t	n-Nitroso-di-n-propylamin	1.183	1.107	6.4	118	0.00	5.78
23	t	Hexachloroethane	0.446	0.410	8.1	122	0.00	5.86
24	I	Naphthalene-d8	1.000	1.000	0.0	124	0.00	6.56
26	t	Nitrobenzene	0.445	0.427	4.0	124	0.00	5.91
28	t	Isophorone	0.778	0.738	5.1	119	0.00	6.12
32	t	bis(2-Chloroethoxy)methan	0.522	0.510	2.3	120	0.00	6.34
36	t	1,2,4-Trichlorobenzene	0.281	0.264	6.0	123	0.00	6.51
38	t	Naphthalene	1.167	1.026	12.1	104	0.00	6.58
42	t	Hexachlorobutadiene	0.134	0.127	5.2	125	0.00	6.72
44	t	2-Methylnaphthalene	0.628	0.552	12.1	98	0.00	7.32
47	I	Acenaphthene-d10	1.000	1.000	0.0	121	0.00	8.63
48	t	Hexachlorocyclopentadiene	0.256	0.242	5.5	104	0.00	7.51
52	t	2-Chloronaphthalene	1.117	1.054	5.6	120	0.00	7.89
54	t	2-Nitroaniline	0.382	0.375	1.8	100	0.00	8.03
55	t	Dimethylphthalate	1.235	1.131	8.4	109	0.00	8.29
56	t	Acenaphthylene	1.920	1.652	14.0	96	0.00	8.43
57	t	2,6-Dinitrotoluene	0.255	0.261	-2.4	116	0.00	8.36
58	t	3-Nitroaniline	0.349	0.306	12.3	87	0.00	8.58
59	t	Acenaphthene	1.195	1.101	7.9	106	0.00	8.67
62	t	Dibenzofuran	1.643	1.499	8.8	102	0.00	8.91
63	t	2,4-Dinitrotoluene	0.336	0.314	6.5	109	0.00	8.91
65	t	Diethylphthalate	1.222	1.127	7.8	108	0.00	9.29
66	t	Fluorene	1.351	1.244	7.9	104	0.00	9.40
67	t	4-Chlorophenyl-phenylethe	0.531	0.482	9.2	110	0.00	9.42
68	t	4-Nitroaniline	0.339	0.332	2.1	97	0.01	9.45
69	I	Phenanthrene-d10	1.000	1.000	0.0	119	0.00	10.80
71	t	n-Nitrosodiphenylamine	0.655	0.596	9.0	106	0.00	9.60
72	t	1,2-Diphenylhydrazine	1.058	1.068	-0.9	123	0.00	9.65
74	t	4-Bromophenyl-phenylether	0.200	0.189	5.5	108	0.00	10.15
75	t	Hexachlorobenzene	0.228	0.212	7.0	117	0.00	10.23

Initial Calibration Verification

Job Number: JB56243 **Sample:** E6P118-ICV118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2907.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

77	t	Phenanthrene	1.227	1.077	12.2	100	0.00	10.84
78	t	Anthracene	1.225	1.122	8.4	102	0.00	10.91
79	t	Carbazole	1.230	1.202	2.3	109	0.00	11.19
80	t	Di-n-butylphthalate	1.373	1.339	2.5	106	0.00	11.84
81	t	Fluoranthene	1.211	1.095	9.6	99	0.00	12.70
83	I	Chrysene-d12	1.000	1.000	0.0	108	0.00	15.00
84	t	Pyrene	1.428	1.412	1.1	97	0.00	13.05
87	t	Butylbenzylphthalate	0.664	0.700	-5.4	102	0.00	14.22
88	t	Benzo[a]anthracene	1.205	1.125	6.6	93	0.00	14.98
90	t	Chrysene	1.159	1.144	1.3	98	0.00	15.04
91	t	bis(2-Ethylhexyl)phthalat	0.892	0.961	-7.7	100	0.00	15.19
92	I	Perylene-d12	1.000	1.000	0.0	110	0.00	17.11
		----------	True	Calc.	% Drift	----------		
93	t	Di-n-octylphthalate	50.000	46.002	8.0	100	0.00	16.18
		----------	AvgRF	CCRF	% Dev	----------		
94	t	Benzo[b]fluoranthene	1.242	1.136	8.5	92	0.00	16.60
95	t	Benzo[k]fluoranthene	1.217	1.142	6.2	95	0.00	16.63
96	t	Benzo[a]pyrene	1.109	1.095	1.3	96	0.00	17.03
97	t	Indeno[1,2,3-cd]pyrene	1.215	1.098	9.6	84	0.01	18.42
99	t	Dibenz[a,h]anthracene	1.209	1.122	7.2	90	0.01	18.45
101	t	Benzo[g,h,i]perylene	1.199	1.146	4.4	93	0.02	18.75
110		Acenaphthene-d10a	1.000	1.000	0.0	123	0.00	8.63
111		1,2,4,5-Tetrachlorobenzen	0.470	0.405	13.8	105	0.00	7.52

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p2900.D M6P118.M Thu Dec 19 09:21:13 2013 RPT1

7.6.8

7

Initial Calibration Verification

Job Number: JB56243 **Sample:** E6P118-ICV118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2908.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e6p118\6p2908.D          Vial: 20
Acq On    : 18 Dec 2013   9:14 pm                  Operator: emilyp
Sample    : icv118-50                              Inst    : MS6P
Misc      : op71279,e6p118,                        Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update  : Thu Dec 19 08:58:40 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	138	0.00	5.42
2		1,4-Dioxane	0.761	0.637	16.3	118	0.01	2.00
6	t	Indene	2.827	2.678	5.3	122	0.00	5.64
7	t	Cumene	4.030	3.713	7.9	116	0.00	4.72
13	t	Decane	1.201	1.005	16.3	113	0.00	5.32
18	t	Acetophenone	2.364	2.188	7.4	119	0.00	5.76
24	I	Naphthalene-d8	1.000	1.000	0.0	134	0.00	6.56
27	t	Quinoline	0.753	0.699	7.2	117	0.00	6.92
40	t	2,3-Dichloroaniline	0.356	0.298	16.3	105	0.00	7.65
41	t	Caprolactam	0.156	0.144	7.7	112	0.02	6.98
45	t	1-Methylnaphthalene	0.594	0.550	7.4	117	0.00	7.43
46	t	Dimethylnaphthalene	0.641	0.592	7.6	116	0.00	8.08
47	I	Acenaphthene-d10	1.000	1.000	0.0	129	0.00	8.62
53	t	Biphenyl	1.524	1.453	4.7	117	0.00	7.88
69	I	Phenanthrene-d10	1.000	1.000	0.0	123	0.00	10.80
82	t	Octadecane	0.566	0.555	1.9	111	0.00	10.78
92	I	Perylene-d12	1.000	1.000	0.0	108	0.00	17.11
100	t	7,12-Dimethylbenz(a)anthr	0.513	0.433	15.6	78	0.00	16.60
102		1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	131	0.00	5.42
103		Benzaldehyde	1.055	1.288	-22.1	151	0.00	5.04
104		Phenanthrene-d10a	1.000	1.000	0.0	119	0.00	10.80
105		Atrazine	0.096	0.112	-16.7	118	-0.01	10.46

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p2900.D M6P118.M Thu Dec 19 09:21:15 2013 RPT1

Initial Calibration Verification

Job Number: JB56243 **Sample:** E6P118-ICV118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2909.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e6p118\6p2909.D          Vial: 21
Acq On    : 18 Dec 2013   9:43 pm                  Operator: emilyp
Sample    : icv118-50                              Inst    : MS6P
Misc      : op71279,e6p118,                        Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update  : Thu Dec 19 08:58:40 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	134	0.00	5.42
5	S	2-Fluorophenol	1.523	1.473	3.3	131	0.00	4.24
8	S	Phenol-d5	2.082	1.913	8.1	129	0.00	5.15
24	I	Naphthalene-d8	1.000	1.000	0.0	130	0.00	6.56
25	S	Nitrobenzene-d5	0.432	0.404	6.5	121	0.00	5.89
47	I	Acenaphthene-d10	1.000	1.000	0.0	127	0.00	8.62
51	S	2-Fluorobiphenyl	1.271	1.169	8.0	121	0.00	7.76
69	I	Phenanthrene-d10	1.000	1.000	0.0	126	0.00	10.79
73	S	2,4,6-Tribromophenol	0.099	0.092	7.1	106	0.00	9.75
83	I	Chrysene-d12	1.000	1.000	0.0	127	0.00	14.99
86	S	Terphenyl-d14	0.821	0.785	4.4	126	0.00	13.37

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 6p2900.D   M6P118.M         Thu Dec 19 09:21:17 2013   RPT1
```

Initial Calibration Verification

Job Number: JB56243 **Sample:** E6P118-ICV118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2910.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e6p118\6p2910.D          Vial: 22
Acq On    : 18 Dec 2013  10:11 pm                   Operator: emilyp
Sample    : icv118-50                               Inst    : MS6P
Misc      : op71279,e6p118,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update  : Thu Dec 19 08:58:40 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	153	0.00	5.42
10	t	Aniline	2.882	2.682	6.9	123	0.00	5.14
24	I	Naphthalene-d8	1.000	1.000	0.0	152	0.00	6.56
39	t	4-Chloroaniline	0.491	0.461	6.1	125	0.00	6.64

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p2900.D M6P118.M Thu Dec 19 09:21:19 2013 RPT1

7.6.11

7

Initial Calibration Verification

Job Number: JB56243 **Sample:** E6P118-ICV118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2911.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e6p118\6p2911.D          Vial: 23
Acq On    : 18 Dec 2013  10:39 pm                   Operator: emilyp
Sample    : icv118-50                               Inst    : MS6P
Misc      : op71279,e6p118,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update  : Thu Dec 19 08:58:40 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83	I	Chrysene-d12	1.000	1.000	0.0	121	0.00	14.99
89	t	3,3'-Dichlorobenzidine	0.372	0.300	19.4	99	0.00	14.99
107		Chrysene-d12a	1.000	1.000	0.0	115	0.00	14.99
108		Benzidine	0.447	0.662	-48.1#	121	-0.01	12.96

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p2900.D M6P118.M Thu Dec 19 09:21:21 2013 RPT1

7.6.12

7

Initial Calibration Verification

Job Number: JB56243 **Sample:** E6P118-ICV118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P2912.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e6p118\6p2912.D          Vial: 24
Acq On    : 18 Dec 2013  11:07 pm                  Operator: emilyp
Sample    : icv118-50                              Inst    : MS6P
Misc      : op71279,e6p118,                        Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update  : Thu Dec 19 08:58:40 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
112 I	Naphthalene-d8a	1.000	1.000	0.0	108	0.00	6.56
113	Hydroquinone	0.368	0.364	1.1	92	-0.03	6.99

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p2900.D M6P118.M Thu Dec 19 09:21:23 2013 RPT1

7.6.13

7

Continuing Calibration Summary

Job Number: JB56243 **Sample:** E6P128-CC118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P3215.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\e6p128\6p3215.D Vial: 2
Acq On : 28 Dec 2013 9:56 am Operator: andrews1
Sample : cc118-25 Inst : MS6P
Misc : op71279,e6p128, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update : Sun Dec 29 10:26:29 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 202%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	147	-0.06	5.36
2		1,4-Dioxane	0.761	0.793	-4.2	146	-0.08	1.91
3	t	Pyridine	1.827	2.150	-17.7	154	-0.12	2.27
4	t	N-Nitrosodimethylamine	1.124	1.225	-9.0	155	-0.10	2.23
5	S	2-Fluorophenol	1.523	1.523	0.0	148	-0.07	4.17
6	t	Indene	2.827	3.136	-10.9	147	-0.07	5.57
7	t	Cumene	4.030	4.615	-14.5	151	-0.08	4.65
8	S	Phenol-d5	2.082	2.140	-2.8	154	-0.05	5.10
9	t	Phenol	2.409	2.533	-5.1	137	-0.05	5.11
10	t	Aniline	2.882	3.566	-23.7#	150	-0.07	5.08
11	t	bis(2-Chloroethyl)ether	1.798	1.887	-4.9	149	-0.06	5.15
12	t	2-Chlorophenol	1.605	1.737	-8.2	147	-0.06	5.19
13	t	Decane	1.201	1.386	-15.4	154	-0.06	5.25
14	t	1,3-Dichlorobenzene	1.579	1.515	4.1	144	-0.06	5.31
15	t	1,4-Dichlorobenzene	1.586	1.528	3.7	145	-0.07	5.37
16	t	Benzyl alcohol	1.078	1.365	-26.6#	152	-0.06	5.49
17	t	1,2-Dichlorobenzene	1.448	1.428	1.4	145	-0.07	5.50
18	t	Acetophenone	2.364	2.669	-12.9	150	-0.07	5.70
19	t	2-Methylphenol	1.532	1.786	-16.6	145	-0.06	5.60
20	t	2,2'-oxybis(1-Chloropropa	0.526	0.544	-3.4	146	-0.07	5.60
21	t	3&4-Methylphenol	1.684	1.973	-17.2	150	-0.06	5.73
22	t	n-Nitroso-di-n-propylamin	1.183	1.302	-10.1	152	-0.06	5.71
23	t	Hexachloroethane	0.446	0.427	4.3	144	-0.08	5.78
24	I	Naphthalene-d8	1.000	1.000	0.0	147	-0.08	6.48
25	S	Nitrobenzene-d5	0.432	0.449	-3.9	151	-0.07	5.82
26	t	Nitrobenzene	0.445	0.449	-0.9	149	-0.07	5.84
27	t	Quinoline	0.753	0.823	-9.3	149	-0.08	6.84
28	t	Isophorone	0.778	0.799	-2.7	152	-0.07	6.05
29	t	2-Nitrophenol	0.192	0.218	-13.5	145	-0.07	6.13
30	t	2,4-Dimethylphenol	0.378	0.438	-15.9	146	-0.07	6.19
31		Benzoic Acid	0.311	0.302	2.9	144	-0.02	6.30
32	t	bis(2-Chloroethoxy)methan	0.522	0.554	-6.1	150	-0.07	6.26
33	t	2,4-Dichlorophenol	0.289	0.315	-9.0	146	-0.08	6.36
34		2,6-Dichlorophenol	0.286	0.309	-8.0	144	-0.08	6.57
35	t	1,3,5-Trichlorobenzene	0.298	0.320	-7.4	143	-0.07	6.14
36	t	1,2,4-Trichlorobenzene	0.281	0.272	3.2	143	-0.07	6.43
37	t	1,2,3-Trichlorobenzene	0.276	0.302	-9.4	144	-0.08	6.65
38	t	Naphthalene	1.167	1.278	-9.5	148	-0.08	6.50
39	t	4-Chloroaniline	0.491	0.588	-19.8	147	-0.08	6.57
40	t	2,3-Dichloroaniline	0.356	0.394	-10.7	148	-0.09	7.57
41	t	Caprolactam	0.156	0.187	-19.9	162	-0.05	6.92

Continuing Calibration Summary

Job Number: JB56243 **Sample:** E6P128-CC118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P3215.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

42	t	Hexachlorobutadiene	0.134	0.127	5.2	141	-0.08	6.64
43	t	4-Chloro-3-methylphenol	0.351	0.398	-13.4	152	-0.07	7.10
44	t	2-Methylnaphthalene	0.628	0.717	-14.2	146	-0.08	7.24
45	t	1-Methylnaphthalene	0.594	0.652	-9.8	146	-0.09	7.34
46	t	Dimethylnaphthalene	0.641	0.706	-10.1	146	-0.09	7.99
47	I	Acenaphthene-d10	1.000	1.000	0.0	149	-0.09	8.54
48	t	Hexachlorocyclopentadiene	0.256	0.258	-0.8	134	-0.09	7.43
49	t	2,4,6-Trichlorophenol	0.316	0.342	-8.2	146	-0.08	7.58
50	t	2,4,5-Trichlorophenol	0.339	0.388	-14.5	149	-0.09	7.63
51	S	2-Fluorobiphenyl	1.271	1.225	3.6	145	-0.09	7.67
52	t	2-Chloronaphthalene	1.117	1.067	4.5	146	-0.09	7.81
53	t	Biphenyl	1.524	1.638	-7.5	146	-0.09	7.79
54	t	2-Nitroaniline	0.382	0.478	-25.1#	157	-0.08	7.95
55	t	Dimethylphthalate	1.235	1.260	-2.0	147	-0.09	8.20
56	t	Acenaphthylene	1.920	2.094	-9.1	147	-0.09	8.34
57	t	2,6-Dinitrotoluene	0.255	0.269	-5.5	151	-0.09	8.27
58	t	3-Nitroaniline	0.349	0.431	-23.5#	154	-0.09	8.49
59	t	Acenaphthene	1.195	1.265	-5.9	146	-0.09	8.58
60	t	2,4-Dinitrophenol	0.144	0.148	-2.8	149	-0.09	8.64
61	t	4-Nitrophenol	0.175	0.195	-11.4	160	-0.08	8.79
62	t	Dibenzofuran	1.643	1.840	-12.0	146	-0.09	8.82
63	t	2,4-Dinitrotoluene	0.336	0.361	-7.4	148	-0.09	8.82
64		2,3,4,6-Tetrachlorophenol	0.247	0.284	-15.0	149	-0.09	9.01
65	t	Diethylphthalate	1.222	1.290	-5.6	152	-0.09	9.20
66	t	Fluorene	1.351	1.456	-7.8	147	-0.10	9.30
67	t	4-Chlorophenyl-phenylethe	0.531	0.539	-1.5	147	-0.10	9.33
68	t	4-Nitroaniline	0.339	0.430	-26.8#	153	-0.09	9.35
69	I	Phenanthrene-d10	1.000	1.000	0.0	147	-0.10	10.70
70	t	4,6-Dinitro-2-methylpheno	0.133	0.146	-9.8	155	-0.09	9.41
71	t	n-Nitrosodiphenylamine	0.655	0.695	-6.1	151	-0.10	9.50
72	t	1,2-Diphenylhydrazine	1.058	1.113	-5.2	156	-0.10	9.56
73	S	2,4,6-Tribromophenol	0.099	0.102	-3.0	149	-0.10	9.66
74	t	4-Bromophenyl-phenylether	0.200	0.206	-3.0	147	-0.10	10.05
75	t	Hexachlorobenzene	0.228	0.214	6.1	143	-0.10	10.12
76	t	Pentachlorophenol	0.120	0.131	-9.2	156	-0.10	10.44
77	t	Phenanthrene	1.227	1.345	-9.6	151	-0.10	10.73
78	t	Anthracene	1.225	1.383	-12.9	152	-0.10	10.81
79	t	Carbazole	1.230	1.382	-12.4	151	-0.10	11.09
80	t	Di-n-butylphthalate	1.373	1.604	-16.8	157	-0.10	11.73
81	t	Fluoranthene	1.211	1.387	-14.5	152	-0.11	12.59
82	t	Octadecane	0.566	0.671	-18.6	153	-0.10	10.68
83	I	Chrysene-d12	1.000	1.000	0.0	150	-0.11	14.88
84	t	Pyrene	1.428	1.561	-9.3	151	-0.11	12.94
85		Butyl stearate	0.406	0.544	-34.0#	163	-0.10	14.30
86	S	Terphenyl-d14	0.821	0.771	6.1	151	-0.11	13.26
87	t	Butylbenzylphthalate	0.664	0.761	-14.6	159	-0.11	14.11
88	t	Benzo[a]anthracene	1.205	1.319	-9.5	153	-0.11	14.87
89	t	3,3'-Dichlorobenzidine	0.372	0.358	3.8	148	-0.11	14.88
90	t	Chrysene	1.159	1.260	-8.7	152	-0.11	14.92
91	t	bis(2-Ethylhexyl)phthalat	0.892	1.033	-15.8	158	-0.11	15.09
92	I	Perylene-d12	1.000	1.000	0.0	149	-0.12	17.00
		----------	True	Calc.	% Drift	----------		
93	t	Di-n-octylphthalate	25.000	26.091	-4.4	164	-0.11	16.08
		----------	AvgRF	CCRF	% Dev	----------		

7.6.14

7

Continuing Calibration Summary

Job Number: JB56243 **Sample:** E6P128-CC118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P3215.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

94	t	Benzo[b]fluoranthene	1.242	1.402	-12.9	153	-0.11	16.48
95	t	Benzo[k]fluoranthene	1.217	1.348	-10.8	147	-0.11	16.52
96	t	Benzo[a]pyrene	1.109	1.265	-14.1	149	-0.11	16.92
97	t	Indeno[1,2,3-cd]pyrene	1.215	1.402	-15.4	154	-0.12	18.29
98	t	Dibenz(a,h)acridine	1.006	1.146	-13.9	150	-0.12	18.03
99	t	Dibenz[a,h]anthracene	1.209	1.361	-12.6	150	-0.12	18.32
100	t	7,12-Dimethylbenz(a)anthr	0.513	0.603	-17.5	144	-0.11	16.49
101	t	Benzo[g,h,i]perylene	1.199	1.345	-12.2	151	-0.13	18.61

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6p2901.D M6P118.M Sun Dec 29 11:51:42 2013 RPT1

Continuing Calibration Summary

Job Number: JB56243 **Sample:** E6P128-CC118
Account: ENVNJB EnviroTrac **Lab FileID:** 6P3216.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\e6p128\6p3216.D          Vial: 3
Acq On    : 28 Dec 2013  10:25 am                   Operator: andrews1
Sample    : cc118-25                                Inst    : MS6P
Misc      : op71279,e6p128,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\M6P118.M (RTE Integrator)
Title        : Semi Volatile  GC/MS, ZB-5MSi 30m x .25mm x .25um
Last Update  : Sun Dec 29 10:26:29 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 202%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	148	-0.06	5.36
103	Benzaldehyde	1.055	1.465	-38.9#	188	-0.07	4.97
104	Phenanthrene-d10a	1.000	1.000	0.0	154	-0.10	10.70
105	Atrazine	0.096	0.111	-15.6	156	-0.11	10.35
106	Chrysene-d12a	1.000	1.000	0.0	151	-0.11	14.88
107	Benzidine	0.447	0.621	-38.9#	204#	-0.11	12.86
108	Acenaphthene-d10a	1.000	1.000	0.0	152	-0.10	8.54
109	1,2,4,5-Tetrachlorobenzen	0.470	0.480	-2.1	152	-0.09	7.43

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 6p2901.D   M6P118.M         Sun Dec 29 11:51:44 2013   RPT1
```

7.6.15

7

Initial Calibration Summary

Job Number: JB56243 **Sample:** ER4197-ICC4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105193.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Response Factor Report Instrument #1

Method : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update : Wed Dec 11 16:01:05 2013
Response via : Initial Calibration

Calibration Files
2 =R105197.D 5 =R105198.D 100 =R105194.D 50 =R105193.D
1 =R105195.D 10 =R105200.D 80 =R105196.D 25 =R105199.D

Compound	2	5	100	50	1	10	80	25	Avg	%RSD
1) I 1,4-Dichlorobenzene-d					ISTD					
2) 1,4-Dioxane	0.569	0.545	0.463	0.500	0.508	0.536	0.459	0.526	0.513	7.52
3) Pyridine	1.337	1.414	1.164	1.235	1.319	1.398	1.162	1.257	1.286	7.57
4) N-Nitrosodim	0.843	0.913	0.793	0.833	0.893	0.938	0.795	0.859	0.858	6.17
5) 2-Fluorophen	0.864	1.053	1.028	1.079	0.811	1.121	1.013	1.055	1.003	10.80
6) Indene	2.174	2.283	2.151	2.198	2.176	2.260	2.173	2.243	2.207	2.18
7) Cumene	3.092	2.991	2.654	2.842	2.647	3.039	2.648	2.844	2.844	6.44
8) Phenol-d5	1.387	1.421	1.421	1.498	1.116	1.469	1.393	1.394	1.387	8.39
9) Phenol	1.568	1.718	1.681	1.763	1.402	1.778	1.648	1.694	1.656	7.36
10) Aniline	1.753	1.820		1.459	1.471	1.774		1.654	1.655	9.50
11) bis(2-Chloro	1.136	1.130	1.111	1.076	1.050	1.122	1.129	1.047	1.100	3.36
12) 2-Chlorophen	1.213	1.360	1.354	1.352	1.068	1.379	1.339	1.309	1.297	8.16
13) Decane	1.651	1.659	1.548	1.573	1.735	1.649	1.594	1.608	1.627	3.62
14) 1,3-Dichloro	1.553	1.580	1.494	1.509	1.310	1.544	1.501	1.489	1.497	5.50
15) 1,4-Dichloro	1.574	1.651	1.528	1.531	1.477	1.633	1.552	1.582	1.566	3.65
16) Benzyl alcoh	0.662	0.772	0.853	0.856	0.602	0.841	0.855	0.823	0.783	12.58
17) 1,2-Dichloro	1.434	1.597	1.439	1.480	1.318	1.536	1.490	1.496	1.474	5.56
18) Acetophenone	1.581	1.679	1.623	1.690	1.306	1.782	1.636	1.741	1.630	8.93
19) 2-Methylphen	1.108	1.180	1.186	1.240	0.945	1.275	1.186	1.230	1.169	8.85
20) 2,2'-oxybis(	0.363	0.412	0.379	0.382	0.274	0.401	0.387	0.386	0.373	11.43
21) 3&4-Methylph	1.039	1.181	1.300	1.312	1.039	1.319	1.296	1.330	1.227	10.18
22) n-Nitroso-di	0.801	0.906	0.928	0.961	0.750	0.984	0.942	0.926	0.900	9.05
23) Hexachloroet	0.617	0.623	0.548	0.556	0.588	0.581	0.557	0.561	0.579	4.98
24) I Naphthalene-d8					ISTD					
25) Nitrobenzene	0.346	0.345	0.345	0.359	0.281	0.357	0.358	0.360	0.344	7.62
26) Nitrobenzene	0.371	0.358	0.343	0.365	0.345	0.373	0.363	0.378	0.362	3.48
27) Quinoline	0.617	0.656	0.626	0.660	0.518	0.670	0.652	0.654	0.632	7.77
28) Isophorone	0.578	0.599	0.575	0.618	0.502	0.605	0.592	0.592	0.583	6.08
29) 2-Nitropheno	0.151	0.167	0.194	0.196	0.131	0.193	0.200	0.197	0.179	14.44
30) 2,4-Dimethyl	0.320	0.318	0.332	0.359	0.263	0.336	0.337	0.347	0.327	8.85
31) Benzoic acid		0.127	0.254	0.241		0.161	0.255	0.204	0.207	25.76
----- Linear regression ----- Coefficient = 0.9991										
Response Ratio = -0.02666 + 0.26537 *A										
32) bis(2-Chloro	0.302	0.342	0.333	0.343	0.323	0.345	0.340	0.345	0.334	4.49
33) 2,4-Dichloro	0.240	0.287	0.305	0.311	0.206	0.315	0.308	0.299	0.284	13.92
34) 2,6-Dichloro	0.279	0.315	0.294	0.309	0.236	0.304	0.309	0.320	0.296	9.26
35) 1,3,5-Trichl	0.326	0.353	0.337	0.358	0.314	0.370	0.358	0.355	0.346	5.46
36) 1,2,4-Trichl	0.350	0.351	0.325	0.343	0.351	0.343	0.340	0.337	0.342	2.58
37) 1,2,3-Trichl	0.349	0.350	0.320	0.332	0.336	0.344	0.328	0.327	0.336	3.31
38) Naphthalene	1.092	1.060	1.012	1.072	1.023	1.094	1.065	1.079	1.062	2.83
39) 4-Chloroanil	0.384	0.401	0.298	0.370	0.360	0.420	0.308	0.402	0.368	12.05
40) 2,3-Dichloro	0.348	0.338	0.330	0.353	0.284	0.353	0.338	0.353	0.337	6.86
41) Caprolactam	0.120	0.143	0.169	0.176	0.124	0.156	0.173	0.160	0.153	14.11
42) Hexachlorobu	0.184	0.213	0.186	0.199	0.201	0.202	0.201	0.203	0.199	4.66

Initial Calibration Summary

Job Number: JB56243 **Sample:** ER4197-ICC4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105193.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

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43) 4-Chloro-3-m 0.224 0.276 0.292 0.311 0.224 0.287 0.302 0.302 0.277  12.50
44) 2-Methylnaph 0.635 0.651 0.613 0.650 0.539 0.660 0.642 0.643 0.629   6.18
45) 1-Methylnaph 0.685 0.689 0.654 0.685 0.634 0.695 0.675 0.676 0.674   3.05
46) Dimethylnaph 0.572 0.613 0.591 0.633 0.525 0.610 0.627 0.607 0.597   5.89

47) I   Acenaphthene-d10      ----------------ISTD---------------------
48) Hexachlorocy 0.244 0.326 0.390 0.377       0.359 0.402 0.386 0.355  15.46
49) 2,4,6-Trichl 0.306 0.401 0.406 0.416 0.251 0.416 0.421 0.412 0.379  16.89
50) 2,4,5-Trichl 0.358 0.392 0.419 0.423 0.272 0.418 0.436 0.428 0.393  13.96
51) 2-Fluorobiph 1.342 1.367 1.296 1.349 1.225 1.427 1.360 1.391 1.345   4.56
52) 2-Chloronaph 1.132 1.170 1.121 1.171 1.032 1.223 1.168 1.168 1.148   4.85
53) Biphenyl     1.471 1.519 1.419 1.468 1.440 1.548 1.481 1.519 1.483   2.93
54) 2-Nitroanili 0.320 0.339 0.360 0.373 0.182 0.358 0.367 0.376 0.334  19.27
55) Dimethylphth 1.261 1.291 1.201 1.270 1.233 1.293 1.259 1.252 1.258   2.40
56) Acenaphthyle 1.771 1.910 1.847 1.905 1.646 1.925 1.914 1.937 1.857   5.45
57) 2,6-Dinitrot 0.236 0.238 0.277 0.283 0.197 0.282 0.292 0.284 0.261  12.86
58) 3-Nitroanili 0.236 0.269 0.276 0.286       0.313 0.280 0.304 0.280   8.97
59) Acenaphthene 1.192 1.217 1.159 1.197 1.077 1.257 1.202 1.224 1.191   4.50
60) 2,4-Dinitrop       0.046 0.178 0.149       0.079 0.180 0.119 0.125  43.29
         ----- Quadratic regression -----                Coefficient =  0.9974
              Response Ratio = -0.03607 + 0.14775 *A + 0.00822 *A^2

61) 4-Nitropheno       0.116 0.165 0.166       0.126 0.173 0.140 0.148  15.91
62) Dibenzofuran 1.676 1.759 1.610 1.682 1.616 1.776 1.673 1.729 1.690   3.62
63) 2,4-Dinitrot 0.243 0.320 0.381 0.387       0.381 0.402 0.384 0.357  15.84
64) 2,3,4,6-Tetr 0.249 0.332 0.364 0.367 0.218 0.355 0.376 0.357 0.327  18.31
65) Diethylphtha 1.170 1.202 1.181 1.241 1.118 1.234 1.224 1.230 1.200   3.49
66) Fluorene     1.240 1.250 1.272 1.294 1.185 1.333 1.309 1.318 1.275   3.82
67) 4-Chlorophen 0.662 0.705 0.669 0.677 0.665 0.715 0.694 0.677 0.683   2.85
68) 4-Nitroanili       0.226 0.287 0.295       0.284 0.291 0.284 0.278   9.35

69) I   Phenanthrene-d10      ----------------ISTD---------------------
70) 4,6-Dinitro-             0.153 0.148       0.114 0.163 0.133 0.142  13.38
71) n-Nitrosodip 0.566 0.587 0.546 0.580 0.550 0.612 0.590 0.602 0.579   4.04
72) 1,2-Diphenyl 0.580 0.675 0.634 0.670 0.537 0.672 0.673 0.693 0.642   8.57
73) 2,4,6-Tribro 0.055 0.075 0.086 0.089       0.091 0.092 0.091 0.083  16.35
74) 4-Bromopheny 0.200 0.228 0.201 0.213 0.202 0.223 0.215 0.228 0.214   5.56
75) Hexachlorobe 0.204 0.226 0.195 0.202 0.192 0.220 0.206 0.212 0.207   5.67
76) Pentachlorop       0.116 0.149 0.152       0.127 0.153 0.140 0.139  10.87
77) Phenanthrene 1.112 1.192 1.103 1.168 1.035 1.174 1.157 1.145 1.136   4.45
78) Anthracene   1.088 1.191 1.113 1.189 0.949 1.170 1.172 1.180 1.132   7.32
79) Carbazole    0.958 0.968 0.991 1.058 0.836 1.034 1.047 1.034 0.991   7.31
80) Di-n-butylph 0.879 1.034 1.065 1.121 0.773 1.079 1.119 1.078 1.018  12.32
81) Fluoranthene 1.079 1.213 1.103 1.184 0.974 1.190 1.166 1.187 1.137   7.07
82) Octadecane   0.469 0.526 0.475 0.505 0.478 0.505 0.508 0.503 0.496   3.96

83) I   Chrysene-d12          ----------------ISTD---------------------
84) Pyrene       1.253 1.334 1.186 1.303 1.116 1.347 1.267 1.338 1.268   6.44
85) Butyl steara 0.190 0.252 0.282 0.289 0.174 0.270 0.294 0.282 0.254  18.31
86) Terphenyl-d1 0.785 0.812 0.752 0.817 0.747 0.836 0.806 0.818 0.797   4.09
87) Butylbenzylp 0.324 0.401 0.430 0.457 0.311 0.428 0.452 0.449 0.406  14.22
88) Benzo[a]anth 1.114 1.117 1.071 1.141 0.993 1.149 1.111 1.151 1.106   4.75
89) 3,3'-Dichlor 0.266 0.363 0.402 0.405 0.257 0.400 0.415 0.399 0.364  17.86
90) Chrysene     1.149 1.155 1.145 1.185 1.020 1.183 1.186 1.165 1.149   4.74
91) bis(2-Ethylh 0.447 0.555 0.687 0.705       0.636 0.718 0.663 0.630  15.43

92) I   Perylene-d12          ----------------ISTD---------------------
93) Di-n-octylph 0.686 0.931 1.145 1.142       1.058 1.176 1.143 1.040  17.01
94) Benzo[b]fluo 0.930 1.136 1.255 1.224 0.954 1.267 1.262 1.261 1.161  12.21
95) Benzo[k]fluo 0.964 1.160 1.183 1.202 0.982 1.189 1.237 1.236 1.144   9.53
```

Initial Calibration Summary

Job Number: JB56243 **Sample:** ER4197-ICC4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105193.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

96)	Benzo[a]pyre	1.045	1.000	1.102	1.143	0.946	1.096	1.133	1.116	1.073	6.49
97)	Indeno[1,2,3	1.151	1.221	1.114	1.197	1.198	1.210	1.162	1.253	1.188	3.72
98)	Dibenz(a,h)a	0.928	0.944	0.884	0.965	0.937	0.952	0.913	0.966	0.936	2.96
99)	Dibenz[a,h]a	1.046	1.181	1.092	1.182	1.075	1.223	1.157	1.196	1.144	5.65
100)	7,12-Dimethy	0.388	0.472	0.582	0.575	0.430	0.502	0.582	0.585	0.514	15.23
101)	Benzo[g,h,i]	1.180	1.346	1.102	1.202	1.245	1.276	1.159	1.279	1.224	6.37

(#) = Out of Range ### Number of calibration levels exceeded format ###

MR4197.M Wed Dec 11 16:58:35 2013 RPT1

7.6.16

7

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4197-ICV4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105209.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\er4197\R105209.D          Vial: 18
Acq On    : 11 Dec 2013   5:32 am                   Operator: andrews1
Sample    : icv4197-50                              Inst    : Instrument #1
Misc      : op71098,er4197,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update  : Wed Dec 11 16:01:05 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	96	0.00	4.50
9	t	Phenol	1.656	1.652	0.2	90	0.00	4.29
12	t	2-Chlorophenol	1.297	1.449	-11.7	103	0.00	4.37
19	t	2-Methylphenol	1.169	1.314	-12.4	101	0.00	4.73
21	t	3&4-Methylphenol	1.227	1.394	-13.6	102	0.00	4.85
24	I	Naphthalene-d8	1.000	1.000	0.0	103	0.00	5.59
29	t	2-Nitrophenol	0.179	0.193	-7.8	101	0.00	5.24
30	t	2,4-Dimethylphenol	0.327	0.361	-10.4	103	0.00	5.30
		----------	True	Calc.	% Drift	----------		
31	t	Benzoic acid	50.000	41.987	16.0	86	0.03	5.43
		----------	AvgRF	CCRF	% Dev	----------		
33	t	2,4-Dichlorophenol	0.284	0.335	-18.0	111	-0.01	5.47
34	t	2,6-Dichlorophenol	0.296	0.325	-9.8	108	0.00	5.69
43	t	4-Chloro-3-methylphenol	0.277	0.311	-12.3	103	-0.01	6.25
47	I	Acenaphthene-d10	1.000	1.000	0.0	92	0.00	7.84
49	t	2,4,6-Trichlorophenol	0.379	0.449	-18.5	100	0.00	6.77
50	t	2,4,5-Trichlorophenol	0.393	0.489	-24.4	106	-0.01	6.83
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	100.000	90.744	9.3	70	0.00	7.98
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.148	0.150	-1.4	83	-0.04	8.22
64	t	2,3,4,6-Tetrachlorophenol	0.327	0.372	-13.8	93	0.00	8.42
69	I	Phenanthrene-d10	1.000	1.000	0.0	86	0.00	10.41
70	t	4,6-Dinitro-2-methylpheno	0.142	0.136	4.2	79	0.00	8.88
76	t	Pentachlorophenol	0.139	0.154	-10.8	86	0.00	10.12

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 R105203.D  MR4197.M         Wed Dec 11 16:26:22 2013   RPT1
```

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4197-ICV4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105210.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\er4197\R105210.D Vial: 19
Acq On : 11 Dec 2013 6:00 am Operator: andrews1
Sample : icv4197-50 Inst : Instrument #1
Misc : op71098,er4197, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update : Wed Dec 11 16:01:05 2013
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	120	0.00	4.51
3	t	Pyridine	1.286	1.415	-10.0	138	-0.04	2.39
4	t	N-Nitrosodimethylamine	0.858	0.865	-0.8	125	-0.01	2.35
11	t	bis(2-Chloroethyl)ether	1.100	1.042	5.3	117	0.00	4.31
14	t	1,3-Dichlorobenzene	1.497	1.396	6.7	111	0.00	4.46
15	t	1,4-Dichlorobenzene	1.566	1.470	6.1	116	0.00	4.52
16	t	Benzyl alcohol	0.783	0.822	-5.0	116	0.00	4.63
17	t	1,2-Dichlorobenzene	1.474	1.415	4.0	115	0.00	4.63
20	t	2,2'-oxybis(1-Chloropropa	0.373	0.345	7.5	109	0.00	4.72
22	t	n-Nitroso-di-n-propylamin	0.900	0.840	6.7	105	0.00	4.82
23	t	Hexachloroethane	0.579	0.527	9.0	114	0.00	4.90
24	I	Naphthalene-d8	1.000	1.000	0.0	118	0.00	5.59
26	t	Nitrobenzene	0.362	0.334	7.7	108	0.00	4.96
28	t	Isophorone	0.583	0.563	3.4	108	0.00	5.16
		----------	AvgRF	CCRF	% Dev	----------		
32	t	bis(2-Chloroethoxy)methan	0.334	0.334	0.0	116	0.00	5.36
36	t	1,2,4-Trichlorobenzene	0.342	0.329	3.8	114	0.00	5.54
38	t	Naphthalene	1.062	1.012	4.7	112	0.00	5.61
42	t	Hexachlorobutadiene	0.199	0.197	1.0	117	0.00	5.75
44	t	2-Methylnaphthalene	0.629	0.604	4.0	110	0.00	6.38
47	I	Acenaphthene-d10	1.000	1.000	0.0	115	0.00	7.85
48	t	Hexachlorocyclopentadiene	0.355	0.366	-3.1	112	0.00	6.59
52	t	2-Chloronaphthalene	1.148	1.047	8.8	102	0.00	7.02
54	t	2-Nitroaniline	0.334	0.325	2.7	100	0.00	7.20
55	t	Dimethylphthalate	1.258	1.125	10.6	102	0.00	7.48
56	t	Acenaphthylene	1.857	1.650	11.1	99	0.00	7.62
57	t	2,6-Dinitrotoluene	0.261	0.246	5.7	100	0.00	7.56
58	t	3-Nitroaniline	0.280	0.240	14.3	96	0.00	7.83
59	t	Acenaphthene	1.191	1.164	2.3	111	0.00	7.89
		----------	AvgRF	CCRF	% Dev	----------		
62	t	Dibenzofuran	1.690	1.633	3.4	111	0.00	8.18
63	t	2,4-Dinitrotoluene	0.357	0.333	6.7	99	0.00	8.20
65	t	Diethylphthalate	1.200	1.078	10.2	99	0.00	8.65
66	t	Fluorene	1.275	1.193	6.4	106	0.00	8.75
67	t	4-Chlorophenyl-phenylethe	0.683	0.638	6.6	108	0.00	8.79
68	t	4-Nitroaniline	0.278	0.261	6.1	101	0.00	8.86
69	I	Phenanthrene-d10	1.000	1.000	0.0	103	0.00	10.42

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4197-ICV4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105210.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

71	t	n-Nitrosodiphenylamine	0.579	0.568	1.9	101	0.00	9.00
72	t	1,2-Diphenylhydrazine	0.642	0.706	-10.0	109	0.00	9.06
74	t	4-Bromophenyl-phenylether	0.214	0.217	-1.4	106	0.00	9.65
75	t	Hexachlorobenzene	0.207	0.208	-0.5	106	0.00	9.73
77	t	Phenanthrene	1.136	1.060	6.7	94	0.00	10.46
78	t	Anthracene	1.132	1.142	-0.9	99	0.00	10.55
79	t	Carbazole	0.991	1.024	-3.3	100	0.00	10.92
80	t	Di-n-butylphthalate	1.018	1.057	-3.8	98	0.00	11.72
81	t	Fluoranthene	1.137	1.087	4.4	95	0.00	12.73
83	I	Chrysene-d12	1.000	1.000	0.0	98	0.00	15.55
84	t	Pyrene	1.268	1.262	0.5	95	0.00	13.15
87	t	Butylbenzylphthalate	0.406	0.426	-4.9	91	0.00	14.64
88	t	Benzo[a]anthracene	1.106	1.022	7.6	88	0.00	15.53
89	t	3,3'-Dichlorobenzidine	0.364	0.272	25.3	66	0.00	15.59
90	t	Chrysene	1.149	1.147	0.2	95	0.00	15.60
91	t	bis(2-Ethylhexyl)phthalat	0.630	0.651	-3.3	90	0.00	15.85
92	I	Perylene-d12	1.000	1.000	0.0	91	0.00	18.15
93	t	Di-n-octylphthalate	1.040	1.136	-9.2	91	0.00	17.07
94	t	Benzo[b]fluoranthene	1.161	1.092	5.9	81	0.00	17.51
95	t	Benzo[k]fluoranthene	1.144	1.151	-0.6	87	0.01	17.56
96	t	Benzo[a]pyrene	1.073	1.089	-1.5	87	0.00	18.05
97	t	Indeno[1,2,3-cd]pyrene	1.188	0.996	16.2	76	0.01	19.80
99	t	Dibenz[a,h]anthracene	1.144	1.036	9.4	80	0.01	19.85
101	t	Benzo[g,h,i]perylene	1.224	1.114	9.0	85	0.01	20.21

(#) = Out of Range SPCC's out = 0 CCC's out = 0
R105203.D MR4197.M Wed Dec 11 16:31:29 2013 RPT1

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4197-ICV4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105211.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\er4197\R105211.D          Vial: 20
Acq On    : 11 Dec 2013   6:29 am                   Operator: andrews1
Sample    : icv4197-50                              Inst    : Instrument #1
Misc      : op71098,er4197,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update  : Wed Dec 11 16:01:05 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	125	0.00	4.51
2	t	1,4-Dioxane	0.513	0.460	10.3	115	0.00	2.05
6	t	Indene	2.207	2.152	2.5	122	0.00	4.70
7	t	Cumene	2.844	2.801	1.5	123	0.00	3.91
13	t	Decane	1.627	1.495	8.1	119	0.00	4.39
18	t	Acetophenone	1.630	1.635	-0.3	121	0.00	4.82
24	I	Naphthalene-d8	1.000	1.000	0.0	116	0.00	5.59
27	t	Quinoline	0.632	0.660	-4.4	116	0.00	5.97
40	t	2,3-Dichloroaniline	0.337	0.320	5.0	105	0.00	6.76
41	t	Caprolactam	0.153	0.155	-1.3	102	0.00	6.05
45	t	1-Methylnaphthalene	0.674	0.703	-4.3	119	0.00	6.50
46	t	Dimethylnaphthalene	0.597	0.629	-5.4	115	0.00	7.22
47	I	Acenaphthene-d10	1.000	1.000	0.0	114	0.00	7.84
53	t	Biphenyl	1.483	1.472	0.7	114	0.00	7.00
69	I	Phenanthrene-d10	1.000	1.000	0.0	102	0.00	10.42
82	t	Octadecane	0.496	0.525	-5.8	106	0.00	10.42
92	I	Perylene-d12	1.000	1.000	0.0	69	0.00	18.15
100	t	7,12-Dimethylbenz(a)anthr	0.514	0.437	15.0	52	0.00	17.52

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 R105203.D  MR4197.M         Wed Dec 11 16:38:02 2013   RPT1
```

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4197-ICV4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105212.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\er4197\R105212.D          Vial: 21
Acq On    : 11 Dec 2013   6:57 am                   Operator: andrews1
Sample    : icv4197-50                              Inst    : Instrument #1
Misc      : op71098,er4197,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update  : Wed Dec 11 16:01:05 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	4.51
5	S	2-Fluorophenol	1.003	1.143	-14.0	110	0.00	3.56
8	S	Phenol-d5	1.387	1.388	-0.1	97	0.00	4.28
24	I	Naphthalene-d8	1.000	1.000	0.0	101	0.00	5.59
25	S	Nitrobenzene-d5	0.344	0.350	-1.7	99	0.00	4.94
47	I	Acenaphthene-d10	1.000	1.000	0.0	92	0.00	7.84
51	S	2-Fluorobiphenyl	1.345	1.333	0.9	91	0.00	6.87
69	I	Phenanthrene-d10	1.000	1.000	0.0	86	0.00	10.41
73	S	2,4,6-Tribromophenol	0.083	0.071	14.5	69	0.00	9.18
83	I	Chrysene-d12	1.000	1.000	0.0	75	0.00	15.54
86	S	Terphenyl-d14	0.797	0.886	-11.2	82	0.00	13.57

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 R105203.D  MR4197.M         Wed Dec 11 16:39:57 2013   RPT1
```

7.6.20

7

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4197-ICV4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105213.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\er4197\R105213.D          Vial: 22
Acq On    : 11 Dec 2013   7:25 am                   Operator: andrews1
Sample    : icv4197-50                              Inst    : Instrument #1
Misc      : op71098,er4197,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update  : Wed Dec 11 16:01:05 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
24	I	Naphthalene-d8	1.000	1.000	0.0	120	0.00	5.59
39	t	4-Chloroaniline	0.368	0.420	-14.1	136	0.00	5.68

(#) = Out of Range SPCC's out = 0 CCC's out = 0
R105203.D MR4197.M Wed Dec 11 16:55:58 2013 RPT1

Initial Calibration Summary

Job Number: JB56243 **Sample:** ER4198-ICC4198
Account: ENVNJB EnviroTrac **Lab FileID:** R105219.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

```
                          Response Factor Report  Instrument #1

  Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
  Last Update  : Tue Dec 17 12:50:15 2013
  Response via : Initial Calibration

  Calibration Files
  2   =R105223.D   5   =R105222.D   100 =R105217.D   50  =R105219.D
  1   =R105224.D   10  =R105221.D   80  =R105218.D   25  =R105220.D

   Compound         2     5     100   50    1     10    80    25    Avg %RSD
  ---------------------------------------------------------------------------
102) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
103) Benzaldehyde 0.675 0.778 0.760 0.860 0.445 0.841 0.794 0.844 0.750  18.23

104) I   Acenaphthene-d10a     ----------------ISTD---------------------
105) 1,2,4,5-Tetr 0.554 0.663 0.609 0.627 0.544 0.632 0.622 0.624 0.609   6.58
106) Atrazine           0.138 0.173 0.174       0.134 0.182 0.168 0.162  12.57

107) I   Chrysene-d12a         ----------------ISTD---------------------
108) Benzidine                0.447 0.475       0.226 0.454 0.372 0.395  25.87
             ----- Linear regression -----  Coefficient =  0.9960
               Response Ratio = -0.04866 + 0.47584 *A


109) I   Naphthalene-d8a       ----------------ISTD---------------------
110) Hydroquinone             0.281 0.246       0.175 0.278 0.204 0.237  19.56
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           MR4197.M          Tue Dec 17 12:50:39 2013   RPT1
```

7.6.22

7

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4198-ICV4198
Account: ENVNJB EnviroTrac **Lab FileID:** R105225.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
  Data File : C:\msdchem\1\DATA\er4198\R105225.D          Vial: 10
  Acq On    : 11 Dec 2013   8:10 pm                   Operator: andrews1
  Sample    : icv4198-50                              Inst    : Instrument #1
  Misc      : op71098,er4198,                         Multiplr: 1.00
  MS Integration Params: RTEINT.P

  Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
  Last Update  : Thu Dec 12 11:21:50 2013
  Response via : Multiple Level Calibration

  Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
  Max. RRF Dev :  30%     Max. Rel. Area : 200%

        Compound                   AvgRF   CCRF      %Dev Area%  Dev(min)R.T.
  ---------------------------------------------------------------------------

109 I   Chrysene-d12a               1.000   1.000      0.0   81   0.00   15.54

            ----------------------- True    Calc.   % Drift  ------------
111 t   Benzidine                  50.000  56.675    -13.3   85  -0.03   13.10

 ---------------------------------------------------------------------------
 ---------------------------------------------------------------------------

    (#) = Out of Range              SPCC's out = 0  CCC's out = 0
     R105251.D  MR4197.M         Thu Dec 12 11:23:12 2013   RPT1
```

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4198-ICV4198
Account: ENVNJB EnviroTrac **Lab FileID:** R105226.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\er4198\R105226.D          Vial: 11
Acq On    : 11 Dec 2013   8:38 pm                   Operator: andrews1
Sample    : icv4198-50                              Inst    : Instrument #1
Misc      : op71098,er4198,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update  : Thu Dec 12 11:21:50 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
104 I	Acenaphthene-d10a	1.000	1.000	0.0	127	0.01	7.84
105 I	1,2,4,5-Tetrachlorobenzen	0.609	0.648	-6.4	131	0.00	6.60

(#) = Out of Range SPCC's out = 0 CCC's out = 0
R105251.D MR4197.M Thu Dec 12 11:24:05 2013 RPT1

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4198-ICV4198
Account: ENVNJB EnviroTrac **Lab FileID:** R105227.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
  Data File : C:\msdchem\1\DATA\er4198\R105227.D          Vial: 12
  Acq On    : 11 Dec 2013   9:07 pm                   Operator: andrews1
  Sample    : icv4198-50                              Inst    : Instrument #1
  Misc      : op71098,er4198,                         Multiplr: 1.00
  MS Integration Params: RTEINT.P

  Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
  Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
  Last Update  : Tue Dec 17 12:51:22 2013
  Response via : Multiple Level Calibration

  Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
  Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
	----------	AvgRF	CCRF	% Dev	----------		
109 I	Naphthalene-d8a	1.000	1.000	0.0	82	0.00	5.59
110	Hydroquinone	0.237	0.210	11.4	70	-0.01	6.09

(#) = Out of Range SPCC's out = 0 CCC's out = 0
R105219.D MR4197.M Tue Dec 17 12:52:57 2013 RPT1

Initial Calibration Verification

Job Number: JB56243 **Sample:** ER4198-ICV4198
Account: ENVNJB EnviroTrac **Lab FileID:** R105228.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\er4198\R105228.D          Vial: 13
Acq On    : 11 Dec 2013   9:35 pm                   Operator: andrews1
Sample    : icv4198-50                              Inst    : Instrument #1
Misc      : op71098,er4198,                         Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update  : Thu Dec 12 11:21:50 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  30%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	117	0.00	4.51
103	t	Benzaldehyde	0.750	0.882	-17.6	120	-0.18	4.19
104	I	Acenaphthene-d10a	1.000	1.000	0.0	119	0.00	7.84
106	t	Atrazine	0.162	0.167	-3.1	115	-0.04	10.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0
R105251.D MR4197.M Thu Dec 12 11:25:21 2013 RPT1

Continuing Calibration Summary

Job Number: JB56243 **Sample:** ER4224-CC4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105909.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\er4224\R105909.D          Vial: 2
Acq On    :  2 Jan 2014   9:20 am                   Operator: saumilp
Sample    : CC4197-25                               Inst    : Instrument #1
Misc      : op71577,er4224,1000,,,1,1               Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update  : Mon Dec 30 10:27:27 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	-0.03	4.32
2	t	1,4-Dioxane	0.513	0.528	-2.9	99	-0.04	1.79
3	t	Pyridine	1.286	1.193	7.2	93	-0.04	2.14
4	t	N-Nitrosodimethylamine	0.858	1.072	-24.9#	123	-0.04	2.11
5	S	2-Fluorophenol	1.003	1.093	-9.0	102	0.00	3.42
6	t	Indene	2.207	2.090	5.3	92	-0.04	4.51
7	t	Cumene	2.844	2.868	-0.8	99	-0.03	3.72
8	S	Phenol-d5	1.387	1.365	1.6	96	0.00	4.16
9	t	Phenol	1.656	1.489	10.1	86	0.00	4.17
10	t	Aniline	1.655	1.472	11.1	87	-0.03	4.09
11	t	bis(2-Chloroethyl)ether	1.100	0.975	11.4	92	-0.03	4.14
12	t	2-Chlorophenol	1.297	1.379	-6.3	104	-0.02	4.21
13	t	Decane	1.627	1.574	3.3	96	-0.03	4.20
14	t	1,3-Dichlorobenzene	1.497	1.448	3.3	96	-0.03	4.28
15	t	1,4-Dichlorobenzene	1.566	1.525	2.6	95	-0.03	4.33
16	t	Benzyl alcohol	0.783	0.783	0.0	94	-0.03	4.45
17	t	1,2-Dichlorobenzene	1.474	1.390	5.7	91	-0.03	4.45
18	t	Acetophenone	1.630	1.555	4.6	88	-0.03	4.63
19	t	2-Methylphenol	1.169	1.136	2.8	91	-0.01	4.58
20	t	2,2'-oxybis(1-Chloropropa	0.373	0.359	3.8	91	-0.03	4.53
21	t	3&4-Methylphenol	1.227	1.180	3.8	87	0.00	4.70
22	t	n-Nitroso-di-n-propylamin	0.900	0.880	2.2	93	-0.04	4.63
23	t	Hexachloroethane	0.579	0.567	2.1	99	-0.04	4.69
24	I	Naphthalene-d8	1.000	1.000	0.0	89	-0.04	5.36
25	S	Nitrobenzene-d5	0.344	0.370	-7.6	91	-0.03	4.75
26	t	Nitrobenzene	0.362	0.373	-3.0	88	-0.03	4.76
27	t	Quinoline	0.632	0.665	-5.2	90	-0.04	5.72
28	t	Isophorone	0.583	0.594	-1.9	89	-0.03	4.95
29	t	2-Nitrophenol	0.179	0.200	-11.7	90	-0.04	5.02
30	t	2,4-Dimethylphenol	0.327	0.337	-3.1	86	-0.02	5.11
		----------	True	Calc.	% Drift	----------		
31	t	Benzoic acid	25.000	21.731	13.1	82	-0.02	5.25
		----------	AvgRF	CCRF	% Dev	----------		
32	t	bis(2-Chloroethoxy)methan	0.334	0.322	3.6	83	-0.03	5.15
33	t	2,4-Dichlorophenol	0.284	0.312	-9.9	93	-0.02	5.28
34	t	2,6-Dichlorophenol	0.296	0.309	-4.4	86	-0.03	5.47
35	t	1,3,5-Trichlorobenzene	0.346	0.376	-8.7	94	-0.04	5.02
36	t	1,2,4-Trichlorobenzene	0.342	0.353	-3.2	93	-0.04	5.31
37	t	1,2,3-Trichlorobenzene	0.336	0.351	-4.5	95	-0.04	5.52

Continuing Calibration Summary

Job Number: JB56243 **Sample:** ER4224-CC4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105909.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

38	t	Naphthalene	1.062	1.056	0.6	87	-0.04	5.38
39	t	4-Chloroaniline	0.368	0.397	-7.9	88	-0.04	5.46
40	t	2,3-Dichloroaniline	0.337	0.352	-4.5	88	-0.04	6.48
41	t	Caprolactam	0.153	0.172	-12.4	95	-0.04	5.83
42	t	Hexachlorobutadiene	0.199	0.223	-12.1	97	-0.04	5.50
43	t	4-Chloro-3-methylphenol	0.277	0.304	-9.7	89	-0.01	6.05
44	t	2-Methylnaphthalene	0.629	0.641	-1.9	88	-0.04	6.11
45	t	1-Methylnaphthalene	0.674	0.684	-1.5	90	-0.05	6.22
46	t	Dimethylnaphthalene	0.597	0.615	-3.0	90	-0.05	6.91
47	I	Acenaphthene-d10	1.000	1.000	0.0	88	-0.05	7.52
48	t	Hexachlorocyclopentadiene	0.355	0.400	-12.7	91	-0.05	6.31
49	t	2,4,6-Trichlorophenol	0.379	0.425	-12.1	91	-0.03	6.51
50	t	2,4,5-Trichlorophenol	0.393	0.438	-11.5	90	-0.01	6.60
51	S	2-Fluorobiphenyl	1.345	1.367	-1.6	86	-0.05	6.58
52	t	2-Chloronaphthalene	1.148	1.187	-3.4	89	-0.05	6.72
53	t	Biphenyl	1.483	1.513	-2.0	87	-0.05	6.71
54	t	2-Nitroaniline	0.334	0.434	-29.9#	101	-0.04	6.91
55	t	Dimethylphthalate	1.258	1.322	-5.1	93	-0.05	7.18
56	t	Acenaphthylene	1.857	1.957	-5.4	89	-0.05	7.30
57	t	2,6-Dinitrotoluene	0.261	0.302	-15.7	93	-0.04	7.26
58	t	3-Nitroaniline	0.280	0.316	-12.9	91	-0.04	7.53
59	t	Acenaphthene	1.191	1.236	-3.8	89	-0.05	7.57
		----------	True	Calc.	% Drift	----------		
60	t	2,4-Dinitrophenol	50.000	51.073	-2.1	98	-0.04	7.69
		----------	AvgRF	CCRF	% Dev	----------		
61	t	4-Nitrophenol	0.148	0.181	-22.3#	113	0.05	8.06
62	t	Dibenzofuran	1.690	1.679	0.7	85	-0.05	7.84
63	t	2,4-Dinitrotoluene	0.357	0.388	-8.7	89	-0.05	7.89
64	t	2,3,4,6-Tetrachlorophenol	0.327	0.362	-10.7	89	-0.04	8.11
65	t	Diethylphthalate	1.200	1.426	-18.8	102	-0.05	8.32
66	t	Fluorene	1.275	1.333	-4.5	89	-0.05	8.41
67	t	4-Chlorophenyl-phenylethe	0.683	0.709	-3.8	92	-0.05	8.44
68	t	4-Nitroaniline	0.278	0.296	-6.5	91	-0.04	8.55
69	I	Phenanthrene-d10	1.000	1.000	0.0	94	-0.05	10.05
70	t	4,6-Dinitro-2-methylpheno	0.142	0.139	2.1	98	-0.05	8.57
71	t	n-Nitrosodiphenylamine	0.579	0.556	4.0	87	-0.05	8.67
72	t	1,2-Diphenylhydrazine	0.642	0.675	-5.1	91	-0.05	8.72
73	S	2,4,6-Tribromophenol	0.083	0.091	-9.6	94	-0.05	8.84
74	t	4-Bromophenyl-phenylether	0.214	0.225	-5.1	93	-0.06	9.29
75	t	Hexachlorobenzene	0.207	0.218	-5.3	96	-0.06	9.36
76	t	Pentachlorophenol	0.139	0.116	16.5	78	-0.04	9.81
77	t	Phenanthrene	1.136	1.142	-0.5	94	-0.06	10.09
78	t	Anthracene	1.132	1.140	-0.7	91	-0.06	10.18
79	t	Carbazole	0.991	0.979	1.2	89	-0.05	10.57
80	t	Di-n-butylphthalate	1.018	1.152	-13.2	100	-0.06	11.36
81	t	Fluoranthene	1.137	1.197	-5.3	94	-0.06	12.35
82	t	Octadecane	0.496	0.494	0.4	92	-0.06	10.06
83	I	Chrysene-d12	1.000	1.000	0.0	97	-0.05	15.16
84	t	Pyrene	1.268	1.301	-2.6	94	-0.06	12.76
85		Butyl stearate	0.254	0.300	-18.1	103	-0.06	14.50
86	S	Terphenyl-d14	0.797	0.829	-4.0	98	-0.06	13.20
87	t	Butylbenzylphthalate	0.406	0.499	-22.9#	108	-0.06	14.27
88	t	Benzo[a]anthracene	1.106	1.159	-4.8	98	-0.05	15.14
89	t	3,3'-Dichlorobenzidine	0.364	0.404	-11.0	98	-0.05	15.21
90	t	Chrysene	1.149	1.128	1.8	94	-0.06	15.21

Continuing Calibration Summary

Job Number: JB56243 **Sample:** ER4224-CC4197
Account: ENVNJB EnviroTrac **Lab FileID:** R105909.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

91	t	bis(2-Ethylhexyl)phthalat	0.630	0.742	-17.8	108	-0.05	15.48
92	I	Perylene-d12	1.000	1.000	0.0	99	-0.05	17.76
93	t	Di-n-octylphthalate	1.040	1.321	-27.0#	115	-0.06	16.69
94	t	Benzo[b]fluoranthene	1.161	1.307	-12.6	103	-0.05	17.12
95	t	Benzo[k]fluoranthene	1.144	1.231	-7.6	99	-0.06	17.17
96	t	Benzo[a]pyrene	1.073	1.157	-7.8	103	-0.05	17.66
97	t	Indeno[1,2,3-cd]pyrene	1.188	1.216	-2.4	96	-0.06	19.39
98	t	Dibenz(a,h)acridine	0.936	1.018	-8.8	105	-0.05	19.08
99	t	Dibenz[a,h]anthracene	1.144	1.167	-2.0	97	-0.06	19.43
100	t	7,12-Dimethylbenz(a)anthr	0.514	0.563	-9.5	96	-0.06	17.13
101	t	Benzo[g,h,i]perylene	1.224	1.233	-0.7	96	-0.07	19.76

(#) = Out of Range SPCC's out = 0 CCC's out = 0
R105220.D MR4197.M Thu Jan 02 15:37:03 2014 RPT1

7.6.27

7

Continuing Calibration Summary

Job Number: JB56243 **Sample:** ER4224-CC4198
Account: ENVNJB EnviroTrac **Lab FileID:** R105910.D
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\er4224\R105910.D          Vial: 3
Acq On    :  2 Jan 2014   9:49 am                   Operator: saumilp
Sample    : CC4198-25                               Inst    : Instrument #1
Misc      : op71577,er4224,1000,,,1,1               Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\MSDCHEM\1\METHODS\MR4197.M (RTE Integrator)
Title        : Semi Volatile GC/MS, ZB-5MSI 30m x .25mm x .25um
Last Update  : Mon Dec 30 10:27:27 2013
Response via : Multiple Level Calibration

Min. RRF     :   0.050  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
102	I	1,4-Dichlorobenzene-d4a	1.000	1.000	0.0	82	-0.03	4.32
103	t	Benzaldehyde	0.750	0.766	-2.1	74	-0.21	4.00
104	I	Acenaphthene-d10a	1.000	1.000	0.0	80	-0.05	7.52
105	I	1,2,4,5-Tetrachlorobenzen	0.609	0.625	-2.6	80	-0.28	6.31
106	t	Atrazine	0.162	0.172	-6.2	82	-0.04	9.72
107	I	Chrysene-d12a	1.000	1.000	0.0	79	-0.06	15.15
		----------	True	Calc.	% Drift	----------		
108	t	Benzidine	25.000	19.179	23.3#	61	-0.05	12.74
		----------	AvgRF	CCRF	% Dev	----------		
109	I	Naphthalene-d8a	1.000	1.000	0.0	82	-0.04	5.36
110		Hydroquinone	0.237	0.265	-11.8	107	-0.19	5.91

(#) = Out of Range SPCC's out = 0 CCC's out = 0
R105220.D MR4197.M Fri Jan 03 09:31:52 2014 RPT1

New Jersey

ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
Analyst: JW Run ID: MA32969
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:05	MA32969-STD1	1		STDA
12:06	MA32969-STD2	1		STDB
12:08	MA32969-STD3	1		STDC
12:09	MA32969-STD4	1		STDD
12:10	MA32969-STD5	1		STDE
12:12	MA32969-STD6	1		STDF
12:32	MA32969-ICV1	1		
12:33	MA32969-ICB1	1		
12:35	MA32969-ICCV1	1		
12:36	MA32969-CCB1	1		
12:38	MA32969-CRI1	1		
12:45	MP76982-MB1	1		
12:46	MP76982-B1	1		
12:48	MP76982-S1	1		
12:49	MP76982-S2	1		
12:51	JB56363-6B	1		(sample used for QC only; not part of login JB56243)
12:53	ZZZZZZ	1		
12:54	ZZZZZZ	1		
12:56	ZZZZZZ	1		
12:57	ZZZZZZ	1		
12:58	MA32969-CCV1	1		
12:59	MA32969-CCB2	1		
13:01	ZZZZZZ	1		
13:02	ZZZZZZ	1		
13:04	ZZZZZZ	1		
13:05	ZZZZZZ	1		
13:06	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:09	ZZZZZZ	1		
13:10	ZZZZZZ	1		
13:11	ZZZZZZ	1		
13:13	MP76983-MB1	1		
13:14	MA32969-CCV2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
Analyst: JW Run ID: MA32969
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:15	MA32969-CCB3	1		
13:17	MP76983-B1	1		
13:18	MP76983-S1	1		
13:20	MP76983-S2	1		
13:22	JB56363-21B	1		(sample used for QC only; not part of login JB56243)
13:23	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:27	MP76984-MB1	1		
13:29	MP76984-B1	1		
13:30	MP76984-S1	1		
13:32	MA32969-CCV3	1		
13:33	MA32969-CCB4	1		
13:35	MP76984-S2	1		
13:36	JB55923-3A	1		(sample used for QC only; not part of login JB56243)
13:38	ZZZZZZ	1		
13:39	ZZZZZZ	1		
13:41	ZZZZZZ	1		
13:42	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:46	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:49	MA32969-CCV4	1		
13:50	MA32969-CCB5	1		
13:52	ZZZZZZ	1		
13:53	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:56	ZZZZZZ	1		
13:57	ZZZZZZ	1		
13:58	MP76876-MB4	1		
13:59	MP76876-LC3	1		
14:01	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
Analyst: JW Run ID: MA32969
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:02	ZZZZZZ	1		
14:04	MP76985-MB1	1		
14:05	MA32969-CCV5	1		
14:06	MA32969-CCB6	1		
14:08	MP76985-B1	1		
14:09	MP76985-S1	1		
14:11	MP76985-S2	1		
14:13	JB54477-13AT	1		(sample used for QC only; not part of login JB56243)
14:15	MP76986-MB1	1		
14:16	MP76986-LC1	1		
14:17	MP76986-S1	1		
14:19	MP76986-S2	1		
14:42	JB56143-1	1		(sample used for QC only; not part of login JB56243)
14:44	ZZZZZZ	1		
14:45	MA32969-CCV6	1		
14:46	MA32969-CCB7	1		
14:48	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:51	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:53	ZZZZZZ	1		
14:55	ZZZZZZ	1		
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
14:58	JB56243-1	1		Brown, muddy
---------->	Last reportable sample/prep for job JB56243			
15:10	MP76994-MB1	1		
15:12	MA32969-CCV7	1		
15:13	MA32969-CCB8	1		
---------->	Last reportable CCB for job JB56243			
15:15	MP76994-LC1	1		
15:16	MP76994-S1	1		
15:18	MP76994-S2	1		
15:19	JB56190-1B	1		(sample used for QC only; not part of login JB56243)
15:21	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
Analyst: JW Run ID: MA32969
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:23	ZZZZZZ	1		
15:24	ZZZZZZ	1		
15:25	ZZZZZZ	1		
15:26	MA32969-CCV8	1		
15:28	MA32969-CCB9	1		

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
QC Limits: result < RL Run ID: MA32969 Units: ug/l

Time:			12:33		12:36		12:59		13:15	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.093	-0.013	<0.20	-0.046	<0.20	-0.026	<0.20	-0.026	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
QC Limits: result < RL Run ID: MA32969 Units: ug/l

Time:			13:33		13:50		14:06		14:46	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.093	-0.029	<0.20	-0.033	<0.20	-0.030	<0.20	-0.025	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

8.1.1
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
QC Limits: result < RL Run ID: MA32969 Units: ug/l

Time:			15:13	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Mercury	0.20	.093	-0.021	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

8.1.1
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
QC Limits: 95 to 105 % Recovery Run ID: MA32969 Units: ug/l

Time:		12:35	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Mercury	2.5	2.6	104.0

(*) Outside of QC limits
(anr) Analyte not requested

8.1.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA32969 Units: ug/l

Time:		12:32			12:58			13:14	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.1	103.3	2.5	2.6	104.0	2.5	2.6	104.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA32969 Units: ug/l

Time:		13:32			13:49			14:05	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.6	104.0	2.5	2.6	104.0	2.5	2.6	104.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA32969 Units: ug/l

Time:		14:45			15:12	
Sample ID:	CCV	CCV6		CCV	CCV7	
Metal	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.5	100.0	2.5	2.5	100.0

(*) Outside of QC limits
(anr) Analyte not requested

8.1.3
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: H7123013W1.CSV Date Analyzed: 12/30/13 Methods: EPA 245.1, SW846 7470A
QC Limits: 70 to 130 % Recovery Run ID: MA32969 Units: ug/l

Time:			12:38	
Sample ID:	CRI	CRIA	CRI1	
Metal	True	True	Results	% Rec
Mercury	0.20		0.23	115.0

(*) Outside of QC limits
(anr) Analyte not requested

8.1.4
8

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:56	MA32992-STD1	1		STDA
10:02	MA32992-STD2	1		STDB
10:08	ZZZZZZ	1		
10:13	ZZZZZZ	1		
10:20	MA32992-ICV1	1		
10:30	MA32992-ICB1	1		
10:35	MA32992-ICCV1	1		
10:48	MA32992-CCB1	1		
10:56	MA32992-CRI1	1		
11:02	MA32992-CRID1	1		
11:08	MA32992-CRIA1	1		
11:13	MA32992-CRID2	1		
11:22	ZZZZZZ	1		
11:29	ZZZZZZ	1		
11:40	MA32992-ICSA1	1		
11:46	MA32992-ICSAB1	1		
11:52	MA32992-CCV1	1		
11:58	MA32992-CCB2	1		
12:04	ZZZZZZ	1		
12:10	MP76900-S1	5		Bad reading on Y 3710
12:18	MP76900-S2	5		Rerun with S1
12:24	MA32992-CCV2	1		
12:30	MA32992-CCB3	1		
12:37	ZZZZZZ	1		
12:42	ZZZZZZ	1		
12:48	MA32992-CCV3	1		
12:55	MA32992-CCB4	1		
13:01	MP76942-MB1	1		CCB out
13:07	MP76942-MB2	1		CCB out
13:13	MP76942-B1	1		CCB out
13:19	MP76942-LC1	1		CCB out
13:24	MP76942-LC2	1		CCB out
13:30	MP76942-S1	1		ISTD out.Na and S high

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:36	MP76942-S2	1		ISTD out.Na and S high
13:42	JB56073-1	1		(sample used for QC only; not part of login JB56243)
13:48	MP76942-SD1	5		ISTD out.Na and S high
13:54	MA32992-CCV4	1		
14:00	MA32992-CCB5	1		
14:09	MA32992-CCV5	1		
14:19	MA32992-CCB6	1		
14:25	MP76942-S3	1		ISTD out.Na and S high
14:31	MP76942-S4	1		ISTD out.Na and S high
14:36	JB56073-1F	1		(sample used for QC only; not part of login JB56243)
14:43	MP76942-SD2	5		CCB out
14:48	ZZZZZZ	1		
14:54	ZZZZZZ	1		
15:00	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:18	MA32992-CCV6	1		
15:24	MA32992-CCB7	1		
15:29	ZZZZZZ	1		
15:35	ZZZZZZ	1		
15:41	ZZZZZZ	1		
15:47	ZZZZZZ	1		
15:53	ZZZZZZ	1		
15:59	ZZZZZZ	1		
16:05	ZZZZZZ	1		
16:11	ZZZZZZ	1		
16:17	ZZZZZZ	1		
16:23	MA32992-CCV7	1		
16:28	MA32992-CCB8	1		
16:34	ZZZZZZ	1		
16:40	ZZZZZZ	1		
16:46	ZZZZZZ	1		
16:52	MP76930-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:58	ZZZZZZ	2		
17:04	ZZZZZZ	2		
17:10	ZZZZZZ	1		
17:15	MP76911-S1	2		
17:21	MP76911-S2	2		
17:27	MP76911-SD1	5		
17:33	MA32992-CCV8	1		
17:38	MA32992-CCB9	1		
17:44	ZZZZZZ	1		
17:50	ZZZZZZ	5		
17:56	MP76979-MB1	1		Y 3600 out on CCB
18:02	MP76979-LC1	1		Y 3600 out on CCB
18:08	ZZZZZZ	1		
18:14	ZZZZZZ	1		
18:19	ZZZZZZ	1		
18:25	ZZZZZZ	1		
18:31	ZZZZZZ	1		
18:37	ZZZZZZ	1		
18:43	MA32992-CCV9	1		
18:48	MA32992-CCB10	1		
18:54	ZZZZZZ	1		
19:00	ZZZZZZ	1		
19:06	ZZZZZZ	1		
19:12	ZZZZZZ	1		
19:18	ZZZZZZ	1		
19:24	ZZZZZZ	1		
19:30	ZZZZZZ	1		
19:36	ZZZZZZ	1		
19:42	ZZZZZZ	1		
19:48	MA32992-CCV10	1		
19:54	MA32992-CCB11	1		
19:59	MA32992-CRI2	1		
20:05	MA32992-CRID3	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:11	MA32992-CRIA2	1		
20:17	MA32992-ICSA2	1		
20:23	MA32992-ICSAB2	1		
20:29	ZZZZZZ	1		
20:35	ZZZZZZ	1		
20:41	ZZZZZZ	1		
20:47	ZZZZZZ	1		
20:53	MA32992-CCV11	1		
20:59	MA32992-CCB12	1		
21:05	MP76973-MB1	1		CCV out
21:11	MP76973-B1	1		CCV out. Low recovery for Ag
21:16	MP76973-S1	1		CCV out
21:22	MP76973-S2	1		CCV out
21:28	JB56549-25	1		(sample used for QC only; not part of login JB56243)
21:34	MP76973-SD1	5		CCV out
21:39	ZZZZZZ	1		
21:45	ZZZZZZ	1		
21:51	ZZZZZZ	1		
21:57	ZZZZZZ	1		
22:03	MA32992-CCV12	1		
22:08	MA32992-CCB13	1		
22:14	ZZZZZZ	1		
22:20	ZZZZZZ	1		
22:26	ZZZZZZ	1		
22:31	ZZZZZZ	1		
22:37	ZZZZZZ	1		
22:43	ZZZZZZ	1		
22:49	ZZZZZZ	1		
22:55	ZZZZZZ	1		
23:01	ZZZZZZ	1		
23:06	ZZZZZZ	1		
23:12	MA32992-CCV13	1		
23:18	MA32992-CCB14	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:24	ZZZZZZ	1		
23:29	MP76972-MB1	1		CCV out
23:35	MP76972-B1	1		CCV out. Low recovery for Ag
23:41	MP76972-S1	1		CCV out
23:47	MP76972-S2	1		CCV out
23:53	JB56549-8	1		(sample used for QC only; not part of login JB56243)
23:58	MP76972-SD1	5		CCV out
00:04	ZZZZZZ	1		
00:10	ZZZZZZ	1		
00:16	ZZZZZZ	1		
00:22	MA32992-CCV14	1		
00:27	MA32992-CCB15	1		
00:33	ZZZZZZ	1		
00:39	ZZZZZZ	1		
00:45	ZZZZZZ	1		
00:51	ZZZZZZ	1		
00:57	ZZZZZZ	1		
01:02	ZZZZZZ	1		
01:08	ZZZZZZ	1		
01:14	ZZZZZZ	1		
01:20	ZZZZZZ	1		
01:26	ZZZZZZ	1		
01:32	MA32992-CCV15	1		
01:37	MA32992-CCB16	1		
01:43	ZZZZZZ	1		
01:49	MP76967-MB1	1		
01:55	MP76967-MB2	1		
02:01	MP76967-LC1	1		
02:07	MP76967-LC2	1		
02:12	MP76967-S1	1		
02:18	MP76967-S2	1		
02:24	JB56267-1	1		(sample used for QC only; not part of login JB56243)
02:29	MP76967-SD1	5		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:35	ZZZZZZ	1		
02:41	MA32992-CCV16	1		
02:47	MA32992-CCB17	1		
02:53	ZZZZZZ	1		
02:59	ZZZZZZ	1		
03:05	ZZZZZZ	1		
03:10	ZZZZZZ	1		
03:16	ZZZZZZ	5		
03:22	ZZZZZZ	1		
03:28	ZZZZZZ	1		
03:34	ZZZZZZ	1		
03:40	ZZZZZZ	1		
03:46	ZZZZZZ	1		
03:52	MA32992-CCV17	1		
03:57	MA32992-CCB18	1		
04:03	MA32992-CRI3	1		
04:09	MA32992-CRID4	1		
04:15	MA32992-CRIA3	1		
04:21	MA32992-ICSA3	1		bad reading on In, not used
04:27	MA32992-ICSAB3	1		
04:33	ZZZZZZ	1		
04:39	ZZZZZZ	1		
04:45	ZZZZZZ	1		
04:51	ZZZZZZ	1		
04:57	MA32992-CCV18	1		
05:02	MA32992-CCB19	1		
05:08	ZZZZZZ	1		
05:14	ZZZZZZ	1		
05:20	ZZZZZZ	1		
05:26	ZZZZZZ	1		
05:32	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:43	MP76945-MB1	1		CCV out

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:49	MP76945-MB2	1		CCV out
05:55	MP76945-B1	1		CCV out
06:01	MP76945-LC1	1		CCV out
06:07	MA32992-CCV19	1		
06:12	MA32992-CCB20	1		
06:18	MP76945-LC2	1		CCV out
06:24	MP76945-S1	1		CCV out
06:30	MP76945-S2	1		CCV out. Bad readings on ISTD
06:35	JB56222-2	1		(sample used for QC only; not part of login JB56243)
06:41	MP76945-SD1	5		CCV out
06:47	MP76945-S3	1		CCV out
06:53	MP76945-S4	1		CCV out. High RSD
06:58	JB56222-2F	1		(sample used for QC only; not part of login JB56243)
07:04	MP76945-SD2	5		CCV out
----------> Last reportable sample/prep for job JB56243				
07:10	ZZZZZZ	1		
07:16	MA32992-CCV20	1		
07:22	MA32992-CCB21	1		
07:28	ZZZZZZ	1		
07:34	ZZZZZZ	1		
07:40	ZZZZZZ	1		
07:46	ZZZZZZ	1		
07:53	MA32992-CCV21	1		
07:58	MA32992-CCB22	1		
08:04	MA32992-CRID5	1		
08:10	MA32992-CRI4	1		
08:16	MA32992-CRID6	1		
08:22	MA32992-CRIA4	1		
08:28	MA32992-CCV22	1		
08:34	MA32992-CCB23	1		
----------> Last reportable CCB for job JB56243				

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:56	MA32992-STD1	1786 R	129120 R	14969 R	6017 R
10:02	MA32992-STD2	1661	119860	14688	5202
10:08	ZZZZZZ	1704	123150	14634	5455
10:13	ZZZZZZ	1775	128970	14866	6062
10:20	MA32992-ICV1	1710	123310	14694	5482
10:30	MA32992-ICB1	1782	128330	14743	6085
10:35	MA32992-ICCV1	1689	123740	14731	5416
10:48	MA32992-CCB1	1765	128820	14778	6017
10:56	MA32992-CRI1	1748	127920	14786	5909
11:02	MA32992-CRID1	No results reported for the elements associated with this internal standard.			
11:08	MA32992-CRIA1	1770	128460	14712	6039
11:13	MA32992-CRID2	1762	128990	14861	6003
11:22	ZZZZZZ	1558	114280	13350	4652
11:29	ZZZZZZ	1561	114400	13302	4665
11:40	MA32992-ICSA1	1575	114460	12975	4679
11:46	MA32992-ICSAB1	1572	115160	13222	4726
11:52	MA32992-CCV1	1678	121900	14425	5406
11:58	MA32992-CCB2	1745	127450	14611	5991
12:04	ZZZZZZ	1593	100070	10944	6198
12:10	MP76900-S1	1611	95036	10031 !a	5931
12:18	MP76900-S2	1682	119400	13451	5846
12:24	MA32992-CCV2	1665	118730	13738	5473
12:30	MA32992-CCB3	1739	999999 !a	13958	6028
12:37	ZZZZZZ	1718	124820	14286	5906
12:42	ZZZZZZ	1739	125610	14229	6008
12:48	MA32992-CCV3	1656	120640	14062	5411
12:55	MA32992-CCB4	1755	127520	14359	6083
13:01	MP76942-MB1	1723	126960	13995	6020
13:07	MP76942-MB2	1728	126320	13975	6028
13:13	MP76942-B1	1650	122390	14093	5589
13:19	MP76942-LC1	1706	125130	13807	5855
13:24	MP76942-LC2	1686	124260	13720	5796
13:30	MP76942-S1	1242 !a	90597	16073	3475 !a

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:36	MP76942-S2	1244 !a	90460	16047	3485 !a
13:42	JB56073-1	1251	92064	16138	3507 !a
13:48	MP76942-SD1	1486	109500	15468	4533
13:54	MA32992-CCV4	1657	120940	13978	5406
14:00	MA32992-CCB5	1712	125820	14104	5960
14:09	MA32992-CCV5	1641	119470	14003	5376
14:19	MA32992-CCB6	1707	125000	14039	5952
14:25	MP76942-S3	1229 !a	90468	15782	3464 !a
14:31	MP76942-S4	1227 !a	90175 !a	15694	3465 !a
14:36	JB56073-1F	1235 !a	90664	15872	3490 !a
14:43	MP76942-SD2	1461	107970	15151	4485
14:48	ZZZZZZ	1490	111940	13975	4464
14:54	ZZZZZZ	1555	118400	13451	5034
15:00	ZZZZZZ	1537	115850	14219	5029
15:06	ZZZZZZ	1555	116960	13726	5091
15:12	ZZZZZZ	1683	127340	13724	5922
15:18	MA32992-CCV6	1629	119330	13700	5332
15:24	MA32992-CCB7	1700	124950	13935	5924
15:29	ZZZZZZ	1254	93705	15718	3612 !a
15:35	ZZZZZZ	1544	116290	13800	5113
15:41	ZZZZZZ	1540	116120	14252	5058
15:47	ZZZZZZ	1541	116770	14236	5092
15:53	ZZZZZZ	1694	126470	13710	5933
15:59	ZZZZZZ	1670	124770	13719	5812
16:05	ZZZZZZ	1644	122610	13922	5377
16:11	ZZZZZZ	1604	119190	13912	5244
16:17	ZZZZZZ	1595	118690	14089	5214
16:23	MA32992-CCV7	1627	120240	13961	5322
16:28	MA32992-CCB8	1703	125730	14033	5911
16:34	ZZZZZZ	1610	120040	14137	5405
16:40	ZZZZZZ	1491	112760	14400	4771
16:46	ZZZZZZ	1690	125920	13682	5895
16:52	MP76930-SD1	1651	124430	14070	5699

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:58	ZZZZZZ	1650	122840	14111	5587
17:04	ZZZZZZ	1423	116830	13474	5107
17:10	ZZZZZZ	1501	123140	13611	5539
17:15	MP76911-S1	1471	119010	13319	5099
17:21	MP76911-S2	1474	119070	13300	5086
17:27	MP76911-SD1	1502	120390	12993	5299
17:33	MA32992-CCV8	1453	116010	13306	4964
17:38	MA32992-CCB9	1519	123890	13140	5541
17:44	ZZZZZZ	1495	120100	12957	5280
17:50	ZZZZZZ	1385	999999 !a	13917	4766
17:56	MP76979-MB1	1493	120630	12843	5476
18:02	MP76979-LC1	1492	120090	12886	5366
18:08	ZZZZZZ	1503	120830	12822	5515
18:14	ZZZZZZ	1501	120610	12872	5520
18:19	ZZZZZZ	1443	117930	13028	5076
18:25	ZZZZZZ	1494	120350	13234	5208
18:31	ZZZZZZ	1466	118560	13031	5151
18:37	ZZZZZZ	1432	116760	12943	4907
18:43	MA32992-CCV9	1488	116110	13215	5076
18:48	MA32992-CCB10	1537	999999 !a	13385	5568
18:54	ZZZZZZ	1551	122590	13378	5624
19:00	ZZZZZZ	1514	121890	13436	5514
19:06	ZZZZZZ	1525	121160	13230	5535
19:12	ZZZZZZ	1516	120820	13140	5516
19:18	ZZZZZZ	1526	999999 !	13341	5529
19:24	ZZZZZZ	1537	122770	13407	5574
19:30	ZZZZZZ	1525	121830	13251	5525
19:36	ZZZZZZ	1533	121670	13244	5560
19:42	ZZZZZZ	1537	122500	13312	5575
19:48	MA32992-CCV10	1491	118960	13396	5059
19:54	MA32992-CCB11	1534	123540	13498	5557
19:59	MA32992-CRI2	1513	121310	13528	5438
20:05	MA32992-CRID3	1524	122430	13394	5519

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:11	MA32992-CRIA2	1522	122490	13200	5528
20:17	MA32992-ICSA2	1355	108320	11459	4231
20:23	MA32992-ICSAB2	1386	108580	11792	4346
20:29	ZZZZZZ	1380	117130	12979	5209
20:35	ZZZZZZ	1447	121310	12936	5437
20:41	ZZZZZZ	1431	120330	12857	5341
20:47	ZZZZZZ	1417	119360	12895	5320
20:53	MA32992-CCV11	1356	114350	12966	4750
20:59	MA32992-CCB12	1426	120380	12844	5347
21:05	MP76973-MB1	1423	120330	12716	5359
21:11	MP76973-B1	1400	117040	12718	5033
21:16	MP76973-S1	1390	117300	12374	4677
21:22	MP76973-S2	1408	116810	12620	4747
21:28	JB56549-25	1393	116470	12946	4548
21:34	MP76973-SD1	1421	120690	13235	5047
21:39	ZZZZZZ	1385	117830	12765	4976
21:45	ZZZZZZ	1313	114080	12510	4731
21:51	ZZZZZZ	1443	122770	13059	5202
21:57	ZZZZZZ	1437	123130	13012	5172
22:03	MA32992-CCV12	1406	116050	13264	4870
22:08	MA32992-CCB13	1474	122030	13084	5451
22:14	ZZZZZZ	1433	999999 !a	13209	4958
22:20	ZZZZZZ	1403	119240	12989	4852
22:26	ZZZZZZ	1427	120580	13128	4908
22:31	ZZZZZZ	1421	119920	13074	4917
22:37	ZZZZZZ	1420	119180	12679	5009
22:43	ZZZZZZ	1410	120400	13249	5003
22:49	ZZZZZZ	1380	117540	13152	4880
22:55	ZZZZZZ	1438	121240	13212	5053
23:01	ZZZZZZ	1435	120400	12922	4899
23:06	ZZZZZZ	1421	121480	12953	4992
23:12	MA32992-CCV13	1419	118370	13174	4904
23:18	MA32992-CCB14	1471	122850	13396	5445

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:24	ZZZZZZ	1399	118940	12761	4893
23:29	MP76972-MB1	1494	126160	13589	5553
23:35	MP76972-B1	1419	118440	12703	5064
23:41	MP76972-S1	1436	119060	12450	4903
23:47	MP76972-S2	1453	121770	12760	4911
23:53	JB56549-8	1452	121980	13121	5062
23:58	MP76972-SD1	1479	121700	13101	5312
00:04	ZZZZZZ	1500	125350	13621	5196
00:10	ZZZZZZ	1489	122540	12938	5095
00:16	ZZZZZZ	1345	115210	12611	4909
00:22	MA32992-CCV14	1426	119380	13622	4897
00:27	MA32992-CCB15	1508	125730	13890	5499
00:33	ZZZZZZ	1392	118010	13319	5067
00:39	ZZZZZZ	1424	119780	13229	4978
00:45	ZZZZZZ	1460	122760	13491	5285
00:51	ZZZZZZ	1459	123350	13389	5071
00:57	ZZZZZZ	1475	124850	13459	4984
01:02	ZZZZZZ	1417	118500	13241	4844
01:08	ZZZZZZ	1465	123200	13379	4966
01:14	ZZZZZZ	1489	124250	13534	5154
01:20	ZZZZZZ	1403	120060	13407	4804
01:26	ZZZZZZ	1398	117790	12884	5041
01:32	MA32992-CCV15	1466	119640	13696	5013
01:37	MA32992-CCB16	1501	125660	13854	5447
01:43	ZZZZZZ	1424	119940	13534	4769
01:49	MP76967-MB1	1481	123310	13358	5430
01:55	MP76967-MB2	1499	123990	13267	5506
02:01	MP76967-LC1	1457	119640	12804	5259
02:07	MP76967-LC2	1486	122330	13047	5316
02:12	MP76967-S1	1447	120300	13806	4937
02:18	MP76967-S2	1426	119400	13665	4873
02:24	JB56267-1	1470	124120	13772	5160
02:29	MP76967-SD1	1517	124200	13674	5493

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:35	ZZZZZZ	1462	121060	13547	5206
02:41	MA32992-CCV16	1506	122450	14094	5108
02:47	MA32992-CCB17	1524	123650	13548	5565
02:53	ZZZZZZ	1409	116770	13178	5026
02:59	ZZZZZZ	1425	119210	13482	5107
03:05	ZZZZZZ	1471	123480	13718	5317
03:10	ZZZZZZ	1474	122120	13731	5277
03:16	ZZZZZZ	1451	120950	13193	5265
03:22	ZZZZZZ	1494	121750	13475	5380
03:28	ZZZZZZ	1525	127170	14035	5352
03:34	ZZZZZZ	1466	121280	13611	5220
03:40	ZZZZZZ	1442	117590	14430	4799
03:46	ZZZZZZ	1423	116370	14633	4721
03:52	MA32992-CCV17	1455	119040	13717	4930
03:57	MA32992-CCB18	1534	126310	13819	5583
04:03	MA32992-CRI3	1517	123250	13815	5470
04:09	MA32992-CRID4	1475	122640	13843	5393
04:15	MA32992-CRIA3	1514	125230	13224	5515
04:21	MA32992-ICSA3	No results reported for the elements associated with this internal standard.			
04:27	MA32992-ICSAB3	No results reported for the elements associated with this internal standard.			
04:33	ZZZZZZ	1499	999999 !	13429	5481
04:39	ZZZZZZ	1342	115380	14196	4644
04:45	ZZZZZZ	1500	124480	13125	5475
04:51	ZZZZZZ	1493	123670	12807	5433
04:57	MA32992-CCV18	1423	116730	13517	4867
05:02	MA32992-CCB19	1519	127150	13507	5556
05:08	ZZZZZZ	1385	116660	14237	4569
05:14	ZZZZZZ	1444	122310	13393	5202
05:20	ZZZZZZ	1418	120420	13223	5082
05:26	ZZZZZZ	1427	119170	13553	5026
05:32	ZZZZZZ	1430	120160	13469	5065
05:38	ZZZZZZ	1458	121570	13556	5190
05:43	MP76945-MB1	1518	125410	13098	5515

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
05:49	MP76945-MB2	1511	123900	13088	5507
05:55	MP76945-B1	1455	121490	13517	5143
06:01	MP76945-LC1	1491	123060	12963	5346
06:07	MA32992-CCV19	1476	121680	13525	5028
06:12	MA32992-CCB20	1526	125640	13331	5559
06:18	MP76945-LC2	1499	123430	12617	5365
06:24	MP76945-S1	1453	119840	13426	5050
06:30	MP76945-S2	No results reported for the elements associated with this internal standard.			
06:35	JB56222-2	1494	123610	13489	5359
06:41	MP76945-SD1	1533	126230	13638	5578
06:47	MP76945-S3	1469	121120	13519	5099
06:53	MP76945-S4	1468	121030	13024	5093
06:58	JB56222-2F	1490	123020	13385	5351
07:04	MP76945-SD2	1517	125290	13435	5514
07:10	ZZZZZZ	1544	126120	13304	5630
07:16	MA32992-CCV20	1485	999999 !a	13658	5030
07:22	MA32992-CCB21	1550	125570	13525	5640
07:28	ZZZZZZ	1316	110590	14219	4427
07:34	ZZZZZZ	1384	119220	17147	4630
07:40	ZZZZZZ	1309	114470	14702	4453
07:46	ZZZZZZ	1329	112940	14515	4529
07:53	MA32992-CCV21	1447	122540	14027	5020
07:58	MA32992-CCB22	1520	128030	13723	5660
08:04	MA32992-CRID5	1514	127540	13864	5642
08:10	MA32992-CRI4	1491	126020	13814	5510
08:16	MA32992-CRID6	1491	126580	13773	5580
08:22	MA32992-CRIA4	1513	128760	13908	5643
08:28	MA32992-CCV22	1452	122580	14023	5044
08:34	MA32992-CCB23	1494	126560	13577	5631

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
Analyst: RR Run ID: MA32992
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Co,Cu,Fe,Pb,Mg,Ni,K,Se,Na,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time: / Sample ID:			10:30 ICB1		10:48 CCB1		11:58 CCB2		12:30 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	-1.6	<200	-19	<200	-1.1	<200	-1.1	<200
Antimony	6.0	1.2	-0.30	<6.0	-0.10	<6.0	0.40	<6.0	0.30	<6.0
Arsenic	3.0	1.1	0.10	<3.0	0.0	<3.0	0.80	<3.0	0.40	<5.0
Barium	200	.09	-0.20	<200	-0.10	<200	0.20	<200	0.0	<200
Beryllium	1.0	.01	0.0	<1.0	0.0	<1.0	0.0	<1.0	0.10	<2.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.20	<3.0	0.20	<3.0	0.20	<3.0	0.10	<3.0
Calcium	5000	8.4	-3.7	<5000	-3.6	<5000	1.6	<5000	-4.3	<5000
Chromium	10	.3	anr							
Cobalt	50	.2	0.10	<50	0.0	<50	0.0	<50	0.0	<50
Copper	10	.6	1.5	<10	0.80	<10	1.1	<10	-7.3	<10
Iron	100	6.2	1.7	<100	0.10	<100	1.4	<100	-0.20	<100
Lead	3.0	1.2	0.60	<3.0	-0.20	<3.0	0.20	<3.0	-0.50	<5.0
Lithium	20	.7								
Magnesium	5000	10	-1.3	<5000	2.0	<5000	8.8	<5000	-1.4	<5000
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	0.0	<10	0.10	<10	0.40	<10	0.10	<10
Palladium	50	.5								
Potassium	10000	17	-4.6	<10000	12.6	<10000	17.5	<10000	-35	<10000
Selenium	10	1.8	1.0	<10	0.30	<10	0.40	<10	0.80	<10
Silicon	200	13								
Silver	10	.4	anr							
Sodium	10000	5.2	9.8	<10000	9.1	<10000	3.0	<10000	-1.1	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	0.40	<2.0	0.70	<2.0	0.50	<2.0	0.10	<5.0
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	0.20	<20	0.0	<20	0.30	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			10:30		10:48		11:58		12:30	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			12:55		14:00		14:19		15:24	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	4.6	<200	21.7	<200	15.4	<200	22.7	<200
Antimony	6.0	1.2	-0.10	<6.0	1.9	<6.0	1.3	<6.0	1.8	<6.0
Arsenic	3.0	1.1	0.0	<5.0	1.4	<3.0	0.50	<3.0	1.4	<3.0
Barium	200	.09	0.0	<200	0.0	<200	0.40	<200	0.50	<200
Beryllium	1.0	.01	0.0	<2.0	0.30	<1.0	0.70	<1.0	0.80	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.40	<3.0	1.9	<3.0	0.60	<3.0	1.0	<3.0
Calcium	5000	8.4	-1.9	<5000	9.3	<5000	11.0	<5000	28.2	<5000
Chromium	10	.3	anr							
Cobalt	50	.2	0.10	<50	1.5	<50	0.50	<50	0.90	<50
Copper	10	.6	3.8	<10	3.9	<10	4.2	<10	3.5	<10
Iron	100	6.2	0.90	<100	5.8	<100	11.7	<100	16.3	<100
Lead	3.0	1.2	0.50	<5.0	0.90	<3.0	1.1	<3.0	-0.30	<3.0
Lithium	20	.7								
Magnesium	5000	10	-2.7	<5000	19.1	<5000	13.6	<5000	12.7	<5000
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	-0.20	<10	1.7	<10	0.60	<10	1.2	<10
Palladium	50	.5								
Potassium	10000	17	-16	<10000	20.0	<10000	28.4	<10000	19.3	<10000
Selenium	10	1.8	-0.60	<10	2.0	<10	1.3	<10	1.0	<10
Silicon	200	13								
Silver	10	.4	anr							
Sodium	10000	5.2	1.1	<10000	213	<10000	129	<10000	262	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	0.60	<5.0	2.2	* (a)	0.90	<2.0	2.2	* (a)
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	0.20	<20	2.0	<20	0.70	<20	1.4	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			12:55		14:00		14:19		15:24	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			16:28		17:38		18:48		19:54	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	24.5	<200	8.8	<200	1.1	<200	8.8	<200
Antimony	6.0	1.2	1.5	<6.0	-1.3	<6.0	-0.50	<6.0	-0.90	<6.0
Arsenic	3.0	1.1	1.4	<3.0	-0.60	<3.0	-0.10	<3.0	-0.80	<3.0
Barium	200	.09	0.40	<200	0.20	<200	0.10	<200	0.10	<200
Beryllium	1.0	.01	0.60	<1.0	0.40	<1.0	0.30	<1.0	0.30	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	1.3	<3.0	0.40	<3.0	0.20	<3.0	0.40	<3.0
Calcium	5000	8.4	20.8	<5000	0.40	<5000	0.80	<5000	-2.1	<5000
Chromium	10	.3	anr							
Cobalt	50	.2	0.90	<50	0.0	<50	0.20	<50	0.10	<50
Copper	10	.6	2.0	<10	1.0	<10	-13	<10**(b)	-0.50	<10
Iron	100	6.2	14.1	<100	11.7	<100	9.7	<100	7.2	<100
Lead	3.0	1.2	0.70	<3.0	0.50	<3.0	0.0	<3.0	0.0	<3.0
Lithium	20	.7								
Magnesium	5000	10	19.2	<5000	17.1	<5000	14.7	<5000	10.3	<5000
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	1.4	<10	1.0	<10	0.70	<10	1.0	<10
Palladium	50	.5								
Potassium	10000	17	5.6	<10000	26.6	<10000	-3.5	<10000	2.3	<10000
Selenium	10	1.8	0.20	<10	-0.50	<10	0.60	<10	-0.50	<10
Silicon	200	13								
Silver	10	.4	anr							
Sodium	10000	5.2	185	<10000	83.3	<10000	31.9	<10000	19.1	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	2.0	<2.0*(a)	0.90	<2.0	0.60	<2.0	1.2	<2.0
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	1.4	<20	0.10	<20	0.30	<20	0.10	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			16:28		17:38		18:48		19:54	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.
(b) No samples reported for this element in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			20:59		22:08		23:18		00:27	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	7.8	<200	15.4	<200	4.5	<200	17.8	<200
Antimony	6.0	1.2	-0.20	<6.0	-1.0	<6.0	0.0	<6.0	0.20	<6.0
Arsenic	3.0	1.1	-0.60	<3.0	-1.0	<3.0	-0.30	<3.0	0.40	<3.0
Barium	200	.09	0.0	<200	0.0	<200	0.0	<200	0.10	<200
Beryllium	1.0	.01	0.40	<1.0	0.30	<1.0	0.30	<1.0	0.30	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.30	<3.0	0.20	<3.0	0.20	<3.0	0.30	<3.0
Calcium	5000	8.4	-6.6	<5000	0.0	<5000	-4.1	<5000	-3.2	<5000
Chromium	10	.3	anr							
Cobalt	50	.2	0.10	<50	0.20	<50	0.20	<50	0.10	<50
Copper	10	.6	-1.5	<10	-2.1	<10	-2.7	<10	-3.3	<10
Iron	100	6.2	5.0	<100	10.3	<100	5.7	<100	18.2	<100
Lead	3.0	1.2	0.0	<3.0	-0.40	<3.0	-0.50	<3.0	-0.70	<3.0
Lithium	20	.7								
Magnesium	5000	10	-8.2	<5000	-13	<5000	-1.1	<5000	4.9	<5000
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	1.3	<10	1.2	<10	1.3	<10	1.8	<10
Palladium	50	.5								
Potassium	10000	17	-23	<10000	-2.8	<10000	2.0	<10000	23.2	<10000
Selenium	10	1.8	-0.20	<10	0.0	<10	-0.70	<10	0.40	<10
Silicon	200	13								
Silver	10	.4	anr							
Sodium	10000	5.2	20.5	<10000	16.4	<10000	11.5	<10000	8.2	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	0.0	<2.0	0.90	<2.0	0.80	<2.0	1.3	<2.0
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	0.20	<20	0.30	<20	0.20	<20	0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			20:59		22:08		23:18		00:27	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			01:37		02:47		03:57		05:02	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	12.8	<200	18.9	<200	12.3	<200	-2.0	<200
Antimony	6.0	1.2	0.10	<6.0	0.10	<6.0	-0.30	<6.0	-0.50	<6.0
Arsenic	3.0	1.1	-0.20	<3.0	-0.20	<3.0	-0.30	<3.0	-0.20	<3.0
Barium	200	.09	0.10	<200	0.0	<200	0.0	<200	0.10	<200
Beryllium	1.0	.01	0.30	<1.0	0.40	<1.0	0.40	<1.0	0.40	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.50	<3.0	0.50	<3.0	0.50	<3.0	0.40	<3.0
Calcium	5000	8.4	-3.5	<5000	-1.0	<5000	-1.6	<5000	-0.20	<5000
Chromium	10	.3	anr							
Cobalt	50	.2	0.20	<50	0.20	<50	0.10	<50	0.20	<50
Copper	10	.6	-5.3	<10	-4.2	<10	-3.7	<10	-3.8	<10
Iron	100	6.2	12.1	<100	7.6	<100	9.0	<100	8.6	<100
Lead	3.0	1.2	0.90	<3.0	0.30	<3.0	-0.10	<3.0	-0.30	<3.0
Lithium	20	.7								
Magnesium	5000	10	3.6	<5000	3.8	<5000	16.5	<5000	11.3	<5000
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	1.9	<10	2.0	<10	1.3	<10	1.4	<10
Palladium	50	.5								
Potassium	10000	17	4.3	<10000	-15	<10000	13.9	<10000	-17	<10000
Selenium	10	1.8	-0.10	<10	-0.50	<10	-0.50	<10	0.40	<10
Silicon	200	13								
Silver	10	.4	anr							
Sodium	10000	5.2	-0.80	<10000	8.6	<10000	10.8	<10000	12.2	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	1.1	<2.0	1.1	<2.0	1.1	<2.0	1.0	<2.0
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	0.30	<20	0.40	<20	0.50	<20	0.50	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			01:37		02:47		03:57		05:02	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

8.2.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			06:12		07:22		07:58		08:34	
Sample ID:			CCB20		CCB21		CCB22		CCB23	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	10.4	<200	-2.4	<200	6.4	<200	-0.20	<200
Antimony	6.0	1.2	-0.20	<6.0	-0.90	<6.0	-0.10	<6.0	-0.10	<6.0
Arsenic	3.0	1.1	-0.10	<3.0	-0.50	<3.0	-0.20	<3.0	0.30	<3.0
Barium	200	.09	0.0	<200	0.10	<200	0.10	<200	-0.20	<200
Beryllium	1.0	.01	0.40	<1.0	0.30	<1.0	0.30	<1.0	0.40	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.50	<3.0	0.40	<3.0	0.50	<3.0	0.30	<3.0
Calcium	5000	8.4	-4.2	<5000	-4.8	<5000	-4.1	<5000	-3.2	<5000
Chromium	10	.3	anr							
Cobalt	50	.2	0.10	<50	0.30	<50	0.20	<50	0.20	<50
Copper	10	.6	-3.2	<10	-1.6	<10	-2.4	<10	-0.80	<10
Iron	100	6.2	4.5	<100	5.6	<100	5.1	<100	5.4	<100
Lead	3.0	1.2	-0.50	<3.0	0.20	<3.0	0.30	<3.0	-0.30	<3.0
Lithium	20	.7								
Magnesium	5000	10	7.4	<5000	6.8	<5000	15.1	<5000	11.3	<5000
Manganese	15	.2	anr							
Molybdenum	20	.3								
Nickel	10	.5	1.7	<10	1.1	<10	1.1	<10	1.0	<10
Palladium	50	.5								
Potassium	10000	17	0.0	<10000	7.1	<10000	28.1	<10000	-1.4	<10000
Selenium	10	1.8	1.0	<10	-0.10	<10	0.70	<10	0.30	<10
Silicon	200	13								
Silver	10	.4	anr							
Sodium	10000	5.2	2.9	<10000	1.7	<10000	31.0	<10000	10.2	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	1.0	<2.0	2.0	<2.0*(a)	1.0	<2.0	1.6	<2.0
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	anr							
Zinc	20	.7	0.30	<20	0.10	<20	0.20	<20	0.0	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32992 Units: ug/l

Time:			06:12		07:22		07:58		08:34	
Sample ID:			CCB20		CCB21		CCB22		CCB23	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for TLNJ in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		10:35	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	38800	97.0
Antimony	2000	2020	101.0
Arsenic	2000	2010	100.5
Barium	2000	1940	97.0
Beryllium	2000	2030	101.5
Bismuth			
Boron	anr		
Cadmium	2000	2030	101.5
Calcium	40000	39200	98.0
Chromium	anr		
Cobalt	2000	2000	100.0
Copper	2000	1960	98.0
Iron	40000	39500	98.8
Lead	2000	2060	103.0
Lithium			
Magnesium	40000	39000	97.5
Manganese	anr		
Molybdenum			
Nickel	2000	2040	102.0
Palladium			
Potassium	40000	38900	97.3
Selenium	2000	2010	100.5
Silicon			
Silver	anr		
Sodium	40000	39300	98.3
Sulfur			
Strontium			
Thallium	2000	2090	104.5
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	2000	2050	102.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		10:35	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		10:20			11:52			12:24	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39100	97.8	40000	38400	96.0	40000	40800	102.0
Antimony	2000	1990	99.5	2000	2010	100.5	2000	2040	102.0
Arsenic	2000	1980	99.0	2000	2010	100.5	2000	2000	100.0
Barium	2000	1950	97.5	2000	1970	98.5	2000	2050	102.5
Beryllium	2000	2050	102.5	2000	2070	103.5	2000	2160	108.0
Bismuth									
Boron	anr								
Cadmium	2000	2000	100.0	2000	2030	101.5	2000	2010	100.5
Calcium	40000	39400	98.5	40000	39300	98.3	40000	38700	96.8
Chromium	anr								
Cobalt	2000	1970	98.5	2000	2000	100.0	2000	1960	98.0
Copper	2000	1970	98.5	2000	1960	98.0	2000	1940	97.0
Iron	40000	39700	99.3	40000	40100	100.3	40000	41500	103.8
Lead	2000	2010	100.5	2000	2070	103.5	2000	1980	99.0
Lithium									
Magnesium	40000	39200	98.0	40000	39300	98.3	40000	40800	102.0
Manganese	anr								
Molybdenum									
Nickel	2000	2000	100.0	2000	2040	102.0	2000	1980	99.0
Palladium									
Potassium	40000	39000	97.5	40000	39500	98.8	40000	40400	101.0
Selenium	2000	1980	99.0	2000	2020	101.0	2000	2030	101.5
Silicon									
Silver	anr								
Sodium	40000	39500	98.8	40000	39600	99.0	40000	41100	102.8
Sulfur									
Strontium									
Thallium	2000	2060	103.0	2000	2090	104.5	2000	2050	102.5
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2020	101.0	2000	2060	103.0	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		10:20			11:52			12:24	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.2.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		12:48			13:54			14:09	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40800	102.0	40000	39800	99.5	40000	39300	98.3
Antimony	2000	2040	102.0	2000	2030	101.5	2000	2040	102.0
Arsenic	2000	2010	100.5	2000	2010	100.5	2000	2020	101.0
Barium	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Beryllium	2000	2110	105.5	2000	2130	106.5	2000	2130	106.5
Bismuth									
Boron	anr								
Cadmium	2000	2010	100.5	2000	2040	102.0	2000	2050	102.5
Calcium	40000	38500	96.3	40000	39200	98.0	40000	39200	98.0
Chromium	anr								
Cobalt	2000	1960	98.0	2000	1980	99.0	2000	1980	99.0
Copper	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5
Iron	40000	40400	101.0	40000	40800	102.0	40000	40800	102.0
Lead	2000	1980	99.0	2000	2050	102.5	2000	2060	103.0
Lithium									
Magnesium	40000	40000	100.0	40000	40200	100.5	40000	40000	100.0
Manganese	anr								
Molybdenum									
Nickel	2000	1980	99.0	2000	2020	101.0	2000	2030	101.5
Palladium									
Potassium	40000	40100	100.3	40000	40200	100.5	40000	40400	101.0
Selenium	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0
Silicon									
Silver	anr								
Sodium	40000	41000	102.5	40000	40500	101.3	40000	40300	100.8
Sulfur									
Strontium									
Thallium	2000	2060	103.0	2000	2070	103.5	2000	2080	104.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2000	100.0	2000	2040	102.0	2000	2050	102.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		12:48			13:54			14:09	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.2.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		15:18			16:23			17:33	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39200	98.0	40000	38700	96.8	40000	40000	100.0
Antimony	2000	2040	102.0	2000	2050	102.5	2000	2140	107.0
Arsenic	2000	2030	101.5	2000	2030	101.5	2000	2110	105.5
Barium	2000	2040	102.0	2000	2000	100.0	2000	2110	105.5
Beryllium	2000	2170	108.5	2000	2130	106.5	2000	2180	109.0
Bismuth									
Boron	anr								
Cadmium	2000	2070	103.5	2000	2070	103.5	2000	2070	103.5
Calcium	40000	40600	101.5	40000	39800	99.5	40000	37000	92.5
Chromium	anr								
Cobalt	2000	2010	100.5	2000	2010	100.5	2000	1940	97.0
Copper	2000	1960	98.0	2000	1980	99.0	2000	2020	101.0
Iron	40000	41700	104.3	40000	40700	101.8	40000	40000	100.0
Lead	2000	2100	105.0	2000	2110	105.5	2000	2020	101.0
Lithium									
Magnesium	40000	40900	102.3	40000	40000	100.0	40000	39100	97.8
Manganese	anr								
Molybdenum									
Nickel	2000	2060	103.0	2000	2060	103.0	2000	2010	100.5
Palladium									
Potassium	40000	41100	102.8	40000	40700	101.8	40000	43700	109.3
Selenium	2000	2040	102.0	2000	2050	102.5	2000	2130	106.5
Silicon									
Silver	anr								
Sodium	40000	40800	102.0	40000	40500	101.3	40000	43500	108.8
Sulfur									
Strontium									
Thallium	2000	2090	104.5	2000	2090	104.5	2000	2020	101.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2080	104.0	2000	2080	104.0	2000	1980	99.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		15:18			16:23			17:33	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.2.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		18:43			19:48			20:53	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39200	98.0	40000	37800	94.5	40000	38800	97.0
Antimony	2000	2070	103.5	2000	2050	102.5	2000	2200	110.0
Arsenic	2000	2050	102.5	2000	2050	102.5	2000	2170	108.5
Barium	2000	2100	105.0	2000	2070	103.5	2000	2160	108.0
Beryllium	2000	2180	109.0	2000	2150	107.5	2000	2190	109.5
Bismuth									
Boron	anr								
Cadmium	2000	2030	101.5	2000	2040	102.0	2000	2130	106.5
Calcium	40000	37400	93.5	40000	37300	93.3	40000	36400	91.0
Chromium	anr								
Cobalt	2000	1900	95.0	2000	1920	96.0	2000	1940	97.0
Copper	2000	2000	100.0	2000	1950	97.5	2000	2040	102.0
Iron	40000	40100	100.3	40000	39600	99.0	40000	39800	99.5
Lead	2000	2000	100.0	2000	2040	102.0	2000	2070	103.5
Lithium									
Magnesium	40000	39300	98.3	40000	38600	96.5	40000	39000	97.5
Manganese	anr								
Molybdenum									
Nickel	2000	1970	98.5	2000	2000	100.0	2000	2030	101.5
Palladium									
Potassium	40000	43600	109.0	40000	43000	107.5	40000	45200	113.0*(a
Selenium	2000	2070	103.5	2000	2060	103.0	2000	2200	110.0
Silicon									
Silver	anr								
Sodium	40000	43100	107.8	40000	42100	105.3	40000	44300	110.8*(a
Sulfur									
Strontium									
Thallium	2000	1970	98.5	2000	1980	99.0	2000	2020	101.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	1940	97.0	2000	1960	98.0	2000	1970	98.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		18:43			19:48			20:53	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		22:03			23:12			00:22	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	37100	92.8	40000	36800	92.0	40000	34700	86.8*(a)
Antimony	2000	2130	106.5	2000	2090	104.5	2000	2070	103.5
Arsenic	2000	2120	106.0	2000	2080	104.0	2000	2080	104.0
Barium	2000	2100	105.0	2000	2110	105.5	2000	2030	101.5
Beryllium	2000	2150	107.5	2000	2150	107.5	2000	2090	104.5
Bismuth									
Boron	anr								
Cadmium	2000	2110	105.5	2000	2090	104.5	2000	2120	106.0
Calcium	40000	36500	91.3	40000	36700	91.8	40000	37300	93.3
Chromium	anr								
Cobalt	2000	1950	97.5	2000	1920	96.0	2000	1950	97.5
Copper	2000	2000	100.0	2000	1970	98.5	2000	1960	98.0
Iron	40000	39200	98.0	40000	39300	98.3	40000	38700	96.8
Lead	2000	2090	104.5	2000	2090	104.5	2000	2150	107.5
Lithium									
Magnesium	40000	38200	95.5	40000	38600	96.5	40000	37800	94.5
Manganese	anr								
Molybdenum									
Nickel	2000	2040	102.0	2000	2030	101.5	2000	2070	103.5
Palladium									
Potassium	40000	43900	109.8	40000	44600	111.5*(a	40000	42800	107.0
Selenium	2000	2140	107.0	2000	2100	105.0	2000	2100	105.0
Silicon									
Silver	anr								
Sodium	40000	42600	106.5	40000	43000	107.5	40000	40700	101.8
Sulfur									
Strontium									
Thallium	2000	2010	100.5	2000	1990	99.5	2000	2000	100.0
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	1980	99.0	2000	1960	98.0	2000	2000	100.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		22:03			23:12			00:22	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		01:32			02:41			03:52	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	33600	84.0*(a)	40000	32900	82.3*(a)	40000	35000	87.5*(a)
Antimony	2000	1980	99.0	2000	1960	98.0	2000	2070	103.5
Arsenic	2000	2010	100.5	2000	1990	99.5	2000	2090	104.5
Barium	2000	2030	101.5	2000	1970	98.5	2000	2050	102.5
Beryllium	2000	2060	103.0	2000	2010	100.5	2000	2100	105.0
Bismuth									
Boron	anr								
Cadmium	2000	2060	103.0	2000	2040	102.0	2000	2140	107.0
Calcium	40000	37100	92.8	40000	36400	91.0	40000	38400	96.0
Chromium	anr								
Cobalt	2000	1910	95.5	2000	1910	95.5	2000	2000	100.0
Copper	2000	1940	97.0	2000	1880	94.0	2000	1970	98.5
Iron	40000	38400	96.0	40000	37600	94.0	40000	39400	98.5
Lead	2000	2130	106.5	2000	2110	105.5	2000	2190	109.5
Lithium									
Magnesium	40000	37400	93.5	40000	36600	91.5	40000	38500	96.3
Manganese	anr								
Molybdenum									
Nickel	2000	2030	101.5	2000	2020	101.0	2000	2120	106.0
Palladium									
Potassium	40000	42600	106.5	40000	41200	103.0	40000	42800	107.0
Selenium	2000	2020	101.0	2000	2000	100.0	2000	2100	105.0
Silicon									
Silver	anr								
Sodium	40000	40000	100.0	40000	38800	97.0	40000	40600	101.5
Sulfur									
Strontium									
Thallium	2000	1950	97.5	2000	1940	97.0	2000	2030	101.5
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	1960	98.0	2000	1950	97.5	2000	2050	102.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		01:32			02:41			03:52	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		04:57			06:07			07:16	
Sample ID:	CCV	CCV18		CCV	CCV19		CCV	CCV20	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	34800	87.0*(a)	40000	36100	90.3	40000	36900	92.3
Antimony	2000	2090	104.5	2000	2060	103.0	2000	2080	104.0
Arsenic	2000	2110	105.5	2000	2070	103.5	2000	2130	106.5
Barium	2000	2010	100.5	2000	2050	102.5	2000	2050	102.5
Beryllium	2000	2090	104.5	2000	2140	107.0	2000	2140	107.0
Bismuth									
Boron	anr								
Cadmium	2000	2130	106.5	2000	2090	104.5	2000	2110	105.5
Calcium	40000	36900	92.3	40000	37500	93.8	40000	37200	93.0
Chromium	anr								
Cobalt	2000	1980	99.0	2000	1950	97.5	2000	1970	98.5
Copper	2000	2000	100.0	2000	1960	98.0	2000	2290	114.5*(a
Iron	40000	38400	96.0	40000	39200	98.0	40000	39200	98.0
Lead	2000	2160	108.0	2000	2100	105.0	2000	2100	105.0
Lithium									
Magnesium	40000	37700	94.3	40000	39100	97.8	40000	39000	97.5
Manganese	anr								
Molybdenum									
Nickel	2000	2090	104.5	2000	2050	102.5	2000	2050	102.5
Palladium									
Potassium	40000	42400	106.0	40000	43400	108.5	40000	43200	108.0
Selenium	2000	2120	106.0	2000	2080	104.0	2000	2090	104.5
Silicon									
Silver	anr								
Sodium	40000	40500	101.3	40000	41800	104.5	40000	42000	105.0
Sulfur									
Strontium									
Thallium	2000	2010	100.5	2000	1980	99.0	2000	1950	97.5
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2020	101.0	2000	1980	99.0	2000	1990	99.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		04:57			06:07			07:16	
Sample ID:	CCV	CCV18		CCV	CCV19		CCV	CCV20	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		07:53			08:28	
Sample ID:	CCV	CCV21		CCV	CCV22	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	37400	93.5	40000	37900	94.8
Antimony	2000	2140	107.0	2000	2130	106.5
Arsenic	2000	2110	105.5	2000	2090	104.5
Barium	2000	2070	103.5	2000	2090	104.5
Beryllium	2000	2070	103.5	2000	2070	103.5
Bismuth						
Boron	anr					
Cadmium	2000	2080	104.0	2000	2050	102.5
Calcium	40000	35200	88.0*(a)	40000	34500	86.3*(a)
Chromium	anr					
Cobalt	2000	1900	95.0	2000	1870	93.5
Copper	2000	2000	100.0	2000	2010	100.5
Iron	40000	37900	94.8	40000	37700	94.3
Lead	2000	2010	100.5	2000	1970	98.5
Lithium						
Magnesium	40000	37900	94.8	40000	37700	94.3
Manganese	anr					
Molybdenum						
Nickel	2000	1980	99.0	2000	1940	97.0
Palladium						
Potassium	40000	43900	109.8	40000	44200	110.5*(a
Selenium	2000	2130	106.5	2000	2110	105.5
Silicon						
Silver	anr					
Sodium	40000	42900	107.3	40000	43500	108.8
Sulfur						
Strontium						
Thallium	2000	1970	98.5	2000	1950	97.5
Tin	anr					
Titanium						
Tungsten						
Vanadium	anr					
Zinc	2000	1900	95.0	2000	1860	93.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32992 Units: ug/l

Time:		07:53			08:28	
Sample ID:	CCV	CCV21		CCV	CCV22	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				10:56		11:08		11:13	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	227	113.5	464	92.8	90.0	90.0
Antimony	6.0	20	3.0	6.3	105.0	21.5	107.5	2.8	93.3
Arsenic	8.0	20	3.0	8.5	106.3	21.9	109.5	3.1	103.3
Barium	200		4.0	181	90.5			3.5	87.5
Beryllium	2.0		1.0	2.3	115.0			1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.2	106.7			1.1	110.0
Calcium	5000		1000	4650	93.0			948	94.8
Chromium	10		2.0	anr					
Cobalt	50		3.0	49.5	99.0			2.9	96.7
Copper	10		2.0	12.2	122.0			1.7	85.0
Iron	100	500		104	104.0	505	101.0		
Lead	3.0	20	2.5	3.3	110.0	21.5	107.5	2.1	84.0
Lithium	20								
Magnesium	5000		100	5310	106.2			86.9	86.9
Manganese	15		3.0	anr					
Molybdenum	20		4.0						
Nickel	10		4.0	10.7	107.0			4.4	110.0
Palladium	50								
Potassium	5000		2000	4800	96.0			1860	93.0
Selenium	10	20	5.0	11.6	116.0	23.3	116.5	4.9	98.0
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	4930	98.6			941	94.1
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	10.1	101.0			2.1	105.0
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	23.8	119.0			11.3	113.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				10:56		11:08		11:13	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.2.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				19:59		20:05		20:11	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	232	116.0	111	111.0	471	94.2
Antimony	6.0	20	3.0	6.0	100.0	2.4	80.0	21.7	108.5
Arsenic	8.0	20	3.0	8.5	106.3	2.9	96.7	23.6	118.0
Barium	200		4.0	189	94.5	3.7	92.5		
Beryllium	2.0		1.0	2.4	120.0	1.2	120.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.5	116.7	1.3	130.0		
Calcium	5000		1000	4300	86.0	878	87.8		
Chromium	10		2.0	anr					
Cobalt	50		3.0	48.5	97.0	2.9	96.7		
Copper	10		2.0	10.8	108.0				
Iron	100	500		103	103.0			502	100.4
Lead	3.0	20	2.5	2.6	86.7	3.0	120.0	21.4	107.0
Lithium	20								
Magnesium	5000		100	5160	103.2	101	101.0		
Manganese	15		3.0	anr					
Molybdenum	20		4.0						
Nickel	10		4.0	11.8	118.0	4.8	120.0		
Palladium	50								
Potassium	5000		2000	5200	104.0	2030	101.5		
Selenium	10	20	5.0	10.9	109.0	5.1	102.0	25.1	125.5
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	5240	104.8	1030	103.0		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	10.3	103.0	1.8	90.0		
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	22.9	114.5	10.7	107.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				19:59		20:05		20:11	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.2.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				04:03		04:09		04:15	
Sample ID:	CRI	CRIA	CRID	CRI3		CRID4		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	222	111.0	95.0	95.0	446	89.2
Antimony	6.0	20	3.0	5.5	91.7			21.1	105.5
Arsenic	8.0	20	3.0	8.7	108.8	2.5	83.3	22.2	111.0
Barium	200		4.0	187	93.5	3.7	92.5		
Beryllium	2.0		1.0	2.4	120.0	1.2	120.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.5	116.7				
Calcium	5000		1000	4420	88.4	895	89.5		
Chromium	10		2.0	anr					
Cobalt	50		3.0	48.6	97.2	3.1	103.3		
Copper	10		2.0	7.8	78.0				
Iron	100	500		102	102.0			489	97.8
Lead	3.0	20	2.5	3.8	126.7	2.8	112.0	21.7	108.5
Lithium	20								
Magnesium	5000		100	5060	101.2	105	105.0		
Manganese	15		3.0	anr					
Molybdenum	20		4.0						
Nickel	10		4.0	12.3	123.0				
Palladium	50								
Potassium	5000		2000	5160	103.2	1950	97.5		
Selenium	10	20	5.0	10.3	103.0	4.4	88.0	25.3	126.5
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	5040	100.8	949	94.9		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	9.6	96.0	1.7	85.0		
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	22.6	113.0	11.0	110.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				04:03		04:09		04:15	
Sample ID:	CRI	CRIA	CRID	CRI3		CRID4		CRIA3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.2.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				08:04		08:10		08:16	
Sample ID:	CRI	CRIA	CRID	CRID5		CRI4		CRID6	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	98.3	98.3	226	113.0	81.1	81.1
Antimony	6.0	20	3.0	2.6	86.7	5.4	90.0	2.4	80.0
Arsenic	8.0	20	3.0	2.5	83.3	8.8	110.0	2.3	76.7
Barium	200		4.0	3.8	95.0	190	95.0	4.0	100.0
Beryllium	2.0		1.0	1.2	120.0	2.4	120.0	1.2	120.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0			3.2	106.7	1.3	130.0
Calcium	5000		1000	811	81.1	4000	80.0	801	80.1
Chromium	10		2.0	anr					
Cobalt	50		3.0	2.9	96.7	46.7	93.4	2.6	86.7
Copper	10		2.0			9.6	96.0		
Iron	100	500				98.2	98.2		
Lead	3.0	20	2.5	2.4	96.0	2.2	73.3	2.5	100.0
Lithium	20								
Magnesium	5000		100	109	109.0	4960	99.2	102	102.0
Manganese	15		3.0	anr					
Molybdenum	20		4.0						
Nickel	10		4.0	4.8	120.0	11.2	112.0	5.0	125.0
Palladium	50								
Potassium	5000		2000	2080	104.0	5320	106.4	2110	105.5
Selenium	10	20	5.0	5.2	104.0	11.1	111.0	6.3	126.0
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	1040	104.0	5370	107.4	1050	105.0
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.0	100.0	8.8	88.0	1.8	90.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	10.2	102.0	21.6	108.0	10.3	103.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				08:04		08:10		08:16	
Sample ID:	CRI	CRIA	CRID	CRID5		CRI4		CRID6	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.2.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				08:22	
Sample ID:	CRI	CRIA	CRID	CRIA4	
Metal	True	True	True	Results	% Rec
Aluminum	200	500	100	457	91.4
Antimony	6.0	20	3.0	20.7	103.5
Arsenic	8.0	20	3.0	23.2	116.0
Barium	200		4.0		
Beryllium	2.0		1.0		
Bismuth	20				
Boron	100		10		
Cadmium	3.0		1.0		
Calcium	5000		1000		
Chromium	10		2.0		
Cobalt	50		3.0		
Copper	10		2.0		
Iron	100	500		469	93.8
Lead	3.0	20	2.5	20.6	103.0
Lithium	20				
Magnesium	5000		100		
Manganese	15		3.0		
Molybdenum	20		4.0		
Nickel	10		4.0		
Palladium	50				
Potassium	5000		2000		
Selenium	10	20	5.0	25.0	125.0
Silicon	200				
Silver	5.0		1.0		
Sodium	5000		1000		
Sulfur	50	50	50		
Strontium	10				
Thallium	10		2.0		
Tin	10				
Titanium	10				
Tungsten	50				
Vanadium	50		2.0		
Zinc	20		10		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32992 Units: ug/l

Time:				08:22	
Sample ID:	CRI	CRIA	CRID	CRIA4	
Metal	True	True	True	Results	% Rec
Zirconium	10		5.0		

(*) Outside of QC limits
(anr) Analyte not requested

8.2.5

8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32992 Units: ug/l

Time:			11:40		11:46		20:17		20:23	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	547000	109.4	468000	93.6	570000	114.0	487000	97.4
Antimony		1000	9.2		977	97.7	8.2		1040	104.0
Arsenic		1000	-0.70		964	96.4	-2.2		1020	102.0
Barium		500	-0.40		505	101.0	-0.40		565	113.0
Beryllium		500	0.0		470	94.0	0.10		513	102.6
Bismuth		500	1.2		493	98.6	0.30		547	109.4
Boron			-1.0		1.8		-1.3		3.1	
Cadmium		1000	-2.3		910	91.0	-2.7		953	95.3
Calcium	400000	400000	425000	106.3	399000	99.8	432000	108.0	407000	101.8
Chromium		500	-0.60		425	85.0	0.30		431	86.2
Cobalt		500	-0.30		429	85.8	-0.60		430	86.0
Copper		500	-0.60		457	91.4	0.20		475	95.0
Iron	200000	200000	217000	108.5	212000	106.0	231000	115.5	224000	112.0
Lead		1000	5.3		858	85.8	3.2		882	88.2
Lithium		500	0.50		493	98.6	1.1		606	121.2*
Magnesium	500000	500000	527000	105.4	501000	100.2	555000	111.0	522000	104.4
Manganese		500	2.6		443	88.6	1.4		437	87.4
Molybdenum		500	-4.0		462	92.4	-4.5		483	96.6
Nickel		1000	0.50		836	83.6	0.40		851	85.1
Palladium		500	-21		494	98.8	-21		513	102.6
Potassium			118		122		98.7		132	
Selenium		1000	5.4		873	87.3	-2.8		923	92.3
Silicon			-8.2		-16		-14		-18	
Silver		1000	6.6		996	99.6	6.3		985	98.5
Sodium			21.2		18.5		43.0		39.5	
Sulfur		500	7.7		465	93.0	0.20		484	96.8
Strontium			-6.8		-6.4		-5.6		-5.2	
Thallium		1000	3.5		901	90.1	-0.80		891	89.1
Tin			-0.80		-0.20		0.30		-0.60	
Titanium			-0.80		-0.50		-0.70		-0.50	
Tungsten		500	12.5		489	97.8	12.4		503	100.6
Vanadium		500	-1.2		421	84.2	-1.1		433	86.6
Zinc		1000	5.7		849	84.9	4.1		859	85.9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010214M1.ICP Date Analyzed: 01/02/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32992 Units: ug/l

Time:			11:40		11:46		20:17		20:23	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	4.0		448	89.6	3.4		459	91.8

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:51	MA32999-STD1	1		STDA
11:56	MA32999-STD2	1		STDB
12:02	ZZZZZZ	1		
12:08	ZZZZZZ	1		
12:20	MA32999-ICV1	1		
12:31	MA32999-ICB1	1		
12:38	MA32999-ICCV1	1		
12:56	MA32999-CCB1	1		
13:02	MA32999-CRI1	1		
13:08	MA32999-CRID1	1		
13:14	ZZZZZZ	2		
13:20	MA32999-CRID2	1		
13:26	MA32999-ICSA1	1		
13:32	MA32999-ICSAB1	1		
13:38	MP76900-S1	5		
13:44	MP76900-S2	5		
13:49	ZZZZZZ	1		
13:55	MA32999-CCV1	1		
14:01	MA32999-CCB2	1		
14:07	MA32999-CRIB1	1		
14:13	ZZZZZZ	1		
14:19	ZZZZZZ	1		
14:24	ZZZZZZ	2		
14:30	ZZZZZZ	5		
14:36	ZZZZZZ	5		
14:42	ZZZZZZ	2		
14:48	MA32999-CCV2	1		
14:54	MA32999-CCB3	1		
15:00	MP76942-MB1	1		
15:06	MP76942-MB2	1		
15:11	MP76942-B1	1		
15:17	MP76942-LC1	1		
15:23	MP76942-LC2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:29	MP76942-S1	10		Tl neg
15:35	MP76942-S2	10		Tl neg
15:40	JB56073-1	10		(sample used for QC only; not part of login JB56243)
15:46	MP76942-SD1	50		Tl neg
15:52	MA32999-CCV3	1		
15:58	MA32999-CCB4	1		
16:04	MP76942-S3	10		Tl neg
16:10	MP76942-S4	10		Tl neg
16:16	JB56073-1F	10		(sample used for QC only; not part of login JB56243)
16:22	MP76942-SD2	50		Tl neg
16:27	ZZZZZZ	1		
16:33	ZZZZZZ	1		
16:39	ZZZZZZ	1		
16:45	ZZZZZZ	1		
16:51	ZZZZZZ	1		
16:57	MA32999-CCV4	1		
17:02	MA32999-CCB5	1		
17:08	ZZZZZZ	1		
17:14	ZZZZZZ	1		
17:20	ZZZZZZ	1		
17:26	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:38	ZZZZZZ	1		
17:44	ZZZZZZ	1		
17:49	ZZZZZZ	1		
17:55	ZZZZZZ	1		
18:01	MA32999-CCV5	1		
18:07	MA32999-CCB6	1		
18:13	ZZZZZZ	1		
18:19	ZZZZZZ	1		
18:25	ZZZZZZ	5		
18:30	ZZZZZZ	5		
18:36	MP76979-MB1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:42	MP76979-LC1	1		
18:48	ZZZZZZ	1		
18:54	ZZZZZZ	1		
19:00	MA32999-CCV6	1		
19:06	MA32999-CCB7	1		
19:12	ZZZZZZ	1		
19:17	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:29	ZZZZZZ	1		
19:35	ZZZZZZ	1		
19:41	ZZZZZZ	1		
19:47	ZZZZZZ	1		
19:53	MA32999-CCV7	1		
19:59	MA32999-CCB8	1		
20:05	MA32999-CRID3	1		
20:11	MA32999-CRI2	1		
20:16	ZZZZZZ	1		
20:22	MA32999-CRID4	1		
20:28	MA32999-ICSA2	1		
20:34	MA32999-ICSAB2	1		
20:40	MA32999-CCV8	1		
20:46	MA32999-CCB9	1		
20:52	MP76945-MB2	1		
20:58	ZZZZZZ	1		
21:04	ZZZZZZ	1		
21:10	ZZZZZZ	1		
21:16	ZZZZZZ	1		
21:22	ZZZZZZ	1		
21:28	ZZZZZZ	1		
21:34	MA32999-CCV9	1		
21:39	MA32999-CCB10	1		
21:45	ZZZZZZ	1		
21:51	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	21:57	JB56243-1	1		Mn and Si high
---------->	Last reportable sample/prep for job JB56243				
	22:03	ZZZZZZ	1		
	22:09	ZZZZZZ	1		
	22:15	ZZZZZZ	1		
	22:21	ZZZZZZ	1		
	22:27	ZZZZZZ	1		
	22:32	ZZZZZZ	5		
	22:38	ZZZZZZ	1		
	22:44	MA32999-CCV10	1		
	22:50	MA32999-CCB11	1		
	22:56	MP76973-MB1	1		
	23:02	MP76973-B1	1		
	23:08	MP76973-S1	1		
	23:13	MP76973-S2	1		
	23:19	JB56549-25	1		(sample used for QC only; not part of login JB56243)
	23:25	MP76973-SD1	5		
	23:31	ZZZZZZ	1		
	23:36	ZZZZZZ	1		
	23:42	ZZZZZZ	1		
	23:48	ZZZZZZ	1		
	23:54	MA32999-CCV11	1		
	00:00	MA32999-CCB12	1		
	00:05	ZZZZZZ	1		
	00:11	ZZZZZZ	1		
	00:17	ZZZZZZ	1		
	00:23	ZZZZZZ	1		
	00:29	ZZZZZZ	1		
	00:34	ZZZZZZ	1		
	00:40	ZZZZZZ	1		
	00:46	ZZZZZZ	1		
	00:52	ZZZZZZ	1		
	00:58	ZZZZZZ	1		
	01:03	MA32999-CCV12	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:09	MA32999-CCB13	1		
01:15	ZZZZZZ	1		
01:21	ZZZZZZ	1		
01:27	ZZZZZZ	1		
01:33	ZZZZZZ	1		
01:38	ZZZZZZ	1		
01:44	MP76972-MB1	1		
01:50	MP76972-B1	1		To reprep for Ag, low recovery confirmed
01:56	MP76972-S1	1		
02:02	MP76972-S2	1		
02:07	JB56549-8	1		(sample used for QC only; not part of login JB56243)
02:13	MA32999-CCV13	1		
02:19	MA32999-CCB14	1		
02:25	MP76972-SD1	5		
02:30	ZZZZZZ	1		
02:36	ZZZZZZ	1		
02:42	ZZZZZZ	1		
02:48	ZZZZZZ	1		
02:54	ZZZZZZ	1		
03:00	ZZZZZZ	1		
03:06	ZZZZZZ	1		
03:12	ZZZZZZ	1		
03:17	MA32999-CCV14	1		
03:23	MA32999-CCB15	1		
03:29	MA32999-CRI3	1		
03:35	MA32999-CRID5	1		
03:41	ZZZZZZ	1		
03:47	ZZZZZZ	1		
03:52	ZZZZZZ	1		
03:58	ZZZZZZ	1		
04:04	ZZZZZZ	1		
04:10	ZZZZZZ	1		
04:16	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
04:22	MA32999-CCV15	1		
04:27	MA32999-CCB16	1		
---------->	Last reportable CCB for job JB56243			
04:33	MA32999-CRI4	1		
04:39	MA32999-CRID6	1		
04:45	ZZZZZZ	1		
04:51	MA32999-CCV16	1		
04:57	MA32999-CCB17	1		
05:03	ZZZZZZ	1		
05:08	ZZZZZZ	1		
05:14	ZZZZZZ	1		
05:20	ZZZZZZ	1		
05:26	ZZZZZZ	1		
05:32	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:44	ZZZZZZ	1		
05:50	ZZZZZZ	1		
05:56	ZZZZZZ	1		
06:34	ZZZZZZ	1		
06:51	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:51	MA32999-STD1	2008 R	174750 R	22533 R	6326 R
11:56	MA32999-STD2	1861	163180	21942	5471
12:02	ZZZZZZ	1932	164110	21182	5770
12:08	ZZZZZZ	2008	172990	21826	6348
12:20	MA32999-ICV1	1929	167150	21634	5758
12:31	MA32999-ICB1	2003	174820	21760	6332
12:38	MA32999-ICCV1	1921	167150	21525	5744
12:56	MA32999-CCB1	2015	173550	21389	6375
13:02	MA32999-CRI1	1968	172020	21600	6177
13:08	MA32999-CRID1	No results reported for the elements associated with this internal standard.			
13:14	ZZZZZZ	1987	172390	21231	6293
13:20	MA32999-CRID2	2013	170340	21488	6367
13:26	MA32999-ICSA1	1784	155010	19033	4919
13:32	MA32999-ICSAB1	1780	150750	19316	4961
13:38	MP76900-S1	1951	171230	22074	6108
13:44	MP76900-S2	1953	169710	21766	6111
13:49	ZZZZZZ	1997	173480	21683	6327
13:55	MA32999-CCV1	1892	163790	21442	5667
14:01	MA32999-CCB2	1984	173650	21633	6288
14:07	MA32999-CRIB1	1983	172990	21783	6245
14:13	ZZZZZZ	2017	172710	21545	6351
14:19	ZZZZZZ	1994	175710	21702	6368
14:24	ZZZZZZ	1923	166490	20753	5377
14:30	ZZZZZZ	1871	166160	21387	5421
14:36	ZZZZZZ	1908	165800	21698	5520
14:42	ZZZZZZ	1839	161290	21172	4936
14:48	MA32999-CCV2	1937	168270	21789	5779
14:54	MA32999-CCB3	2035	175270	21916	6424
15:00	MP76942-MB1	2003	175360	21322	6387
15:06	MP76942-MB2	1992	174690	21032	6368
15:11	MP76942-B1	1904	169960	21581	5882
15:17	MP76942-LC1	1974	172020	20792	6175
15:23	MP76942-LC2	1980	173040	21140	6199

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:29	MP76942-S1	1814	159880	23372	5203
15:35	MP76942-S2	1811	158920	23403	5187
15:40	JB56073-1	1823	157580	22983	5235
15:46	MP76942-SD1	1950	168930	22454	5910
15:52	MA32999-CCV3	1935	168330	21801	5783
15:58	MA32999-CCB4	2028	171970	22069	6415
16:04	MP76942-S3	1807	159540	23286	5197
16:10	MP76942-S4	1812	159430	23303	5212
16:16	JB56073-1F	1819	159700	23356	5236
16:22	MP76942-SD2	1947	170070	22822	5911
16:27	ZZZZZZ	1740	156880	21906	4794
16:33	ZZZZZZ	1818	165280	20939	5421
16:39	ZZZZZZ	1810	163840	22307	5431
16:45	ZZZZZZ	1834	164680	22208	5504
16:51	ZZZZZZ	1998	168030	21636	6380
16:57	MA32999-CCV4	1951	169050	21902	5828
17:02	MA32999-CCB5	2046	175510	22093	6450
17:08	ZZZZZZ	1474	130790	24299	3878 !a
17:14	ZZZZZZ	1809	163580	21952	5503
17:20	ZZZZZZ	1838	165160	22486	5505
17:26	ZZZZZZ	1842	165030	22154	5553
17:32	ZZZZZZ	2036	173680	21676	6456
17:38	ZZZZZZ	8288 !	450280 !	50730 !	20352 !
17:44	ZZZZZZ	2001	173730	22015	5941
17:49	ZZZZZZ	1927	168130	22242	5730
17:55	ZZZZZZ	1934	169010	22413	5724
18:01	MA32999-CCV5	1986	170480	22169	5882
18:07	MA32999-CCB6	2057	177760	22270	6450
18:13	ZZZZZZ	1949	167910	22371	5908
18:19	ZZZZZZ	1795	160720	22714	5203
18:25	ZZZZZZ	1944	170170	22123	5758
18:30	ZZZZZZ	1808	157800	23920	5076
18:36	MP76979-MB1	2047	178250	21874	6476

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:42	MP76979-LC1	2016	174420	21835	6272
18:48	ZZZZZZ	2054	178140	21969	6489
18:54	ZZZZZZ	2055	178580	21758	6500
19:00	MA32999-CCV6	2004	172840	22292	5915
19:06	MA32999-CCB7	2087	178550	22332	6520
19:12	ZZZZZZ	2098	178660	22522	6565
19:17	ZZZZZZ	2085	177580	22394	6513
19:23	ZZZZZZ	2095	179000	22403	6527
19:29	ZZZZZZ	2098	179400	22603	6522
19:35	ZZZZZZ	2102	178250	22707	6548
19:41	ZZZZZZ	2107	179280	22438	6556
19:47	ZZZZZZ	2106	178830	22522	6548
19:53	MA32999-CCV7	2028	171810	22310	5970
19:59	MA32999-CCB8	2123	180160	22481	6605
20:05	MA32999-CRID3	2110	179990	22555	6555
20:11	MA32999-CRI2	2073	173630	22420	6395
20:16	ZZZZZZ	2124	176170	22423	6598
20:22	MA32999-CRID4	2109	179040	22583	6552
20:28	MA32999-ICSA2	1871	160150	19932	5079
20:34	MA32999-ICSAB2	1884	160600	20446	5163
20:40	MA32999-CCV8	2030	172800	22366	5969
20:46	MA32999-CCB9	2122	180570	22625	6584
20:52	MP76945-MB2	2129	180740	22473	6634
20:58	ZZZZZZ	2072	177620	21762	6475
21:04	ZZZZZZ	1879	165930	22096	5504
21:10	ZZZZZZ	1759	158630	22518	5134
21:16	ZZZZZZ	1905	159020	22402	5393
21:22	ZZZZZZ	1869	161120	21919	5341
21:28	ZZZZZZ	1878	160880	22221	5369
21:34	MA32999-CCV9	2085	174430	22257	6062
21:39	MA32999-CCB10	2156	178410	22291	6630
21:45	ZZZZZZ	2150	181320	22176	6656
21:51	ZZZZZZ	1918	166420	22136	5573

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:57	JB56243-1	2208	188060	24753	5446
22:03	ZZZZZZ	2010	171920	21717	5813
22:09	ZZZZZZ	2135	179250	21974	6614
22:15	ZZZZZZ	2003	171150	22069	5862
22:21	ZZZZZZ	2067	174600	22513	6127
22:27	ZZZZZZ	2146	181160	22109	6463
22:32	ZZZZZZ	1980	172610	23099	5801
22:38	ZZZZZZ	2174	999999 !	22644	6752
22:44	MA32999-CCV10	2039	169030	21849	5970
22:50	MA32999-CCB11	2131	179530	22365	6608
22:56	MP76973-MB1	2101	180250	22074	6576
23:02	MP76973-B1	2066	176280	21792	6220
23:08	MP76973-S1	2019	174970	21294	5790
23:13	MP76973-S2	2026	174380	21561	5818
23:19	JB56549-25	1987	171760	21553	5550
23:25	MP76973-SD1	2072	175800	22241	6184
23:31	ZZZZZZ	2014	170250	22018	6102
23:36	ZZZZZZ	1980	173640	21831	6002
23:42	ZZZZZZ	2097	179770	21996	6359
23:48	ZZZZZZ	2097	179290	21955	6350
23:54	MA32999-CCV11	1993	170330	22016	5871
00:00	MA32999-CCB12	2119	178900	22440	6588
00:05	ZZZZZZ	2033	174560	22040	5996
00:11	ZZZZZZ	2023	174420	21969	5964
00:17	ZZZZZZ	2017	175120	21722	5939
00:23	ZZZZZZ	2008	177100	21669	5955
00:29	ZZZZZZ	1975	173160	21258	5976
00:34	ZZZZZZ	1988	171840	21492	6001
00:40	ZZZZZZ	1924	170460	21739	5837
00:46	ZZZZZZ	1999	173500	21288	6036
00:52	ZZZZZZ	1998	172760	21658	5885
00:58	ZZZZZZ	2014	175150	21358	6043
01:03	MA32999-CCV12	1989	169140	21239	5872

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:09	MA32999-CCB13	2087	170100	22327	6500
01:15	ZZZZZZ	1967	171240	21471	5878
01:21	ZZZZZZ	1988	171870	21993	6046
01:27	ZZZZZZ	2028	174420	20746	6132
01:33	ZZZZZZ	2020	174050	21692	6126
01:38	ZZZZZZ	1954	173800	21420	5819
01:44	MP76972-MB1	2062	176930	22073	6489
01:50	MP76972-B1	2020	172890	21053	6118
01:56	MP76972-S1	2027	172920	21367	5937
02:02	MP76972-S2	2061	174650	21166	5988
02:07	JB56549-8	2070	175910	21779	6145
02:13	MA32999-CCV13	1994	168970	21683	5881
02:19	MA32999-CCB14	2105	178140	22325	6552
02:25	MP76972-SD1	2087	176960	21996	6376
02:30	ZZZZZZ	2079	179110	22343	6181
02:36	ZZZZZZ	2092	176240	21537	6148
02:42	ZZZZZZ	1883	168180	20922	5990
02:48	ZZZZZZ	1973	999999 !	20803	6193
02:54	ZZZZZZ	1994	172730	21921	6036
03:00	ZZZZZZ	1978	172200	21264	6173
03:06	ZZZZZZ	2073	173070	21306	6197
03:12	ZZZZZZ	2057	174490	21506	6053
03:17	MA32999-CCV14	1992	169730	22158	5882
03:23	MA32999-CCB15	2100	177140	21863	6547
03:29	MA32999-CRI3	2064	176580	22324	6386
03:35	MA32999-CRID5	2107	178000	22237	6543
03:41	ZZZZZZ	2100	178360	22197	6549
03:47	ZZZZZZ	1992	173240	21843	5919
03:52	ZZZZZZ	2017	175140	21564	5947
03:58	ZZZZZZ	2046	176040	21722	6113
04:04	ZZZZZZ	1992	172300	21648	5915
04:10	ZZZZZZ	1978	172910	21544	6157
04:16	ZZZZZZ	1985	166980	21511	5810

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA32999
Parameters: Al,Sb,Ba,Be,Cd,Ca,Cr,Co,Cu,Mg,Mn,Ni,K,Se,Ag,Na,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:22	MA32999-CCV15	2010	171130	21808	5928
04:27	MA32999-CCB16	2093	177230	22165	6536
04:33	MA32999-CRI4	2071	175790	22180	6411
04:39	MA32999-CRID6	2082	177420	21628	6489
04:45	ZZZZZZ	2097	178010	22115	6531
04:51	MA32999-CCV16	1990	170270	21936	5884
04:57	MA32999-CCB17	2094	177790	22295	6538
05:03	ZZZZZZ	1903	165940	22372	5633
05:08	ZZZZZZ	2046	175750	22292	6455
05:14	ZZZZZZ	2230	173460	19049	5979
05:20	ZZZZZZ	1954	165560	22292	5692
05:26	ZZZZZZ	2162	177260	22219	6576
05:32	ZZZZZZ	2115	999999 !	21830	6539
05:38	ZZZZZZ	2144	179530	22212	6544
05:44	ZZZZZZ	2130	176600	22230	6516
05:50	ZZZZZZ	2139	177460	22078	6542
05:56	ZZZZZZ	2115	177560	22418	6472
06:34	ZZZZZZ	2085	175680	22163	6455
06:51	ZZZZZZ	2386	150930	19544	6261

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			12:31		12:56		14:01		14:54	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	2.5	<200	-0.10	<200	7.8	<200	5.9	<200
Antimony	6.0	1.2	0.80	<6.0	0.20	<6.0	0.70	<6.0	0.90	<6.0
Arsenic	3.0	1.1	anr							
Barium	200	.09	-0.10	<200	-0.30	<200	-0.20	<200	-0.20	<200
Beryllium	1.0	.01	0.0	<1.0	0.0	<1.0	0.10	<2.0	0.0	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	-0.10	<3.0	-0.20	<3.0	0.0	<3.0	0.10	<3.0
Calcium	5000	8.4	0.60	<5000	5.2	<5000	10.0	<5000	13.6	<5000
Chromium	10	.3	-0.20	<10	0.20	<10	-0.10	<10	0.20	<10
Cobalt	50	.2	0.0	<50	-0.10	<50	0.0	<50	0.10	<50
Copper	10	.6	1.0	<10	1.3	<10	1.9	<10	1.6	<10
Iron	100	6.2	anr							
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	8.8	<5000	2.0	<5000	-11	<5000	10.7	<5000
Manganese	15	.2	0.0	<15	0.0	<15	0.0	<15	0.10	<15
Molybdenum	20	.3								
Nickel	10	.5	-0.10	<10	-0.20	<10	-0.50	<10	-0.50	<10
Palladium	50	.5								
Potassium	10000	17	-86	<10000	-83	<10000	-110	<10000	-89	<10000
Selenium	10	1.8	1.8	<10	2.8	<10	1.2	<10	1.9	<10
Silicon	200	13								
Silver	10	.4	0.20	<10	0.40	<10	0.30	<10	0.40	<10
Sodium	10000	5.2	-13	<10000	-19	<10000	-16	<10000	-20	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	anr							
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	-0.60	<50	-0.40	<50	-0.40	<50	-0.50	<50
Zinc	20	.7	0.10	<20	0.0	<20	0.40	<20	0.60	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			12:31		12:56		14:01		14:54	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			15:58		17:02		18:07		19:06	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	3.0	<200	7.5	<200	-0.60	<200	9.0	<200
Antimony	6.0	1.2	0.10	<6.0	-0.10	<6.0	-0.30	<6.0	0.30	<6.0
Arsenic	3.0	1.1	anr							
Barium	200	.09	0.0	<200	-0.30	<200	0.0	<200	-0.20	<200
Beryllium	1.0	.01	0.10	<1.0	0.0	<1.0	0.10	<1.0	0.10	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.0	<3.0	-0.10	<3.0	0.0	<3.0	0.0	<3.0
Calcium	5000	8.4	10.0	<5000	12.1	<5000	12.4	<5000	12.7	<5000
Chromium	10	.3	0.10	<10	0.10	<10	0.20	<10	0.10	<10
Cobalt	50	.2	0.0	<50	-0.10	<50	0.10	<50	0.20	<50
Copper	10	.6	2.6	<10	2.8	<10	2.1	<10	2.1	<10
Iron	100	6.2	anr							
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	0.0	<5000	14.6	<5000	8.5	<5000	7.1	<5000
Manganese	15	.2	0.0	<15	0.0	<15	0.10	<15	0.10	<15
Molybdenum	20	.3								
Nickel	10	.5	-0.80	<10	-0.80	<10	-0.70	<10	-1.0	<10
Palladium	50	.5								
Potassium	10000	17	-63	<10000	-67	<10000	-79	<10000	-82	<10000
Selenium	10	1.8	2.9	<10	2.9	<10	1.6	<10	1.4	<10
Silicon	200	13								
Silver	10	.4	0.50	<10	0.40	<10	0.60	<10	0.50	<10
Sodium	10000	5.2	2.3	<10000	3.3	<10000	15.8	<10000	5.8	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	anr							
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	-0.80	<50	-0.70	<50	-0.60	<50	-0.70	<50
Zinc	20	.7	0.10	<20	0.20	<20	0.0	<20	0.10	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			15:58		17:02		18:07		19:06	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			19:59		20:46		21:39		22:50	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	5.3	<200	17.5	<200	1.9	<200	6.0	<200
Antimony	6.0	1.2	0.30	<6.0	0.80	<6.0	0.90	<6.0	-0.40	<6.0
Arsenic	3.0	1.1	anr							
Barium	200	.09	0.0	<200	-0.10	<200	0.0	<200	0.10	<200
Beryllium	1.0	.01	0.10	<1.0	0.20	<1.0	0.20	<1.0	0.10	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.0	<3.0	0.0	<3.0	0.0	<3.0	0.0	<3.0
Calcium	5000	8.4	12.6	<5000	24.9	<5000	24.5	<5000	15.7	<5000
Chromium	10	.3	0.10	<10	0.20	<10	0.10	<10	0.10	<10
Cobalt	50	.2	0.20	<50	0.10	<50	0.10	<50	0.20	<50
Copper	10	.6	1.8	<10	2.1	<10	2.2	<10	2.1	<10
Iron	100	6.2	anr							
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	-11	<5000	13.1	<5000	6.7	<5000	-0.30	<5000
Manganese	15	.2	0.10	<15	0.10	<15	0.10	<15	0.10	<15
Molybdenum	20	.3								
Nickel	10	.5	-0.90	<10	-0.70	<10	-0.90	<10	-1.0	<10
Palladium	50	.5								
Potassium	10000	17	-93	<10000	-91	<10000	-79	<10000	-68	<10000
Selenium	10	1.8	2.1	<10	2.8	<10	2.4	<10	3.7	<10
Silicon	200	13								
Silver	10	.4	0.50	<10	0.60	<10	0.70	<10	0.80	<10
Sodium	10000	5.2	-8.8	<10000	-9.1	<10000	6.2	<10000	-8.1	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	anr							
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	-0.60	<50	-0.80	<50	-0.70	<50	-0.50	<50
Zinc	20	.7	0.50	<20	0.10	<20	0.30	<20	0.0	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			19:59		20:46		21:39		22:50	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			00:00		01:09		02:19		03:23	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	3.6	5.4	<200	8.8	<200	-1.4	<200	7.3	<200
Antimony	6.0	1.2	-0.50	<6.0	-0.20	<6.0	-0.30	<6.0	-1.1	<6.0
Arsenic	3.0	1.1	anr							
Barium	200	.09	-0.10	<200	0.0	<200	-0.10	<200	-0.40	<200
Beryllium	1.0	.01	0.10	<1.0	0.10	<1.0	0.10	<1.0	0.10	<1.0
Bismuth	20	.9								
Boron	100	2.8	anr							
Cadmium	3.0	.2	0.0	<3.0	0.20	<3.0	0.0	<3.0	0.0	<3.0
Calcium	5000	8.4	13.1	<5000	18.4	<5000	21.1	<5000	17.7	<5000
Chromium	10	.3	0.10	<10	0.20	<10	0.20	<10	0.20	<10
Cobalt	50	.2	0.10	<50	0.20	<50	0.10	<50	0.0	<50
Copper	10	.6	3.3	<10	4.1	<10	4.0	<10	3.9	<10
Iron	100	6.2	anr							
Lead	3.0	1.2	anr							
Lithium	20	.7								
Magnesium	5000	10	0.80	<5000	-5.0	<5000	16.2	<5000	8.5	<5000
Manganese	15	.2	0.10	<15	0.10	<15	0.10	<15	0.10	<15
Molybdenum	20	.3								
Nickel	10	.5	-1.1	<10	-1.0	<10	-1.4	<10	-1.3	<10
Palladium	50	.5								
Potassium	10000	17	-84	<10000	-58	<10000	-42	<10000	-54	<10000
Selenium	10	1.8	3.0	<10	3.0	<10	3.9	<10	2.5	<10
Silicon	200	13								
Silver	10	.4	0.90	<10	1.0	<10	1.1	<10	1.0	<10
Sodium	10000	5.2	-15	<10000	-15	<10000	-14	<10000	-18	<10000
Sulfur	50	2.9								
Strontium	10	.04								
Thallium	2.0	1.6	anr							
Tin	10	1.1	anr							
Titanium	10	.2								
Tungsten	50	8.7								
Vanadium	50	.2	-1.0	<50	-1.2	<50	-1.0	<50	-1.0	<50
Zinc	20	.7	0.0	<20	0.10	<20	0.20	<20	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			00:00		01:09		02:19		03:23	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			04:27	
Sample ID:			CCB16	
Metal	RL	IDL	raw	final
Aluminum	200	3.6	-1.4	<200
Antimony	6.0	1.2	-0.10	<6.0
Arsenic	3.0	1.1	anr	
Barium	200	.09	0.0	<200
Beryllium	1.0	.01	0.10	<1.0
Bismuth	20	.9		
Boron	100	2.8	anr	
Cadmium	3.0	.2	0.0	<3.0
Calcium	5000	8.4	20.5	<5000
Chromium	10	.3	-0.10	<10
Cobalt	50	.2	0.20	<50
Copper	10	.6	3.9	<10
Iron	100	6.2	anr	
Lead	3.0	1.2	anr	
Lithium	20	.7		
Magnesium	5000	10	8.0	<5000
Manganese	15	.2	0.10	<15
Molybdenum	20	.3		
Nickel	10	.5	-1.2	<10
Palladium	50	.5		
Potassium	10000	17	-71	<10000
Selenium	10	1.8	3.7	<10
Silicon	200	13		
Silver	10	.4	1.0	<10
Sodium	10000	5.2	-15	<10000
Sulfur	50	2.9		
Strontium	10	.04		
Thallium	2.0	1.6	anr	
Tin	10	1.1	anr	
Titanium	10	.2		
Tungsten	50	8.7		
Vanadium	50	.2	-0.90	<50
Zinc	20	.7	0.30	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA32999 Units: ug/l

Time:			04:27	
Sample ID:			CCB16	
Metal	RL	IDL	raw	final
Zirconium	10	.3		

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		12:38	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	40000	100.0
Antimony	2000	1980	99.0
Arsenic	anr		
Barium	2000	1960	98.0
Beryllium	2000	2060	103.0
Bismuth			
Boron	anr		
Cadmium	2000	1980	99.0
Calcium	40000	39700	99.3
Chromium	2000	1980	99.0
Cobalt	2000	1970	98.5
Copper	2000	1960	98.0
Iron	anr		
Lead	anr		
Lithium			
Magnesium	40000	39800	99.5
Manganese	2000	2020	101.0
Molybdenum			
Nickel	2000	1990	99.5
Palladium			
Potassium	40000	39500	98.8
Selenium	2000	1960	98.0
Silicon			
Silver	250	242	96.8
Sodium	40000	39900	99.8
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	2000	2000	100.0
Zinc	2000	2000	100.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		12:38	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		12:20			13:55			14:48	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40200	100.5	40000	40500	101.3	40000	39600	99.0
Antimony	2000	1980	99.0	2000	2040	102.0	2000	1990	99.5
Arsenic	anr								
Barium	2000	1960	98.0	2000	1980	99.0	2000	1950	97.5
Beryllium	2000	2070	103.5	2000	2080	104.0	2000	2050	102.5
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	2030	101.5	2000	1990	99.5
Calcium	40000	39600	99.0	40000	40100	100.3	40000	39800	99.5
Chromium	2000	1990	99.5	2000	2020	101.0	2000	1950	97.5
Cobalt	2000	1980	99.0	2000	2020	101.0	2000	1990	99.5
Copper	2000	1950	97.5	2000	2020	101.0	2000	1960	98.0
Iron	anr								
Lead	anr								
Lithium									
Magnesium	40000	39900	99.8	40000	40200	100.5	40000	39600	99.0
Manganese	2000	2040	102.0	2000	2080	104.0	2000	2010	100.5
Molybdenum									
Nickel	2000	1990	99.5	2000	2030	101.5	2000	1990	99.5
Palladium									
Potassium	40000	39700	99.3	40000	39900	99.8	40000	39000	97.5
Selenium	2000	1960	98.0	2000	2010	100.5	2000	1970	98.5
Silicon									
Silver	250	242	96.8	250	245	98.0	250	238	95.2
Sodium	40000	40100	100.3	40000	40200	100.5	40000	39200	98.0
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	2010	100.5	2000	2050	102.5	2000	1980	99.0
Zinc	2000	2010	100.5	2000	2050	102.5	2000	2010	100.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		12:20			13:55			14:48	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
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CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		15:52			16:57			18:01	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40000	100.0	40000	39800	99.5	40000	39700	99.3
Antimony	2000	2010	100.5	2000	1990	99.5	2000	1980	99.0
Arsenic	anr								
Barium	2000	1980	99.0	2000	1960	98.0	2000	1950	97.5
Beryllium	2000	2050	102.5	2000	2040	102.0	2000	2030	101.5
Bismuth									
Boron	anr								
Cadmium	2000	2000	100.0	2000	1980	99.0	2000	1990	99.5
Calcium	40000	39500	98.8	40000	39300	98.3	40000	39800	99.5
Chromium	2000	1940	97.0	2000	1930	96.5	2000	1930	96.5
Cobalt	2000	2000	100.0	2000	1980	99.0	2000	2000	100.0
Copper	2000	1980	99.0	2000	1970	98.5	2000	1960	98.0
Iron	anr								
Lead	anr								
Lithium									
Magnesium	40000	39600	99.0	40000	39300	98.3	40000	39600	99.0
Manganese	2000	2010	100.5	2000	2000	100.0	2000	2010	100.5
Molybdenum									
Nickel	2000	1990	99.5	2000	1960	98.0	2000	1990	99.5
Palladium									
Potassium	40000	39300	98.3	40000	39000	97.5	40000	38800	97.0
Selenium	2000	1970	98.5	2000	1950	97.5	2000	1950	97.5
Silicon									
Silver	250	237	94.8	250	236	94.4	250	236	94.4
Sodium	40000	39400	98.5	40000	39200	98.0	40000	38800	97.0
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	1980	99.0	2000	1970	98.5	2000	1970	98.5
Zinc	2000	2000	100.0	2000	1980	99.0	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		15:52			16:57			18:01	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		19:00			19:53			20:40	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39400	98.5	40000	39500	98.8	40000	39600	99.0
Antimony	2000	1970	98.5	2000	1960	98.0	2000	1960	98.0
Arsenic	anr								
Barium	2000	1950	97.5	2000	1950	97.5	2000	1930	96.5
Beryllium	2000	2030	101.5	2000	2030	101.5	2000	2020	101.0
Bismuth									
Boron	anr								
Cadmium	2000	1990	99.5	2000	1980	99.0	2000	1980	99.0
Calcium	40000	39800	99.5	40000	40100	100.3	40000	40000	100.0
Chromium	2000	1910	95.5	2000	1950	97.5	2000	1930	96.5
Cobalt	2000	2010	100.5	2000	2000	100.0	2000	2010	100.5
Copper	2000	1940	97.0	2000	1950	97.5	2000	1930	96.5
Iron	anr								
Lead	anr								
Lithium									
Magnesium	40000	39400	98.5	40000	39600	99.0	40000	39700	99.3
Manganese	2000	1980	99.0	2000	2020	101.0	2000	2020	101.0
Molybdenum									
Nickel	2000	1990	99.5	2000	1980	99.0	2000	1990	99.5
Palladium									
Potassium	40000	38500	96.3	40000	38600	96.5	40000	38500	96.3
Selenium	2000	1940	97.0	2000	1930	96.5	2000	1930	96.5
Silicon									
Silver	250	234	93.6	250	236	94.4	250	233	93.2
Sodium	40000	38500	96.3	40000	38500	96.3	40000	38500	96.3
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	1950	97.5	2000	1970	98.5	2000	1960	98.0
Zinc	2000	2020	101.0	2000	2020	101.0	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		19:00			19:53			20:40	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		21:34			22:44			23:54	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39200	98.0	40000	40300	100.8	40000	39700	99.3
Antimony	2000	1940	97.0	2000	2000	100.0	2000	2030	101.5
Arsenic	anr								
Barium	2000	1900	95.0	2000	1980	99.0	2000	1980	99.0
Beryllium	2000	2030	101.5	2000	2080	104.0	2000	2050	102.5
Bismuth									
Boron	anr								
Cadmium	2000	1980	99.0	2000	2020	101.0	2000	2050	102.5
Calcium	40000	41100	102.8	40000	41500	103.8	40000	40900	102.3
Chromium	2000	1980	99.0	2000	2010	100.5	2000	1930	96.5
Cobalt	2000	2040	102.0	2000	2070	103.5	2000	2090	104.5
Copper	2000	1920	96.0	2000	2010	100.5	2000	2000	100.0
Iron	anr								
Lead	anr								
Lithium									
Magnesium	40000	40300	100.8	40000	41000	102.5	40000	40400	101.0
Manganese	2000	2050	102.5	2000	2080	104.0	2000	2010	100.5
Molybdenum									
Nickel	2000	2020	101.0	2000	2030	101.5	2000	2040	102.0
Palladium									
Potassium	40000	38000	95.0	40000	39400	98.5	40000	39100	97.8
Selenium	2000	1920	96.0	2000	1960	98.0	2000	2000	100.0
Silicon									
Silver	250	237	94.8	250	243	97.2	250	238	95.2
Sodium	40000	37900	94.8	40000	39200	98.0	40000	38700	96.8
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	1990	99.5	2000	2030	101.5	2000	1980	99.0
Zinc	2000	2070	103.5	2000	2080	104.0	2000	2080	104.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		21:34			22:44			23:54	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		01:03			02:13			03:17	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	41700	104.3	40000	40700	101.8	40000	39600	99.0
Antimony	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0
Arsenic	anr								
Barium	2000	2070	103.5	2000	2000	100.0	2000	1960	98.0
Beryllium	2000	2130	106.5	2000	2070	103.5	2000	2020	101.0
Bismuth									
Boron	anr								
Cadmium	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0
Calcium	40000	42600	106.5	40000	41000	102.5	40000	40100	100.3
Chromium	2000	1900	95.0	2000	1880	94.0	2000	1900	95.0
Cobalt	2000	2060	103.0	2000	2060	103.0	2000	2070	103.5
Copper	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5
Iron	anr								
Lead	anr								
Lithium									
Magnesium	40000	42200	105.5	40000	40900	102.3	40000	39800	99.5
Manganese	2000	2010	100.5	2000	2010	100.5	2000	2010	100.5
Molybdenum									
Nickel	2000	2010	100.5	2000	2000	100.0	2000	2010	100.5
Palladium									
Potassium	40000	41000	102.5	40000	40000	100.0	40000	39000	97.5
Selenium	2000	1990	99.5	2000	1980	99.0	2000	1990	99.5
Silicon									
Silver	250	234	93.6	250	233	93.2	250	234	93.6
Sodium	40000	40300	100.8	40000	39300	98.3	40000	38400	96.0
Sulfur									
Strontium									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	2000	1960	98.0	2000	1950	97.5	2000	1970	98.5
Zinc	2000	2040	102.0	2000	2040	102.0	2000	2040	102.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		01:03			02:13			03:17	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		04:22	
Sample ID:	CCV	CCV15	
Metal	True	Results	% Rec
Aluminum	40000	40300	100.8
Antimony	2000	2010	100.5
Arsenic	anr		
Barium	2000	1990	99.5
Beryllium	2000	2050	102.5
Bismuth			
Boron	anr		
Cadmium	2000	2020	101.0
Calcium	40000	40700	101.8
Chromium	2000	1880	94.0
Cobalt	2000	2050	102.5
Copper	2000	1990	99.5
Iron	anr		
Lead	anr		
Lithium			
Magnesium	40000	40300	100.8
Manganese	2000	1990	99.5
Molybdenum			
Nickel	2000	1990	99.5
Palladium			
Potassium	40000	39700	99.3
Selenium	2000	1970	98.5
Silicon			
Silver	250	233	93.2
Sodium	40000	39000	97.5
Sulfur			
Strontium			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	2000	1950	97.5
Zinc	2000	2020	101.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA32999 Units: ug/l

Time:		04:22	
Sample ID:	CCV	CCV15	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				13:02		13:20		20:05	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	221	110.5	95.9	95.9	102	102.0
Antimony	6.0	20	3.0	6.1	101.7	3.2	106.7	3.8	126.7
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	187	93.5	3.8	95.0	3.7	92.5
Beryllium	2.0		1.0	2.2	110.0	1.1	110.0	1.1	110.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.1	103.3	0.90	90.0	1.0	100.0
Calcium	5000		1000	4960	99.2	1000	100.0	985	98.5
Chromium	10		2.0	10.3	103.0	2.1	105.0	2.1	105.0
Cobalt	50		3.0	51.1	102.2	3.1	103.3	3.0	100.0
Copper	10		2.0	10.3	103.0				
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	5550	111.0	103	103.0	116	116.0
Manganese	15		3.0	16.5	110.0	3.3	110.0	3.1	103.3
Molybdenum	20		4.0						
Nickel	10		4.0	10.5	105.0	3.4	85.0	3.1	77.5
Palladium	50								
Potassium	5000		2000	4870	97.4	1840	92.0	1750	87.5
Selenium	10	20	5.0	11.7	117.0	6.3	126.0		
Silicon	200								
Silver	5.0		1.0	5.2	104.0	1.2	120.0		
Sodium	5000		1000	5120	102.4	971	97.1	920	92.0
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	52.6	105.2	1.5	75.0		
Zinc	20		10	23.6	118.0	11.1	111.0	11.4	114.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				13:02		13:20		20:05	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2		CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				20:11		20:22		03:29	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID4		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	213	106.5	104	104.0	209	104.5
Antimony	6.0	20	3.0	5.0	83.3	2.6	86.7	5.3	88.3
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	181	90.5	3.5	87.5	183	91.5
Beryllium	2.0		1.0	2.1	105.0	1.0	100.0	2.1	105.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	2.8	93.3	0.90	90.0	3.0	100.0
Calcium	5000		1000	4870	97.4	990	99.0	4850	97.0
Chromium	10		2.0	10.1	101.0	2.1	105.0	9.5	95.0
Cobalt	50		3.0	50.9	101.8	3.1	103.3	51.1	102.2
Copper	10		2.0	11.5	115.0			12.7	127.0
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	5470	109.4	98.0	98.0	5360	107.2
Manganese	15		3.0	16.5	110.0	3.1	103.3	15.6	104.0
Molybdenum	20		4.0						
Nickel	10		4.0	9.5	95.0	2.8	70.0	9.0	90.0
Palladium	50								
Potassium	5000		2000	4610	92.2	1740	87.0	4640	92.8
Selenium	10	20	5.0	10.5	105.0			12.7	127.0
Silicon	200								
Silver	5.0		1.0	5.5	110.0			5.7	114.0
Sodium	5000		1000	4730	94.6	913	91.3	4660	93.2
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	51.3	102.6			48.8	97.6
Zinc	20		10	22.4	112.0	11.1	111.0	22.0	110.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				20:11		20:22		03:29	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID4		CRI3	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.3.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				03:35	
Sample ID:	CRI	CRIA	CRID	CRID5	
Metal	True	True	True	Results	% Rec
Aluminum	200	500	100	101	101.0
Antimony	6.0	20	3.0	2.3	76.7
Arsenic	8.0	20	3.0	anr	
Barium	200		4.0	3.6	90.0
Beryllium	2.0		1.0	1.0	100.0
Bismuth	20				
Boron	100		10	anr	
Cadmium	3.0		1.0	1.0	100.0
Calcium	5000		1000	1000	100.0
Chromium	10		2.0	1.9	95.0
Cobalt	50		3.0	3.1	103.3
Copper	10		2.0		
Iron	100	500			
Lead	3.0	20	2.5		
Lithium	20				
Magnesium	5000		100	123	123.0
Manganese	15		3.0	3.0	100.0
Molybdenum	20		4.0		
Nickel	10		4.0		
Palladium	50				
Potassium	5000		2000	1810	90.5
Selenium	10	20	5.0		
Silicon	200				
Silver	5.0		1.0		
Sodium	5000		1000	921	92.1
Sulfur	50	50	50		
Strontium	10				
Thallium	10		2.0	anr	
Tin	10				
Titanium	10				
Tungsten	50				
Vanadium	50		2.0		
Zinc	20		10	10.8	108.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:				03:35	
Sample ID:	CRI	CRIA	CRID	CRID5	
Metal	True	True	True	Results	% Rec
Zirconium	10		5.0		

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:		14:07	
Sample ID:	CRIB	CRIB1	
Metal	True	Results	% Rec
Aluminum	200	222	111.0
Antimony	6.0	6.4	106.7
Arsenic	8.0		
Barium	200	186	93.0
Beryllium	2.0	2.3	115.0
Bismuth	20		
Boron	100		
Cadmium	3.0	3.1	103.3
Calcium	5000	4890	97.8
Chromium	10	10.6	106.0
Cobalt	50	50.2	100.4
Copper	10	10.9	109.0
Iron	100		
Lead	3.0		
Lithium	20		
Magnesium	5000	5480	109.6
Manganese	15	16.4	109.3
Molybdenum	20		
Nickel	10	9.9	99.0
Palladium	50		
Potassium	5000	4810	96.2
Selenium	10	10.7	107.0
Silicon	200		
Silver	5.0	5.3	106.0
Sodium	5000	5020	100.4
Sulfur	50		
Strontium	10		
Thallium	10		
Tin	10		
Titanium	10		
Tungsten	50		
Vanadium	50	51.7	103.4
Zinc	20	23.4	117.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA32999 Units: ug/l

Time:		14:07	
Sample ID:	CRIB	CRIB1	
Metal	True	Results	% Rec
Zirconium	10		

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32999 Units: ug/l

Time:			13:26		13:32		20:28		20:34	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	589000	117.8	511000	102.2	571000	114.2	493000	98.6
Antimony		1000	8.6		1010	101.0	8.0		988	98.8
Arsenic		1000	-3.3		984	98.4	-1.4		968	96.8
Barium		500	-0.80		533	106.6	-0.40		514	102.8
Beryllium		500	-0.10		493	98.6	-0.10		475	95.0
Bismuth		500	1.1		498	99.6	2.5		485	97.0
Boron			-1.2		-2.6		-2.5		-5.1	
Cadmium		1000	0.90		927	92.7	1.1		924	92.4
Calcium	400000	400000	449000	112.3	426000	106.5	447000	111.8	416000	104.0
Chromium		500	-1.2		438	87.6	-1.4		413	82.6
Cobalt		500	-1.7		440	88.0	-1.0		449	89.8
Copper		500	1.6		501	100.2	1.7		475	95.0
Iron	200000	200000	224000	112.0	220000	110.0	215000	107.5	208000	104.0
Lead		1000	0.80		845	84.5	0.20		829	82.9
Lithium		500	1.4		510	102.0	-0.10		464	92.8
Magnesium	500000	500000	554000	110.8	527000	105.4	546000	109.2	514000	102.8
Manganese		500	0.10		454	90.8	1.3		436	87.2
Molybdenum		500	-4.1		472	94.4	-4.3		466	93.2
Nickel		1000	-0.10		847	84.7	-0.60		846	84.6
Palladium		500	-45		515	103.0	-52		478	95.6
Potassium			49.2		60.5		19.1		19.1	
Selenium		1000	-2.7		896	89.6	-0.50		876	87.6
Silicon			-14		-23		-16		-26	
Silver		1000	1.8		1060	106.0	5.2		994	99.4
Sodium			-8.2		-3.1		1.9		11.9	
Sulfur		500	10.3		474	94.8	7.4		459	91.8
Strontium			-7.9		-7.5		-8.4		-8.0	
Thallium		1000	3.3		939	93.9	2.9		953	95.3
Tin			1.2		0.40		-0.40		1.2	
Titanium			-0.80		-0.80		-1.1		-0.90	
Tungsten		500	-14		497	99.4	-26		478	95.6
Vanadium		500	-0.80		443	88.6	-1.5		419	83.8
Zinc		1000	1.3		853	85.3	1.5		865	86.5

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SA010314M1.ICP Date Analyzed: 01/03/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA32999 Units: ug/l

Time:			13:26		13:32		20:28		20:34	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	8.8		477	95.4	9.2		441	88.2

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:14	MA33003-STD1	1		STDA
08:20	MA33003-STD2	1		STDB
08:26	ZZZZZZ	1		
08:32	ZZZZZZ	1		
08:40	MA33003-ICV1	1		
08:54	MA33003-ICB1	1		
09:00	MA33003-ICCV1	1		
09:10	MA33003-CCB1	1		
09:15	MA33003-CRI1	1		
09:21	MA33003-CRID1	1		
09:27	MA33003-CRIA1	1		
09:33	ZZZZZZ	1		
09:39	MA33003-CRI2	1		
09:45	MA33003-ICSA1	1		
09:51	MA33003-ICSAB1	1		
09:57	MA33003-CCV1	1		
10:03	MA33003-CCB2	1		
10:09	MP76826-MB1	1		
10:15	MP76826-S1	1		
10:21	MP76826-S2	1		
10:27	JB55635-1	1		(sample used for QC only; not part of login JB56243)
10:33	MP76826-SD1	5		
10:39	ZZZZZZ	1		
10:45	ZZZZZZ	1		
10:51	MP76826-LC1	1		
10:57	ZZZZZZ	1		
11:03	MA33003-CCV2	1		
11:13	MA33003-CCB3	1		
11:19	ZZZZZZ	1		
11:25	ZZZZZZ	2		
11:31	ZZZZZZ	5		
11:37	ZZZZZZ	1		
11:43	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:49	ZZZZZZ	1		
11:55	ZZZZZZ	3		
12:01	ZZZZZZ	5		
12:07	ZZZZZZ	5		
12:13	MA33003-CCV3	1		
12:19	MA33003-CCB4	1		
12:25	ZZZZZZ	5		
12:31	ZZZZZZ	5		
12:37	ZZZZZZ	1		
12:43	MP76978-S1	1		
12:49	MP76978-S2	1		
12:55	JB56506-1	1		(sample used for QC only; not part of login JB56243)
13:01	MP76978-SD1	5		
13:07	MP77021-MB1	1		
13:13	MP77021-MB2	1		
13:19	MP77021-LC1	1		
13:25	MA33003-CCV4	1		
13:31	MA33003-CCB5	1		
13:37	MP77021-LC2	1		
13:43	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:55	MP77021-B1	1		
14:01	MP76764-MB1	1		
14:07	MP76764-B1	1		
14:13	MP76764-S1	1		
14:19	MP76764-S2	1		
14:25	JB55731-26	1		(sample used for QC only; not part of login JB56243)
14:31	MP76764-SD1	5		
14:37	MA33003-CCV5	1		
14:43	MA33003-CCB6	1		
14:55	ZZZZZZ	1		
15:01	ZZZZZZ	2		
15:07	ZZZZZZ	2		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:13	ZZZZZZ	1		
15:19	MP76945-MB1	1		
15:25	ZZZZZZ	1		
15:32	MP76945-LC1	1		
15:37	MP76945-LC2	1		
15:43	MP76945-B1	1		
15:49	MA33003-CCV6	1		
15:55	MA33003-CCB7	1		
16:01	MP76945-S1	1		
16:07	MP76945-S2	1		
16:13	JB56222-2	1		(sample used for QC only; not part of login JB56243)
16:19	MP76945-SD1	5		bad reading on IN
16:25	MP76945-S3	1		
16:31	MP76945-S4	1		
16:37	JB56222-2F	1		(sample used for QC only; not part of login JB56243)
16:43	MP76945-SD2	1		wrong DF
16:49	ZZZZZZ	1		
16:55	ZZZZZZ	1		
17:01	MA33003-CCV7	1		
17:07	MA33003-CCB8	1		
17:13	ZZZZZZ	1		
17:19	MA33003-CRI3	1		
17:25	MA33003-CRIA2	1		
17:31	MA33003-CRID2	1		
17:37	MA33003-ICSA2	1		
17:43	MA33003-ICSAB2	1		
17:49	MA33003-CCV8	1		
17:55	MA33003-CCB9	1		
18:01	ZZZZZZ	1		
18:07	ZZZZZZ	1		
18:13	ZZZZZZ	1		
18:19	ZZZZZZ	1		
18:25	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	18:31	JB56243-1	3		high RSD-s
---------->	Last reportable sample/prep for job JB56243				
	18:37	ZZZZZZ	1		
	18:43	ZZZZZZ	1		
	18:49	ZZZZZZ	1		
	18:56	MA33003-CCV9	1		
	19:01	MA33003-CC1	1		
	19:07	MP77053-MB1	1		
	19:14	MP77053-LC1	1		
	19:19	MP77053-S1	1		to reprep for Cu
	19:25	MP77053-S2	1		to reprep for Cu
	19:31	JB56942-3A	1		(sample used for QC only; not part of login JB56243)
	19:37	MP77053-SD1	5		
	19:43	ZZZZZZ	1		
	19:49	ZZZZZZ	1		
	19:55	ZZZZZZ	1		
	20:02	ZZZZZZ	1		
	20:08	MA33003-CCV10	1		
	20:13	MA33003-CCB10	1		
	20:20	MP77032-MB1	1		Rerun for Cr and Zn
	20:26	MP77032-B1	1		
	20:32	MP77032-S1	1		Cu high
	20:38	MP77032-S2	1		Cu high
	20:44	JB56584-1	1		(sample used for QC only; not part of login JB56243)
	20:50	MP77032-SD1	5		Cu high
	20:56	ZZZZZZ	1		
	21:02	ZZZZZZ	1		
	21:08	ZZZZZZ	1		
	21:15	ZZZZZZ	1		
	21:21	MA33003-CCV11	1		
	21:27	MA33003-CCB11	1		
	21:33	ZZZZZZ	1		
	21:39	ZZZZZZ	1		
	21:45	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:51	ZZZZZZ	1		
21:57	ZZZZZZ	1		
22:03	ZZZZZZ	1		
22:09	ZZZZZZ	1		
22:16	ZZZZZZ	1		
22:22	ZZZZZZ	1		
22:28	MA33003-CCV12	1		
22:34	MA33003-CCB12	1		
22:40	MA33003-CRID3	1		
22:46	MA33003-CRI4	1		
22:52	ZZZZZZ	5		
22:58	ZZZZZZ	1		
23:04	MA33003-ICSA3	1		
23:10	MA33003-ICSAB3	1		
23:16	MA33003-CCV13	1		
23:22	MA33003-CCB13	1		
---------->	Last reportable CCB for job JB56243			
23:28	MP76765-B1	1		CRI out
23:34	MP76765-MB1	1		CRI out
23:40	MP76765-S1	1		CRI out
23:46	MP76765-S2	1		CRI out
23:52	JB55731-28	1		(sample used for QC only; not part of login JB56243)
23:59	MP76765-SD1	5		CRI out
00:05	ZZZZZZ	1		
00:11	ZZZZZZ	1		
00:17	MA33003-CCV14	1		
00:23	MA33003-CCB14	1		
00:29	MP76839-MB1	1		CRI out
00:35	MP76839-B1	1		CRI out
00:41	MP76839-S1	1		CRI out
00:47	MP76839-S2	1		CRI out
00:53	JB55731-40	1		(sample used for QC only; not part of login JB56243)
00:59	MP76839-SD1	5		CRI out
01:05	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:11	ZZZZZZ	1		
01:18	ZZZZZZ	1		
01:24	ZZZZZZ	1		
01:30	MA33003-CCV15	1		
01:36	MA33003-CCB15	1		
01:42	ZZZZZZ	1		
01:48	ZZZZZZ	1		
01:54	ZZZZZZ	1		
02:00	MP77031-MB1	1		
02:06	MP77031-B1	1		
02:12	MP77031-S1	1		
02:18	MP77031-S2	1		
02:24	JB56377-1A	1		(sample used for QC only; not part of login JB56243)
02:30	MP77031-SD1	5		
02:37	MA33003-CCV16	1		
02:42	MA33003-CCB16	1		
02:49	ZZZZZZ	1		
02:55	ZZZZZZ	1		
03:01	ZZZZZZ	1		
03:07	ZZZZZZ	1		
03:13	ZZZZZZ	1		
03:19	MA33003-CCV17	1		
03:25	MA33003-CCB17	1		
03:31	MA33003-CRI5	1		
03:37	MA33003-CRIA3	1		
03:43	MA33003-CCV18	1		
03:49	MA33003-CCB18	1		
03:55	ZZZZZZ	1		
04:01	ZZZZZZ	1		
04:07	ZZZZZZ	1		
04:13	ZZZZZZ	1		
04:20	ZZZZZZ	1		
04:26	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
04:32	ZZZZZZ	1		
04:38	ZZZZZZ	1		
04:44	ZZZZZZ	1		
04:50	ZZZZZZ	1		
04:56	ZZZZZZ	1		
05:02	ZZZZZZ	1		
05:08	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
08:14	MA33003-STD1	1219 R	43199 R	7596 R	1975 R
08:20	MA33003-STD2	1158	41620	7163	1759
08:26	ZZZZZZ	1192	42668	7449	1832
08:32	ZZZZZZ	1237	45032	7249	2002
08:40	MA33003-ICV1	1189	42386	7327	1830
08:54	MA33003-ICB1	1262	44167	7389	2034
09:00	MA33003-ICCV1	1195	42497	7199	1842
09:10	MA33003-CCB1	1238	44612	7461	2012
09:15	MA33003-CRI1	1251	44834	7630	2014
09:21	MA33003-CRID1	1265	45004	7425	2044
09:27	MA33003-CRIA1	1247	45535	7419	2020
09:33	ZZZZZZ	1249	44975	7530	2020
09:39	MA33003-CRI2	1246	44779	7499	2002
09:45	MA33003-ICSA1	1108	39437	6976	1635
09:51	MA33003-ICSAB1	1122	39797	6869	1663
09:57	MA33003-CCV1	1204	43263	7462	1852
10:03	MA33003-CCB2	1249	44942	7638	2020
10:09	MP76826-MB1	1236	45581	7669	2006
10:15	MP76826-S1	1180	42670	7516	1824
10:21	MP76826-S2	1162	42046	7454	1797
10:27	JB55635-1	1179	42573	7543	1849
10:33	MP76826-SD1	1233	44410	7639	1979
10:39	ZZZZZZ	1223	44928	7716	1959
10:45	ZZZZZZ	1252	45360	7809	1997
10:51	MP76826-LC1	1230	44522	7776	1967
10:57	ZZZZZZ	1245	45541	7917	2017
11:03	MA33003-CCV2	1208	43697	7514	1860
11:13	MA33003-CCB3	1236	44965	7679	2000
11:19	ZZZZZZ	1338	46764	7878	1878
11:25	ZZZZZZ	1303	45816	7877	1920
11:31	ZZZZZZ	1348	48703	8259	1982
11:37	ZZZZZZ	1621 !	58893 !	10182 !	1925
11:43	ZZZZZZ	1649 !	58493 !	9962 !	1923

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:49	ZZZZZZ	1648 !	60515 !	10523 !	2003
11:55	ZZZZZZ	1376	50017	8407	1982
12:01	ZZZZZZ	1346	49082	8035	1971
12:07	ZZZZZZ	1518	55054	9274	1961
12:13	MA33003-CCV3	1193	43109	7208	1853
12:19	MA33003-CCB4	1221	45028	7560	2000
12:25	ZZZZZZ	1281	46993	7956	1979
12:31	ZZZZZZ	1354	49852	8240	1976
12:37	ZZZZZZ	1241	45878	7685	2042
12:43	MP76978-S1	1162	42411	7457	1810
12:49	MP76978-S2	1144	41786	7351	1784
12:55	JB56506-1	1159	42356	7400	1828
13:01	MP76978-SD1	1207	43886	7477	1959
13:07	MP77021-MB1	1221	45226	7535	2017
13:13	MP77021-MB2	1222	45205	7497	2018
13:19	MP77021-LC1	1227	44779	7239	1994
13:25	MA33003-CCV4	1183	43469	7327	1849
13:31	MA33003-CCB5	1224	44844	7261	2014
13:37	MP77021-LC2	1211	44456	7094	1967
13:43	ZZZZZZ	1128	41831	7182	1784
13:49	ZZZZZZ	1136	41988	7143	1807
13:55	MP77021-B1	1186	43654	7362	1902
14:01	MP76764-MB1	1091	39102	7279	1635
14:07	MP76764-B1	1095	38958	7318	1637
14:13	MP76764-S1	1076	38996	7274	1636
14:19	MP76764-S2	1076	39010	7211	1637
14:25	JB55731-26	1067	36093	7277	1627
14:31	MP76764-SD1	1154	42210	7302	1807
14:37	MA33003-CCV5	1176	43024	7227	1848
14:43	MA33003-CCB6	1225	43475	7461	2026
14:55	ZZZZZZ	1128	41759	7161	1773
15:01	ZZZZZZ	1150	40851	7203	1830
15:07	ZZZZZZ	1154	42257	7213	1837

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:13	ZZZZZZ	1107	39186	7300	1685
15:19	MP76945-MB1	1232	45035	7274	2038
15:25	ZZZZZZ	1220	45221	7447	2017
15:32	MP76945-LC1	1206	44485	7356	1962
15:37	MP76945-LC2	1197	42195	7268	1950
15:43	MP76945-B1	1178	43198	7267	1891
15:49	MA33003-CCV6	1181	43102	7225	1853
15:55	MA33003-CCB7	1238	44588	7450	2048
16:01	MP76945-S1	1172	42798	7216	1871
16:07	MP76945-S2	1164	43159	7289	1858
16:13	JB56222-2	1200	44232	7306	1967
16:19	MP76945-SD1	1234	45159	7419	999999 !a
16:25	MP76945-S3	1178	43768	7346	1877
16:31	MP76945-S4	1175	43668	7416	1873
16:37	JB56222-2F	1209	44882	7459	1980
16:43	MP76945-SD2	No results reported for the elements associated with this internal standard.			
16:49	ZZZZZZ	1214	45192	7497	2017
16:55	ZZZZZZ	1076	40089	7219	1671
17:01	MA33003-CCV7	1195	43862	7410	1878
17:07	MA33003-CCB8	1210	45483	7511	2007
17:13	ZZZZZZ	1231	45649	7553	2035
17:19	MA33003-CRI3	1239	44281	7430	2032
17:25	MA33003-CRIA2	1235	45657	7522	2043
17:31	MA33003-CRID2	1228	45117	7778	2029
17:37	MA33003-ICSA2	1094	39119	6855	1642
17:43	MA33003-ICSAB2	1104	40399	6771	1665
17:49	MA33003-CCV8	1173	42618	7124	1840
17:55	MA33003-CCB9	1209	45204	7333	1998
18:01	ZZZZZZ	1077	40333	6899	1664
18:07	ZZZZZZ	1093	40134	7068	1690
18:13	ZZZZZZ	1096	40725	7091	1691
18:19	ZZZZZZ	1082	999999 !	6960	1674
18:25	ZZZZZZ	1084	40344	7071	1677

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:31	JB56243-1	1246	45081	7509	1857
18:37	ZZZZZZ	1172	43143	7257	1808
18:43	ZZZZZZ	1141	41881	7119	1809
18:49	ZZZZZZ	1181	42853	7148	1888
18:56	MA33003-CCV9	1203	43585	7137	1882
19:01	MA33003-CC1	1228	44639	7223	2020
19:07	MP77053-MB1	1222	44698	7298	2024
19:14	MP77053-LC1	1194	44091	7258	1943
19:19	MP77053-S1	1166	43024	7245	1859
19:25	MP77053-S2	1154	999999 !a	7294	1845
19:31	JB56942-3A	1186	43084	7438	1935
19:37	MP77053-SD1	1219	44404	7328	2006
19:43	ZZZZZZ	1080	39052	6953	1638
19:49	ZZZZZZ	1181	42904	7153	1909
19:55	ZZZZZZ	1210	44013	7391	1970
20:02	ZZZZZZ	1187	41584	7271	1937
20:08	MA33003-CCV10	1184	42627	7044	1854
20:13	MA33003-CCB10	1233	44940	7210	2030
20:20	MP77032-MB1	1227	45719	7352	2068
20:26	MP77032-B1	1221	45786	7374	2044
20:32	MP77032-S1	915	38848	7040	1656
20:38	MP77032-S2	911	38965	7066	1651
20:44	JB56584-1	910	38765	7064	1653
20:50	MP77032-SD1	1140	41879	7117	1827
20:56	ZZZZZZ	1096	39099	7058	1645
21:02	ZZZZZZ	1112	39513	7111	1667
21:08	ZZZZZZ	1111	39705	7071	1663
21:15	ZZZZZZ	1117	39473	7112	1674
21:21	MA33003-CCV11	1187	43100	7111	1862
21:27	MA33003-CCB11	1231	45074	7266	2033
21:33	ZZZZZZ	1102	39217	7105	1654
21:39	ZZZZZZ	1108	39338	7120	1660
21:45	ZZZZZZ	919	34158	6699	1501

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:51	ZZZZZZ	923	38794	7037	1656
21:57	ZZZZZZ	934	38692	6952	1661
22:03	ZZZZZZ	1125	40149	7089	1671
22:09	ZZZZZZ	1078	38233	6969	1648
22:16	ZZZZZZ	1100	39136	6994	1657
22:22	ZZZZZZ	1074	38383	6906	1647
22:28	MA33003-CCV12	1187	43377	7101	1867
22:34	MA33003-CCB12	1241	45518	7287	2054
22:40	MA33003-CRID3	1232	44662	7322	2037
22:46	MA33003-CRI4	1220	44989	7206	2006
22:52	ZZZZZZ	1249	44284	7273	2067
22:58	ZZZZZZ	1228	45010	7229	2026
23:04	MA33003-ICSA3	1113	40114	6751	1669
23:10	MA33003-ICSAB3	1103	39582	6690	1668
23:16	MA33003-CCV13	1189	43210	7107	1866
23:22	MA33003-CCB13	1230	45222	7347	2031
23:28	MP76765-B1	1103	39008	7080	1648
23:34	MP76765-MB1	1090	38740	7094	1639
23:40	MP76765-S1	1080	38653	7025	1604
23:46	MP76765-S2	1082	38584	7022	1607
23:52	JB55731-28	1074	38457	7215	1605
23:59	MP76765-SD1	1168	42139	7352	1817
00:05	ZZZZZZ	1198	44442	7463	1915
00:11	ZZZZZZ	1090	38880	7190	1639
00:17	MA33003-CCV14	1192	43474	7284	1870
00:23	MA33003-CCB14	1224	45155	7423	2020
00:29	MP76839-MB1	1086	38727	7149	1638
00:35	MP76839-B1	1096	38987	7342	1649
00:41	MP76839-S1	1078	38891	7218	1626
00:47	MP76839-S2	1078	38855	7262	1621
00:53	JB55731-40	1072	38712	7238	1616
00:59	MP76839-SD1	1158	42430	7378	1818
01:05	ZZZZZZ	1082	39055	7305	1632

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:11	ZZZZZZ	1075	39024	7317	1621
01:18	ZZZZZZ	1079	38914	7132	1622
01:24	ZZZZZZ	1089	40172	7017	1640
01:30	MA33003-CCV15	1193	43530	7409	1871
01:36	MA33003-CCB15	1227	45702	7533	2027
01:42	ZZZZZZ	1079	39233	7318	1627
01:48	ZZZZZZ	1016	37655	7156	1526
01:54	ZZZZZZ	1236	45744	7637	2046
02:00	MP77031-MB1	1211	45822	7730	2052
02:06	MP77031-B1	1228	46164	7727	2060
02:12	MP77031-S1	1067	38675	7282	1596
02:18	MP77031-S2	1074	38829	7263	1604
02:24	JB56377-1A	1054	38028	7203	1581
02:30	MP77031-SD1	1154	41831	7309	1800
02:37	MA33003-CCV16	1191	43563	7461	1868
02:42	MA33003-CCB16	1232	45748	7325	2039
02:49	ZZZZZZ	1097	39460	7293	1654
02:55	ZZZZZZ	1059	38196	7159	1590
03:01	ZZZZZZ	1061	38078	7118	1601
03:07	ZZZZZZ	1065	38485	7202	1602
03:13	ZZZZZZ	1076	38863	7195	1626
03:19	MA33003-CCV17	1186	43497	7317	1865
03:25	MA33003-CCB17	1223	45579	7515	2027
03:31	MA33003-CRI5	1216	45306	7437	1999
03:37	MA33003-CRIA3	1230	45410	7406	2037
03:43	MA33003-CCV18	1187	42656	7248	1866
03:49	MA33003-CCB18	1231	45499	7459	2038
03:55	ZZZZZZ	1254	43489	7083	1867
04:01	ZZZZZZ	1213	44778	7348	2019
04:07	ZZZZZZ	1148	41747	7072	1819
04:13	ZZZZZZ	1149	42212	7183	1802
04:20	ZZZZZZ	1228	45620	7502	2044
04:26	ZZZZZZ	1234	45669	7433	2040

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA33003
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:32	ZZZZZZ	1242	45899	7474	2051
04:38	ZZZZZZ	1238	45631	7452	2050
04:44	ZZZZZZ	1246	45177	7493	2062
04:50	ZZZZZZ	1246	45998	7480	2056
04:56	ZZZZZZ	1238	45760	7454	2047
05:02	ZZZZZZ	1239	46206	7455	2056
05:08	ZZZZZZ	1235	45795	7477	2051

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33003 Units: ug/l

Time:			08:54		09:10		10:03		11:13	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	28.6	<200	26.5	<200	27.7	<200	25.2	<200
Antimony	6.0	1.6	1.5	<6.0	0.80	<6.0	0.30	<6.0	-0.30	<6.0
Arsenic	3.0	2.2	-0.40	<3.0	-0.50	<3.0	-0.20	<3.0	-1.5	<3.0
Barium	200	.4	0.10	<200	0.40	<200	0.30	<200	0.0	<200
Beryllium	1.0	.1	0.20	<1.0	0.50	<1.0	0.10	<1.0	0.10	<1.0
Bismuth	20	1.4								
Boron	100	1.1	anr							
Cadmium	3.0	.3	0.30	<3.0	0.40	<3.0	0.20	<3.0	0.0	<3.0
Calcium	5000	14	11.7	<5000	16.6	<5000	6.3	<5000	2.9	<5000
Chromium	10	.5	0.30	<10	0.30	<10	-0.60	<10	0.50	<10
Cobalt	50	.3	0.50	<50	0.60	<50	0.50	<50	0.70	<50
Copper	10	.7	0.60	<10	0.60	<10	0.40	<10	-0.90	<10
Iron	100	3.6	-1.0	<100	8.9	<100	5.3	<100	0.80	<100
Lead	3.0	2	0.40	<3.0	0.70	<3.0	-1.6	<3.0	-1.6	<3.0
Lithium	20	.6								
Magnesium	5000	36	-17	<5000	9.3	<5000	-1.2	<5000	-0.20	<5000
Manganese	15	.2	0.20	<15	0.50	<15	0.20	<15	0.20	<15
Molybdenum	20	.7								
Nickel	10	.9	0.50	<10	0.80	<10	0.30	<10	0.0	<10
Palladium	50	1.7								
Potassium	10000	46	46.8	<10000	90.7	<10000	15.2	<10000	17.9	<10000
Selenium	10	3.3	1.9	<10	2.6	<10	-0.30	<10	0.80	<10
Silicon	200	5.1	anr							
Silver	10	.5	0.90	<10	0.50	<10	0.10	<10	0.80	<10
Sodium	10000	140	-5.5	<10000	15.5	<10000	1.3	<10000	-4.6	<10000
Sulfur	50	5.2								
Strontium	10	.2								
Thallium	2.0	1.8	-0.20	<2.0	0.80	<2.0	-0.20	<2.0	0.80	<2.0
Tin	10	1.1								
Titanium	10	.8								
Tungsten	50	3.6								
Vanadium	50	.5	0.20	<50	0.50	<50	0.10	<50	0.0	<50
Zinc	20	5	0.0	<20	0.10	<20	-0.30	<20	-0.40	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33003 Units: ug/l

Time:			08:54		09:10		10:03		11:13	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.4								

(*) Outside of QC limits
(anr) Analyte not requested

8.4.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33003 Units: ug/l

Time:			12:19		13:31		14:43		15:55	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	21.4	<200	29.3	<200	22.8	<200	31.2	<200
Antimony	6.0	1.6	-0.10	<6.0	0.90	<6.0	0.80	<6.0	0.90	<6.0
Arsenic	3.0	2.2	-1.7	<3.0	0.40	<3.0	-1.8	<3.0	0.90	<3.0
Barium	200	.4	0.0	<200	0.50	<200	2.4	<200	1.0	<200
Beryllium	1.0	.1	0.0	<1.0	0.10	<1.0	0.20	<1.0	0.40	<1.0
Bismuth	20	1.4								
Boron	100	1.1	anr							
Cadmium	3.0	.3	0.0	<3.0	0.30	<3.0	0.60	<3.0	0.20	<3.0
Calcium	5000	14	0.90	<5000	3.7	<5000	9.2	<5000	10.7	<5000
Chromium	10	.5	0.40	<10	0.40	<10	0.0	<10	-0.10	<10
Cobalt	50	.3	0.40	<50	0.50	<50	0.50	<50	0.50	<50
Copper	10	.7	0.30	<10	-0.10	<10	0.50	<10	1.0	<10
Iron	100	3.6	0.60	<100	8.3	<100	8.2	<100	12.1	<100
Lead	3.0	2	0.50	<3.0	1.7	<3.0	0.10	<3.0	-0.90	<3.0
Lithium	20	.6								
Magnesium	5000	36	-29	<5000	-0.80	<5000	-20	<5000	-20	<5000
Manganese	15	.2	0.30	<15	0.20	<15	0.50	<15	0.70	<15
Molybdenum	20	.7								
Nickel	10	.9	0.30	<10	0.50	<10	0.40	<10	0.70	<10
Palladium	50	1.7								
Potassium	10000	46	24.8	<10000	47.7	<10000	74.9	<10000	28.7	<10000
Selenium	10	3.3	-0.20	<10	1.3	<10	1.9	<10	4.4	<10
Silicon	200	5.1	anr							
Silver	10	.5	1.2	<10	0.0	<10	0.30	<10	0.20	<10
Sodium	10000	140	-8.7	<10000	-8.1	<10000	184	<10000	37.2	<10000
Sulfur	50	5.2								
Strontium	10	.2								
Thallium	2.0	1.8	0.20	<2.0	0.10	<2.0	0.60	<2.0	1.1	<2.0
Tin	10	1.1								
Titanium	10	.8								
Tungsten	50	3.6								
Vanadium	50	.5	0.30	<50	0.0	<50	0.70	<50	0.30	<50
Zinc	20	5	-0.40	<20	-0.40	<20	0.20	<20	-0.20	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33003 Units: ug/l

Time:			12:19		13:31		14:43		15:55	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.4								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33003 Units: ug/l

Time:			17:07		17:55		20:13		21:27	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	14.4	<200	23.3	<200	18.0	<200	23.6	<200
Antimony	6.0	1.6	2.1	<6.0	0.0	<6.0	0.60	<6.0	-0.10	<6.0
Arsenic	3.0	2.2	0.0	<3.0	-0.30	<3.0	0.50	<3.0	-1.4	<3.0
Barium	200	.4	0.10	<200	0.40	<200	0.30	<200	0.40	<200
Beryllium	1.0	.1	-0.20	<1.0	-0.10	<1.0	-0.20	<1.0	0.0	<1.0
Bismuth	20	1.4								
Boron	100	1.1	anr							
Cadmium	3.0	.3	0.10	<3.0	0.20	<3.0	0.10	<3.0	0.30	<3.0
Calcium	5000	14	-1.0	<5000	0.20	<5000	-0.10	<5000	1.0	<5000
Chromium	10	.5	0.0	<10	0.60	<10	0.20	<10	0.40	<10
Cobalt	50	.3	0.30	<50	0.10	<50	0.30	<50	0.60	<50
Copper	10	.7	-0.10	<10	-0.20	<10	-1.3	<10	-0.50	<10
Iron	100	3.6	0.10	<100	1.7	<100	0.30	<100	0.40	<100
Lead	3.0	2	0.40	<3.0	1.3	<3.0	-0.60	<3.0	-0.40	<3.0
Lithium	20	.6								
Magnesium	5000	36	30.2	<5000	-22	<5000	-1.8	<5000	-6.1	<5000
Manganese	15	.2	0.0	<15	0.0	<15	0.0	<15	0.10	<15
Molybdenum	20	.7								
Nickel	10	.9	0.40	<10	0.40	<10	0.60	<10	0.50	<10
Palladium	50	1.7								
Potassium	10000	46	21.8	<10000	-22	<10000	17.8	<10000	-2.8	<10000
Selenium	10	3.3	4.2	<10	2.4	<10	0.50	<10	1.8	<10
Silicon	200	5.1	anr							
Silver	10	.5	0.40	<10	0.0	<10	-0.20	<10	0.0	<10
Sodium	10000	140	19.9	<10000	10.8	<10000	33.7	<10000	180	<10000
Sulfur	50	5.2								
Strontium	10	.2								
Thallium	2.0	1.8	0.20	<2.0	1.4	<2.0	0.10	<2.0	0.90	<2.0
Tin	10	1.1								
Titanium	10	.8								
Tungsten	50	3.6								
Vanadium	50	.5	-0.40	<50	-0.30	<50	0.30	<50	0.20	<50
Zinc	20	5	-0.60	<20	-0.50	<20	-0.70	<20	-0.60	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33003 Units: ug/l

Time:			17:07		17:55		20:13		21:27	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.4								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33003 Units: ug/l

Time:			22:34		23:22	
Sample ID:			CCB12		CCB13	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	17	32.3	<200	23.9	<200
Antimony	6.0	1.6	-0.20	<6.0	-0.90	<6.0
Arsenic	3.0	2.2	-0.90	<3.0	-0.70	<3.0
Barium	200	.4	0.30	<200	0.30	<200
Beryllium	1.0	.1	0.0	<1.0	-0.10	<1.0
Bismuth	20	1.4				
Boron	100	1.1	anr			
Cadmium	3.0	.3	0.40	<3.0	0.20	<3.0
Calcium	5000	14	-1.8	<5000	-0.20	<5000
Chromium	10	.5	0.0	<10	-0.10	<10
Cobalt	50	.3	0.50	<50	0.40	<50
Copper	10	.7	-0.20	<10	-0.60	<10
Iron	100	3.6	2.7	<100	4.0	<100
Lead	3.0	2	-0.80	<3.0	-1.0	<3.0
Lithium	20	.6				
Magnesium	5000	36	4.1	<5000	-27	<5000
Manganese	15	.2	0.20	<15	0.10	<15
Molybdenum	20	.7				
Nickel	10	.9	0.50	<10	0.50	<10
Palladium	50	1.7				
Potassium	10000	46	22.6	<10000	-10	<10000
Selenium	10	3.3	2.0	<10	0.40	<10
Silicon	200	5.1	anr			
Silver	10	.5	0.70	<10	0.40	<10
Sodium	10000	140	299	<10000	137	<10000
Sulfur	50	5.2				
Strontium	10	.2				
Thallium	2.0	1.8	1.6	<2.0	0.10	<2.0
Tin	10	1.1				
Titanium	10	.8				
Tungsten	50	3.6				
Vanadium	50	.5	0.0	<50	0.0	<50
Zinc	20	5	-0.50	<20	-0.50	<20

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33003 Units: ug/l

Time:			22:34		23:22	
Sample ID:			CCB12		CCB13	
Metal	RL	IDL	raw	final	raw	final
Zirconium	10	.4				

(*) Outside of QC limits
(anr) Analyte not requested

8.4.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: to % Recovery Run ID: MA33003 Units: ug/l

Time:		09:00	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	38700	96.8
Antimony	2000	1920	96.0
Arsenic	2000	1930	96.5
Barium	2000	1880	94.0*(a)
Beryllium	2000	1920	96.0
Bismuth			
Boron	anr		
Cadmium	2000	1960	98.0
Calcium	40000	39500	98.8
Chromium	2000	1990	99.5
Cobalt	2000	2010	100.5
Copper	2000	1900	95.0
Iron	40000	38600	96.5
Lead	2000	1970	98.5
Lithium			
Magnesium	40000	38200	95.5
Manganese	2000	2000	100.0
Molybdenum			
Nickel	2000	1970	98.5
Palladium			
Potassium	40000	38200	95.5
Selenium	2000	1940	97.0
Silicon	anr		
Silver	250	248	99.2
Sodium	40000	38100	95.3
Sulfur			
Strontium			
Thallium	2000	1970	98.5
Tin			
Titanium			
Tungsten			
Vanadium	2000	1990	99.5
Zinc	2000	2030	101.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: to % Recovery Run ID: MA33003 Units: ug/l

Time:		09:00	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 90 to 110 percent limits required for SW846 6010. No EPA 200.7 samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		08:40			09:57			11:03	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38300	95.8	40000	39400	98.5	40000	38000	95.0
Antimony	2000	1930	96.5	2000	2010	100.5	2000	1920	96.0
Arsenic	2000	1930	96.5	2000	2010	100.5	2000	1900	95.0
Barium	2000	1880	94.0*(a)	2000	1960	98.0	2000	1880	94.0
Beryllium	2000	1910	95.5	2000	1970	98.5	2000	1880	94.0
Bismuth									
Boron	anr								
Cadmium	2000	1960	98.0	2000	2030	101.5	2000	1920	96.0
Calcium	40000	38800	97.0	40000	39900	99.8	40000	38400	96.0
Chromium	2000	2000	100.0	2000	2060	103.0	2000	1940	97.0
Cobalt	2000	2000	100.0	2000	2080	104.0	2000	1960	98.0
Copper	2000	1920	96.0	2000	2000	100.0	2000	1880	94.0
Iron	40000	38700	96.8	40000	39500	98.8	40000	38300	95.8
Lead	2000	1980	99.0	2000	2060	103.0	2000	1930	96.5
Lithium									
Magnesium	40000	38000	95.0	40000	38700	96.8	40000	37300	93.3
Manganese	2000	2010	100.5	2000	2070	103.5	2000	1950	97.5
Molybdenum									
Nickel	2000	1980	99.0	2000	2050	102.5	2000	1940	97.0
Palladium									
Potassium	40000	37900	94.8*(a)	40000	38900	97.3	40000	37400	93.5
Selenium	2000	1940	97.0	2000	2030	101.5	2000	1920	96.0
Silicon	anr								
Silver	250	250	100.0	250	249	99.6	250	242	96.8
Sodium	40000	38100	95.3	40000	39100	97.8	40000	37700	94.3
Sulfur									
Strontium									
Thallium	2000	2000	100.0	2000	2060	103.0	2000	1960	98.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2010	100.5	2000	2050	102.5	2000	1960	98.0
Zinc	2000	2020	101.0	2000	2090	104.5	2000	1960	98.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		08:40			09:57			11:03	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested
(a) Within 90 to 110 percent limits required for SW846 6010. No EPA 200.7 samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		12:13			13:25			14:37	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	39300	98.3	40000	38200	95.5	40000	38700	96.8
Antimony	2000	1930	96.5	2000	1950	97.5	2000	1930	96.5
Arsenic	2000	1930	96.5	2000	1950	97.5	2000	1950	97.5
Barium	2000	1960	98.0	2000	1910	95.5	2000	1930	96.5
Beryllium	2000	1940	97.0	2000	1880	94.0	2000	1890	94.5
Bismuth									
Boron	anr								
Cadmium	2000	1990	99.5	2000	2020	101.0	2000	2030	101.5
Calcium	40000	39900	99.8	40000	39200	98.0	40000	39800	99.5
Chromium	2000	1990	99.5	2000	1970	98.5	2000	1990	99.5
Cobalt	2000	2020	101.0	2000	2040	102.0	2000	2050	102.5
Copper	2000	1990	99.5	2000	2010	100.5	2000	2060	103.0
Iron	40000	39200	98.0	40000	38300	95.8	40000	38600	96.5
Lead	2000	1930	96.5	2000	1930	96.5	2000	1910	95.5
Lithium									
Magnesium	40000	39000	97.5	40000	38400	96.0	40000	38800	97.0
Manganese	2000	1980	99.0	2000	1960	98.0	2000	1960	98.0
Molybdenum									
Nickel	2000	1930	96.5	2000	1940	97.0	2000	1910	95.5
Palladium									
Potassium	40000	38900	97.3	40000	38100	95.3	40000	38600	96.5
Selenium	2000	1950	97.5	2000	1960	98.0	2000	1960	98.0
Silicon	anr								
Silver	250	250	100.0	250	250	100.0	250	252	100.8
Sodium	40000	39400	98.5	40000	38700	96.8	40000	38800	97.0
Sulfur									
Strontium									
Thallium	2000	1920	96.0	2000	1900	95.0	2000	1860	93.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1960	98.0	2000	1940	97.0	2000	1940	97.0
Zinc	2000	2020	101.0	2000	2060	103.0	2000	2080	104.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		12:13			13:25			14:37	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.4.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		15:49			17:01			17:49	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38900	97.3	40000	37800	94.5	40000	38700	96.8
Antimony	2000	1930	96.5	2000	1920	96.0	2000	1930	96.5
Arsenic	2000	1960	98.0	2000	1920	96.0	2000	1950	97.5
Barium	2000	1940	97.0	2000	1900	95.0	2000	1940	97.0
Beryllium	2000	1900	95.0	2000	1860	93.0	2000	1900	95.0
Bismuth									
Boron	anr								
Cadmium	2000	2040	102.0	2000	2010	100.5	2000	2040	102.0
Calcium	40000	40000	100.0	40000	38600	96.5	40000	39700	99.3
Chromium	2000	2010	100.5	2000	1970	98.5	2000	2020	101.0
Cobalt	2000	2060	103.0	2000	2020	101.0	2000	2060	103.0
Copper	2000	2080	104.0	2000	2050	102.5	2000	2060	103.0
Iron	40000	38900	97.3	40000	38100	95.3	40000	38900	97.3
Lead	2000	1920	96.0	2000	1880	94.0	2000	1920	96.0
Lithium									
Magnesium	40000	39200	98.0	40000	38100	95.3	40000	39200	98.0
Manganese	2000	1980	99.0	2000	1930	96.5	2000	1980	99.0
Molybdenum									
Nickel	2000	1920	96.0	2000	1880	94.0	2000	1920	96.0
Palladium									
Potassium	40000	38800	97.0	40000	37800	94.5	40000	38500	96.3
Selenium	2000	1970	98.5	2000	1940	97.0	2000	1960	98.0
Silicon	anr								
Silver	250	257	102.8	250	251	100.4	250	254	101.6
Sodium	40000	39300	98.3	40000	38500	96.3	40000	39200	98.0
Sulfur									
Strontium									
Thallium	2000	1870	93.5	2000	1840	92.0	2000	1880	94.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1960	98.0	2000	1910	95.5	2000	1960	98.0
Zinc	2000	2100	105.0	2000	2030	101.5	2000	2090	104.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		15:49			17:01			17:49	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.4.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		18:56			20:08			21:21	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38900	97.3	40000	38300	95.8	40000	38400	96.0
Antimony	2000	1880	94.0	2000	1870	93.5	2000	1890	94.5
Arsenic	2000	1900	95.0	2000	1900	95.0	2000	1910	95.5
Barium	2000	1920	96.0	2000	1890	94.5	2000	1880	94.0
Beryllium	2000	1880	94.0	2000	1850	92.5	2000	1850	92.5
Bismuth									
Boron	anr								
Cadmium	2000	1990	99.5	2000	1990	99.5	2000	2010	100.5
Calcium	40000	39900	99.8	40000	39600	99.0	40000	39700	99.3
Chromium	2000	1960	98.0	2000	1990	99.5	2000	1990	99.5
Cobalt	2000	2010	100.5	2000	2020	101.0	2000	2030	101.5
Copper	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0
Iron	40000	38800	97.0	40000	38500	96.3	40000	38200	95.5
Lead	2000	1900	95.0	2000	1890	94.5	2000	1890	94.5
Lithium									
Magnesium	40000	38800	97.0	40000	38700	96.8	40000	38500	96.3
Manganese	2000	1920	96.0	2000	1940	97.0	2000	1940	97.0
Molybdenum									
Nickel	2000	1880	94.0	2000	1880	94.0	2000	1890	94.5
Palladium									
Potassium	40000	38500	96.3	40000	37900	94.8	40000	37800	94.5
Selenium	2000	1920	96.0	2000	1910	95.5	2000	1920	96.0
Silicon	anr								
Silver	250	256	102.4	250	257	102.8	250	258	103.2
Sodium	40000	39200	98.0	40000	38600	96.5	40000	37800	94.5
Sulfur									
Strontium									
Thallium	2000	1830	91.5	2000	1820	91.0	2000	1820	91.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	1920	96.0	2000	1940	97.0	2000	1930	96.5
Zinc	2000	2090	104.5	2000	2080	104.0	2000	2090	104.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		18:56			20:08			21:21	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.4.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		22:28			23:16	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38300	95.8	40000	38400	96.0
Antimony	2000	1880	94.0	2000	1910	95.5
Arsenic	2000	1900	95.0	2000	1930	96.5
Barium	2000	1890	94.5	2000	1910	95.5
Beryllium	2000	1840	92.0	2000	1870	93.5
Bismuth						
Boron	anr					
Cadmium	2000	2010	100.5	2000	2030	101.5
Calcium	40000	39500	98.8	40000	39600	99.0
Chromium	2000	1970	98.5	2000	1990	99.5
Cobalt	2000	2030	101.5	2000	2050	102.5
Copper	2000	2040	102.0	2000	2060	103.0
Iron	40000	38000	95.0	40000	38200	95.5
Lead	2000	1860	93.0	2000	1890	94.5
Lithium						
Magnesium	40000	38300	95.8	40000	38900	97.3
Manganese	2000	1920	96.0	2000	1960	98.0
Molybdenum						
Nickel	2000	1870	93.5	2000	1900	95.0
Palladium						
Potassium	40000	37900	94.8	40000	38000	95.0
Selenium	2000	1910	95.5	2000	1940	97.0
Silicon	anr					
Silver	250	255	102.0	250	254	101.6
Sodium	40000	37600	94.0	40000	38800	97.0
Sulfur						
Strontium						
Thallium	2000	1790	89.5*(a)	2000	1820	91.0
Tin						
Titanium						
Tungsten						
Vanadium	2000	1920	96.0	2000	1930	96.5
Zinc	2000	2080	104.0	2000	2100	105.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA33003 Units: ug/l

Time:		22:28			23:16	
Sample ID:	CCV	CCV12		CCV	CCV13	
Metal	True	Results	% Rec	True	Results	% Rec
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA33003 Units: ug/l

Time:				09:15		09:21		09:27	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	237	118.5	124	124.0	543	108.6
Antimony	6.0	20	3.0	5.1	85.0			20.9	104.5
Arsenic	8.0	20	3.0	8.0	100.0	3.1	103.3	21.9	109.5
Barium	200		4.0	191	95.5	4.1	102.5		
Beryllium	2.0		1.0	2.0	100.0	1.1	110.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.3	110.0	1.0	100.0		
Calcium	5000		1000	4990	99.8	1050	105.0		
Chromium	10		2.0	10.6	106.0	2.3	115.0		
Cobalt	50		3.0	54.4	108.8	3.8	126.7		
Copper	10		2.0	10.6	106.0	1.8	90.0		
Iron	100	500		103	103.0			532	106.4
Lead	3.0	20	2.5	2.6	86.7	2.1	84.0	22.3	111.5
Lithium	20								
Magnesium	5000		100	5380	107.6	85.8	85.8		
Manganese	15		3.0	16.4	109.3	3.4	113.3		
Molybdenum	20		4.0						
Nickel	10		4.0	11.2	112.0	4.5	112.5		
Palladium	50								
Potassium	5000		2000	4870	97.4	2040	102.0		
Selenium	10	20	5.0	10.5	105.0	5.0	100.0	25.2	126.0
Silicon	200			anr					
Silver	5.0		1.0	5.0	100.0	1.1	110.0		
Sodium	5000		1000	4980	99.6	1000	100.0		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	8.9	89.0	1.5	75.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	52.1	104.2	2.2	110.0		
Zinc	20		10	22.4	112.0	10.7	107.0		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA33003 Units: ug/l

Time:				09:15		09:21		09:27	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.4.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA33003 Units: ug/l

Time:				09:39		17:19		17:25	
Sample ID:	CRI	CRIA	CRID	CRI2		CRI3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	237	118.5	230	115.0	527	105.4
Antimony	6.0	20	3.0	4.4	73.3	6.7	111.7	21.2	106.0
Arsenic	8.0	20	3.0	8.4	105.0	8.6	107.5	20.9	104.5
Barium	200		4.0	195	97.5	198	99.0		
Beryllium	2.0		1.0	2.2	110.0	2.1	105.0		
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	3.4	113.3	3.2	106.7		
Calcium	5000		1000	5120	102.4	5150	103.0		
Chromium	10		2.0	10.0	100.0	10.4	104.0		
Cobalt	50		3.0	55.0	110.0	54.8	109.6		
Copper	10		2.0	9.8	98.0	10.8	108.0		
Iron	100	500		110	110.0	109	109.0	522	104.4
Lead	3.0	20	2.5	3.3	110.0	2.6	86.7	21.2	106.0
Lithium	20								
Magnesium	5000		100	5550	111.0	5600	112.0		
Manganese	15		3.0	16.6	110.7	16.3	108.7		
Molybdenum	20		4.0						
Nickel	10		4.0	10.9	109.0	10.6	106.0		
Palladium	50								
Potassium	5000		2000	4970	99.4	5010	100.2		
Selenium	10	20	5.0	12.4	124.0	10.7	107.0	25.8	129.0
Silicon	200			anr					
Silver	5.0		1.0	5.7	114.0	4.8	96.0		
Sodium	5000		1000	5090	101.8	5230	104.6		
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	8.8	88.0	9.3	93.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	52.6	105.2	52.7	105.4		
Zinc	20		10	22.5	112.5	22.7	113.5		

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA33003 Units: ug/l

Time:				09:39		17:19		17:25	
Sample ID:	CRI	CRIA	CRID	CRI2		CRI3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.4.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA33003 Units: ug/l

Time:				17:31		22:40		22:46	
Sample ID:	CRI	CRIA	CRID	CRID2		CRID3		CRI4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	123	123.0	125	125.0	228	114.0
Antimony	6.0	20	3.0			3.7	123.3	6.1	101.7
Arsenic	8.0	20	3.0	3.2	106.7	3.8	126.7	8.6	107.5
Barium	200		4.0	4.0	100.0	4.8	120.0	193	96.5
Beryllium	2.0		1.0	1.0	100.0	0.90	90.0	2.0	100.0
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	1.1	110.0	1.1	110.0	3.3	110.0
Calcium	5000		1000	988	98.8	1020	102.0	5160	103.2
Chromium	10		2.0	1.8	90.0	1.4	70.0	10.5	105.0
Cobalt	50		3.0	3.4	113.3	3.5	116.7	55.8	111.6
Copper	10		2.0	1.8	90.0	2.6	130.0	10.3	103.0
Iron	100	500						103	103.0
Lead	3.0	20	2.5	2.9	116.0			2.3	76.7
Lithium	20								
Magnesium	5000		100	74.2	74.2	93.7	93.7	5630	112.6
Manganese	15		3.0	3.1	103.3	3.3	110.0	16.0	106.7
Molybdenum	20		4.0						
Nickel	10		4.0	3.9	97.5	4.3	107.5	10.6	106.0
Palladium	50								
Potassium	5000		2000	1860	93.0	1940	97.0	4920	98.4
Selenium	10	20	5.0					10.4	104.0
Silicon	200								
Silver	5.0		1.0			1.3	130.0	5.4	108.0
Sodium	5000		1000	968	96.8	1200	120.0	5280	105.6
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	1.7	85.0	1.6	80.0	9.3	93.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	2.2	110.0	2.1	105.0	50.8	101.6
Zinc	20		10	11.0	110.0	11.4	114.0	23.7	118.5

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA33003 Units: ug/l

Time:				17:31		22:40		22:46	
Sample ID:	CRI	CRIA	CRID	CRID2		CRID3		CRI4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.4.5

8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33003 Units: ug/l

Time:			09:45		09:51		17:37		17:43	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	523000	104.6	474000	94.8	528000	105.6	465000	93.0
Antimony		1000	-5.5		986	98.6	-6.2		970	97.0
Arsenic		1000	-0.40		1000	100.0	1.9		995	99.5
Barium		500	-1.0		482	96.4	-0.90		476	95.2
Beryllium		500	0.70		451	90.2	0.60		433	86.6
Bismuth		500	14.4		512	102.4	13.7		507	101.4
Boron			-0.20		3.1		0.20		4.8	
Cadmium		1000	0.60		928	92.8	0.70		952	95.2
Calcium	400000	400000	400000	100.0	394000	98.5	404000	101.0	389000	97.3
Chromium		500	0.50		439	87.8	0.40		433	86.6
Cobalt		500	-1.6		436	87.2	-1.9		441	88.2
Copper		500	-1.5		475	95.0	0.10		494	98.8
Iron	200000	200000	196000	98.0	200000	100.0	196000	98.0	197000	98.5
Lead		1000	1.8		876	87.6	4.0		847	84.7
Lithium		500	3.8		480	96.0	5.3		474	94.8
Magnesium	500000	500000	465000	93.0	461000	92.2	471000	94.2	460000	92.0
Manganese		500	-3.5		448	89.6	-4.5		430	86.0
Molybdenum		500	0.20		483	96.6	-0.60		487	97.4
Nickel		1000	1.3		847	84.7	1.0		815	81.5
Palladium		500	0.70		524	104.8	5.5		499	99.8
Potassium			57.3		74.3		26.2		66.2	
Selenium		1000	2.2		919	91.9	-4.8		901	90.1
Silicon			-5.5		-5.7		-6.1		-5.6	
Silver		1000	4.6		939	93.9	-2.3		950	95.0
Sodium			1.9		15.2		13.3		33.9	
Sulfur		500	6.9		508	101.6	6.6		516	103.2
Strontium			-5.4		-5.3		-5.3		-5.1	
Thallium		1000	-1.4		937	93.7	0.0		875	87.5
Tin			-3.3		-2.8		-2.2		-2.4	
Titanium			0.90		1.1		0.90		1.4	
Tungsten		500	-37		469	93.8	-50		460	92.0
Vanadium		500	4.4		444	88.8	6.6		427	85.4
Zinc		1000	1.3		889	88.9	1.7		907	90.7

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33003 Units: ug/l

Time:			09:45		09:51		17:37		17:43	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-0.80		443	88.6	-0.90		428	85.6

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33003 Units: ug/l

Time:			23:04		23:10	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	517000	103.4	466000	93.2
Antimony		1000	-5.4		961	96.1
Arsenic		1000	3.0		998	99.8
Barium		500	-1.1		473	94.6
Beryllium		500	0.50		430	86.0
Bismuth		500	15.1		505	101.0
Boron			-1.2		4.9	
Cadmium		1000	0.60		959	95.9
Calcium	400000	400000	400000	100.0	391000	97.8
Chromium		500	0.90		440	88.0
Cobalt		500	-1.7		447	89.4
Copper		500	-0.50		512	102.4
Iron	200000	200000	192000	96.0	194000	97.0
Lead		1000	0.80		837	83.7
Lithium		500	5.2		472	94.4
Magnesium	500000	500000	466000	93.2	458000	91.6
Manganese		500	-4.3		438	87.6
Molybdenum		500	0.10		491	98.2
Nickel		1000	1.5		816	81.6
Palladium		500	5.0		506	101.2
Potassium			32.4		82.9	
Selenium		1000	-6.9		900	90.0
Silicon			-7.0		-5.8	
Silver		1000	-1.6		976	97.6
Sodium			237		295	
Sulfur		500	12.3		523	104.6
Strontium			-5.4		-5.2	
Thallium		1000	3.2		861	86.1
Tin			-2.9		-3.0	
Titanium			0.60		1.3	
Tungsten		500	-43		465	93.0
Vanadium		500	6.8		435	87.0
Zinc		1000	1.3		926	92.6

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010414M1.ICP Date Analyzed: 01/04/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33003 Units: ug/l

Time:			23:04		23:10	
Sample ID:	ICSA	ICSAB	ICSA3		ICSAB3	
Metal	True	True	Results	% Rec	Results	% Rec
Zirconium		500	-0.50		440	88.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:53	MA33013-STD1	1		STDA
17:59	MA33013-STD2	1		STDB
18:05	ZZZZZZ	1		
18:11	ZZZZZZ	1		
18:17	MA33013-ICV1	1		
18:23	MA33013-ICB1	1		
18:29	MA33013-CCV1	1		
18:35	MA33013-CCB1	1		
18:41	MA33013-CRID1	1		See rerun.
18:47	MA33013-CRI1	1		
18:53	MA33013-CRID2	1		
18:59	MA33013-CRIA1	1		
19:05	MA33013-ICSA1	1		
19:11	MA33013-ICSAB1	1		
19:17	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:29	ZZZZZZ	1		
19:35	ZZZZZZ	1		
19:41	MA33013-CCV2	1		
19:47	MA33013-CCB2	1		
19:53	ZZZZZZ	1		
19:59	ZZZZZZ	1		
20:05	ZZZZZZ	1		
20:11	MP77033-S1	1		
20:17	MP77033-S2	1		
20:23	MP77033-SD1	5		
20:29	ZZZZZZ	1		
20:35	ZZZZZZ	1		
20:41	ZZZZZZ	1		
20:47	MA33013-CCV3	1		
20:53	MA33013-CCB3	1		
20:59	ZZZZZZ	1		
21:05	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	21:11	ZZZZZZ	1		
	21:17	ZZZZZZ	1		
	21:23	ZZZZZZ	1		
	21:29	MP76968-S1	1		
	21:35	MP76968-S2	1		
	21:41	JB56275-7	1		(sample used for QC only; not part of login JB56243)
	21:47	MP76968-SD1	5		
	21:53	MA33013-CCV4	1		
	21:59	MA33013-CCB4	1		
	22:05	ZZZZZZ	1		
	22:11	ZZZZZZ	5		
	22:17	ZZZZZZ	5		
	22:24	ZZZZZZ	2		
	22:30	ZZZZZZ	1		
	22:36	ZZZZZZ	1		
	22:42	MP76966-S1	1		
	22:48	MP76966-S2	1		
	22:53	JB56359-8	1		(sample used for QC only; not part of login JB56243)
	22:59	MA33013-CCV5	1		
	23:05	MA33013-CCB5	1		
	23:11	MP76966-SD1	5		
	23:17	ZZZZZZ	1		
	23:23	ZZZZZZ	2		
	23:29	ZZZZZZ	1		
	23:35	MP76945-SD1	5		
	23:41	MP76945-SD2	5		
---------->	Last reportable sample/prep for job JB56243				
	23:47	ZZZZZZ	1		
	23:54	ZZZZZZ	1		
	00:00	ZZZZZZ	1		
	00:06	MA33013-CCV6	1		
	00:12	MA33013-CCB6	1		
	00:18	ZZZZZZ	1		
	00:24	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	00:30	MP77032-MB1	1		
	00:36	MP77032-S1	20		
	00:42	MP77032-S2	20		
	00:48	JB56584-1	20		(sample used for QC only; not part of login JB56243)
	00:54	MP77032-SD1	100		
	01:00	ZZZZZZ	2		
	01:06	ZZZZZZ	20		
	01:12	ZZZZZZ	20		
	01:19	MA33013-CCV7	1		
	01:24	MA33013-CCB7	1		
	01:30	MP77045-MB1	1		
	01:37	MP77045-B1	1		
	01:43	MP77045-S1	1		
	01:49	MP77045-S2	1		
	01:55	JB55731-24	1		(sample used for QC only; not part of login JB56243)
	02:01	MP77045-SD1	5		
	02:07	MP77047-MB2	1		
	02:13	MP77047-LC1	1		
	02:19	ZZZZZZ	1		
	02:25	ZZZZZZ	1		
	02:31	MA33013-CCV8	1		
	02:37	MA33013-CCB8	1		
	02:43	MA33013-CRID3	1		
	02:49	MA33013-CRI2	1		
	02:55	ZZZZZZ	1		
	03:01	MA33013-CRIA2	1		
	03:07	MA33013-ICSA2	1		
	03:13	MA33013-ICSAB2	1		
	03:19	MA33013-CCV9	1		
	03:25	MA33013-CCB9	1		
---------->	Last reportable CCB for job JB56243				
	03:31	ZZZZZZ	1		
	03:37	ZZZZZZ	1		
	03:44	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:50	ZZZZZZ	1		
03:56	ZZZZZZ	1		
04:02	ZZZZZZ	1		
04:08	ZZZZZZ	1		
04:14	ZZZZZZ	1		
04:20	ZZZZZZ	1		
04:27	ZZZZZZ	1		
04:33	ZZZZZZ	1		
04:39	ZZZZZZ	1		
04:45	ZZZZZZ	1		
04:52	ZZZZZZ	1		
04:58	MA33013-CCV10	1		
05:03	MA33013-CCB10	1		
05:10	MP76802-MB1	1		
05:16	MP76802-MB2	1		
05:22	MP76802-LC1	1		
05:28	MP76802-B1	1		
05:34	MP76802-S1	1		
05:40	MP76802-S2	1		
05:46	JB55731-34	1		(sample used for QC only; not part of login JB56243)
05:52	MP76802-SD1	5		
05:58	ZZZZZZ	1		
06:04	MP77041-MB1	1		
06:10	MA33013-CCV11	1		
06:16	MA33013-CCB11	1		
06:22	MP77041-MB2	1		
06:28	MA33013-CCV12	1		
06:34	MA33013-CCB12	1		
06:40	MP77041-LC1	1		CCB out for Tl.
06:46	MP77041-LC2	1		CCB out for Tl.
06:52	MP77041-B1	1		CCB out for Tl.
06:58	MP77041-S1	1		CCB out for Tl.
07:04	MP77041-S2	1		High RSD's. CCB out for Tl.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:10	JB56254-12	1		(sample used for QC only; not part of login JB56243)
07:16	MP77041-SD1	5		CCB out for Tl.
07:22	MA33013-CCV13	1		
07:28	MA33013-CCB13	1		
07:34	MP76840-MB1	1		
07:40	MP76840-B1	1		
07:46	MP76840-S1	1		
07:52	MP76840-S2	1		
07:58	JB55731-44	1		(sample used for QC only; not part of login JB56243)
08:04	MP76840-SD1	5		
08:10	MP77032-MB2	1		
08:17	MP77032-LC1	1		
08:22	ZZZZZZ	1		
08:29	ZZZZZZ	1		
08:35	MA33013-CCV14	1		Ba reps within ranges.
08:41	MA33013-CCB14	1		
08:47	MA33013-CCV15	1		
08:53	MA33013-CCB15	1		
08:59	MP77070-MB1	1		
09:05	MA33013-CRID4	1		Tl out.
09:11	MA33013-CRI3	1		
09:18	MA33013-CRID5	1		As and Tl out.
09:24	MA33013-CRIA3	1		
09:30	MA33013-CCV16	1		
09:36	MA33013-CCB16	1		
09:42	ZZZZZZ	1		
09:48	ZZZZZZ	1		
09:54	ZZZZZZ	1		
10:00	ZZZZZZ	1		
10:06	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:53	MA33013-STD1	1166 R	41350 R	9465 R	1809 R
17:59	MA33013-STD2	1084	38037	9098	1583
18:05	ZZZZZZ	1114	39084	9167	1646
18:11	ZZZZZZ	1165	42131	9479	1816
18:17	MA33013-ICV1	1124	38808	9240	1660
18:23	MA33013-ICB1	1162	41574	9661	1809
18:29	MA33013-CCV1	1121	39171	9051	1657
18:35	MA33013-CCB1	1168	42050	9350	1820
18:41	MA33013-CRID1	No results reported for the elements associated with this internal standard.			
18:47	MA33013-CRI1	1160	41263	9239	1789
18:53	MA33013-CRID2	1168	41623	9263	1817
18:59	MA33013-CRIA1	1178	41665	9263	1832
19:05	MA33013-ICSA1	1039	35792	8421	1473
19:11	MA33013-ICSAB1	1042	36051	8439	1480
19:17	ZZZZZZ	1157	41029	9150	1817
19:23	ZZZZZZ	1168	41893	9193	1811
19:29	ZZZZZZ	1180	41706	9186	1829
19:35	ZZZZZZ	1174	41846	9234	1820
19:41	MA33013-CCV2	1129	40032	9053	1662
19:47	MA33013-CCB2	1190	41640	9312	1848
19:53	ZZZZZZ	1176	42060	9236	1835
19:59	ZZZZZZ	1074	38136	8911	1583
20:05	ZZZZZZ	1173	42586	9266	1834
20:11	MP77033-S1	1165	41607	9197	1797
20:17	MP77033-S2	1169	41781	9220	1797
20:23	MP77033-SD1	1177	42065	9222	1829
20:29	ZZZZZZ	1157	39966	8937	1733
20:35	ZZZZZZ	1128	40237	8996	1803
20:41	ZZZZZZ	1163	41190	9090	1785
20:47	MA33013-CCV3	1140	39719	8900	1679
20:53	MA33013-CCB3	1189	42281	9184	1844
20:59	ZZZZZZ	1157	41297	9094	1786
21:05	ZZZZZZ	1146	41362	9050	1762

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:11	ZZZZZZ	1162	41029	9346	1785
21:17	ZZZZZZ	1171	41422	9044	1785
21:23	ZZZZZZ	1188	42158	9165	1853
21:29	MP76968-S1	1134	39940	9071	1688
21:35	MP76968-S2	1132	39777	8919	1684
21:41	JB56275-7	1154	40616	9057	1759
21:47	MP76968-SD1	1188	40901	9112	1836
21:53	MA33013-CCV4	1143	39911	8850	1683
21:59	MA33013-CCB4	1194	42242	9117	1851
22:05	ZZZZZZ	993	33731	8529	1355
22:11	ZZZZZZ	1106	38038	8762	1584
22:17	ZZZZZZ	956	32031	8414	1290
22:24	ZZZZZZ	1070	37124	8680	1531
22:30	ZZZZZZ	1118	40188	8637	1669
22:36	ZZZZZZ	1171	42379	9214	1828
22:42	MP76966-S1	1105	39019	8720	1626
22:48	MP76966-S2	1106	38624	8870	1628
22:53	JB56359-8	1134	39778	8867	1690
22:59	MA33013-CCV5	1150	40164	8711	1693
23:05	MA33013-CCB5	1202	42497	9024	1869
23:11	MP76966-SD1	1180	41330	8854	1809
23:17	ZZZZZZ	1125	39543	8718	1620
23:23	ZZZZZZ	1176	41377	8931	1727
23:29	ZZZZZZ	1186	41944	8862	1847
23:35	MP76945-SD1	1194	42059	8881	1854
23:41	MP76945-SD2	1190	41779	8858	1841
23:47	ZZZZZZ	No results reported for the elements associated with this internal standard.			
23:54	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:00	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:06	MA33013-CCV6	1156	39802	8589	1698
00:12	MA33013-CCB6	1207	42481	8859	1874
00:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
00:24	ZZZZZZ	1268	43806	9735	1568

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:30	MP77032-MB1	1207	42984	9004	1924
00:36	MP77032-S1	1174	40572	8691	1772
00:42	MP77032-S2	1180	41114	8753	1782
00:48	JB56584-1	1176	40807	8735	1774
00:54	MP77032-SD1	1202	41941	8793	1849
01:00	ZZZZZZ	989	34165	8292	1463
01:06	ZZZZZZ	1170	41199	8772	1771
01:12	ZZZZZZ	1178	40700	8691	1778
01:19	MA33013-CCV7	1164	39976	8553	1708
01:24	MA33013-CCB7	1210	41128	8758	1872
01:30	MP77045-MB1	1204	42825	8870	1911
01:37	MP77045-B1	1211	42964	8790	1896
01:43	MP77045-S1	1047	35199	8557	1441
01:49	MP77045-S2	1047	35180	8528	1442
01:55	JB55731-24	1028	35137	8508	1424
02:01	MP77045-SD1	1136	38744	8612	1651
02:07	MP77047-MB2	1212	42507	8754	1888
02:13	MP77047-LC1	1191	41668	8621	1820
02:19	ZZZZZZ	1220	43462	8840	1918
02:25	ZZZZZZ	1051	37243	8582	1749
02:31	MA33013-CCV8	1169	40217	8545	1719
02:37	MA33013-CCB8	1223	42607	8703	1894
02:43	MA33013-CRID3	1207	42722	8632	1866
02:49	MA33013-CRI2	1208	41906	8615	1855
02:55	ZZZZZZ	1219	42461	8647	1882
03:01	MA33013-CRIA2	1225	42567	8599	1895
03:07	MA33013-ICSA2	1075	36508	7918	1516
03:13	MA33013-ICSAB2	1083	36533	7886	1534
03:19	MA33013-CCV9	1174	40021	8344	1720
03:25	MA33013-CCB9	1230	42632	8603	1903
03:31	ZZZZZZ	1055	39941	8340	1860
03:37	ZZZZZZ	1136	41128	8486	1863
03:44	ZZZZZZ	1184	41942	8571	1865

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:50	ZZZZZZ	1250	42694	8564	1929
03:56	ZZZZZZ	1231	42702	8614	1891
04:02	ZZZZZZ	1241	42711	8550	1906
04:08	ZZZZZZ	1235	42636	8556	1902
04:14	ZZZZZZ	1175	40926	8373	1720
04:20	ZZZZZZ	1239	42825	8621	1917
04:27	ZZZZZZ	1240	39530	8640	1900
04:33	ZZZZZZ	1234	42843	8688	1898
04:39	ZZZZZZ	956	32344	7434	1395
04:45	ZZZZZZ	1001	33972	7569	1431
04:52	ZZZZZZ	1116	37998	7965	1580
04:58	MA33013-CCV10	1193	40504	8235	1745
05:03	MA33013-CCB10	1238	42637	8353	1912
05:10	MP76802-MB1	1090	36336	8222	1521
05:16	MP76802-MB2	1226	42899	8394	1905
05:22	MP76802-LC1	1206	41846	8264	1842
05:28	MP76802-B1	1101	36617	8184	1527
05:34	MP76802-S1	1074	36153	8173	1478
05:40	MP76802-S2	1073	35935	8195	1476
05:46	JB55731-34	1063	35547	8057	1469
05:52	MP76802-SD1	1159	39218	8285	1673
05:58	ZZZZZZ	1040	35519	8030	1451
06:04	MP77041-MB1	1227	43254	8446	1903
06:10	MA33013-CCV11	1188	40483	8296	1735
06:16	MA33013-CCB11	1241	42934	8431	1915
06:22	MP77041-MB2	1238	43593	8401	1920
06:28	MA33013-CCV12	1198	40764	8125	1746
06:34	MA33013-CCB12	1248	42752	8381	1921
06:40	MP77041-LC1	1225	42398	8385	1860
06:46	MP77041-LC2	1224	42259	8360	1857
06:52	MP77041-B1	1202	41516	8338	1794
06:58	MP77041-S1	1193	40675	8311	1731
07:04	MP77041-S2	1187	43008	7960	1722

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
07:10	JB56254-12	1212	41547	8294	1792
07:16	MP77041-SD1	1232	42479	8324	1880
07:22	MA33013-CCV13	1194	40412	8187	1742
07:28	MA33013-CCB13	1247	43080	8167	1922
07:34	MP76840-MB1	1090	36069	8102	1519
07:40	MP76840-B1	1104	36563	8124	1533
07:46	MP76840-S1	1168	39913	8227	1709
07:52	MP76840-S2	1177	40107	8159	1722
07:58	JB55731-44	1170	39905	8270	1712
08:04	MP76840-SD1	1224	41905	8340	1835
08:10	MP77032-MB2	1103	36425	8187	1527
08:17	MP77032-LC1	1218	42772	8337	1847
08:22	ZZZZZZ	1105	36497	8104	1534
08:29	ZZZZZZ	1097	36330	8153	1519
08:35	MA33013-CCV14	1205	41298	8134	1752
08:41	MA33013-CCB14	1253	43201	8448	1928
08:47	MA33013-CCV15	1207	40929	8491	1751
08:53	MA33013-CCB15	1262	43830	8845	1930
08:59	MP77070-MB1	No results reported for the elements associated with this internal standard.			
09:05	MA33013-CRID4	1236	42799	9100	1874
09:11	MA33013-CRI3	1216	42074	9130	1825
09:18	MA33013-CRID5	1224	42637	9235	1849
09:24	MA33013-CRIA3	1209	40768	9288	1830
09:30	MA33013-CCV16	1157	39496	9124	1663
09:36	MA33013-CCB16	1194	41786	9315	1806
09:42	ZZZZZZ	1178	41743	9507	1801
09:48	ZZZZZZ	1159	41224	9321	1780
09:54	ZZZZZZ	1068	37297	8902	1543
10:00	ZZZZZZ	1162	41269	9350	1761
10:06	ZZZZZZ	1155	40867	9435	1757

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33013
Parameters: Cr,Cu,Mn,Ag,Tl,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
Istd#4	Indium		70-130 %		

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33013 Units: ug/l

Time:			18:23		18:35		19:47		20:53	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	2.2	anr							
Barium	200	.4	anr							
Beryllium	1.0	.1	anr							
Bismuth	20	1.4								
Boron	100	1.1	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	14	anr							
Chromium	10	.5	0.40	<10	0.50	<10	0.70	<10	-0.20	<10
Cobalt	50	.3	anr							
Copper	10	.7	-0.30	<10	-0.10	<10	0.70	<10	0.20	<25
Iron	100	3.6	anr							
Lead	3.0	2	anr							
Lithium	20	.6								
Magnesium	5000	36	anr							
Manganese	15	.2	0.0	<15	0.20	<15	0.40	<15	0.0	<15
Molybdenum	20	.7								
Nickel	10	.9	anr							
Palladium	50	1.7								
Potassium	10000	46	anr							
Selenium	10	3.3	anr							
Silicon	200	5.1								
Silver	10	.5	0.10	<10	-0.70	<10	0.0	<10	-0.40	<10
Sodium	10000	140	anr							
Sulfur	50	5.2								
Strontium	10	.2								
Thallium	2.0	1.8	1.2	<2.0	0.60	<2.0	-0.30	<2.0	0.80	<500
Tin	10	1.1								
Titanium	10	.8								
Tungsten	50	3.6								
Vanadium	50	.5	0.10	<50	0.50	<50	0.60	<50	0.0	<50
Zinc	20	5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33013 Units: ug/l

Time:			18:23		18:35		19:47		20:53	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.4								

(*) Outside of QC limits
(anr) Analyte not requested

8.5.2
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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33013 Units: ug/l

Time:			21:59		23:05		00:12		01:24	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	17	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	2.2	anr							
Barium	200	.4	anr							
Beryllium	1.0	.1	anr							
Bismuth	20	1.4								
Boron	100	1.1	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	14	anr							
Chromium	10	.5	0.50	<10	0.40	<10	0.90	<10	0.60	<10
Cobalt	50	.3	anr							
Copper	10	.7	0.70	<10	0.30	<10	1.2	<10	1.1	<10
Iron	100	3.6	anr							
Lead	3.0	2	anr							
Lithium	20	.6								
Magnesium	5000	36	anr							
Manganese	15	.2	0.20	<15	0.40	<15	0.50	<15	0.30	<15
Molybdenum	20	.7								
Nickel	10	.9	anr							
Palladium	50	1.7								
Potassium	10000	46	anr							
Selenium	10	3.3	anr							
Silicon	200	5.1								
Silver	10	.5	-0.50	<10	-0.10	<10	0.20	<10	-0.10	<10
Sodium	10000	140	anr							
Sulfur	50	5.2								
Strontium	10	.2								
Thallium	2.0	1.8	1.4	<2.0	1.2	<2.0	1.2	<2.0	1.5	<2.0
Tin	10	1.1								
Titanium	10	.8								
Tungsten	50	3.6								
Vanadium	50	.5	0.40	<50	0.30	<50	0.40	<50	0.20	<50
Zinc	20	5	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33013 Units: ug/l

Time:			21:59		23:05		00:12		01:24	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.4								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33013 Units: ug/l

Time:			02:37		03:25	
Sample ID:			CCB8		CCB9	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	17	anr			
Antimony	6.0	1.6	anr			
Arsenic	3.0	2.2	anr			
Barium	200	.4	anr			
Beryllium	1.0	.1	anr			
Bismuth	20	1.4				
Boron	100	1.1	anr			
Cadmium	3.0	.3	anr			
Calcium	5000	14	anr			
Chromium	10	.5	-0.20	<10	0.0	<10
Cobalt	50	.3	anr			
Copper	10	.7	1.1	<10	0.80	<10
Iron	100	3.6	anr			
Lead	3.0	2	anr			
Lithium	20	.6				
Magnesium	5000	36	anr			
Manganese	15	.2	0.10	<15	0.0	<15
Molybdenum	20	.7				
Nickel	10	.9	anr			
Palladium	50	1.7				
Potassium	10000	46	anr			
Selenium	10	3.3	anr			
Silicon	200	5.1				
Silver	10	.5	-1.0	<10	-0.80	<10
Sodium	10000	140	anr			
Sulfur	50	5.2				
Strontium	10	.2				
Thallium	2.0	1.8	0.30	<2.0	0.80	<2.0
Tin	10	1.1				
Titanium	10	.8				
Tungsten	50	3.6				
Vanadium	50	.5	0.40	<50	-0.10	<50
Zinc	20	5	anr			

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33013 Units: ug/l

Time:			02:37		03:25	
Sample ID:			CCB8		CCB9	
Metal	RL	IDL	raw	final	raw	final
Zirconium	10	.4				

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33013 Units: ug/l

Time:		18:17			18:29			19:41	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	2000	2050	102.5	2000	2020	101.0	2000	1990	99.5
Cobalt	anr								
Copper	2000	1960	98.0	2000	1920	96.0	2000	1900	95.0
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2060	103.0	2000	2040	102.0	2000	2010	100.5
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	250	247	98.8	250	243	97.2	250	241	96.4
Sodium	anr								
Sulfur									
Strontium									
Thallium	2000	2060	103.0	2000	2060	103.0	2000	2070	103.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2030	101.5	2000	2010	100.5	2000	1980	99.0
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33013 Units: ug/l

Time:		18:17			18:29			19:41	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.5.3

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33013 Units: ug/l

Time:		20:47			21:53			22:59	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	2000	2030	101.5	2000	2020	101.0	2000	2000	100.0
Cobalt	anr								
Copper	2000	1930	96.5	2000	1920	96.0	2000	1900	95.0
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2060	103.0	2000	2050	102.5	2000	2040	102.0
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	250	247	98.8	250	246	98.4	250	244	97.6
Sodium	anr								
Sulfur									
Strontium									
Thallium	2000	2070	103.5	2000	2080	104.0	2000	2060	103.0
Tin									
Titanium									
Tungsten									
Vanadium	2000	2010	100.5	2000	2010	100.5	2000	1980	99.0
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33013 Units: ug/l

Time:		20:47			21:53			22:59	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.5.3

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33013 Units: ug/l

Time:		00:06			01:19			02:31	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	2000	2020	101.0	2000	2010	100.5	2000	1990	99.5
Cobalt	anr								
Copper	2000	1920	96.0	2000	1880	94.0	2000	1910	95.5
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	2000	2080	104.0	2000	2070	103.5	2000	2060	103.0
Molybdenum									
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	250	247	98.8	250	244	97.6	250	246	98.4
Sodium	anr								
Sulfur									
Strontium									
Thallium	2000	2080	104.0	2000	2070	103.5	2000	2070	103.5
Tin									
Titanium									
Tungsten									
Vanadium	2000	2010	100.5	2000	1990	99.5	2000	1980	99.0
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33013 Units: ug/l

Time:		00:06			01:19			02:31	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.5.3

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33013 Units: ug/l

Time:		03:19	
Sample ID:	CCV	CCV9	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	2000	1990	99.5
Cobalt	anr		
Copper	2000	1860	93.0
Iron	anr		
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	2000	2070	103.5
Molybdenum			
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	250	241	96.4
Sodium	anr		
Sulfur			
Strontium			
Thallium	2000	2050	102.5
Tin			
Titanium			
Tungsten			
Vanadium	2000	1980	99.0
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33013 Units: ug/l

Time:		03:19	
Sample ID:	CCV	CCV9	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

8.5.3

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33013 Units: ug/l

Time:				18:47		18:53		18:59	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	10.8	108.0	1.9	95.0		
Cobalt	50		3.0	anr					
Copper	10		2.0	8.4	84.0	2.4	120.0		
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	15.9	106.0	3.1	103.3		
Molybdenum	20		4.0						
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	4.3	86.0	0.50	50.0*(a)		
Sodium	5000		1000	anr					
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	9.1	91.0	2.2	110.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	50.3	100.6	2.1	105.0		
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33013 Units: ug/l

Time:				18:47		18:53		18:59	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID2		CRIA1	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element at this RL in the area bracketed by this QC.

8.5.4

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33013 Units: ug/l

Time:				02:43		02:49		03:01	
Sample ID:	CRI	CRIA	CRID	CRID3		CRI2		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	2.1	105.0	9.8	98.0		
Cobalt	50		3.0	anr					
Copper	10		2.0	2.9	145.0*(a	9.4	94.0		
Iron	100	500							
Lead	3.0	20	2.5	anr					
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	3.1	103.3	16.1	107.3		
Molybdenum	20		4.0						
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	0.50	50.0*(a)	4.1	82.0		
Sodium	5000		1000	anr					
Sulfur	50	50	50						
Strontium	10								
Thallium	10		2.0	2.3	115.0	9.2	92.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	1.8	90.0	50.0	100.0		
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33013 Units: ug/l

Time:				02:43		02:49		03:01	
Sample ID:	CRI	CRIA	CRID	CRID3		CRI2		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element at this RL in the area bracketed by this QC.

8.5.4

8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33013 Units: ug/l

Time:			19:05		19:11		03:07		03:13	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	539000	107.8	471000	94.2	545000	109.0	481000	96.2
Antimony		1000	0.10		971	97.1	1.1		951	95.1
Arsenic		1000	-5.1		980	98.0	-3.7		968	96.8
Barium		500	-1.4		475	95.0	-1.1		477	95.4
Beryllium		500	0.60		450	90.0	0.50		463	92.6
Bismuth		500	23.1		501	100.2	23.4		484	96.8
Boron			-3.6		-2.7		-1.9		-2.5	
Cadmium		1000	0.20		905	90.5	0.20		900	90.0
Calcium	400000	400000	403000	100.8	389000	97.3	422000	105.5	406000	101.5
Chromium		500	-0.50		427	85.4	-0.50		419	83.8
Cobalt		500	-1.8		428	85.6	-2.0		434	86.8
Copper		500	1.8		459	91.8	1.7		440	88.0
Iron	200000	200000	199000	99.5	198000	99.0	194000	97.0	194000	97.0
Lead		1000	5.4		846	84.6	-1.9		854	85.4
Lithium		500	3.0		469	93.8	2.8		476	95.2
Magnesium	500000	500000	483000	96.6	465000	93.0	488000	97.6	473000	94.6
Manganese		500	6.5		449	89.8	6.8		455	91.0
Molybdenum		500	0.20		477	95.4	0.20		467	93.4
Nickel		1000	-0.60		840	84.0	-0.70		846	84.6
Palladium		500	-4.8		494	98.8	-7.9		472	94.4
Potassium			73.9		118		124		117	
Selenium		1000	-1.7		885	88.5	-7.0		865	86.5
Silicon			0.40		-4.7		1.9		-4.4	
Silver		1000	1.9		911	91.1	4.9		895	89.5
Sodium			0.30		16.8		113		150	
Sulfur		500	10.0		498	99.6	8.0		495	99.0
Strontium			-5.7		-5.5		-6.5		-6.3	
Thallium		1000	0.50		910	91.0	-3.4		913	91.3
Tin			-3.9		-0.90		-2.7		-2.4	
Titanium			0.80		0.80		1.3		0.60	
Tungsten		500	-51		449	89.8	-54		434	86.8
Vanadium		500	-4.3		419	83.8	-4.6		414	82.8
Zinc		1000	1.0		878	87.8	0.80		906	90.6

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SC010614M2.ICP Date Analyzed: 01/06/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33013 Units: ug/l

Time:			19:05		19:11		03:07		03:13	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	2.1		444	88.8	2.5		430	86.0

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:08	MA33017-STD1	1		STDA
13:14	MA33017-STD2	1		STDB
13:20	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:34	MA33017-ICV1	1		
13:47	MA33017-ICB1	1		
13:54	MA33017-ICCV1	1		
14:05	MA33017-CCB1	1		
14:09	MA33017-CRI1	1		
14:16	MA33017-CRID1	1		
14:22	MA33017-CRIA1	1		
14:28	MA33017-CRID2	1		
14:35	MA33017-ICSA1	1		
14:41	MA33017-ICSAB1	1		
14:47	MA33017-CCV1	1		
14:53	MA33017-CCB2	1		
15:00	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:18	ZZZZZZ	1		
15:25	ZZZZZZ	1		
15:31	ZZZZZZ	10		
15:37	ZZZZZZ	1		
15:44	ZZZZZZ	1		
15:50	ZZZZZZ	1		
15:56	MA33017-CCV2	1		
16:02	MA33017-CCB3	1		
16:09	ZZZZZZ	1		
16:15	MP77021-MB3	1		Tl DL raised for the batch
16:21	MP77021-MB4	1		
16:27	MP77021-LC3	1		
16:34	MP77021-LC4	1		
16:40	MP77021-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:46	MP77021-S2	1		
16:52	JB56693-2	1		(sample used for QC only; not part of login JB56243)
16:58	MP77021-SD1	5		
17:04	MA33017-CCV3	1		
17:10	MA33017-CCB4	1		
17:16	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:35	MP77059-MB1	1		
17:41	MP77059-B1	1		
17:47	ZZZZZZ	1		
17:54	ZZZZZZ	1		
18:00	ZZZZZZ	1		
18:06	ZZZZZZ	1		
18:13	MA33017-CCV4	1		
18:19	MA33017-CCB5	1		
18:25	MP77059-S1	1		
18:31	MP77059-S1	2		
18:38	MP77059-S2	1		
18:44	MP77059-S2	2		
18:50	JB56577-1	1		(sample used for QC only; not part of login JB56243)
18:56	JB56577-1	2		(sample used for QC only; not part of login JB56243)
19:03	MP77059-SD1	5		
19:09	MP77059-SD1	10		
19:15	ZZZZZZ	1		
19:21	MA33017-CCV5	1		
19:27	MA33017-CCB6	1		
19:34	ZZZZZZ	1		
19:40	MP76911-S1	2		
19:46	MP76911-S2	2		
19:52	ZZZZZZ	1		
19:58	ZZZZZZ	1		
20:04	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:10	ZZZZZZ	1		
20:17	ZZZZZZ	1		
20:23	ZZZZZZ	1		
20:29	MA33017-CCV6	1		
20:35	MA33017-CCB7	1		
20:42	MA33017-CRI2	1		
20:48	MA33017-CRID3	1		
20:54	MA33017-CRIA2	1		
21:00	ZZZZZZ	5		
21:07	MA33017-ICSA2	1		
21:13	MA33017-ICSAB2	1		
21:19	MA33017-CCV7	1		
21:26	MA33017-CCB8	1		
21:32	MP77022-MB1	1		
21:38	MP77022-LC1	1		
21:44	MP77022-S1	1		
21:50	MP77022-S2	1		
21:56	JB56674-1	1		(sample used for QC only; not part of login JB56243)
22:03	MP77022-SD1	5		
22:09	ZZZZZZ	1		
22:15	ZZZZZZ	5		
22:21	ZZZZZZ	1		
22:28	MA33017-CCV8	1		
22:34	MA33017-CCB9	1		
22:40	ZZZZZZ	5		
22:46	ZZZZZZ	1		
22:53	ZZZZZZ	1		
22:59	MP77044-S1	1		Y 3600 and In out. Na and S very high
23:05	MP77044-S2	1		Y 3600 and In out. Na and S very high
23:11	JB56641-1	1		(sample used for QC only; not part of login JB56243)
23:18	MP77044-SD1	5		Y 3600 and In out. Na and S very high
23:24	ZZZZZZ	1		
23:30	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:37	MA33017-CCV9	1		
23:43	MA33017-CCB10	1		
23:49	ZZZZZZ	1		
23:55	ZZZZZZ	1		
00:01	ZZZZZZ	1		
00:08	ZZZZZZ	1		
00:14	ZZZZZZ	1		
00:20	ZZZZZZ	1		
00:27	ZZZZZZ	1		
00:33	ZZZZZZ	1		
00:39	ZZZZZZ	1		
00:45	MA33017-CCV10	1		
00:51	MA33017-CCB11	1		
00:58	ZZZZZZ	1		
01:04	ZZZZZZ	1		
01:10	ZZZZZZ	1		
01:17	ZZZZZZ	1		
01:23	ZZZZZZ	1		
01:29	ZZZZZZ	1		
01:35	ZZZZZZ	1		
01:42	ZZZZZZ	1		
01:48	ZZZZZZ	1		
01:54	MA33017-CCV11	1		
02:00	MA33017-CCB12	1		
02:07	ZZZZZZ	1		
02:13	ZZZZZZ	1		
02:19	MP77060-MB1	1		
02:25	MP77060-B1	1		
02:32	MP77060-S1	1		
02:38	MP77060-S2	1		
02:44	JB54933-1R	1		(sample used for QC only; not part of login JB56243)
02:50	MP77060-SD1	5		
02:56	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:02	MA33017-CCV12	1		
03:08	MA33017-CCB13	1		
03:15	MA33017-CRI3	1		
03:21	ZZZZZZ	5		
03:27	MA33017-CRIA3	1		
03:34	MA33017-CRID4	1		
03:40	MA33017-ICSA3	1		
03:46	MA33017-ICSAB3	1		Bad reading on ISTD , refer to ICSA for IEC information.
03:53	MA33017-CCV13	1		
03:59	MA33017-CCB14	1		
04:05	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:17	ZZZZZZ	1		
04:23	ZZZZZZ	1		
04:30	ZZZZZZ	1		
04:36	ZZZZZZ	1		
04:42	ZZZZZZ	1		
04:48	ZZZZZZ	1		
04:55	ZZZZZZ	1		
05:01	MA33017-CCV14	1		
05:07	MA33017-CCB15	1		
05:13	ZZZZZZ	1		
05:19	ZZZZZZ	1		
05:25	ZZZZZZ	1		
05:32	ZZZZZZ	1		
05:38	MP77018-MB1	1		CCV out
05:44	MP77018-B1	1		CCV out
05:50	MP77018-S1	1		CCV out
05:56	MP77018-S2	1		CCV out
06:02	JB56657-3A	1		(sample used for QC only; not part of login JB56243)
06:08	MA33017-CCV15	1		
06:14	MA33017-CCB16	1		
06:21	MP77018-SD1	5		CCV out

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:27	ZZZZZZ	1		
06:33	ZZZZZZ	1		
06:40	MA33017-ICSA4	1		
06:46	MA33017-ICSAB4	1		
06:52	MA33017-ICSAB5	1		
06:58	ZZZZZZ	1		
07:05	ZZZZZZ	1		
07:11	ZZZZZZ	1		
07:17	MA33017-CCV16	1		
07:23	MA33017-CCB17	1		
07:30	ZZZZZZ	1		
07:36	ZZZZZZ	1		
07:42	ZZZZZZ	1		
07:49	JB56243-1	2		
07:55	MP76911-MB2	1		
08:01	MP76911-B2	1		
08:07	JB56044-9	2		(sample used for QC only; not part of login JB56243)
08:13	MP76911-SD1	10		
08:20	JB56243-1	5		
---------->	Last reportable sample/prep for job JB56243			
08:26	MA33017-CCV17	1		
08:32	MA33017-CCB18	1		
08:38	ZZZZZZ	1		
08:44	MA33017-CRI4	1		
08:51	MA33017-CRID5	1		
08:59	ZZZZZZ	1		
09:05	MA33017-CCV18	1		
09:11	MA33017-CCB19	1		
---------->	Last reportable CCB for job JB56243			

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:08	MA33017-STD1	1921 R	113760 R	14663 R	6439 R
13:14	MA33017-STD2	1768	103830	14366	5582
13:20	ZZZZZZ	1815	107450	14653	5779
13:26	ZZZZZZ	1905	113130	14796	6389
13:34	MA33017-ICV1	1827	108390	14602	5809
13:47	MA33017-ICB1	1915	114560	14778	6417
13:54	MA33017-ICCV1	1815	107190	14558	5803
14:05	MA33017-CCB1	1908	114150	14640	6419
14:09	MA33017-CRI1	1873	112250	14838	6257
14:16	MA33017-CRID1	No results reported for the elements associated with this internal standard.			
14:22	MA33017-CRIA1	1915	113760	14879	6401
14:28	MA33017-CRID2	1885	112690	15303	6318
14:35	MA33017-ICSA1	1690	98275	13748	5173
14:41	MA33017-ICSAB1	1688	100300	13998	5196
14:47	MA33017-CCV1	1846	109050	14623	5874
14:53	MA33017-CCB2	1930	115380	14982	6454
15:00	ZZZZZZ	1893	115000	14849	6348
15:06	ZZZZZZ	1894	111050	14649	6140
15:12	ZZZZZZ	1632	95274	14487	4930
15:18	ZZZZZZ	1578	93984	14408	4763
15:25	ZZZZZZ	1917	114740	14712	6436
15:31	ZZZZZZ	1670	96424	14246	4950
15:37	ZZZZZZ	1902	113980	15013	6421
15:44	ZZZZZZ	1911	114330	15149	6110
15:50	ZZZZZZ	1906	113820	14570	6448
15:56	MA33017-CCV2	1849	105970	14586	5900
16:02	MA33017-CCB3	1912	114530	15173	6430
16:09	ZZZZZZ	2175	127640	16963	6117
16:15	MP77021-MB3	1892	116480	15025	6370
16:21	MP77021-MB4	1911	114630	14789	6449
16:27	MP77021-LC3	1888	113190	14551	6246
16:34	MP77021-LC4	1892	112930	14625	6239
16:40	MP77021-S1	1784	107350	14427	5630

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:46	MP77021-S2	1803	106910	14472	5683
16:52	JB56693-2	1825	109460	13950	5865
16:58	MP77021-SD1	1906	114290	14715	6288
17:04	MA33017-CCV3	1857	110260	14520	5886
17:10	MA33017-CCB4	1937	115100	14695	6477
17:16	ZZZZZZ	1828	109180	14514	5815
17:23	ZZZZZZ	1824	108480	14470	5809
17:29	ZZZZZZ	1940	117230	14741	6494
17:35	MP77059-MB1	1889	116750	14402	6544
17:41	MP77059-B1	1828	110830	14618	6102
17:47	ZZZZZZ	1544	92465	13934	4620
17:54	ZZZZZZ	1643	96405	14272	4941
18:00	ZZZZZZ	1607	94946	13955	4864
18:06	ZZZZZZ	1626	95623	14275	4906
18:13	MA33017-CCV4	1858	109780	14203	5900
18:19	MA33017-CCB5	1941	115490	13923	6492
18:25	MP77059-S1	1487	89374	13938	4692
18:31	MP77059-S1	1609	97379	13306	5101
18:38	MP77059-S2	1501	92664	13470	4732
18:44	MP77059-S2	1609	97951	13714	5083
18:50	JB56577-1	1504	92431	13373	4746
18:56	JB56577-1	1607	99047	13552	5095
19:03	MP77059-SD1	1735	104600	13908	5585
19:09	MP77059-SD1	1814	108320	14237	5889
19:15	ZZZZZZ	1923	115490	14579	6464
19:21	MA33017-CCV5	1856	108580	14149	5899
19:27	MA33017-CCB6	1939	115170	14412	6495
19:34	ZZZZZZ	1922	115080	14483	6483
19:40	MP76911-S1	1886	110000	14183	6128
19:46	MP76911-S2	1871	107370	14455	6091
19:52	ZZZZZZ	1890	112720	14312	6266
19:58	ZZZZZZ	1906	113230	14293	6298
20:04	ZZZZZZ	1898	112480	14324	6299

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:10	ZZZZZZ	1900	113170	14286	6458
20:17	ZZZZZZ	1949	114850	14242	6527
20:23	ZZZZZZ	1942	114590	14223	6536
20:29	MA33017-CCV6	1863	105980	14227	5926
20:35	MA33017-CCB7	1933	117980	14668	6453
20:42	MA33017-CRI2	1933	114430	14393	6401
20:48	MA33017-CRID3	1950	115270	14347	6501
20:54	MA33017-CRIA2	1965	115800	14283	6559
21:00	ZZZZZZ	1945	115160	14341	6496
21:07	MA33017-ICSA2	1706	98864	13308	5232
21:13	MA33017-ICSAB2	1700	99026	13456	5233
21:19	MA33017-CCV7	1857	108450	13939	5921
21:26	MA33017-CCB8	1940	114390	14466	6495
21:32	MP77022-MB1	1947	115500	14571	6570
21:38	MP77022-LC1	1902	110270	14325	6312
21:44	MP77022-S1	1831	106360	14210	5914
21:50	MP77022-S2	1808	106630	14353	5850
21:56	JB56674-1	1862	110110	14362	6157
22:03	MP77022-SD1	1920	113030	14268	6416
22:09	ZZZZZZ	1888	111100	14712	5449
22:15	ZZZZZZ	1892	111350	14390	6023
22:21	ZZZZZZ	1666	98406	13720	5124
22:28	MA33017-CCV8	1862	108260	13913	5925
22:34	MA33017-CCB9	1976	114060	14205	6601
22:40	ZZZZZZ	1848	107890	13942	5933
22:46	ZZZZZZ	999999 !	115210	14220	999999 !
22:53	ZZZZZZ	1917	113450	14227	6335
22:59	MP77044-S1	1408	81202	12800	3839 !a
23:05	MP77044-S2	1416	81194	12751	3866 !a
23:11	JB56641-1	1383	79615 !a	12618	3816 !a
23:18	MP77044-SD1	1693	97445	13461	4987
23:24	ZZZZZZ	1795	107540	13533	5695
23:30	ZZZZZZ	1776	104640	13513	5672

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:37	MA33017-CCV9	1863	108750	13720	5929
23:43	MA33017-CCB10	1971	112630	14301	6591
23:49	ZZZZZZ	1803	107670	13730	5815
23:55	ZZZZZZ	1834	108100	13796	5960
00:01	ZZZZZZ	1838	108320	13382	5912
00:08	ZZZZZZ	1841	109030	13853	5855
00:14	ZZZZZZ	1922	115560	13751	6211
00:20	ZZZZZZ	1851	109690	13704	5722
00:27	ZZZZZZ	1944	115630	13661	6321
00:33	ZZZZZZ	1937	114940	13660	6231
00:39	ZZZZZZ	2033	119350	13696	6708
00:45	MA33017-CCV10	1955	113970	13486	6087
00:51	MA33017-CCB11	2034	120940	999999 !a	6660
00:58	ZZZZZZ	2057	121930	13763	6719
01:04	ZZZZZZ	1779	103270	13080	5206
01:10	ZZZZZZ	1939	112850	13393	5851
01:17	ZZZZZZ	2062	122970	13541	6717
01:23	ZZZZZZ	1815	105390	13097	5285
01:29	ZZZZZZ	1937	112600	13556	5830
01:35	ZZZZZZ	2108	125610	13461	6823
01:42	ZZZZZZ	1921	111920	13018	5824
01:48	ZZZZZZ	2013	118830	13280	6185
01:54	MA33017-CCV11	2061	120270	13114	6263
02:00	MA33017-CCB12	2136	124200	13400	6845
02:07	ZZZZZZ	1955	115400	13064	5831
02:13	ZZZZZZ	1957	113740	12954	5638
02:19	MP77060-MB1	2128	126470	13464	6829
02:25	MP77060-B1	2144	126080	13289	6836
02:32	MP77060-S1	2131	126500	13334	6724
02:38	MP77060-S2	2137	124400	13394	6746
02:44	JB54933-1R	2143	126230	13264	6782
02:50	MP77060-SD1	2181	128600	13287	6921
02:56	ZZZZZZ	2156	127270	13297	6800

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
03:02	MA33017-CCV12	2099	124200	13211	6295
03:08	MA33017-CCB13	2179	130380	13391	6898
03:15	MA33017-CRI3	2177	128700	12906	6806
03:21	ZZZZZZ	2205	128270	13062	6939
03:27	MA33017-CRIA3	2208	130130	13094	6960
03:34	MA33017-CRID4	2220	130150	13177	6960
03:40	MA33017-ICSA3	1989	113480	12203	5711
03:46	MA33017-ICSAB3	No results reported for the elements associated with this internal standard.			
03:53	MA33017-CCV13	2155	120950	12990	6412
03:59	MA33017-CCB14	2230	130780	13035	6999
04:05	ZZZZZZ	2203	129280	13054	6866
04:11	ZZZZZZ	2188	127610	12538	6821
04:17	ZZZZZZ	2215	130480	13165	6802
04:23	ZZZZZZ	2209	128870	12914	6849
04:30	ZZZZZZ	2207	129720	13073	6893
04:36	ZZZZZZ	2209	126590	12939	6860
04:42	ZZZZZZ	2245	129580	12750	6932
04:48	ZZZZZZ	2246	131960	12905	6922
04:55	ZZZZZZ	2224	129940	12914	6798
05:01	MA33017-CCV14	2153	125200	12884	6350
05:07	MA33017-CCB15	2289	130820	12407	7126
05:13	ZZZZZZ	2256	132740	13048	6965
05:19	ZZZZZZ	2249	131150	12529	6866
05:25	ZZZZZZ	2260	135550	12956	6992
05:32	ZZZZZZ	2232	132500	12932	6906
05:38	MP77018-MB1	No results reported for the elements associated with this internal standard.			
05:44	MP77018-B1	No results reported for the elements associated with this internal standard.			
05:50	MP77018-S1	No results reported for the elements associated with this internal standard.			
05:56	MP77018-S2	No results reported for the elements associated with this internal standard.			
06:02	JB56657-3A	No results reported for the elements associated with this internal standard.			
06:08	MA33017-CCV15	2210	125630	12950	6493
06:14	MA33017-CCB16	2304	134350	12797	7148
06:21	MP77018-SD1	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
Analyst: KK Run ID: MA33017
Parameters: As,Pb,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
06:27	ZZZZZZ	2293	134750	12863	7100
06:33	ZZZZZZ	2274	133220	12634	7040
06:40	MA33017-ICSA4	2049	115340	11932	5792
06:46	MA33017-ICSAB4	No results reported for the elements associated with this internal standard.			
06:52	MA33017-ICSAB5	2095	119150	12202	5940
06:58	ZZZZZZ	2323	131980	12489	7193
07:05	ZZZZZZ	2143	124500	12514	6271
07:11	ZZZZZZ	2073	120240	12433	5952
07:17	MA33017-CCV16	2255	128550	12600	6596
07:23	MA33017-CCB17	2326	134740	12512	7194
07:30	ZZZZZZ	2059	117180	12596	5877
07:36	ZZZZZZ	2067	119040	12383	5910
07:42	ZZZZZZ	2094	118970	11903	5958
07:49	JB56243-1	2354	134560	13262	6362
07:55	MP76911-MB2	2335	134590	12856	7230
08:01	MP76911-B2	2281	129130	12491	6846
08:07	JB56044-9	2297	127970	12854	6945
08:13	MP76911-SD1	2347	131420	12808	7198
08:20	JB56243-1	2313	127890	12590	6742
08:26	MA33017-CCV17	2217	120290	12563	6642
08:32	MA33017-CCB18	2301	126750	12902	7273
08:38	ZZZZZZ	2310	127470	13118	999999 !
08:44	MA33017-CRI4	2246	126460	12832	7020
08:51	MA33017-CRID5	2234	125760	12944	7089
08:59	ZZZZZZ	2243	118820	13169	7205
09:05	MA33017-CCV18	2104	114450	12932	6449
09:11	MA33017-CCB19	2204	118670	13452	7112

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			13:47		14:05		14:53		16:02	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	0.40	<3.0	0.60	<3.0	1.1	<3.0	0.50	<3.0
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	-0.80	<3.0	-0.80	<3.0	0.40	<3.0	-0.30	<3.0
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	-1.4	<2.0	-1.3	<2.0	-1.6	<2.0	-0.40	<2.0
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			13:47		14:05		14:53		16:02	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			17:10		18:19		19:27		20:35	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	-0.10	<3.0	0.60	<3.0	-0.20	<3.0	0.60	<3.0
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	0.10	<3.0	-0.40	<3.0	-0.50	<3.0	-0.50	<3.0
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	0.40	<2.0	0.10	<2.0	-0.10	<2.0	0.50	<2.0
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			17:10		18:19		19:27		20:35	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			21:26		22:34		23:43		00:51	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	0.0	<3.0	0.80	<3.0	0.20	<3.0	0.70	<3.0
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	-1.0	<3.0	-0.50	<3.0	-0.50	<3.0	-0.30	<3.0
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	0.60	<2.0	1.2	<2.0	0.30	<2.0	0.40	<2.0
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			21:26		22:34		23:43		00:51	
Sample ID:			CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			02:00		03:08		03:59		05:07	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	0.40	<3.0	0.20	<500	0.10	<500	0.70	<500
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	0.20	<3.0	-0.60	<500	-0.10	<500	0.40	<500
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	0.80	<2.0	0.50	<500	0.40	<500	0.30	<500
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			02:00		03:08		03:59		05:07	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

8.6.2
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			06:14		07:23		08:32		09:11	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	6.2	anr							
Antimony	6.0	.9	anr							
Arsenic	3.0	1.5	1.7	<3.0	1.6	<3.0	1.4	<3.0	1.8	<3.0
Barium	200	.2	anr							
Beryllium	1.0	.08	anr							
Bismuth	20	1.3								
Boron	100	1.2	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	16	anr							
Chromium	10	.4	anr							
Cobalt	50	.3	anr							
Copper	10	.7	anr							
Iron	100	10	anr							
Lead	3.0	1.2	1.1	<3.0	1.3	<3.0	0.40	<3.0	0.30	<3.0
Lithium	20	.6								
Magnesium	5000	20	anr							
Manganese	15	.2	anr							
Molybdenum	20	.3	anr							
Nickel	10	.4	anr							
Palladium	50	1								
Potassium	10000	36	anr							
Selenium	10	1.5	anr							
Silicon	200	7.4								
Silver	10	.4	anr							
Sodium	10000	16	anr							
Sulfur	50	7.8	anr							
Strontium	10	.09								
Thallium	2.0	1.9	0.50	<2.0	-0.30	<2.0	-0.40	<2.0	0.50	<2.0
Tin	10	1								
Titanium	10	.3								
Tungsten	50	3.5								
Vanadium	50	.3	anr							
Zinc	20	2.7	anr							

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA33017 Units: ug/l

Time:			06:14		07:23		08:32		09:11	
Sample ID:			CCB16		CCB17		CCB18		CCB19	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zirconium	10	.3								

(*) Outside of QC limits
(anr) Analyte not requested

8.6.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		13:54	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	2000	1990	99.5
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	2000	2030	101.5
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur	anr		
Strontium			
Thallium	2000	2090	104.5
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		13:54	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		13:34			14:47			15:56	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1980	99.0	2000	1960	98.0	2000	1950	97.5
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2040	102.0	2000	2010	100.5	2000	2010	100.5
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2080	104.0	2000	2060	103.0	2000	2060	103.0
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		13:34			14:47			15:56	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		17:04			18:13			19:21	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1940	97.0	2000	1950	97.5	2000	1930	96.5
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2020	101.0	2000	2020	101.0	2000	2020	101.0
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2070	103.5	2000	2070	103.5	2000	2080	104.0
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		17:04			18:13			19:21	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		20:29			21:19			22:28	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1910	95.5	2000	1910	95.5	2000	1880	94.0
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2010	100.5	2000	2020	101.0	2000	2010	100.5
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2080	104.0	2000	2100	105.0	2000	2090	104.5
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		20:29			21:19			22:28	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		23:37			00:45			01:54	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1880	94.0	2000	1850	92.5	2000	1930	96.5
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2010	100.5	2000	2040	102.0	2000	2100	105.0
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2100	105.0	2000	2100	105.0	2000	2030	101.5
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		23:37			00:45			01:54	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		03:02			03:53			05:01	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	2060	103.0
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2140	107.0	2000	2140	107.0	2000	2210	110.5*(a
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	2000	100.0	2000	1960	98.0	2000	1960	98.0
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		03:02			03:53			05:01	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		06:08			07:17			08:26	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2030	101.5	2000	2000	100.0	2000	2050	102.5
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2180	109.0	2000	2160	108.0	2000	2150	107.5
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Sulfur	anr								
Strontium									
Thallium	2000	1920	96.0	2000	1910	95.5	2000	1950	97.5
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	anr								

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		06:08			07:17			08:26	
Sample ID:	CCV	CCV15		CCV	CCV16		CCV	CCV17	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		09:05	
Sample ID:	CCV	CCV18	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	2000	2030	101.5
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	2000	2130	106.5
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Palladium			
Potassium	anr		
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Sulfur	anr		
Strontium			
Thallium	2000	2060	103.0
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	anr		

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA33017 Units: ug/l

Time:		09:05	
Sample ID:	CCV	CCV18	
Metal	True	Results	% Rec
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

8.6.4

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				14:09		14:22		14:28	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	8.5	106.3	22.5	112.5	3.2	106.7
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	2.3	76.7	20.3	101.5	2.1	84.0
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0	anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50	50	50	anr					
Strontium	10								
Thallium	10		2.0	9.2	92.0			1.6	80.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				14:09		14:22		14:28	
Sample ID:	CRI	CRIA	CRID	CRI1		CRIA1		CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.6.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				20:42		20:48		20:54	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	7.9	98.8	3.1	103.3	21.4	107.0
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	2.6	86.7	2.4	96.0	20.5	102.5
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0	anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50	50	50	anr					
Strontium	10								
Thallium	10		2.0	9.0	90.0	2.4	120.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				20:42		20:48		20:54	
Sample ID:	CRI	CRIA	CRID	CRI2		CRID3		CRIA2	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.6.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				03:15		03:27		03:34	
Sample ID:	CRI	CRIA	CRID	CRI3		CRIA3		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	8.6	107.5	22.8	114.0	2.4	80.0
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000		1000	anr					
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	2.3	76.7	22.5	112.5	3.2	128.0
Lithium	20								
Magnesium	5000		100	anr					
Manganese	15		3.0	anr					
Molybdenum	20		4.0	anr					
Nickel	10		4.0	anr					
Palladium	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		1.0	anr					
Sodium	5000		1000	anr					
Sulfur	50	50	50	anr					
Strontium	10								
Thallium	10		2.0	9.9	99.0			2.1	105.0
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	anr					

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				03:15		03:27		03:34	
Sample ID:	CRI	CRIA	CRID	CRI3		CRIA3		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium	10		5.0						

(*) Outside of QC limits
(anr) Analyte not requested

8.6.5

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				08:44		08:51	
Sample ID:	CRI	CRIA	CRID	CRI4		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr			
Antimony	6.0	20	3.0	anr			
Arsenic	8.0	20	3.0	9.3	116.3	3.4	113.3
Barium	200		4.0	anr			
Beryllium	2.0		1.0	anr			
Bismuth	20						
Boron	100		10	anr			
Cadmium	3.0		1.0	anr			
Calcium	5000		1000	anr			
Chromium	10		2.0	anr			
Cobalt	50		3.0	anr			
Copper	10		2.0	anr			
Iron	100	500		anr			
Lead	3.0	20	2.5	3.4	113.3	2.9	116.0
Lithium	20						
Magnesium	5000		100	anr			
Manganese	15		3.0	anr			
Molybdenum	20		4.0	anr			
Nickel	10		4.0	anr			
Palladium	50						
Potassium	5000		2000	anr			
Selenium	10	20	5.0	anr			
Silicon	200						
Silver	5.0		1.0	anr			
Sodium	5000		1000	anr			
Sulfur	50	50	50	anr			
Strontium	10						
Thallium	10		2.0	10.0	100.0	1.5	75.0
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	anr			
Zinc	20		10	anr			

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA33017 Units: ug/l

Time:				08:44		08:51	
Sample ID:	CRI	CRIA	CRID	CRI4		CRID5	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zirconium	10		5.0				

(*) Outside of QC limits
(anr) Analyte not requested

8.6.5

8

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33017 Units: ug/l

Time:			14:35		14:41		21:07		21:13	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	521000	104.2	437000	87.4	540000	108.0	452000	90.4
Antimony		1000	3.6		992	99.2	3.1		998	99.8
Arsenic		1000	2.2		986	98.6	4.1		970	97.0
Barium		500	-1.2		478	95.6	-1.2		489	97.8
Beryllium		500	-0.30		449	89.8	-0.30		452	90.4
Bismuth		500	0.80		498	99.6	1.4		500	100.0
Boron			-14		-15		-16		-16	
Cadmium		1000	1.9		965	96.5	1.9		984	98.4
Calcium	400000	400000	395000	98.8	362000	90.5	394000	98.5	366000	91.5
Chromium		500	-0.30		429	85.8	-1.0		433	86.6
Cobalt		500	5.2		460	92.0	4.7		471	94.2
Copper		500	6.3		488	97.6	4.5		473	94.6
Iron	200000	200000	199000	99.5	188000	94.0	193000	96.5	185000	92.5
Lead		1000	2.0		906	90.6	5.4		912	91.2
Lithium		500	3.0		444	88.8	3.0		471	94.2
Magnesium	500000	500000	485000	97.0	443000	88.6	476000	95.2	443000	88.6
Manganese		500	-2.4		452	90.4	-1.7		468	93.6
Molybdenum		500	-0.70		469	93.8	-0.40		480	96.0
Nickel		1000	0.60		882	88.2	0.70		897	89.7
Palladium		500	-16		499	99.8	-16		518	103.6
Potassium			13.0		23.8		-15		-28	
Selenium		1000	3.6		899	89.9	10.8		884	88.4
Silicon			-3.6		-1.8		-3.2		-3.5	
Silver		1000	5.1		956	95.6	4.7		994	99.4
Sodium			-14		-9.1		-11		-13	
Sulfur		500	-40		443	88.6	-37		451	90.2
Strontium			-1.0		-1.0		-0.90		-1.1	
Thallium		1000	0.70		935	93.5	0.40		956	95.6
Tin			5.7		4.8		7.2		3.8	
Titanium			1.6		5.0		1.6		5.2	
Tungsten		500	21.7		504	100.8	12.8		505	101.0
Vanadium		500	-0.40		413	82.6	0.0		434	86.8
Zinc		1000	-2.9		906	90.6	-3.7		926	92.6

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33017 Units: ug/l

Time:			14:35		14:41		21:07		21:13	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1		ICSA2		ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-10		415	83.0	-10		436	87.2

(*) Outside of QC limits
(anr) Analyte not requested

8.6.6

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33017 Units: ug/l

Time:			03:40		06:40		06:52	
Sample ID:	ICSA	ICSAB	ICSA3		ICSA4		ICSAB5	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	480000	96.0	467000	93.4	401000	80.2
Antimony		1000	2.8		1.5		871	87.1
Arsenic		1000	0.40		2.7		1000	100.0
Barium		500	-0.60		-0.30		445	89.0
Beryllium		500	-0.30		-0.30		402	80.4
Bismuth		500	1.6		0.80		424	84.8
Boron			-17		-17		-14	
Cadmium		1000	2.0		2.0		818	81.8
Calcium	400000	400000	389000	97.3	385000	96.3	361000	90.3
Chromium		500	0.20		0.20		451	90.2
Cobalt		500	5.8		5.8		424	84.8
Copper		500	-1.0		-1.3		492	98.4
Iron	200000	200000	173000	86.5	169000	84.5	164000	82.0
Lead		1000	-2.9		-5.8		909	90.9
Lithium		500	2.1		2.7		434	86.8
Magnesium	500000	500000	456000	91.2	451000	90.2	425000	85.0
Manganese		500	-7.2		-9.4		411	82.2
Molybdenum		500	-0.10		0.0		410	82.0
Nickel		1000	0.80		0.80		847	84.7
Palladium		500	-12		-10		394	78.8*
Potassium			-21		-2.3		4.5	
Selenium		1000	-5.9		-12		855	85.5
Silicon			-2.8		-2.9		-1.0	
Silver		1000	-5.3		-8.6		793	79.3*(a)
Sodium			-15		-28		-21	
Sulfur		500	-38		-45		386	77.2*(a)
Strontium			-0.20		-0.10		-0.20	
Thallium		1000	3.7		-1.8		861	86.1
Tin			4.2		4.4		3.7	
Titanium			1.4		1.3		4.5	
Tungsten		500	6.3		5.5		443	88.6
Vanadium		500	-0.10		0.30		351	70.2*(a)
Zinc		1000	-2.5		-2.2		899	89.9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: SB010714M1.ICP Date Analyzed: 01/07/14 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA33017 Units: ug/l

Time:			03:40		06:40		06:52	
Sample ID:	ICSA	ICSAB	ICSA3		ICSA4		ICSAB5	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	-6.9		-6.2		354	70.8*

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

8.6.6

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:					12/27/13		12/27/13
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	3.6	11	23.5	<200	8.0	<200
Antimony	6.0	1.2	1.8	0.90	<6.0	0.50	<6.0
Arsenic	3.0	1.1	1.5	0.70	<3.0	-0.70	<3.0
Barium	200	.09	.36	0.20	<200	-0.10	<200
Beryllium	1.0	.01	.17	0.10	<1.0	0.10	<1.0
Bismuth	20	.9	.98				
Boron	100	1.1	2				
Cadmium	3.0	.2	.24	0.30	<3.0	0.20	<3.0
Calcium	5000	8.4	55	15.2	<5000	1.1	<5000
Chromium	10	.3	.92	-0.20	<10	0.10	<10
Cobalt	50	.2	.48	0.10	<50	-0.10	<50
Copper	10	.6	1	-4.4	<10	-3.8	<10
Iron	100	3.6	13	16.6	<100	2.2	<100
Lead	3.0	1.2	2.4	-0.20	<3.0	-0.30	<3.0
Lithium	20	.6	2.4				
Magnesium	5000	10	23	12.9	<5000	0.70	<5000
Manganese	15	.2	.18	0.20	<15	0.20	<15
Molybdenum	20	.3	2				
Nickel	10	.5	1.6	1.5	<10	1.4	<10
Palladium	50	.5	1.5				
Potassium	10000	17	41	-5.8	<10000	-22	<10000
Selenium	10	1.8	2.4	-1.1	<10	-1.3	<10
Silicon	200	5.1	29				
Silver	10	.4	1.5	0.70	<10	0.70	<10
Sodium	10000	5.2	58	21.9	<10000	17.1	<10000
Sulfur	50	2.9	5.9				
Strontium	10	.04	.59				
Thallium	2.0	1.6	1.3	0.0	<2.0	-0.70	<2.0
Tin	10	1.1	3.7				
Titanium	10	.2	1.2				
Tungsten	50	3.6	6.5				
Vanadium	50	.2	.72	-0.20	<50	-0.70	<50
Zinc	20	.7	4.4	2.3	<20	1.7	<20

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:				12/27/13		12/27/13	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Zirconium	10	.3	1.2				

Associated samples MP76945: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	JB56222-2 Original	MS	Spikelot MPIOW9	% Rec	QC Limits
Aluminum	172	2090	2000	95.9	75-125
Antimony	2.2	492	500	98.4	75-125
Arsenic	5.7	2090	2000	104.2	75-125
Barium	337	2300	2000	98.6	75-125
Beryllium	0.0	53.6	50	107.0	75-125
Bismuth					
Boron	anr				
Cadmium	0.50	47.0	50	93.2	75-125
Calcium	23200	43000	25000	91.2	75-125
Chromium	0.0	199	200	99.5	75-125
Cobalt	0.30	479	500	95.8	75-125
Copper	0.0	264	250	105.6	75-125
Iron	55.4	1030	1000	97.5	75-125
Lead	0.0	515	500	103.0	75-125
Lithium					
Magnesium	5600	31200	25000	103.5	75-125
Manganese	141	637	500	99.2	75-125
Molybdenum					
Nickel	1.4	507	500	101.1	75-125
Palladium					
Potassium	1960	28800	25000	106.8	75-125
Selenium	0.0	2050	2000	102.5	75-125
Silicon					
Silver	0.0	41.4	50	82.8	75-125
Sodium	16000	42400	25000	105.6	75-125
Sulfur					
Strontium					
Thallium	0.0	1850	2000	92.5	75-125
Tin					
Titanium					
Tungsten					
Vanadium	0.0	466	500	93.2	75-125
Zinc	0.0	505	500	99.9	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/27/13

Metal	JB56222-2 Original MS	Spikelot MPIOW9	% Rec	QC Limits
Zirconium				

Associated samples MP76945: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	JB56222-2 Original	MSD	Spikelot MPIOW9	% Rec	MSD RPD	QC Limit
Aluminum	172	2010	2000	91.9	3.9	20
Antimony	2.2	492	500	98.4	0.0	20
Arsenic	6.3	1990	2000	99.2	4.9	20
Barium	337	2220	2000	94.6	3.5	20
Beryllium	0.10	48.1	50	96.0	10.8	20
Bismuth						
Boron	anr					
Cadmium	0.40	50.9	50	101.0	8.0	20
Calcium	20200	46900	25000	106.8	8.7	20
Chromium	0.0	198	200	99.0	0.5	20
Cobalt	0.0	520	500	104.0	8.2	20
Copper	0.0	260	250	104.0	1.5	20
Iron	40.0	1020	1000	96.5	1.0	20
Lead	0.0	477	500	95.4	7.7	20
Lithium						
Magnesium	5330	31800	25000	105.9	1.9	20
Manganese	141	630	500	97.8	1.1	20
Molybdenum						
Nickel	1.4	468	500	93.3	8.0	20
Palladium						
Potassium	1960	26000	25000	95.6	10.2	20
Selenium	3.7	1940	2000	97.0	5.5	20
Silicon						
Silver	0.0	40.0	50	80.0	3.4	20
Sodium	15800	40300	25000	97.2	5.1	20
Sulfur						
Strontium						
Thallium	0.0	1850	2000	92.5	0.0	20
Tin						
Titanium						
Tungsten						
Vanadium	0.0	460	500	92.0	1.3	20
Zinc	5.7	521	500	103.1	3.1	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/27/13

Metal	JB56222-2 Original MSD	Spikelot MPIOW9	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP76945: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			12/27/13				12/27/13	
Metal	BSP Result	Spikelot MPIOW9	% Rec	QC Limits	LCS Result	Spikelot MPLCW3	% Rec	QC Limits
Aluminum	1990	2000	99.5	80-120	4960	5000	99.2	80-120
Antimony	486	500	97.2	80-120	520	500	104.0	80-120
Arsenic	2060	2000	103.0	80-120	527	500	105.4	80-120
Barium	1920	2000	96.0	80-120	500	500	100.0	80-120
Beryllium	53.3	50	106.6	80-120	569	500	113.8	80-120
Bismuth								
Boron	anr							
Cadmium	46.1	50	92.2	80-120	531	500	106.2	80-120
Calcium	21800	25000	87.2	80-120	5000	5500	90.9	80-120
Chromium	203	200	101.5	80-120	517	500	103.4	80-120
Cobalt	474	500	94.8	80-120	489	500	97.8	80-120
Copper	208	250	83.2	80-120	502	500	100.4	80-120
Iron	991	1000	99.1	80-120	5470	5500	99.5	80-120
Lead	516	500	103.2	80-120	531	500	106.2	80-120
Lithium								
Magnesium	25400	25000	101.6	80-120	5340	5500	97.1	80-120
Manganese	505	500	101.0	80-120	517	500	103.4	80-120
Molybdenum								
Nickel	503	500	100.6	80-120	517	500	103.4	80-120
Palladium								
Potassium	26000	25000	104.0	80-120	10600	10000	106.0	80-120
Selenium	2030	2000	101.5	80-120	515	500	103.0	80-120
Silicon								
Silver	40.9	50	81.8	80-120	196	200	98.0	80-120
Sodium	25400	25000	101.6	80-120	10400	10000	104.0	80-120
Sulfur								
Strontium								
Thallium	1920	2000	96.0	80-120	495	500	99.0	80-120
Tin								
Titanium								
Tungsten								
Vanadium	472	500	94.4	80-120	481	500	96.2	80-120
Zinc	504	500	100.8	80-120	564	500	112.8	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13 12/27/13

Metal	BSP Result	Spikelot MPIOW9	% Rec	QC Limits	LCS Result	Spikelot MPLCW3	% Rec	QC Limits
Zirconium								

Associated samples MP76945: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.7.3

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	LCS Result	Spikelot MPLCW3	% Rec	QC Limits
Aluminum	4620	5000	92.4	80-120
Antimony	514	500	102.8	80-120
Arsenic	521	500	104.2	80-120
Barium	509	500	101.8	80-120
Beryllium	579	500	115.8	80-120
Bismuth				
Boron				
Cadmium	524	500	104.8	80-120
Calcium	5110	5500	92.9	80-120
Chromium	548	500	109.6	80-120
Cobalt	483	500	96.6	80-120
Copper	562	500	112.4	80-120
Iron	5590	5500	101.6	80-120
Lead	524	500	104.8	80-120
Lithium				
Magnesium	5470	5500	99.5	80-120
Manganese	549	500	109.8	80-120
Molybdenum				
Nickel	512	500	102.4	80-120
Palladium				
Potassium	10800	10000	108.0	80-120
Selenium	510	500	102.0	80-120
Silicon				
Silver	206	200	103.0	80-120
Sodium	10600	10000	106.0	80-120
Sulfur				
Strontium				
Thallium	491	500	98.2	80-120
Tin				
Titanium				
Tungsten				
Vanadium	509	500	101.8	80-120
Zinc	524	500	104.8	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/27/13

Metal	LCS Result	Spikelot MPLCW3	% Rec	QC Limits
Zirconium				

Associated samples MP76945: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			12/27/13				12/27/13	
Metal	JB56222-2 Original	SDL 1:5	%DIF	QC Limits	JB56222-2F Original	SDL 1:5	%DIF	QC Limits
Aluminum	172	155	9.8	0-10	143	110	23.4 (a)	0-10
Antimony	2.20	0.00	NC	0-10	1.40	0.00	NC	0-10
Arsenic	5.70	0.00	100.0(a)	0-10	3.80	0.00	100.0(a)	0-10
Barium	337	324	1.4	0-10	333	329	0.2	0-10
Beryllium	0.00	0.300	200.0(a)	0-10	0.00	0.300	200.0(a)	0-10
Bismuth								
Boron	anr							
Cadmium	0.400	1.90	375.0(a)	0-10	0.00	1.60	300.0(a)	0-10
Calcium	23200	19900	1.6	0-10	22500	20100	1.0	0-10
Chromium	0.00	0.00	NC	0-10	0.00	0.00	NC	0-10
Cobalt	0.00	0.00	NC	0-10	0.300	0.00	NC	0-10
Copper	0.00	0.00	NC	0-10	0.00	4.60	NC	0-10
Iron	40.0	58.3	5.2	0-10	24.7	51.3	107.7(a)	0-10
Lead	0.00	0.00	NC	0-10	0.00	0.00	NC	0-10
Lithium								
Magnesium	5600	5280	0.9	0-10	5460	5260	0.3	0-10
Manganese	141	148	4.9	0-10	138	157	13.8*(b)	0-10
Molybdenum								
Nickel	1.40	6.80	385.7(a)	0-10	1.00	5.50	450.0(a)	0-10
Palladium								
Potassium	2090	2010	3.6	0-10	1750	1790	6.1	0-10
Selenium	0.00	0.00	NC	0-10	0.00	0.00	NC	0-10
Silicon								
Silver	0.00	0.00	NC	0-10	1.80	0.00	100.0(a)	0-10
Sodium	16000	15700	1.7	0-10	15900	15800	0.3	0-10
Sulfur								
Strontium								
Thallium	0.00	0.00	NC	0-10	0.00	0.00	NC	0-10
Tin								
Titanium								
Tungsten								
Vanadium	0.00	0.00	NC	0-10	0.00	0.00	NC	0-10
Zinc	2.60	7.00	22.8 (a)	0-10	1.90	7.90	229.2(a)	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76945
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:	12/27/13			12/27/13		
Metal	JB56222-2 Original SDL 1:5	%DIF	QC Limits	JB56222-2F Original SDL 1:5	%DIF	QC Limits
Zirconium						

Associated samples MP76945: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

8.7.4

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76986 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/30/13

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.093	.089	-0.0023	<0.20

Associated samples MP76986: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.8.1

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76986 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/30/13

Metal	JB56143-1 Original	MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0	2.0	2	100.0	75-125

Associated samples MP76986: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76986 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/30/13

Metal	JB56143-1 Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.1	2	105.0	4.9	20

Associated samples MP76986: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

8.8.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

QC Batch ID: MP76986
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/30/13

Metal	LCS Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	2.0	2	100.0	80-120

Associated samples MP76986: JB56243-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.8.3

8

New Jersey
ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Nitrogen, Ammonia	GP76991/GN97430	0.20	0.030	mg/l	1	1.06	106.0	80-120%
Total Organic Carbon	GP77025/GN97479	1000	0.00	mg/kg	20000	19800	99.0	80-120%

Associated Samples:
Batch GP76991: JB56243-1
Batch GP77025: JB56243-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Total Organic Carbon	GP77025/GN97479	JB53358-4RT	mg/kg	25500	25300	0.8	0-40%

Associated Samples:
Batch GP77025: JB56243-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Ammonia	GP76991/GN97430	JB56222-2	mg/l	0.36	1	1.1	74.0	52-146%
Total Organic Carbon	GP77025/GN97479	JB53358-4RT	mg/kg	25500	52600	75300	94.7	46.9-123.4%

Associated Samples:
Batch GP76991: JB56243-1
Batch GP77025: JB56243-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Nitrogen, Ammonia	GP76991/GN97430	JB56222-2	mg/l	0.36	1	1.1	0.0	

Associated Samples:
Batch GP76991: JB56243-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: B123113W1.AMN Date Analyzed: 12/31/13 Methods: SM20 4500NH3G, SM4500NH3 H-11 M, SM4500NH3 H-11L
Analyst: CV Run ID: GN97430
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:03	GN97430-STD1	1		STDA
08:04	GN97430-STD2	1		STDB
08:05	GN97430-STD3	1		STDC
08:06	GN97430-STD4	1		STDD
08:07	GN97430-STD5	1		STDE
08:08	GN97430-STD6	1		STDF
08:09	GN97430-STD7	1		STDG
08:10	GN97430-ICV1	1		
08:10	GN97430-ICB1	1		
08:11	GN97430-CCV1	1		
08:12	GN97430-CCB1	1		
08:13	GP76991-MB1	1		
08:14	GP76991-B1	1		
08:15	GP76991-S1	1		
08:16	GP76991-MSD1	1		
08:17	GP76991-S2	1		Over calibration curve. See rerun at dilution.
08:18	GP76991-MSD2	1		Over calibration curve. See rerun at dilution.
08:19	JB56222-2	1		(sample used for QC only; not part of login JB56243)
08:20	ZZZZZZ	1		
08:20	ZZZZZZ	1		
08:21	ZZZZZZ	1		
08:22	GN97430-CCV2	1		
08:23	GN97430-CCB2	1		
08:24	ZZZZZZ	1		
08:25	ZZZZZZ	1		
08:26	JB56222-3	1		(sample used for QC only; not part of login JB56243)
08:27	ZZZZZZ	1		
08:28	ZZZZZZ	1		
08:29	ZZZZZZ	1		
08:30	ZZZZZZ	1		
08:30	JB56243-1	1		
08:31	ZZZZZZ	1		
08:32	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: B123113W1.AMN Date Analyzed: 12/31/13 Methods: SM20 4500NH3G, SM4500NH3 H-11 M, SM4500NH3 H-11L
Analyst: CV Run ID: GN97430
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:33	GN97430-CCV3	1		
08:34	GN97430-CCB3	1		
08:35	ZZZZZZ	1		
08:36	ZZZZZZ	1		
08:37	ZZZZZZ	1		
08:38	ZZZZZZ	1		
08:39	ZZZZZZ	1		
08:40	ZZZZZZ	1		
08:41	ZZZZZZ	1		
08:41	GP76990-MB1	1		CCV failed high. See rerun.
08:42	GP76990-B1	1		CCV failed high. See rerun.
08:43	GP76990-S1	1		CCV failed high. See rerun.
08:44	GN97430-CCV4	1		CCV failed high. See rerun.
08:50	GN97430-CCV5	1		
08:51	GN97430-CCB4	1		
08:51	ZZZZZZ	1		
08:52	ZZZZZZ	1		
08:53	ZZZZZZ	1		
08:54	ZZZZZZ	1		
08:55	ZZZZZZ	1		
08:56	ZZZZZZ	1		
08:57	ZZZZZZ	1		
08:58	GP76990-MB1	1		
08:59	GP76990-B1	1		
09:00	ZZZZZZ	1		
09:01	GN97430-CCV6	1		
09:02	GN97430-CCB5	1		
09:03	GP76990-S1	1		Over calibration curve. See rerun at dilution.
09:03	GP76990-MSD1	1		Over calibration curve. See rerun at dilution.
09:04	GP76990-S2	1		Over calibration curve. See rerun at dilution.
09:05	GP76990-MSD2	1		Over calibration curve. See rerun at dilution.
09:06	JB56477-2	1		(sample used for QC only; not part of login JB56243)
09:07	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: B123113W1.AMN Date Analyzed: 12/31/13 Methods: SM20 4500NH3G, SM4500NH3 H-11 M, SM4500NH3 H-11L
Analyst: CV Run ID: GN97430
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:08	ZZZZZZ	1		
09:09	ZZZZZZ	1		
09:10	ZZZZZZ	1		
09:11	ZZZZZZ	1		
09:12	GN97430-CCV7	1		
09:13	GN97430-CCB6	1		
09:13	ZZZZZZ	1		
09:14	ZZZZZZ	1		
09:15	ZZZZZZ	1		
09:16	JB56477-3	1		(sample used for QC only; not part of login JB56243)
09:17	ZZZZZZ	1		
09:18	ZZZZZZ	1		
09:19	ZZZZZZ	1		
09:20	GP76810-MB2	1		
09:21	GP76810-B2	1		
09:22	ZZZZZZ	1		
09:22	GN97430-CCV8	1		
09:23	GN97430-CCB7	1		
09:24	ZZZZZZ	1		
09:25	ZZZZZZ	1		
09:26	GP77003-MB1	1		
09:27	GP77003-B1	1		
09:28	GP77003-S1	1		
09:29	GP77003-MSD1	1		
09:30	JB56241-1A	1		(sample used for QC only; not part of login JB56243)
09:31	GP77003-LB1	1		
09:32	GP76991-S2	20		1:20 dilution for confirmation only
09:33	GP76991-S2	40		1:40 dilution
09:33	GN97430-CCV9	1		
09:34	GN97430-CCB8	1		
09:35	GP76991-MSD2	20		1:20 dilution Over calibration curve. See rerun at dilution.
09:36	GP76991-MSD2	40		1:40 dilution
09:37	ZZZZZZ	20		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: B123113W1.AMN Date Analyzed: 12/31/13 Methods: SM20 4500NH3G, SM4500NH3 H-11 M, SM4500NH3 H-11L
Analyst: CV Run ID: GN97430
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:38	ZZZZZZ	40		
09:39	JB56222-3	20		(sample used for QC only; not part of login JB56243)
09:40	JB56222-3	40		(sample used for QC only; not part of login JB56243)
09:41	GP76990-S1	20		1:20 dilution Over calibration curve. See rerun at dilution.
09:42	GP76990-S1	40		1:40 dilution
09:43	GP76990-MSD1	20		1:20 dilution. Over calibration curve. See rerun at dilution.
09:44	GP76990-MSD1	40		
09:44	GN97430-CCV10	1		
09:45	GN97430-CCB9	1		
09:46	GP76990-S2	20		1:20 dilution
09:47	GP76990-S2	40		1:40 dilution for confirmation only
09:48	GP76990-MSD2	20		1:20 dilution
09:49	GP76990-MSD2	40		1:40 dilution for confirmation only
09:50	JB56477-2	20		(sample used for QC only; not part of login JB56243)
09:51	JB56477-2	40		(sample used for QC only; not part of login JB56243)
09:52	ZZZZZZ	20		
09:53	ZZZZZZ	40		
09:54	ZZZZZZ	20		
09:54	ZZZZZZ	40		
09:55	GN97430-CCV11	1		
09:56	GN97430-CCB10	1		
09:57	JB56477-3	20		(sample used for QC only; not part of login JB56243)
09:58	JB56477-3	40		(sample used for QC only; not part of login JB56243)
09:59	ZZZZZZ	20		
10:00	ZZZZZZ	40		
10:03	GN97430-CCV12	1		
10:04	GN97430-CCB11	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: B123113W1.AMN Date Analyzed: 12/31/13 Methods: SM20 4500NH3G, SM4500NH3 H-11 M, SM4500NH3 H-11L
Run ID: GN97430 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN97430-ICV1	Nitrogen, Ammonia	1.5	0.20	0.030	1.5	100.0	90-110
GN97430-ICB1	Nitrogen, Ammonia	-0.099	0.20	0.030			
GN97430-CCV1	Nitrogen, Ammonia	1.5	0.20	0.030	1.5	100.0	90-110
GN97430-CCB1	Nitrogen, Ammonia	-0.13	0.20	0.030			
GN97430-CCV2	Nitrogen, Ammonia	1.5	0.20	0.030	1.5	100.0	90-110
GN97430-CCB2	Nitrogen, Ammonia	-0.075	0.20	0.030			
GN97430-CCV3	Nitrogen, Ammonia	1.5	0.20	0.030	1.5	100.0	90-110
GN97430-CCB3	Nitrogen, Ammonia	-0.12	0.20	0.030			
GN97430-CCV5	Nitrogen, Ammonia	1.6	0.20	0.030	1.5	106.7	90-110
GN97430-CCB4	Nitrogen, Ammonia	-0.066	0.20	0.030			
GN97430-CCV6	Nitrogen, Ammonia	1.6	0.20	0.030	1.5	106.7	90-110
GN97430-CCB5	Nitrogen, Ammonia	-0.086	0.20	0.030			
GN97430-CCV7	Nitrogen, Ammonia	1.6	0.20	0.030	1.5	106.7	90-110
GN97430-CCB6	Nitrogen, Ammonia	-0.075	0.20	0.030			
GN97430-CCV8	Nitrogen, Ammonia	1.6	0.20	0.030	1.5	106.7	90-110
GN97430-CCB7	Nitrogen, Ammonia	-0.074	0.20	0.030			
GN97430-CCV9	Nitrogen, Ammonia	1.6	0.20	0.030	1.5	106.7	90-110
GN97430-CCB8	Nitrogen, Ammonia	-0.087	0.20	0.030			
GN97430-CCV10	Nitrogen, Ammonia	1.6	0.20	0.030	1.5	106.7	90-110
GN97430-CCB9	Nitrogen, Ammonia	0.19	0.20	0.030			
GN97430-CCV11	Nitrogen, Ammonia	1.6	0.20	0.030	1.5	106.7	90-110
GN97430-CCB10	Nitrogen, Ammonia	0.15	0.20	0.030			
GN97430-CCV12	Nitrogen, Ammonia	1.6	0.20	0.030	1.5	106.7	90-110
GN97430-CCB11	Nitrogen, Ammonia	0.18	0.20	0.030			

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: D31231S1.TXT Date Analyzed: 12/31/13 Methods: CORP ENG 81M/SW9060M
Analyst: VA Run ID: GN97479
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:04	GN97479-STD1	1		STDA
09:16	GN97479-STD2	1		STDB
09:34	GN97479-STD3	1		STDC
09:56	GN97479-STD4	1		STDD
10:53	GN97479-STD5	1		STDE
11:09	GN97479-STD6	1		STDF
11:29	GN97479-STD7	1		STDG
11:55	GN97479-ICV1	1		
12:11	GN97479-ICB1	1		
12:20	GN97479-CCV1	1		
12:30	GN97479-CCB1	1		
12:42	GP77025-MB1	1		
12:54	GP77025-B1	1		
13:11	ZZZZZZ	1		
14:36	JB53358-4RT	1		(sample used for QC only; not part of login JB56243)
14:56	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:22	JB56243-2	1		Multiple injections indicate possible sample non-homogeneity.
15:53	GP77025-D1	1		
16:12	GP77025-S1	1		
16:30	ZZZZZZ	1		
16:44	GN97479-CCV2	1		
16:56	GN97479-CCB2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JB56243
Account: ENVNJB - EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

File ID: D31231S1.TXT Date Analyzed: 12/31/13 Methods: CORP ENG 81M/SW9060M
Run ID: GN97479 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN97479-ICV1	Total Organic Carbon	20800	1000	840	20000	104.0	90-110
GN97479-ICB1	Total Organic Carbon	840 U	1000	840			
GN97479-CCV1	Total Organic Carbon	25800	1000	840	25000	103.2	90-110
GN97479-CCB1	Total Organic Carbon	840 U	1000	840			
GN97479-CCV2	Total Organic Carbon	26100	1000	840	25000	104.4	90-110
GN97479-CCB2	Total Organic Carbon	840 U	1000	840			

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JB56243
Account: ENVNJB EnviroTrac
Project: Hess Port Reading, QC Labs, 835 West Avenue, Port Reading, NJ

Sample: JB56243-2 **Analyzed:** 28-DEC-13 by KP **Method:** SM2540 G-97
ClientID: QC-TW-1 (2.5-3.0)

Wet Weight (Total)	33.55	g
Tare Weight	27.1	g
Dry Weight (Total)	32.46	g
Solids, Percent	83.1	%

APPENDIX VIII

SWPE-IGWSRS Spreadsheets

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Acetone (2-Propanone)	CAS No.:	67-64-1
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	6000
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	5.75E-01
K_d	Soil-Water Partition Coefficient	L/kg	2.62E-03
H'	Henry's Law Constant	dimensionless	1.59E-03
RL_{soil}	Soil Reporting Limit	mg/kg	0.01
C_{sat}	Soil Saturation Concentration	mg/kg	1.55E+05
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.00456
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 1.90E+01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

19 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Aluminum (total)	CAS No.:	7429-90-5
		Evaluated by:	

$$IGWSRS = C_{gw} \frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	200
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	NA
K_d	Soil-Water Partition Coefficient	L/kg	1.50E+03
H'	Henry's Law Constant	dimensionless	0.00E+00
RL_{soil}	Soil Reporting Limit	mg/kg	20
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 6.00E+03 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

6000 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Anthracene	CAS No.:	120-12-7
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	2000
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	2.95E+04
K_d	Soil-Water Partition Coefficient	L/kg	1.35E+02
H'	Henry's Law Constant	dimensionless	2.67E-03
RL_{soil}	Soil Reporting Limit	mg/kg	0.2
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.00456
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 5.40E+03 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

5400 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Arsenic (total)	CAS No.:	7440-38-2
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	0.02
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	NA
K_d	Soil-Water Partition Coefficient	L/kg	2.60E+01
H'	Henry's Law Constant	dimensionless	0.00E+00
RL_{soil}	Soil Reporting Limit	mg/kg	1
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	19

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 1.00E-02 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

19 mg/kg

CONTROLLED BY AMBIENT BACKGROUND CONCENTRATION

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Benzene	CAS No.:	71-43-2
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	0.2
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	5.89E+01
K_d	Soil-Water Partition Coefficient	L/kg	2.71E-01
H'	Henry's Law Constant	dimensionless	2.28E-01
RL_{soil}	Soil Reporting Limit	mg/kg	0.005
C_{sat}	Soil Saturation Concentration	mg/kg	5.22E+02
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 2.00E-03 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

0.005 mg/kg

CONTROLLED BY SOIL REPORTING LIMIT

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Benzo(a)anthracene (1,2-Benzanthracene)	CAS No.:	56-55-3
		Evaluated by:	

$$IGWSRS = C_{gw} \frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	0.05
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	3.98E+05
K_d	Soil-Water Partition Coefficient	L/kg	1.82E+03
H'	Henry's Law Constant	dimensionless	1.37E-04
RL_{soil}	Soil Reporting Limit	mg/kg	0.2
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.00456
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 2.00E+00 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

2 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Benzo(b)fluoranthene (3,4-Benzofluoranthene)	CAS No.:	205-99-2
		Evaluated by:	

$$IGWSRS = C_{gw} \frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	0.05
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	1.23E+06
K_d	Soil-Water Partition Coefficient	L/kg	5.61E+03
H'	Henry's Law Constant	dimensionless	4.55E-03
RL_{soil}	Soil Reporting Limit	mg/kg	0.2
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.00456
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 6.00E+00 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

6 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Benzo(a)pyrene	CAS No.:	50-32-8
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	0.005
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	1.02E+06
K_d	Soil-Water Partition Coefficient	L/kg	4.65E+03
H'	Henry's Law Constant	dimensionless	4.63E-05
RL_{soil}	Soil Reporting Limit	mg/kg	0.2
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.00456
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 5.00E-01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

0.5 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Beryllium	CAS No.:	7440-41-7
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	1
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	NA
K_d	Soil-Water Partition Coefficient	L/kg	3.50E+01
H'	Henry's Law Constant	dimensionless	0.00E+00
RL_{soil}	Soil Reporting Limit	mg/kg	0.5
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 7.00E-01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

0.7 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Chrysene	CAS No.:	218-01-9
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	5
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	3.98E+05
K_d	Soil-Water Partition Coefficient	L/kg	1.82E+03
H'	Henry's Law Constant	dimensionless	3.88E-03
RL_{soil}	Soil Reporting Limit	mg/kg	0.2
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.00456
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 1.80E+02 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

180 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Ethylbenzene	CAS No.:	100-41-4
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	700
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	3.63E+02
K_d	Soil-Water Partition Coefficient	L/kg	1.67E+00
H'	Henry's Law Constant	dimensionless	3.23E-01
RL_{soil}	Soil Reporting Limit	mg/kg	0.005
C_{sat}	Soil Saturation Concentration	mg/kg	1.55E+02
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 2.60E+01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

26 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Lead (total)	CAS No.:	7439-92-1
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	5
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	NA
K_d	Soil-Water Partition Coefficient	L/kg	9.00E+02
H'	Henry's Law Constant	dimensionless	0.00E+00
RL_{soil}	Soil Reporting Limit	mg/kg	1
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 9.00E+01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

90 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Manganese (total)	CAS No.:	7439-96-5
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	50
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	NA
K_d	Soil-Water Partition Coefficient	L/kg	6.50E+01
H'	Henry's Law Constant	dimensionless	0.00E+00
RL_{soil}	Soil Reporting Limit	mg/kg	2
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 6.50E+01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

65 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Mercury (total)	CAS No.:	7439-97-6
		Evaluated by:	

$$IGWSRS = C_{gw} \frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	2
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	NA
K_d	Soil-Water Partition Coefficient	L/kg	2.00E-01
H'	Henry's Law Constant	dimensionless	0.00E+00
RL_{soil}	Soil Reporting Limit	mg/kg	0.1
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 1.00E-02 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

0.1 mg/kg

CONTROLLED BY SOIL REPORTING LIMIT

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	2-Methylnaphthalene	CAS No.:	91-57-6
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	30
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	6.82E+03
K_d	Soil-Water Partition Coefficient	L/kg	3.14E+01
H'	Henry's Law Constant	dimensionless	2.13E-02
RL_{soil}	Soil Reporting Limit	mg/kg	0.17
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 1.90E+01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

19 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Methylene chloride (Dichloromethane)	CAS No.:	75-09-2
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	3
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	1.17E+01
K_d	Soil-Water Partition Coefficient	L/kg	5.38E-02
H'	Henry's Law Constant	dimensionless	8.98E-02
RL_{soil}	Soil Reporting Limit	mg/kg	0.005
C_{sat}	Soil Saturation Concentration	mg/kg	2.44E+03
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 1.00E-02 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

0.01 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Methyl tert-butyl ether (MTBE)	CAS No.:	1634-04-4
		Evaluated by:	

$$IGWSRS = C_{gw} \frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	70
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	8.00E+00
K_d	Soil-Water Partition Coefficient	L/kg	3.68E-02
H'	Henry's Law Constant	dimensionless	2.40E-02
RL_{soil}	Soil Reporting Limit	mg/kg	0.005
C_{sat}	Soil Saturation Concentration	mg/kg	8.27E+03
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 3.00E-01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

0.3 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Nickel (total)	CAS No.:	7440-02-0
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	100
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	NA
K_d	Soil-Water Partition Coefficient	L/kg	2.40E+01
H'	Henry's Law Constant	dimensionless	0.00E+00
RL_{soil}	Soil Reporting Limit	mg/kg	4
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

				Converted to metric:	
Parameter	*Definition*	*Value*	*units*	*Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 4.80E+01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

48 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Silver (total)	CAS No.:	7440-22-4
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	40
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	NA
K_d	Soil-Water Partition Coefficient	L/kg	2.60E-01
H'	Henry's Law Constant	dimensionless	0.00E+00
RL_{soil}	Soil Reporting Limit	mg/kg	1
C_{sat}	Soil Saturation Concentration	mg/kg	NA
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 3.00E-01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

1 mg/kg

CONTROLLED BY SOIL REPORTING LIMIT

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Toluene	CAS No.:	108-88-3
		Evaluated by:	

$$IGWSRS = C_{gw}\frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	600
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	1.82E+02
K_d	Soil-Water Partition Coefficient	L/kg	8.37E-01
H'	Henry's Law Constant	dimensionless	2.72E-01
RL_{soil}	Soil Reporting Limit	mg/kg	0.005
C_{sat}	Soil Saturation Concentration	mg/kg	2.89E+02
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 1.20E+01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

12 mg/kg

NJDEP Soil-Water Partition Equation Calculator V2.1, November 2013

Site Name:	Port Readin QC Lab	Date:	
Contaminant:	Xylenes (total)	CAS No.:	1330-20-7
		Evaluated by:	

$$IGWSRS = C_{gw} \frac{1mg}{1000\mu g}\{K_d + \frac{\theta_w + \theta_a H'}{\rho_b}\}DAF$$

$$K_d = K_{oc} f_{oc}$$

$$DAF = 1 + \frac{Kid}{IL}$$

$$d = (0.112L^2)^{0.5} + d_a\{1 - \exp[(-LI)/(Kid_a)]\}, d \le d_a$$

Contaminant Parameters:

Parameter	*Definition*	*Units*	*Value*
C_{gw}	Health-based Ground Water Quality Criterion	µg/L	1000
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	L/kg	3.86E+02
K_d	Soil-Water Partition Coefficient	L/kg	1.78E+00
H'	Henry's Law Constant	dimensionless	2.76E-01
RL_{soil}	Soil Reporting Limit	mg/kg	0.005
C_{sat}	Soil Saturation Concentration	mg/kg	1.68E+02
C_{amb}	Ambient Background Concentration	mg/kg	NA

Soil Parameters:

Parameter	*Definition*	*Units*	*Value*
θ_w	Water-filled soil porosity	dimensionless (v/v)	0.23
θ_a	Air-filled Soil Porosity	dimensionless (v/v)	0.18
f_{oc}	Fraction Organic Carbon Content of Soil	dimensionless (w/w)	0.0046
ρ_b	Dry Soil Bulk Density	kg/L	1.5

NOTES: (click outside box when finished)

DAF Parameters:

Parameter	*Definition*	*Value*	*units*	Converted to metric: *Value*	*units*
L	Length of Area of Concern Parallel to Ground Water Flow	100	ft	30.5	m
d_a	Aquifer Thickness	11.5	ft	3.5	m
I	Infiltration Rate	11	in/yr	0.28	m/yr
K	Aquifer Hydraulic Conductivity	51865	ft/yr	15808	m/yr
i	Gradient	0.003	dimensionless	0.003	dimensionless
d	Mixing Zone Depth			3.4	m
DAF	Dilution-Attenuation Factor			20	dimensionless

Health-based Impact to Groundwater Soil Cleanup Criteria: 3.90E+01 mg/kg

Impact to Ground Water Soil Remediation Standard (IGWSRS):

39 mg/kg

APPENDIX IX

SPLP-IGWSRS Spreadsheets

NJDEP SPLP Spreadsheet, V3.1, November 2013

Case name/area of concern:	Hess Port Reading- Concrete
Case number:	
Sampling date:	2/26/2014
Contaminant:	Beryllium
CAS No:	7440-41-7
Water solubility (mg/L)	NA
Aqueous reporting limit (µg/L):	1.00E+00
Soil reporting limit (mg/kg):	5.00E-01
Health-based GWQC (µg/L)	1.00E+00
DAF (20, or site-specific if approved):	**20**
Leachate Criterion (µg/L):	2.00E+01
Henry's law constant (dimensionless):	0.00E+00

CALCULATE SITE SPECIFIC IGW STANDARD

Reset Spreadsheet

Print Results

Instructions

CLICK HERE if chemical is not on drop-down list, or to enter alternate GWQC

Print to file

Exit

NOTE:

USE ONE PAGE PER CONTAMINANT, do not leave empty rows between samples

Do not enter samples with soil concentrations at or below the reporting limit

When leachate concentration is non-detect, enter the aqueous reporting limit

Enter site-specific dilution-attenuation factor (DAF) if desired

Data entry cells (do not skip rows)

Optional data entry

Calculated or locked cells

Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	SPLP Leachate Concentration (µg/L)	Final pH of Leachate (except VOCs)	Optional data				Kd (L/kg)	% Contaminant in Leachate	Field leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)	Organic Carbon (%)				
P-13(2-2.5)	0.0923	2.002	0.68	5	6.06					114.3	15.95	5.94	PASS
P-13(2-2.5)a	0.0923	2.002	0.68	5	6.06					114.3	15.95	5.94	PASS
P-12(2-2.5)	0.0971	2.008	0.36	5	6.49					51.3	28.72	6.99	PASS
P-12(2-2.5)a	0.0971	2.008	0.36	5	6.49					51.3	28.72	6.99	PASS

SPLP RESULTS for

OPTION 1a: All adjusted leachate concentrations are below the leachate criterion

REMEDIATION STANDARD = 0.68 mg/kg

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard

EVERYTHING PASSED, OPTION 1b NOT VALID

OPTION 2: Remediation standard using site-specific Kd value

Kd ratio = 2.23, AVERAGING Kds OK

Kd USED FOR CALCULATING STANDARD = 82.82 L/kg

result before rounding = 1.6594 mg/kg

REMEDIATION STANDARD = 0.7 mg/kg (controlled by maximum soil concentration)

OPTION 3: Remediation standard using linear regression

Number of points = 4

Soil concentration midrange = .52

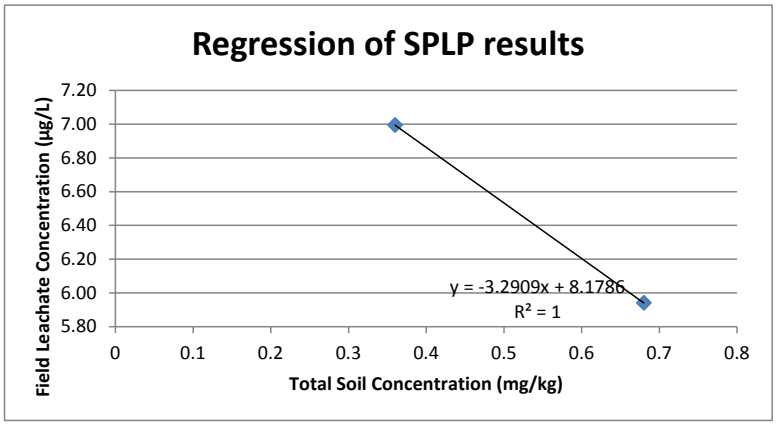
Number of points above midrange = 2

Enough points above midrange? YES

R-Square high enough? YES

Leachate criterion within range of leachate concentrations? NO

OPTION 3 NOT VALID



NJDEP SPLP Spreadsheet, V3.1, November 2013

Case name/area of concern:	Hess Port Reading- Concrete
Case number:	
Sampling date:	2/26/2014
Contaminant:	Lead (total)
CAS No:	7439-92-1
Water solubility (mg/L)	NA
Aqueous reporting limit (µg/L):	5.00E+00
Soil reporting limit (mg/kg):	1.00E+00
Health-based GWQC (µg/L)	5.00E+00
DAF (20, or site-specific if approved):	**20**
Leachate Criterion (µg/L):	#NAME? **#NAME?**
Henry's law constant (dimensionless):	0.00E+00

CALCULATE SITE SPECIFIC IGW STANDARD

Reset Spreadsheet

Print Results

Instructions

CLICK HERE if chemical is not on drop-down list, or to enter alternate GWQC

Print to file

Exit

NOTE:
USE ONE PAGE PER CONTAMINANT, do not leave empty rows between samples
Do not enter samples with soil concentrations at or below the reporting limit
When leachate concentration is non-detect, enter the aqueous reporting limit
Enter site-specific dilution-attenuation factor (DAF) if desired

	Data entry cells (do not skip rows)
	Optional data entry
	Calculated or locked cells
	Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	SPLP Leachate Concentration (µg/L)	Final pH of Leachate (except VOCs)	Optional data				Kd (L/kg)	% Contaminant in Leachate	Field leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)	Organic Carbon (%)				
P-12(2-2.5)	0.0971	2.008	4.9	50	6.49					77.3	21.10	63.25	PASS
P-12(2-2.5)b	0.0971	2.008	4.9	50	6.49					77.3	21.10	63.25	PASS
P-12(2-2.5)a	0.0971	2.008	4.9	50	6.49					77.3	21.10	63.25	PASS

SPLP RESULTS for

OPTION 1a: All adjusted leachate concentrations are below the leachate criterion

REMEDIATION STANDARD = 4.9 mg/kg

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard
EVERYTHING PASSED, OPTION 1b NOT VALID

OPTION 2: Remediation standard using site-specific Kd value
Kd ratio = 1.00, AVERAGING Kds OK
Kd USED FOR CALCULATING STANDARD = 77.32 L/kg
result before rounding = 7.7474 mg/kg
REMEDIATION STANDARD = 5 mg/kg (controlled by maximum soil concentration)

OPTION 3: Remediation standard using linear regression
Number of points = 3
All soil concentrations are the same value. The slope cannot be calulated.

NJDEP SPLP Spreadsheet, V3.1, November 2013

Case name/area of concern:	Hess Port Reading- Concrete
Case number:	
Sampling date:	2/26/2014
Contaminant:	Nickel (total)
CAS No:	7440-02-0
Water solubility (mg/L)	NA
Aqueous reporting limit (µg/L):	4.00E+00
Soil reporting limit (mg/kg):	4.00E+00
Health-based GWQC (µg/L)	1.00E+02
DAF (20, or site-specific if approved):	**20**
Leachate Criterion (µg/L):	2.00E+03
Henry's law constant (dimensionless):	0.00E+00

CALCULATE SITE SPECIFIC IGW STANDARD

Reset Spreadsheet

Print Results

Instructions

CLICK HERE if chemical is not on drop-down list, or to enter alternate GWQC

Print to file

Exit

NOTE:

USE ONE PAGE PER CONTAMINANT, do not leave empty rows between samples

Do not enter samples with soil concentrations at or below the reporting limit

When leachate concentration is non-detect, enter the aqueous reporting limit

Enter site-specific dilution-attenuation factor (DAF) if desired

Data entry cells (do not skip rows)

Optional data entry

Calculated or locked cells

Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	SPLP Leachate Concentration (µg/L)	Final pH of Leachate (except VOCs)	Optional data				Kd (L/kg)	% Contaminant in Leachate	Field leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)	Organic Carbon (%)				
P-13(2-2.5)	0.0923	2.002	19.2	10	6.06					1898.3	1.13	10.11	PASS
P-13(2-2.5)a	0.0923	2.002	19.2	10	6.06					1898.3	1.13	10.11	PASS
P-13(2-2.5)b	0.0923	2.002	19.2	10	6.06					1898.3	1.13	10.11	PASS

SPLP RESULTS for

OPTION 1a: All adjusted leachate concentrations are below the leachate criterion

REMEDIATION STANDARD = 19.2 mg/kg

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard

EVERYTHING PASSED, OPTION 1b NOT VALID

OPTION 2: Remediation standard using site-specific Kd value

Kd ratio = 1.00, AVERAGING Kds OK

Kd USED FOR CALCULATING STANDARD = 1898.31 L/kg

result before rounding = 3796.9264 mg/kg

REMEDIATION STANDARD = 19 mg/kg (controlled by maximum soil concentration)

OPTION 3: Remediation standard using linear regression

Number of points = 3

All soil concentrations are the same value. The slope cannot be calulated.

APPENDIX X

Underground Storage Tank Removal Documentation

EnviroTrac

ENVIROTRAC
Version 5.10 ID: 004800
Facility Name: HESS CORPORATION - QC LAB Help | My Workspace | Logout

-->

New Jersey Department of Environmental Protection
Division of Remediation Support
Bureau of Risk Management, Initial Notice and Case Assignment
PO Box 435
Trenton, NJ 08625-0435
(609)633-0708

CLOSURE - Notice of Intent
Underground Storage Tank System

DEP Received Date: 05/10/2013
Earliest Start of Work Date: 05/24/2013
Expiration Date: 05/10/2014

TMS #: N13-9009
Activity #: UCL130001

Facility ID: 004800

Facility Name:
HESS CORPORATION - QC LAB

Facility Address:
835 WEST AVE
Woodbridge Twp
Middlesex County

Decommission, close and conduct a site investigation for the UST(s) and all associated piping specified in this approval in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

The management of any excavated soils must follow the requirements listed in N.J.A.C. 7:14B-8.2.

Note: The UNDERGROUND STORAGE TANK SERVICES CERTIFICATION ACT, N.J.S.A. 58:10A-24, requires all services performed on an UST system for the purpose of complying with P.L.1986, c.102 to be performed by or under the immediate on-site supervision of a person certified by the Department for that service. The certified person providing that service must be employed by a business that is also certified by the Department for that service.

Contact Person: William J Groeling

Telephone #: (908) 757-1900

This Permit must be displayed at the Site during the Approved Activity and must be made available for inspections at all times.

The above listed facility is hereby granted approval to perform the attached activities in accordance with N.J.A.C. 7:14b-1 et. seq..

Rafael Rivera

18171111

Rafael Rivera, Supervisor
Bureau of Risk Management, Initial Notice and Case Assignment

---

TMS #: N13-9009

Facility ID: 004800

The closure of the following:

Tank No.	Length of Piping (ft)	Tank Size (gallons)	Tank Contents
1	51 or more	10000	Waste Oil

Return

TOWNSHIP OF WOODBRIDGE
1 MAIN STREET
WOODBRIDGE, NJ 07095
732 6344500

Control Number: 1075484
Application Date: 06/17/13

CONSTRUCTION PERMIT

IDENTIFICATION

OWNER/PROPERTY DETAILS

Block : 665 Lot : 33 Qualifier :
Work Site Location: 835 WEST AVE PORT READING

Owner In Fee: AMERADA HESS CORP
Address: 1 HESS PLAZA
WOODBRIDGE NJ, 07095
Telephone: (908) 757-1900
Use Group(s): U

Contractor: EISCO Of NJ
Address: 43 NEW BRUNSWICK AVE
HOPELAWN NJ, 08861
Telephone: (732) 442-5152
Lic. No. / Bldrs. Reg. No.:
Federal Emp. No.: 51-0345186

is hereby granted permission to perform the following work :

[ ] BUILDING [ ] PLUMBING [ ] DEMOLITION
[ ] ELECTRICAL [X] FIRE PROTECTION [ ] OTHER
[ ] ELEVATOR DEVICES [ ] MECHANICAL
[ ] ASBESTOS ABATEMENT [ ] LEAD HAZARD ABATEMENT
(Subchapter 8 only)

DESCRIPTION OF WORK:

Tank Removal- (4) 275 gallon tank

ESTIMATED COST OF WORK:

Cost of Construction:	$0.00
Cost of Alteration:	$0.00
Cost of Demolition:	$2,500.00
Total Cost:	$2,500.00

PAYMENTS (Office Use Only)	
Building	
Electrical	
Plumbing	
Fire Protection	$280.00
Elevator Devices	
Mechanical	
VolFee (DCA)	
AltFee (DCA)	
DCA Minimum Fee	$0.00
Other Fees	
CO Fee	
CCO Fee	
Minimum Fee	
Total	$280.00
All Fees Waived	No

Amount to be Paid: $280.00

If construction does not commence within one year of date of issuance, or if construction ceases for a period of six months, this permit is void.

LAWRENCE ESOLDO
Construction Official

Date

:: Failure to obtain all required inspections may result in administrative action.
:: Final inspections are required before final payment is to be made to contractor.
:: An approved set of plans must be kept at the worksite at all times.

Note:

DATE RECEIVED

SCALE RECEIVING TICKET NO. 81457

DEPENDABLE IRON & METAL CO., INC.
P.O. BOX 1012 · RAHWAY, N.J. 07065

CORNER OF RODGERS ST. & LEESVILLE AVE. · RAHWAY, N.J. (732) 382-7715

VENDOR NAME			VENDOR NUMBER		INVENTORY CODE	
PRODUCT DESCRIPTION						
PRODUCT NUMBER						
GROSS LBS.						
TARE LBS.						
NET LBS.						
DEDUCTIONS						
GROSS TONS						
UNIT PRICE		PER		PER		PER
$ AMOUNT		TERMS*		TERMS*		TERMS*
SELLERS' SIGNATURE FOR CASH RECEIVED						

*TERMS: C = CASH CK = CHECK P = PAYABLE O = OPEN

DISPATCH
CONCRETE (877) 322-4300
STONE (908) 322-7840
ASPHALT (888) 322-2231

FANWOOD CRUSHED STONE CO.

DIVISION OF WELDON MATERIALS, INC.
OFFICE-141 CENTRAL AVE., WESTFIELD, N.J.
(908)233-4444
Ready Mixed Concrete, Sand, Crushed Stone, Black Top

DATE	MANUAL WEIGHTS TICKET NO.
06/28/13	10378
TIME 14:16	

CUSTOMER:	JOB:	TRUCK NO.
414800/000 MADDOX MATERIALS, LLC. 303 MAIN STREET SPOTSWOOD NJ 08884	SEWARREN	30 TRUCKER NAME: MEL BEL 12
P.O. NO.	ZONE: 1	

PRODUCT CODE	PRODUCT	AMOUNT	UNIT PRICE	EXTENSION
SP	QUARRY PROCESS	GROSS WGT. 38.41 TARE WGT. 12.97 NET WGT. 25.44		
LOADS: 3	ACCUM. AMOUNT 78.72 TONS			
LOCATION WHERE WEIGHED:				
WEIGHMASTER NAME:				

REC'D BY & AGREE TO ALL TERMS (FRONT & BACK): _____ DRIVER NAME: _____

FORM FS - 131

2

APPENDIX XI

Underground Storage Tank Photographic Documentation

EnviroTrac

Photograph Documentation

Hess Corporation- Quality Control Laboratory
835 West Avenue
Port Reading, Middlesex County, New Jersey

Photograph 1: Location of former 10,000-gallon waste oil UST.

Photograph 2: Former 10,000-gallon waste oil UST.

Photograph Documentation

Hess Corporation- Quality Control Laboratory
835 West Avenue
Port Reading, Middlesex County, New Jersey

Photograph 3: Former 10,000-gallon waste oil UST.

Photograph 4: Former 10,000-gallon waste oil UST removed from the excavation.

Photograph Documentation

Hess Corporation- Quality Control Laboratory
835 West Avenue
Port Reading, Middlesex County, New Jersey

Photograph 5: Inside the former 10,000-gallon waste oil UST post-cleaning.

Photograph 6: Former 10,000-gallon waste oil UST excavation backfilled.

APPENDIX XII

Clean Fill Certification

Maddox Materials, LLC
Quality Aggregates & Construction Soils

May 6, 2014

EISCO, Inc.
900 Port Reading Ave.
Port Reading, NJ 07064

Attn: Jeff Thorne
Phone: 732-442-5152
Fax: 732-442-3331

Re: 77 Cliff Rd.
Sewaren, NJ

To whom it may concern:

Please be advised that the 78.72 tons of QP Maddox delivered to the above reference project on 6/20/13 and the 25.86 tons delivered on 6/21/13 originated from the Weldon Fanwood quarry located at #1 New Providence Road, Watchung, NJ, Somerset County tax map Block 76.01 Lot 5 and 20. It is free of any hazardous materials or contamination and is considered to be clean virgin material. Our belief is based on the fact that this site has been tested by Accredited Analytical Resources, LLC work order# 1300047 as well as work order# 1300265 and found to be acceptable for residential development.

If you need any additional information please contact me at 732-251-0054.

Respectfully Submitted,

William Maddox
Member

323 Main Street • Spotswood, NJ 08884 • PH: 732-251-0054 • Fax: 732-251-0461

Maddox Materials, LLC
Quality Aggregates & Construction Soils

May 6, 2014

EISCO, Inc.
43 New Brunswick Ave.
Hopelawn, NJ 08861

Attn: Jeff Thorne
Phone: 732-442-5152
Fax: 732-442-3331

Re: 77 Cliff Rd.
Sewaren, NJ

To whom it may concern:

Please be advised that the 24.63 tons of DGA Maddox delivered to the above referenced project on 6/19/13 as well as the 26.24 tons delivered on 6/20/13 originated from the Stavola Quarry located on Chimney Rock Rd. Bridgewater Twp., NJ. Somerset County Tax Map Block 6401 Lot 15 the nearest cross street is Hwy 22. The material is free of any hazardous materials or contamination and is considered to be clean virgin material.

If you need any additional information please contact me at 732-251-0054.

Respectfully Submitted,

William Maddox
Member

323 Main Street • Spotswood, NJ 08884 • PH: 732-251-0054 • Fax: 732-251-0461

APPENDIX XIII

Soil Boring Temporary Well Logs

Soil Boring Log of P-2

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)		Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date	DTW	
		6/21/2013	NA	
Date Started: **6/21/13** Completed: **6/21/13**				
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA		

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-6" Mulch
0.5	-	0.0	6"-1.5' Brown SILT (dry)
1	-	0.0	
1.5	-	0.0	1.5-2.5' Orange fine/medium SAND and COBBLES (dry)
2	-	0.0	
2.5	P-2	0.0	
3			End of boring

EnviroTrac

Soil Boring Log of P-3

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)	Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date: 6/21/2013 DTW: NA	
Date Started: **6/21/13** Completed: **6/21/13**			
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA	

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-6" Concrete
0.5	-	0.0	6"-1' Orange fine/medium SAND, some silt and cobbles (dry)
1	-	0.0	1-1.5' Dark brown SILT, some cobbles (dry)
1.5	-	0.0	1.5-2.5' Brown SILT (dry)
2	-	0.0	
2.5	P-3	10.2	
3			End of boring

EnviroTrac

Soil Boring Log of P-4

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)	Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date: 6/21/2013 DTW: NA	
Date Started: **6/21/13** Completed: **6/21/13**			
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA	

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-6" Concrete
0.5	-	0.0	6"-1' Orange/brown fine/medium SAND and SILT, some cobbles (dry)
1	-	0.0	1-1.5' Orange/brown SILT and GRAVEL, some fine/medium sand (dry)
1.5	-	0.7	1.5-2' Dark brown SILT and GRAVEL (dry)
2	-	0.6	2-2.5' Dark brown SILT, some gravel (moist)
2.5	P-4	0.8	
3			End of boring

Soil Boring Log of P-5

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)		Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date	DTW	
		6/21/2013	NA	
Date Started: **6/21/13** Completed: **6/21/13**				
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA		

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-6" Concrete
0.5	-	0.0	
1	-	0.0	6"-1.5' Brown SILT, some cobbles (dry)
1.5	-	0.0	
2	-	0.0	1.5-2.5' Brown SILT, some fine/medium sand, trace cobbles (dry)
2.5	P-5	0.0	
3			End of boring

Soil Boring Log of P-6

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)		Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date	DTW	
		6/21/2013	NA	
Date Started: **6/21/13** Completed: **6/21/13**				
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA		

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-6" Concrete
0.5	-	0.0	6"-2' Orange fine/medium SAND, some cobbles (dry)
1	-	0.0	
1.5	-	0.0	
2	-	0.0	
2.5	P-6	0.0	2-2.5' Brown SILT, some cobbles (dry)
3			End of boring

Soil Boring Log of P-7

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)		Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date	DTW	
		6/21/2013	NA	
Date Started: **6/21/13** Completed: **6/21/13**				
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA		

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-6" Concrete
0.5	-	0.9	6"-1.5' Brown SILT and COBBLES (dry)
1	-	31.0	
1.5	-	154.0	
2	-	176.0	1.5-3' Dark brown SILT, some clay and cobbles (dry)
2.5	P-7	215.0	
3	-	89.3	
3.5			End of boring- Refusal at 3.0'

Soil Boring Log of P-8

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)		Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date	DTW	
		6/21/2013	NA	
Date Started: **6/21/13** Completed: **6/21/13**				
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA		

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-6" Concrete
0.5	-	0.0	6"-1' Orange fine/medium SAND, some cobbles (dry)
1	-	0.0	1-1.5' Orange/brown fine/medium SAND and SILT, some cobbles (dry)
1.5	-	0.0	1.5-2.5' Brown SILT and COBBLES (dry)
2	-	0.0	
2.5	P-8	0.0	
3			End of boring

Soil Boring Log of P-9

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)		Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date	DTW	
		6/21/2013	NA	
Date Started: **6/21/13** Completed: **6/21/13**				
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA		

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-6" Concrete
0.5	-	0.0	6"-1' Orange fine/medium SAND, some cobbles (dry)
1	-	0.0	1-1.5' Orange/brown fine/medium SAND and SILT, some cobbles (dry)
1.5	-	0.0	1.5-2.5' Brown SILT, some clay and cobbles (dry)
2	-	0.0	
2.5	P-9	0.0	
3			End of boring

Soil Boring Log of P-10

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)		Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date	DTW	
		6/21/2013	NA	
Date Started: **6/21/13** Completed: **6/21/13**				
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA		

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-1' Concrete
0.5	-	0.0	
1	-	0.0	
1.5	-	0.0	1-2' Brown SILT and COBBLES (dry)
2	-	0.0	
2.5	P-10	0.0	2-2.5' Brown SILT, some clay and cobbles (moist)
3			End of boring

Soil Boring Log of P-11

Client: **Hess Corporation**	Preferred ID # 004800 Incident # 13-07-24-1427-02	Depth to Water (ft. from measuring pt.)		Site Elevation Datum Ground Elevation
Site Name: **Former Quality Control Laboratory- 835 West Ave, Port Reading New Jersey**		Date	DTW	
		6/21/2013	NA	
Date Started: **6/21/13** Completed: **6/21/13**				
Completion Depth: **2.5'**	Hydrogeologist/Engineer **Justin Piegaro**	Permit #: NA		

DEPTH (ft. below grade)	Sample ID	OVM (ppm)	SOIL DESCRIPTION
0	-	0.0	0-1' Concrete
0.5	-	0.0	
1	-	0.0	
1.5	-	0.0	1-2.5' Brown SILT and COBBLES (dry)
2	-	0.0	
2.5	P-11	0.0	
3			End of boring

SOIL BORING LOG

Boring Name: P-6R

Client: Hess Corporation	Site Name: Port Reading Complex- Quality Control Laboratory	Latitude: 40°33'48.26"
Site Address: 835 West Avenue, Port Reading, New Jersey		Longitude: 74°15'09.03"
Drilling Company: Zebra Environmental Corp		Method: Hand Auger

Start Date: 12/16/2013 Complete Date: 12/16/2013 Soil Logger: Sarah Dyson

Boring Diameter: 2" Completion Depth: 2.5' Depth to Water: NA

Soil Boring Lithology	Depth (feet)	Samples ID	Samples Depth	Samples PID	SOIL DESCRIPTION
	0				0.0-0.5' Concrete
	1			0.0	0.5-1.5' Reddish orange very Sandy CLAY with Gravel
				0.0	
	2			0.0	1.5-2.5' Orange Sandy CLAY with Gravel
		P-6R	2.0-2.5'	0.0	
	3				

SOIL BORING LOG

Boring Name: P-7R

Client: Hess Corporation	Site Name: Port Reading Complex- Quality Control Laboratory	Latitude: 40°33'48.52"
Site Address: 835 West Avenue, Port Reading, New Jersey		Longitude: 74°15'09.04"
Drilling Company: Zebra Environmental Corp		Method: Hand Auger

Start Date: 12/16/2013 Complete Date: 12/16/2013 Soil Logger: Sarah Dyson

Boring Diameter: 2" Completion Depth: 6.0' Depth to Water: 4 feet

Soil Boring Lithology	Depth (feet)	Samples ID	Samples Depth	PID	SOIL DESCRIPTION
	0				0.0-0.5' Concrete
	1			12.8	0.5-2.5' Brown SAND, some Clay and Gravel
				31.2	
	2			181	
		P-7R	2.0-2.5'		
	3			281	2.5-4.0' Dark brown SAND with organic material
				693	
	4			8,753	
				153	4.0-5.0' Reddish brown CLAY
	5			305	
				218	5.0-5.5' Grayish brown CLAY
	6	P-7R	5.5-6.0'	116	5.5-6.0' Red and gray CLAY

SOIL BORING LOG

Boring Name: P-8R

Client: Hess Corporation	Site Name: Port Reading Complex- Quality Control Laboratory	Latitude: 40°33'48.13"
Site Address: 835 West Avenue, Port Reading, New Jersey		Longitude: 74°15'08.95"
Drilling Company: Zebra Environmental Corp		Method: Hand Auger

Start Date: 12/16/2013 Complete Date: 12/16/2013 Soil Logger: Sarah Dyson

Boring Diameter: 2" Completion Depth: 2.5' Depth to Water: NA

Soil Boring Lithology	Depth (feet)	Samples ID	Samples Depth	Samples PID	SOIL DESCRIPTION
	0				0.0-0.5' Concrete
	1			0.0	0.5-1.5' Orange Sandy CLAY, some Gravel
				17.8	
	2			14.9	1.5-2.0' Brownish orange very Sandy CLAY with concrete and Gravel
		P-8R	2.0-2.5'	839	2.0-2.5' Brown CLAY, some Sand and Gravel
	3				

SOIL BORING LOG

Boring Name: P-9R

Client: Hess Corporation	Site Name: Port Reading Complex- Quality Control Laboratory	Latitude: 40°33'48.67"
Site Address: 835 West Avenue, Port Reading, New Jersey		Longitude: 74°15'08.81"
Drilling Company: Zebra Environmental Corp		Method: Hand Auger

Start Date: 12/17/2013 Complete Date: 12/17/2013 Soil Logger: Sarah Dyson

Boring Diameter: 2" Completion Depth: 2.5' Depth to Water: NA

Soil Boring Lithology	Depth (feet)	Samples ID	Samples Depth	Samples PID	SOIL DESCRIPTION
	0				0.0-1.0' Concrete
				0.0	
	1			0.0	1.0-2.5' Reddish brown SAND with rounded Gravel
				0.0	
	2	P-9R	2.0-2.5'	0.0	
	3				

SOIL BORING LOG

Boring Name: P-10R

Client: Hess Corporation	Site Name: Port Reading Complex- Quality Control Laboratory	Latitude: 40°33'49.00"
Site Address: 835 West Avenue, Port Reading, New Jersey		Longitude: 74°15'08.73"
Drilling Company: Zebra Environmental Corp		Method: Hand Auger

Start Date: 12/17/2013 Complete Date: 12/17/2013 Soil Logger: Sarah Dyson

Boring Diameter: 2" Completion Depth: 2.5' Depth to Water: NA

Soil Boring Lithology	Depth (feet)	Samples ID	Samples Depth	Samples PID	SOIL DESCRIPTION
	0				0.0-1.0' Concrete
				0.0	
	1			0.0	1.0-2.5' Reddish brown SAND with rounded Gravel
				0.0	
	2	P-10R	2.0-2.5'	0.0	
	3				

SOIL BORING LOG

Boring Name: P-13

Client: Hess Corporation	Site Name: Port Reading Complex- Quality Control Laboratory	Latitude: 40°33'47.99"
Site Address: 835 West Avenue, Port Reading, New Jersey		Longitude: 74°15'09.56"
Drilling Company: Zebra Environmental Corp		Method: Hand Auger

Start Date: 12/17/2013 Complete Date: 12/17/2013 Soil Logger: Sarah Dyson

Boring Diameter: 2" Completion Depth: 6.0' Depth to Water: 4 feet

Soil Boring Lithology	Depth (feet)	Samples ID	Samples Depth	Samples PID	SOIL DESCRIPTION
	0				0.0-0.5' Concrete
	1				0.5-3.0' Reddish brown SAND, some Gravel
	2	P-12	2.0-2.5'		
	3				3.0-4.5' Brownish gray CLAY
	4	P-12	4.0-4.5'		
	5				4.5-6.0' Red CLAY with Gravel
	6				

SOIL BORING LOG

Boring Name: P-12

Client: Hess Corporation	Site Name: Port Reading Complex- Quality Control Laboratory	Latitude: 40°33'47.82"
Site Address: 835 West Avenue, Port Reading, New Jersey		Longitude: 74°15'09.426"
Drilling Company: Zebra Environmental Corp		Method: Hand Auger

Start Date: 12/17/2013 Complete Date: 12/17/2013 Soil Logger: Sarah Dyson

Boring Diameter: 2" Completion Depth: 6.0' Depth to Water: 4 feet

Soil Boring Lithology	Depth (feet)	Samples ID	Samples Depth	PID	SOIL DESCRIPTION
	0				0.0-0.5' Concrete
				0.0	0.5-3.0' Reddish brown SAND, some Clay and Gravel
	1			0.0	
				0.0	
	2	P-13	2.0-2.5'	0.0	
				0.0	
	3			0.0	3.0-4.0' Reddish brown SAND with dark brown CLAY
				0.0	
	4	P-13	4.0-4.5	0.0	4.0-6.0' Brown CLAY, some Gravel
				0.0	
	5			0.0	
				0.0	
	6				

SOIL BORING LOG

Boring Name: QC-TW-1

Client: Hess Corporation	Site Name: Port Reading Complex- Quality Control Laboratory	Latitude: 40°33'42.327"
Site Address: 835 West Avenue, Port Reading, New Jersey		Longitude: 74°14'42.125"
Drilling Company: Summit Drilling		Method: Direct Push

Start Date: 12/18/2013 Complete Date: 12/18/2013 Soil Logger: Sarah Dyson

Boring Diameter: 2" Completion Depth: 12.0' Depth to Water: 4'

Soil Boring Lithology	Depth (feet)	Samples ID	Samples Depth	PID	SOIL DESCRIPTION
	0				
					0.0-0.5' ASPHALT
	1			0.0	0.5-1.0' ROADSTONE
				0.0	1.0-2.5' Brown SAND, some Gravel
	2			0.0	
				0.0	
	3	QC-TW-1	2.5-3.0'	0.0	2.5-4.5' Brown to red CLAY
				0.0	
	4			0.0	
				0.0	
	5			0.0	4.5-6.0' Red CLAY (tight)
				0.0	
	6			0.0	
				0.0	6.0-8.5' Fine reddish borwn SAND
	7			0.0	
				0.0	
	8			0.0	
				0.0	
	9			0.0	8.5-10.0' Fine reddish brown Clayey SAND
				0.0	
	10			0.0	
				0.0	10.0-11.0' No Recovery
	11			0.0	
				0.0	11.0-13.0' Fine reddish brown Clayey SAND
	12			0.0	
				0.0	
	13			0.0	
				0.0	13.0-15.0' Red CLAY
	14			0.0	
				0.0	
	15			0.0	

*Groundwater sample QC-TW-1 collected from temporary well screened from 0.0'-15.0' below grade

APPENDIX XIV

Electronic Data Documentation Submittal Confirmation

From:	srpedd@dep.state.nj.us
To:	Judith Kirkbride
Cc:	don.cramer@dep.state.nj.us
Subject:	006148, NJD045445483, HB154836 Passed
Date:	Wednesday, June 18, 2014 5:52:41 PM
Attachments:	erdtst-7-1-6.txt erresult-7-1-6.txt ersample-7-1-6.txt rstp-7-1-6.txt 006148_20130620_20130620.KML DTST.TXT EDSA_Error_Log.html HZRESULT.TXT HZSAMPLE.TXT

The EDD submission shown below was processed 06/18/2014. This submission has passed and is cataloged in our system.
Your submission has been issued an SRP Catalog ID: HB154836
Thank You

The following identifiers were in the DTST file:
Directory: 062013SB
DESC: Hess Corp. Port Reading Complex-QC Lab
SRPID: 006148
Submit Date: 6/18/2014

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.

From:	srpedd@dep.state.nj.us
To:	Judith Kirkbride
Cc:	don.cramer@dep.state.nj.us
Subject:	006148, NJD045445483, HB154844 Passed
Date:	Wednesday, June 18, 2014 5:52:45 PM
Attachments:	erdtst-7-1-6.txt erresult-7-1-6.txt ersample-7-1-6.txt rstp-7-1-6.txt DTST.TXT EDSA_Error_Log.html HZRESULT.TXT HZSAMPLE.TXT NJD045445483_20130621_20130621.KML

The EDD submission shown below was processed 06/18/2014. This submission has passed and is cataloged in our system.
Your submission has been issued an SRP Catalog ID: HB154844
Thank You

The following identifiers were in the DTST file:
Directory: 062113SB
DESC: Hess Corp-Port Reading Complex-QC Lab
SRPID: NJD045445483
Submit Date: 6/18/2014

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.

From:	srpedd@dep.state.nj.us
To:	Judith Kirkbride
Cc:	don.cramer@dep.state.nj.us
Subject:	006148, NJD045445483, HB154856 Passed
Date:	Thursday, June 19, 2014 4:50:42 PM
Attachments:	erdtst-7-1-6.txt erresult-7-1-6.txt ersample-7-1-6.txt rstp-7-1-6.txt DTST.TXT EDSA_Error_Log.html HZRESULT.TXT HZSAMPLE.TXT NJD045445483_20131218_20131219.KML

The EDD submission shown below was processed 06/19/2014. This submission has passed and is cataloged in our system.
Your submission has been issued an SRP Catalog ID: HB154856
Thank You

The following identifiers were in the DTST file:
Directory: 121913MW
DESC: Hess Corp.-Port Reading Complex-QC Lab
SRPID: NJD045445483
Submit Date: 6/19/2014

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.

From:	srpedd@dep.state.nj.us
To:	Judith Kirkbride
Cc:	don.cramer@dep.state.nj.us
Subject:	006148, NJD045445483, HB155472 Passed
Date:	Tuesday, July 08, 2014 2:49:40 PM
Attachments:	erdtst-7-1-6.txt erresult-7-1-6.txt ersample-7-1-6.txt rstp-7-1-6.txt 006148_20131216_20131217.KML DTST.TXT EDSA_Error_Log.html HZRESULT.TXT HZSAMPLE.TXT

The EDD submission shown below was processed 07/08/2014. This submission has passed and is cataloged in our system.
Your submission has been issued an SRP Catalog ID: HB155472
Thank You

The following identifiers were in the DTST file:
Directory: 121713SB
DESC: HC-PRC QC Lab
SRPID: 006148
Submit Date: 7/7/2014

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.

From:	srpedd@dep.state.nj.us
To:	Judith Kirkbride
Cc:	don.cramer@dep.state.nj.us
Subject:	006148, NJD045445483, HB155474 Passed
Date:	Tuesday, July 08, 2014 2:49:43 PM
Attachments:	erdtst-7-1-6.txt erresult-7-1-6.txt ersample-7-1-6.txt rstp-7-1-6.txt 006148_20130620_20130620.KML DTST.TXT EDSA_Error_Log.html HZRESULT.TXT HZSAMPLE.TXT

The EDD submission shown below was processed 07/08/2014. This submission has passed and is cataloged in our system.
Your submission has been issued an SRP Catalog ID: HB155474
Thank You

The following identifiers were in the DTST file:
Directory: 062013SB
DESC: Hess Corp.- Port Reading Complex-QC Lab
SRPID: 006148
Submit Date: 6/18/2014

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APPENDIX J:
QUALITY ASSURANCE PROJECT PLAN

QUALITY ASSURANCE PROJECT PLAN

AOC-19: QC Laboratory
Hess Corporation – Former Port Reading Complex (HC-PR)
835 West Avenue
Port Reading, Middlesex County, New Jersey
NJDEP PI# 006148
ISRA Case No. E20130449
EPA ID No. NJD045445483

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MAY 2016

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INTRODUCTION

This Quality Assurance Project Plan (QAPP) was prepared by Earth Systems, Inc. (Earth Systems) for Hess Corporation, who is conducting remedial investigation (RI) activities at an environmental area of concern designated as AOC-19: QC Laboratory located at 835 West Avenue, Port Reading (Woodbridge Township), Middlesex County, New Jersey (Property or site).

The purpose of this QAPP is to ensure that scientific data are acquired according to established methods and procedures designed to obtain results that are objective, true, repeatable, and of known accuracy. Specifically, this QAPP provides guidance and specifications to ensure that RI activities are planned and executed in a manner consistent with the Quality Assurance Objectives (QAO's) stated below:

- Field determinations and analytical results are valid through adherence to New Jersey Department of Environmental Protection (NJDEP) field procedures, NJDEP-approved analytical protocols, and calibration and preventive maintenance of equipment;
- Samples are identified and controlled through sample tracking systems and chain of custody procedures;
- Records are retained as documentary evidence of field activities and observations;
- Samples are collected and analytical data are validated in accordance with the NJDEP requirements; and
- Evaluations of the data are accurate, appropriate, and consistent throughout the project.

The contents of this QAPP are based on the NJDEP requirements as stated in the NJDEP Technical Requirements for Site Remediation and the Quality Assurance Project Plan Technical Guidance (Version 1.0, April 2014). This QAPP includes the following components:

- Problem Definition/Background;
- Project/Task Description;
- Project/Task Organization;
- Data Quality Objectives and Criteria for Measurement Data;
- Historical and Secondary Information/Data;
- Investigative Process Design;
- Field Instrumentation/Equipment Calibration and Frequency;
- Inspection/Acceptance of Supplies and Consumables;
- Sample Handling and Custody Requirements;
- Field Storage and Transport Procedures;
- Sample Containers, Preservation, and Holding Times;
- Analytical Methods Summary Table;
- Project Compounds and Analytical Summary;
- Analytical Quality Control;
- Laboratory Deliverables;
- Data and Records Management;
- Data Verification and Usability; and
- Corrective Action Processes.

As specific conditions and additional information warrant, this QAPP will be amended or revised to include site-specific quality assurance/quality control procedures.

Quality Assurance Project Plan
AOC-19: QC Laboratory
Hess Corporation – Former Port Reading Complex
835 West Avenue
Port Reading, Middlesex County, New Jersey

1. Project Definition / Background

Project Definition

The property is owned by Hess Corporation and is located at 835 West Avenue, Port Reading, New Jersey. The QC Lab was demolished in 2015 and included the decommissioning of four (4) underground storage tanks (USTs): two (2) 10,000-gallon No. waste oil, one 4,000-gallon waste oil and one 1,000-gallon waste oil. The UST decommissioning was performed per the regulations of the New Jersey Department of Environmental Protection (NJDEP) and included the collection and analyses of post-excavation soil samples to assess the adjacent soil for potential UST-associated impacts. The analyses identified soil contamination that was attributable to historic releases from the USTs, as well as, contaminants associated to the original location(s) of the soils that were historically introduced to the property for its initial development. The detected soil contamination and visible ground water in the UST excavations resulted in the collection and analysis of a groundwater sample. The analysis detected groundwater contamination that was attributed to the UST releases.

The overall project goals and objectives are summarized below:

- Vapor Intrusion Investigation;
- Horizontal and Vertical Delineation Soil Investigation; and
- Installation of Horizontal and Vertical Delineation Monitoring Wells.

The analytical data shall be used to determine if further soil, groundwater or vapor investigation is required. These decisions shall be made following receipt of all analytical data associated with the investigation. Data users for the project include the person responsible for conducting the remediation, the environmental consultant, and ultimately, the NJDEP.

2. Project / Task Description

A 1991 as-built plan titled "Replacement of Slop Oil Tank and Removal of Fuel Oil Tank" depicts a 6,000-gallon heating oil UST adjacent to the boiler room beneath the northern exterior grounds (Figure 2). Earth Systems will perform a geophysical Investigation of this UST location. The investigation will determine whether the UST or its backfilled excavation presently exists.

The extent of previous soil contamination related to the former USTs will be delineated both horizontally and vertically. In addition, soil sampling will be conducted at the location of the 6,000-gallon heating oil UST with the boring program determined by the findings of the geophysical survey.

Three (3) monitoring wells will be installed to further delineate the horizontal and vertical extent of groundwater contamination. Groundwater samples will be collected from the wells two weeks after their installation.

All data shall be collected through soil, groundwater and vapor sampling and laboratory analysis. No data shall be collected from other sources. The sample results shall be compared to the applicable remediation standards and a conclusion shall be made, based on the comparison, as to whether the Area of Concern (AOC) requires further investigation / action or no further investigation / action is required.

The applicable regulatory quality standards to this phase of investigation are:

- NJDEP Residential and Non-Residential Soil Remediation Standards
- NJDEP Default Impact to Groundwater Soil Screening Levels
- NJDEP Ground Water Quality Standards

3. Project / Task Organization

The NJDEP's "Quality Assurance Project Plan Technical Guidance" recommends that the QAPP include an organizational chart identifying key personnel and/or organizations showing relationships and lines of communication. As stated in Section 5 of the guidance, not all elements of the QAPP may need the same level of detail, which should be based on a graded approach depending on the complexity of the project and the intended use of the data. In this regard, since the number of personnel and organizations is relatively small, the relationships can be described rather than depicted in a chart.

Project Team

The Licensed Site Remediation Professional (LSRP) is John Virgie of Earth Systems. He also serves as the central point of communication with all other individuals and organizations associated with this project. He is responsible for implementing the Quality Assurance Project Plan and coordinating the site investigation activities. He can be reached at (732) 739-6444, extension 22.

The Project Director and On-Site Health and Safety Officer for Earth Systems is Mr. James Bartley. He can be reached at (732) 739-6444, extension 14.

The Project Manager is Mr. Joseph Cusick of Earth Systems. She is responsible for coordinating the site investigation activities in the field and tabulating/interpreting the analytical data once received. She can be reached at (732) 739-6444, extension 13.

Laboratory: Alpha Analytical: 2235 U.S. Highway 130, Dayton, NJ 08810 (Contact: Mr. Paul Simms @ psimms@alphalab.com).

Drilling Contractor: Uni-Tech Drilling Company, 49 Old York Road, Bridgewater, New Jersey 08807 (Contact: Greg Adams @ 908-725-7500)

Special Training Needs/Certification

Training needs and certifications of field oversight include requirements to have completed the OSHA 40-Hour training with annual 8-hour refresher training in accordance with 29 CFR 1910.120 (Hazardous waste

operations and emergency response). In addition, site workers must have a TWIC card and at least one person on-site must have completed Buckeye Person-In-Charge (PIC) training.

The site investigation activities are being conducted under the oversight of an LSRP.

Special training is required to operate laboratory equipment and conduct laboratory analyses. Laboratory certification is established at N.J.A.C. 7:18.

4. Data Quality Objectives and Criteria for Measurement Data

Data quality objectives ("DQOs") are qualitative and quantitative statements that are developed in the first six (6) steps of the DQO process. DQOs define the purpose of the data collection effort, clarify what the data should represent to satisfy this purpose, and specify the performance requirements for the quality of information to be obtained from the data.

In accordance with Section 5.4 of the NJDEP's "Quality Assurance Project Plan" technical guidance, the development of the data quality criteria can be developed through the formal DQO process described in the EPA document titled "Guidance for the Data Quality Objectives Process", EPA/600/R-96/055. For most projects, however, a less iterative process is normally used to develop the project-specific DQOs.

Data of Known Quality Protocols ("DKQP") describe specific laboratory quality assurance and quality control procedures which, if followed, will provide data of known and documented quality (i.e. scientific reproducible and reliable data). When data of known quality ("DKQ") is obtained, an evaluation of the data with respect to its intended purpose can be made. To this end, a NJDEP-certified laboratory must be used to analyze samples whenever possible.

Typical DQOs are often expressed in terms of data quality indicators ("DQIs") including precision, accuracy, representativeness, comparability, completeness and sensitivity (also known as the "PARCCS" parameters). These measures of performance are discussed in detail below.

<u>Precision</u>
Precision is the measure of agreement among repeated measurements of the same property under identical or substantially similar testing conditions. The investigator will determine the precision of the data by:

- Using the same analytical methods to perform repeated analyses on the same sample (laboratory or matrix duplicates);
- Collection of a field duplicate and submittal of both to evaluate the precision from sample collection, for sample handling, preservation and storage and analytical measurements

Precision for laboratory and field measurements can be expressed as the relative percent difference ("RPD") between two duplicate determinations or percent relative standard deviation ("%RSD") between multiple determinations.

Acceptance criteria for field precision shall be assessed through the splitting of a sample in the field and submitting both to the laboratory. Field duplicates will be collected at a frequency of one (1) per twenty (20) investigative samples per matrix per analytical parameter. Precision will be measured through the calculation of RPD. The resulting information will be used to assess sample homogeneity, spatial variability at the site, sample collection reproducibility, and analytical variability.

Accuracy

Accuracy is the degree of agreement of a measured value and an accepted reference or true value. The difference between the measured value and the reference or true value includes components of both systematic error (bias) and random error (precision). It should be noted that precise data may not be accurate data. Accuracy can be expressed as a percent recovery or percent deviation of the measurement with respect to its known or true value.

The accuracy will be determined through establishing acceptance criteria for spike recoveries (e.g., surrogate recoveries, laboratory control sample recoveries, matrix spike recoveries, reference material recoveries etc.) or allowable deviations for calibration (e.g., %RPD for calibration verification). Acceptance criteria for matrix spike measurements are expressed as a percent recovery and are usually specified in the analytical method (or laboratory SOP, as applicable). Various blank samples (laboratory or field) may also be used to assess contamination of samples that may bias results high. Accuracy in the field shall be assessed through the adherence to sample collection, handling, preservation, and holding time requirements.

Representativeness

Representativeness is a qualitative measurement that describes the extent to which analytical data represent the site conditions. In almost every project, the investigator will not be able to measure the whole system, process, or situation of interest. Instead, the investigator will choose sample locations, quantities, and analyses in order to capture a sufficiently broad and/or weighted view of the situation.

Representativeness in the laboratory is ensured by using the proper analytical procedures, appropriate methods, and meeting sample holding times. Following the detailed requirements outlined in the EPA methods and the laboratory SOPs will maximize the representativeness of the laboratory data.

Comparability

Comparability is a qualitative term that expresses the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition. Comparability is defined as the extent to which data from one data set can be compared directly to similar or related data sets and/or decision-making standards.

Historical data should be evaluated to determine whether they may be combined with data being collected in present time. Comparability should discuss comparisons of sample collection and handling methods, sample preparation, and analytical procedures, holding times, stability issues and QA protocol.

Comparability in the laboratory is dependent on the use of recognized methods and approved laboratory SOPs. Comparability in the field is dependent upon adherence to the sampling methodology and that the proper preservation techniques are used.

Completeness

Completeness is a measure of the amount of usable data collected compared to the amount of data expected to be obtained. Three measures of completeness are defined as:

- Sampling completeness, defined as the number of valid samples collected relative to the number of samples planned for collection;

- Analytical completeness, defined as the number of valid sample measurements relative to the number of valid samples collected; and
- Overall completeness, defined as the number of valid sample measurements relative to the number of samples planned for collection.

Sensitivity

Sensitivity refers to the ability of an analytical procedure to quantify an analyte at a given concentration. The sensitivity requirements should be established such that the laboratory method Reporting Limits ("RLs") are at or below the relevant and applicable regulatory limits for each Contaminant of Concern ("COC") for the project. For the purpose of SRP projects:

- The RL for a specific substance when determining the extent and degree of polluted soil, groundwater, or sediment from a release. For the purpose of this document, the RL is defined as:
  - Organics, the lowest initial calibration standard as adjusted for the dilution factor, sample weight/volume, and moisture content;
  - Inorganics, the concentration of that analyte in the lowest level check standard (which could be the lowest calibration standard in a multi-point calibration curve).

Methods for analysis have been chosen to meet the sensitivity requirements for a project (e.g., compound-specific and matrix-specific). If however, the laboratory RLs exceed the project sensitivity requirements (i.e., the RL is above the relevant and applicable regulatory standard), the analytical methods may need to be adjusted (e.g., analysis conducted using a more sensitive method or sample preparation and analysis features adjusted to gain sensitivity) and/or the project objectives may need to be adjusted (i.e., certain COCs may not be able to be screened out during this phase of the evaluation).

5. Historical and Secondary Information / Data

The potential sources of data for any project include both historical data (i.e. data not collected by the current investigator) and secondary data (i.e. data that were collected for a different purpose than that for which they are now being used). Historical data should be evaluated for applicability to current project objectives. Secondary data should be assessed to determine if the quality of the data is sufficient for the current project objectives and meets comparability criteria (it is not sufficient that the secondary data were produced by a reliable source or a known environmental monitoring project with an approved QAPP).

6. Investigation Process Design

A description and justification of the investigation design should include, for each area of interest:

- The COCs or other parameters of interest
- The number of anticipated investigation points and how and why they will be selected including a site map depicting proposed sample locations
- Method of obtaining/determining locational information (such as the use of GPS instrumentation)
- Factors which could affect the variability of the data such as physical obstructions, seasonal variations, tidal influences, soil profile changes, weather-related variation, and process variation within the source
- Design basis i.e. probability based or judgment based
- Results comparison (i.e. versus previous data, regulatory standards, reference population, etc.)
- Matrices to be monitored including any special sampling requirements

- Monitoring frequency (if applicable)
- Heterogeneity or homogeneity of the matrix
- Appropriateness of composite samples
- Required quality control samples

The investigative process design is based generally on the following:

- The Technical Requirements for Site Remediation N.J.A.C. 7:26E.
- The NJDEP's "Field Sampling Procedures Manual (FSPM)" dated August 2005.

7. Field Quality Control

Field quality control activities, along with their frequency, acceptance criteria, and corrective actions to be taken are provided for each DQI in the following table.

Analyte(s)	DQI	Data Quality Element	Frequency of Collection	Acceptance Criteria	Corrective Action(s)
All	Representativeness & Precision	Field Duplicate	One (1) per 20 samples per matrix per analyte	RPD ≤ 25% for results > 5x RL; Professional judgment for results < 5xRL	Potential data usability issue /possible rejection of data

Field equipment cleaning / decontamination are not expected to be required as all field equipment shall be dedicated to each individual sample.

8. Field Instrumentation / Equipment Calibration and Frequency

Field instrumentation/equipment that will require calibration includes a photoionization detector (PID). Calibration and routine maintenance procedures are presented in the User's Manual. Documentation of the maintenance and calibration records is stored at the office or in the field logbook.

In addition, the air flow controllers for vapor investigation will require calibration. The flow controllers will be calibrated in the laboratory prior to shipment.

9. Inspection / Acceptance of Supplies and Consumables

Critical supplies or consumables (e.g., pre-cleaned containers, pre-preserved containers, tubing, etc.) shall be inspected for visible indications of contamination and damage and, if none are identified, then the supplies/consumables shall be accepted for use.

10. Sample Handling and Custody Requirements

Sample handling shall be as specified in Section 2.5.5.1 of the FSPM and Section 4.6.2.2 of the NJDEP's "Data Quality Assessment and Data Usability Evaluation Technical Guidance", Version 1.0, dated April 2014. Specifically, samples shall be maintained on-site for no more than two (2) consecutive days, and shall be delivered to the laboratory within one (1) day of shipment from the field.

The chain of custody procedure to be utilized in the field is specified in Section 2.3.6 of the FSPM. The chain of custody procedure to be used in the laboratory shall be in accordance with Section 2.3.6 of the FSPM as well as the laboratory's standard operating procedure.

11. Field Storage and Transport Procedures

Samples shall remain in direct site and in the custody of field personnel at all times until transfer to the laboratory.

12. Sample Containers, Preservation, and Holding Times

Sample containers, preservation, and holding times are specified on Table 1.

13. Analytical Methods Summary Table

Analytical methods are summarized on Table 1.

14. Project Compounds and Analytical Summary

Soil samples will be collected and analyzed for Extractable Petroleum Hydrocarbons (EPH). If the UST contents are determined to be fuel oil, the samples will be analyzed for EPH Category 1 with contingent analysis for 2-methylnaphthalene and naphthalene. If the UST contents are determined to be gasoline, the samples will be analyzed for TCL VOC+15, methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA) and lead. If the UST contents are unknown, the samples will be analyzed for EPH Category 2 with contingent analysis for compounds following Table 2-1 of the NJDEP's Technical Requirements for Site Remediation. The project action limits are the NJDEP's Soil Remediation Standards and Default Impact to Groundwater Soil Screening Levels. The analytical methods chosen can meet the DQOs of the project.

Analytical sensitivity requirements include the use of instruments or methods to detect the contaminants of concern at or below the action limits. The RLs are expected to be below the applicable regulatory standards. NJDEP and EPA methods were selected to achieve the action limits. Laboratories may need to adjust RLs based on dilutions, sample sizes, extract/digestate volumes, percent solids and cleanup procedures. Sensitivity will be maximized by following the NJDEP and EPA methods or laboratory SOPs utilizing experienced, trained laboratory personnel and by conducting laboratory audits.

15. Analytical Quality Control

Quality assurance and quality control ("QA/QC") requirements for analysis are specified in the most recent version of the document titled "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", prepared by EPA. The laboratory may also have QA/QC procedures in addition to those specified by the test method (Appendix 1).

16. Laboratory Deliverables

The laboratory deliverable format to be used for this project shall be the reduced laboratory deliverable format as described in Appendix A of N.J.A.C. 7:26E. The laboratory shall also generate Hazsite files and spreadsheets of the analytical results.

17. Data and Records Management

The recording media for the project will be both paper and electronic. The project will implement proper document control procedures for both, consistent with NJDEP's Quality Management Plan. For instance, hand-recorded data records will be taken with indelible ink, and changes to such data records will be made by drawing a single line through the error with an initial by the responsible person. The Project Manager will have ultimate responsibility for any and all changes to records and documents. Similar controls will be put in place for electronic records.

The Quality Assurance Coordinator shall retain all updated versions of the QAPP and be responsible for distribution of the current version of the QAPP. The Quality Assurance Coordinator and the Project Manager will approve periodic updates. The Project Manager shall retain copies of all management reports, memoranda, and all correspondence between the parties identified in Section 3.

Project data shall be stored in the Project Manager's office. Laboratory records management is described in Appendix 1.

18. Data Verification and Usability

The procedure for review (verification and usability procedures) including data assessment versus stated data quality objectives of the investigation is specified in the NJDEP's "Data Quality Assessment and Data Usability Evaluation Technical Guidance", Version 1.0, dated April 2014.

19. Corrective Action Processes

Corrective action in the field may be needed when the work plan is modified (i.e. number or locations of samples) or when sampling procedures and/or field analytical procedures require modification due to unexpected conditions. The corrective action may be implemented at the time the determination is made in the field or may be implemented later, depending on the circumstances. Any corrective actions taken shall be documented in the field logbook and in the technical report.

Corrective actions in the laboratory may be needed when Non-Conformances occur. The laboratory shall implement and document corrective actions in accordance with the laboratory SOP.

Table 1: Analytical Methods / Quality Assurance Summary Table

TABLE 1
Analytical Methods/Quality Assurance Summary Table
AOC-19: QC Laboratory, Hess Corporation – Former Port Reading Complex, Port Reading, Middlesex County, New Jersey

Matrix Type	Number of Samples	Number of Blanks	Number of Duplicates	Analytical Parameters	Analytical Methods	Sample Preservation	Sample Container & Volume	Permissible Holding Time
Soil	25	0	0	Extractable Petroleum Hydrocarbons	EPH 10/08 Rev 3	4ºC	Amber glass 4 ounce	14 days to extract, 40 days after extraction to test
	60	1	0	Volatile Organic Compounds	8260C	4ºC methanol	Clear glass 40 mL	14 days
	27	0	0	Semi-Volatile Organic Compounds	8270C	4ºC	Clear glass 4 oz.	14 days to extract, 40 days after extraction to test
	23	0	0	Metals	6010	4ºC	Clear glass 4 oz.	180 days
	0	0	0	SPLP Metals	1312	4ºC	Clear glass 4 oz.	180 days to extract, 180 days after extraction to test
	0	0	0	Mercury	7471A	4ºC	Clear glass 4 oz.	28 days
	0	0	0	PCBs	8082	4ºC	Clear glass 4 oz.	14 days to extract, 40 days after extraction to test
	0	0	0	Pesticides	8081A	4ºC	Clear glass 4 oz.	14 days to extract, 40 days after extraction to test
	0	0	0	Cyanide, Total	EPA 9010C/ 9012A	4ºC	Clear glass 4 oz.	14 days
	0	0	0	Phenol	9065	4ºC	Clear glass 4 oz.	28 days
Ground Water	8	2 (FB, TB)	0	Volatile Organic Compounds	8260B	4ºC, HCl	Clear glass 40 mL	14 days
	8	0	0	Metals		4ºC, HCl		
	8	0	0	Semi-Volatile Organic Compounds	8270C	4ºC	Amber glass 1 L w/TFE lined cap	7 days to extract, 40 days after extraction to test
Soil Gas	0	0	0	Volatile Organic Compounds	Low Level TO-15	none	1 L stainless steel canister	30 days
Indoor Air	0	0	0	Volatile Organic Compounds	Low Level TO-15	none	6 L stainless steel canister	30 days

Figure 1: Site Location Map

QC Laboratory Building Detail Site Map

HESS CORPORATION
HESS PORT READING COMPLEX
FORMER QC LABORATORY
835 WEST AVENUE
PORT READING, NEW JERSEY

Earth Systems

Figure 1

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FILE: I:\CLIENTS\E\EARTHSYSTEMS\HESS\PINNACLE\LAB\LAB BLDG BASE 2.DWG, DATE: 04/11/2017 09:58:51AM

Appendix 1: Laboratory Quality Assurance / Quality Control Manual

Quality Systems Manual

Volume XVII, Revision II: January 2016

Effective Date: January 2016

Document Control Number: 16

Nancy Cole, Laboratory Director
Technical Director-Inorganics

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Introduction

The SGS Accutest Inc. Quality Assurance System, detailed in this plan, has been designed to meet the quality program requirements of the National Environmental Laboratory Accreditation Program (NELAP), ISO Guide 17025, the Department of Defense Environmental Laboratory Approval Program (DOD ELAP) and other National environmental monitoring programs. The plan establishes the framework for documenting the requirements of the quality processes regularly practiced by the Laboratory. The Quality Assurance Director is responsible for changes to the Quality Assurance Program, which is appended to the Quality System Manual (QSM) during the annual program review. The plan is also reviewed annually for compliance purposes by the Company President and Laboratory Director and edited if necessary. Changes that are incorporated into the plan are itemized in a summary of changes following the introduction. Plan changes are communicated to the general staff in a meeting conducted by the Director of Quality Assurance following the plan's approval.

The SGS Accutest Inc. plan is supported by standard operating procedures (SOPs), which provide specific operational instructions on the execution of each quality element and assure that compliance with the requirements of the plan are achieved. SGS Accutest Inc. employees are responsible for knowing the requirements of the SOPs and applying them in the daily execution of their duties. These documents are updated as changes occur and the staff is trained to apply the changes.

At SGS Accutest Inc., we believe that satisfying client requirements and providing a product that meets or exceeds the standards of the industry is the key to a good business relationship. However, client satisfaction cannot be guaranteed unless there is a system that assures the product consistently meets its design requirements and is adequately documented to assure that all procedural steps are executed, properly documented and traceable.

This plan has been designed to assure that this goal is consistently achieved and the SGS Accutest Inc. product withstands the rigors of scrutiny that are routinely applied to analytical data and the processes that support its generation.

Summary of Changes
SGS Accutest Inc. Quality System Manual – January 2016

Section	Page	Description
2.3	7	Chain of Command - Heather Hall _QA Director
3.0	9	QA organizational chart, Heather Hall _QA Director
8.12	34	Added performance limits from section 12.7
12.7	53	Removed, transferred to section 8.12
Appendix I		
Appendix III Methods		

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1.0 QUALITY POLICY

1.1 ***SGS Accutest Inc. Mission***:

SGS Accutest Inc. provides analytical services to commercial and government clients in support of environmental monitoring and remedial activities as requested. The Laboratory's mission is dedicated to providing reliable data that satisfies client's requirements as explained in the following:

"Provide easy access, high quality, analytical support to commercial and government clients which meets or exceeds data quality objectives and provides them with the data needed to satisfy regulatory requirements and/or make confident decisions on the effectiveness of remedial activities."

These services are provided impartially and are not influenced by undue commercial or financial pressures which might impact the staff's technical judgment. Coincidently, SGS Accutest Inc. does not engage in activities that endanger the trust in our independent judgment and integrity in relation to the testing activities performed.

1.2 ***Policy Statement***:

The management and staff of SGS Accutest Inc. share the responsibility for product quality and the commitment to the continual improvement of the quality system. Accordingly, SGS Accutest Inc.'s quality assurance program is designed to assure that all processes and procedures, which are components of environmental data production, meet established industry requirements, are adequately documented from a procedural and data traceability perspective, and are consistently executed by the staff. It also assures that analytical data of known quality, meeting the quality objectives of the analytical method in use and the data user's requirements, is consistently produced in the laboratory. This assurance enables the data user to make rational, confident, cost-effective decisions on the assessment and resolution of environmental issues.

The laboratory Quality System also provides the management staff with data quality and operational feedback information. This enables them to determine if the laboratory is achieving the established quality and operational standards, which are dictated by the client or established by regulation. The information provided to management, through the QA program, is used to assess operational performance from a quality perspective and to perform corrective action as necessary.

All employees of SGS Accutest Inc. participating in environmental testing receive quality system training and are responsible for knowing and complying with the system requirements. The entire staff shares SGS Accutest Inc.'s commitment to good professional practice.

01/19/2016

President & Chief Executive Officer — Date

2.0 ORGANIZATION

2.1 ***Organizational Entity***. SGS Accutest Inc. is a privately held, independent testing laboratory founded in 1956 and registered as a New Jersey Corporation. The headquarters are located in Dayton, New Jersey where it has conducted business since 1987. Satellite laboratories are maintained in Marlborough, Massachusetts; Orlando, Florida, Houston, Texas, San Jose, California, Wheat Ridge, Colorado, and Scott Louisiana.

2.2 ***Management Responsibilities***

Requirement: Each laboratory facility has an established chain of command. The duties and responsibilities of the management staff are linked to the Board of Directors/CEO of SGS Accutest Inc. who establishes the agenda for all company activities.

President/CEO. Primary responsibility for all operations and business activities. Delegates authority to laboratory directors, general managers, and the quality assurance director to conduct day to day operations and execute quality assurance duties. Each of the seven operational entities (New Jersey, Florida, Massachusetts, Texas, California, Colorado, and Louisiana) report to the President/CEO.

Laboratory Director. Executes day to day responsibility for laboratory operations including technical aspects of production activities and associated logistical procedures. Reports directly to the President/CEO.

Quality Assurance Director. Design, oversight, and facilitation responsibility for all Quality System elements identified in the Quality Program. Reports directly to the President/CEO.

Technical Directors (Organics/Inorganic). Responsible for day to day operations and activities of the organics and inorganics laboratories including scheduling, production and data quality. Reports directly to the Laboratory Director.

Organics Manager. Responsible for laboratory managers, supervisors and analyst performing daily laboratory procedures in semi-volatiles and organic prep.

Department Managers. Executes day to day responsibility for specific laboratory areas including technical aspects of production activities and associated logistical procedures. Directly report to the laboratory director.

Section Supervisors. Executes day to day responsibility for specific laboratory units including technical aspects of production activities and associated logistical procedures. Direct report to the Department Manager.

2.3 ***Chain of Command***

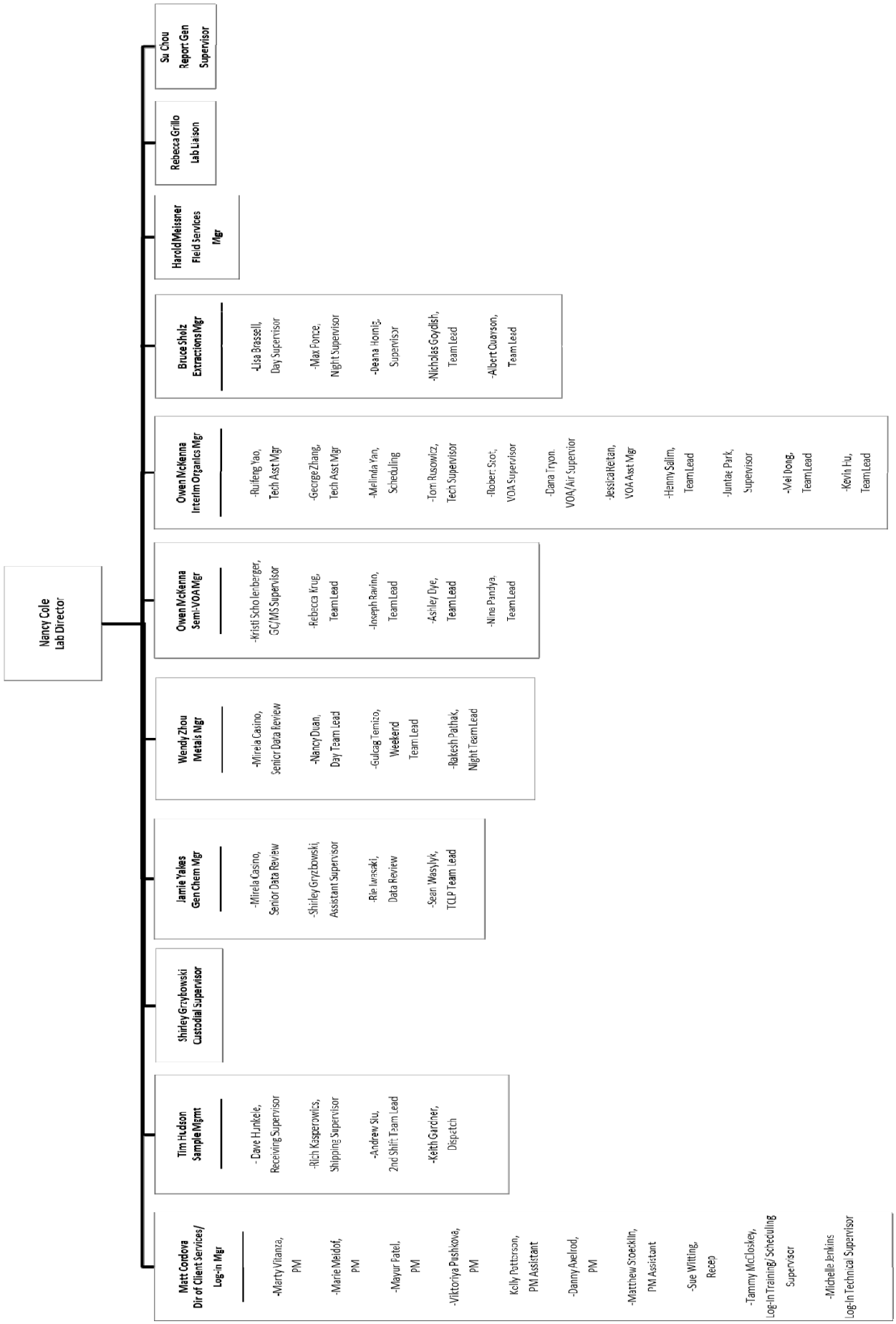
The responsibility for managing all aspects of the Company's operation is delegated to specific individuals, who have been assigned the authority to act in the absence of the senior staff. These individuals are identified in the following Chain of Command:

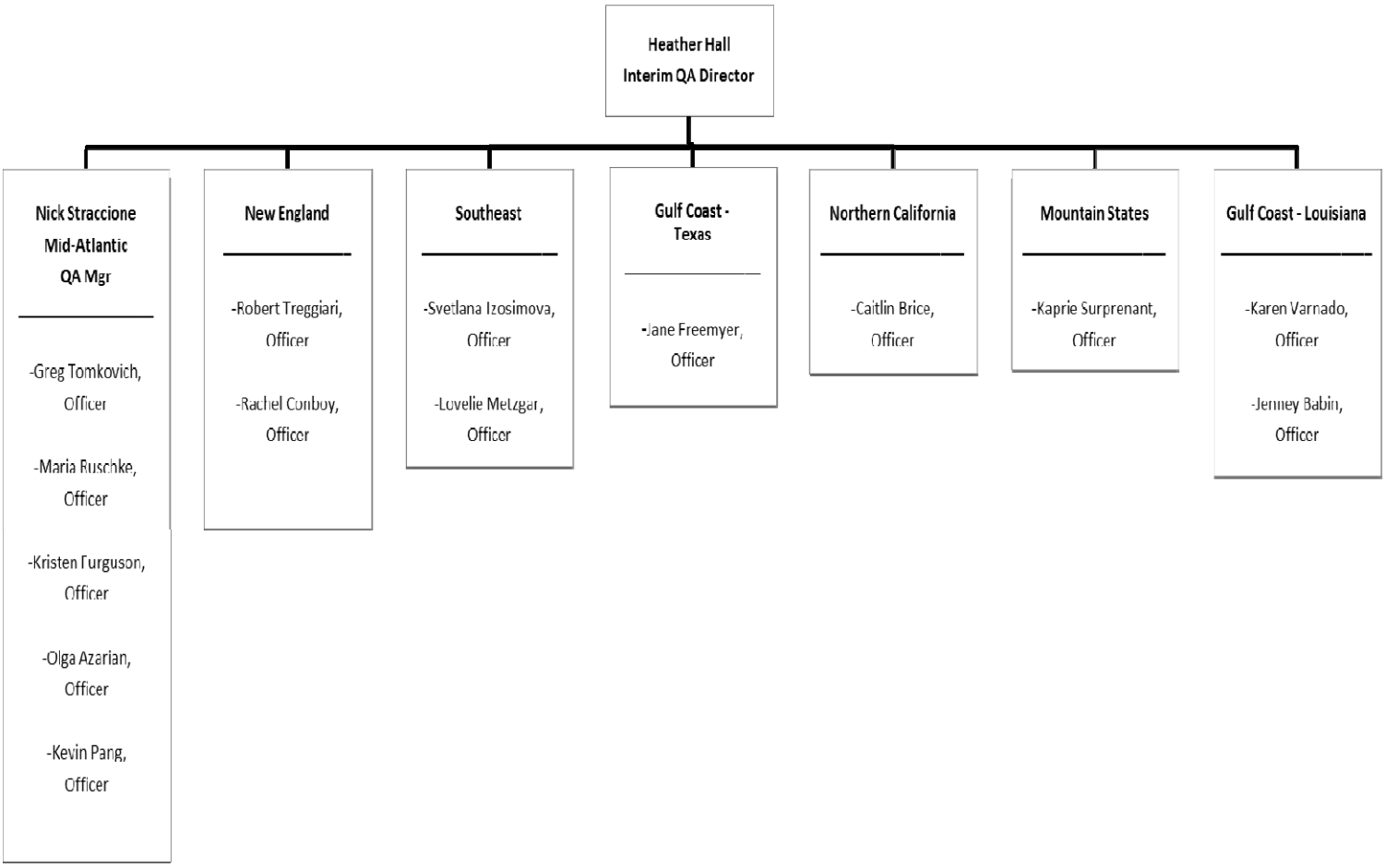
Karl Schoene, President & Chief Executive Officer SGS Accutest Inc.
Chad Tate, Chief Financial Officer
Nancy Cole, Laboratory Director
Heather Hall, Director, Corporate Quality Assurance
Matt Cordova, Director, Client Services

2.4 ***Organization Chart***

The hierarchy of the Company's operational control and oversight is illustrated in the SGS Accutest Inc. Organization Chart. Employees listed with an asterisk would be considered to be the appointed deputy in the event that the technical director or corporate quality assurance director are absent from their respective position for a period of time exceeding fifteen (15) consecutive calendar days. If this absence exceeds thirty-five (35) consecutive calendar days the laboratory shall notify the NJDEP-Office of Quality Assurance in writing.

Should this absence exceed sixty-five consecutive calendar days the DOD ELAP Accrediting Body shall be notified in writing.


Nancy Cole
Lab Director
Matt Cordova
Dir of Client Services/
Log-in Mgr
-Marty Vilanza,
PM
-Marie Meldof,
PM
-Mayur Patel,
PM
-Viktoriya Pushkova,
PM
Kelly Patterson,
PM Assistant
-Danny Axelrod,
PM
-Matthew Stoecklin,
PM Assistant
-Sue Witting,
Recep
-Tammy McCloskey,
Log-In Training/ Scheduling
Supervisor
-Michelle Jenkins
Log-In Technical Supervisor
Tim Hudson
Sample Mgmt
- Dave Hunkele,
Receiving Supervisor
-Rich Kasperowics,
Shipping Supervisor
-Andrew Siu,
2nd Shift Team Lead
-Keith Gardner,
Dispatch
Shirley Grzybowski
Custodial Supervisor
Jamie Yakes
Gen Chem Mgr
-Mirela Casino,
Senior Data Review
-Shirley Grzybowski,
Assistant Supervisor
-Rie Iwasaki,
Data Review
-Sean Wasylyk,
TCLP Team Lead
Wendy Zhou
Metals Mgr
-Mirela Casino,
Senior Data Review
-Nancy Duan,
Day Team Lead
-Gulcag Temizo,
Weekend
Team Lead
-Rakesh Pathak,
Night Team Lead
Owen McKenna
Semi-VOA Mgr
-Kristi Scholenberger,
GC/MS Supervisor
-Rebecca Krug,
Team Lead
-Joseph Ravino,
Team Lead
-Ashley Dye,
Team Lead
-Nina Pandya,
Team Lead
Owen McKenna
Interim Organics Mgr
-Rulfeng Yao,
Tech Asst Mgr
-George Zhang,
Tech Asst Mgr
-Melinda Yan,
Scheduling
-Tom Rusowicz,
Tech Supervisor
-Robert Scot,
VOA Supervisor
-Dana Tryon,
VOA/Air Supervior
-Jessica Helton,
VOA Asst Mgr
-Hanny Salim,
Team Lead
-Juntae Park,
Supervisor
-Mei Dong,
Team Lead
-Kevin Hu,
Team Lead
Bruce Sholz
Extractions Mgr
-Lisa Blassell,
Day Supervisor
-Max Ponce,
Night Supervisor
-Deana Homig,
Supervisor
-Nicholas Goydish,
Team Lead
-Albert Cuayson,
Team Lead
Harold Meissner
Field Services
Mgr
Rebecca Grillo
Lab Liaison
Su Chou
Report Gen
Supervisor


Heather Hall
Interim QA Director
Nick Straccione
Mid-Atlantic
QA Mgr
-Greg Tomkovich, Officer
-Maria Ruschke, Officer
-Kristen Furguson, Officer
-Olga Azarian, Officer
-Kevin Pang, Officer
New England
-Robert Treggiari, Officer
-Rachel Conboy, Officer
Southeast
-Svetlana Izosimova, Officer
-Lovelie Metzgar, Officer
Gulf Coast - Texas
-Jane Freemyer, Officer
Northern California
-Caitlin Brice, Officer
Mountain States
-Kaprie Surprenant, Officer
Gulf Coast - Louisiana
-Karen Varnado, Officer
-Jenney Babin, Officer

3.0 QUALITY RESPONSIBILITIES OF THE MANAGEMENT TEAM

3.1 ***Requirement***: Each member of the management team has a defined responsibility for the Quality System. System implementation and operation is designated as an operational management responsibility. System design and implementation is designated as a Quality Assurance Responsibility.

President/CEO. Primarily responsible for process improvements to all business aspects of the company.

Laboratory Director. Responsible for implementing and operating the Quality System in all laboratory areas. Responsible for the design and implementation of corrective action for defective processes. Has the authority to delegate Quality System implementation responsibilities.

Quality Assurance Director. Responsible for design, implementation support, training, and monitoring of the quality system. Identifies product, process, or operational defects using statistical monitoring tools and processes audits for elimination via corrective action. Empowered with the authority to halt production if quality issues warrant immediate action. Monitors implemented corrective actions for compliance.

Technical Directors. Responsible for overseeing the technical aspects of the quality assurance system as they are integrated into method applications and employed to assess analytical control on a daily basis. The Technical directors review and acknowledge the technical feasibility of proposed QA systems involving technical applications of applied methodology.

Department Managers. Responsible for applying the requirements of the Quality System in their section and assuring subordinate supervisors and staff apply all system requirements. Initiates, designs, documents, and implements corrective action for quality deficiencies.

Section Supervisors & Team Leaders. Responsible for applying the requirements of the Quality System to their operation and assuring the staff applies all system requirements. Initiates, designs, documents, and implements corrective action for quality deficiencies.

Quality Assurance Officers. Responsible for design support, implementation support, training, and monitoring support for the quality system. Conducts audits and product reviews to identify product, process, or operational defects using statistical monitoring tools and processes audits for elimination via corrective action. Provides support for implemented corrective actions for compliance. Serves as the primary alternate in the absence of the Quality Assurance Director.

Bench Analysts. Responsible for applying the requirements of the Quality System to the analyses they perform, evaluating QC data and initiating corrective action for quality control deficiencies within their control. Implements global corrective action as directed by superiors.

3.2 ***Program Authority***. Authority for program implementation originates with the Board of Directors who bears the ultimate responsibility for system design, implementation, and enforcement of requirements. This authority and responsibility is delegated to the Director of Quality Assurance who performs quality functions independently without the encumbrances or biases associated with operational or production responsibilities to ensure an honest, independent assessment of quality issues.

3.3 ***Data Integrity Policy***: The SGS Accutest Inc. Data Integrity Policy reflects a comprehensive, systematic approach for assuring that data produced by the laboratory accurately reflects the outcome of the tests performed on field samples and has been produced in a bias free environment by ethical professionals. The policy includes a commitment to technical ethics, staff training in ethics and data integrity, an individual attestation to data integrity and procedures for evaluating data integrity. Senior management assumes the responsibility for assuring compliance with all technical ethics elements and operation of all data integrity procedures. The staff is responsible for compliance with the ethical code of conduct and for practicing data integrity procedures.

The SGS Accutest Inc. Data Integrity Policy is as follows:

"SGS Accutest Inc. is committed to producing data that meets the data integrity requirements of the environmental regulatory community. This commitment is demonstrated through the application of a comprehensive data integrity program that includes ethics and data integrity training, data integrity evaluation procedures, staff participation and management oversight. Adherence to the specifications of the program assures that data provided to our clients is of the highest possible integrity and can be used for decision making processes with high confidence."

Data Integrity Responsibilities

Management. Senior management retains oversight responsibility for the data integrity program and retains ultimate responsibility for execution of the data integrity program elements. Senior management is responsible for providing the resources required to conduct ethics training and operate data integrity evaluation procedures. They also include responsibility for creating an environment of trust among the staff and being the lead advocate for promoting the data integrity policy and the importance of technical ethics. The Quality Assurance Director is the designated ethics officer for the Company.

Staff. The staff is responsible for adhering to the company ethics policy as they perform their duties and responsibilities associated with sample analysis and reporting. By executing this responsibility, data produced by SGS Accutest Inc. retains its high integrity characteristics and withstands the rigors of all data integrity checks.

The staff is also responsible for adhering to all laboratory requirements pertaining to manual data edits, data transcription and data traceability. These include the application of approved

manual peak integration and documentation procedures. It also includes establishing traceability for all manual results calculations and data edits.

Ethics Statement. The SGS Accutest Inc. ethics statement reflects the standards that are expected for businesses that provide environmental services to regulated entities and regulatory agencies on a commercial basis. The Ethics Policy is comprised of key elements that are essential to organizations that perform chemical analysis for a fee. As such, it focuses on elements related to personal, technical and business activities.

SGS Accutest Inc. provides analytical chemistry services on environmental matters to the regulated community. The data the company produces provides the foundation for determining the risk presented by a chemical pollutant to human health and the environment. The environmental industry is dependent upon the accurate portrayal of environmental chemistry data. This process is reliant upon a high level of scientific and personal ethics.

It is essential to the Company that each employee understands the ethical and quality standards required to work in this industry. Accordingly, SGS Accutest Inc. has adopted a code of ethics, which each employee is expected to adhere to as follows:

- Perform chemical and microbiological analysis using accepted scientific practices and principles.
- Perform tasks in an honest, principled and incorruptible manner inspiring peers & subordinates.
- Maintain professional integrity as an individual.
- Provide services in a confidential, honest, and forthright manner.
- Produce results that are accurate and defensible.
- Report data without any considerations of self-interest.
- Comply with all pertinent laws and regulations associated with assigned tasks and responsibilities.

Data Integrity Procedures. Four key elements comprise the SGS Accutest Inc. data integrity system. Procedures have been implemented for conducting data integrity training and for documenting that employees conform to the SGS Accutest Inc. Data Integrity and Ethics policy.

The data integrity program consists of routine data integrity evaluation and documentation procedures to periodically monitor and document data integrity. These procedures are documented as SOPs. SOPs are approved and reviewed annually following the procedures

employed for all SGS Accutest Inc. SOPs. Documentation associated with data integrity evaluations is maintained on file and is available for review.

Data Integrity Training. SGS Accutest Inc. employees receive technical ethics training during new employee orientation. Employees are also required to refresh their ethical conduct agreement annually, which verifies their understanding of SGS Accutest Inc. ethics policy and their ethical responsibilities. A brochure summarizing the details of the SGS Accutest Inc. Data Integrity Policy is distributed to all employees with the Ethical Conduct Agreement. The refreshed agreement is appended to each individual's training file.

The training focuses on the reasons for technical ethics training, explains the impact of data fraud on human health and the environment, and illustrates the consequences of criminal fraud on businesses and individual careers. SGS Accutest Inc. ethics policy and code of ethics are reviewed and explained for each new employee.

Training on data integrity procedures are conducted by individual departments for groups involved in data operations. These include procedures for manual chromatographic peak integration, traceability for manual calculations and data transcription.

Data Integrity Training Documentation. Records of all data integrity training are maintained in individual training folders. Attendance at all training sessions is documented and maintained in the training archive.

SGS Accutest Inc. Data Integrity and Ethical Conduct Agreement. All employees are required to sign a Data Integrity and Ethical Conduct Agreement annually. This document is archived in individual training files, which are retained for duration of employment.

The Data Integrity and Ethical Conduct Agreement are as follows**:**

I. *I understand the high ethical standards required of me with regard to the duties I perform and the data I report in connection with my employment at SGS Accutest Inc.*

II. *I have received formal instruction on the code of ethics that has been adapted by SGS Accutest Inc. during my orientation and agree to comply with these requirements.*

III. *I have received formal instruction on the elements of SGS Accutest Inc. Data Integrity Policy and have been informed of the following specific procedures:*

   a. *Formal procedures for the confidential reporting of data integrity issues are available, which can be used by any employee,*

   b. *A data integrity investigation is conducted when data issues are identified that may negatively impact data integrity.*

c. *Routine data integrity monitoring is conducted on sample data, which may include an evaluation of the data I produce,*

IV. *I have read the brochure detailing SGS Accutest Inc. Data Integrity and Ethics Program as required.*

V. *I am aware that data fraud is a punishable crime that may include fines and/or imprisonment upon conviction.*

VI. *I also agree to the following:*

a. *I shall not intentionally report data values, which are not the actual values observed or measured.*

b. *I shall not intentionally modify data values unless the modification can be technically justified through a measurable analytical process.*

c. *I shall not intentionally report dates and times of data analysis that are not the true and actual times the data analysis was conducted.*

d. *I shall not condone any accidental or intentional reporting of inauthentic data by other employees and immediately report it's occurrence to my superiors.*

e. *I shall immediately report any accidental reporting of inauthentic data by myself to my superiors.*

Data Integrity Monitoring. Documented procedures are employed for performing data integrity monitoring. These include regular data review procedures by supervisory and management staff (Section 12.7), supervisory review and approval of manual integrations and periodic reviews of GALP audit trails from the LIMS and all computer controlled analysis.

Data Review. All data produced by the laboratory undergoes at least two levels of review the final review must be performed by a manager, supervisor or designated reviewer. Detected data anomalies that appear to be related to data integrity issues are isolated for further investigation. The investigation is conducted following the procedures described in this section.

Manual Peak Integration Review and Approval. Routine data review procedures for all chromatographic processes includes a review of all manual chromatographic peak integrations. This review is performed by the management staff and consists of a review of the machine integration compared to the manual integration. Manual integrations, which have been performed in accordance with SGS Accutest Inc. manual peak integration procedures, are approved for further processing and release. Identification of samples and analytes in which manual integration had been necessary may be recorded in a report case narrative specific to a particular client and project requirement.

Manual integrations which are not performed to SGS Accutest Inc. specifications are set aside for corrective action, which may include analyst retraining or further investigation as necessary.

Data Integrity Review. Data integrity audits are comprehensive data package audits that include a review of raw data, process logbooks, processed data reports and GALP audit trails from individual instruments and LIMS. GALP audit trails, which record all electronic data activities, are available for the majority of computerized methodology and the laboratory information management system (LIMS). These audit trails are periodically reviewed to determine if interventions performed by technical staff constitute an appropriate action. The review is performed on a recently completed job and may include interviews with the staff who performed the analysis. Findings indicative of inappropriate interventions or data integrity issues are investigated to determine the cause and the extent of the anomaly.

Confidential Reporting of Data Integrity Issues. Data integrity concerns may be raised by any individual to their supervisor. Employees with data integrity concerns should always discuss those concerns with their immediate supervisors as a first step unless the employee is concerned with the confidentiality of disclosing data integrity issues or is uncomfortable discussing the issue with their immediate supervisors. The supervisor makes an initial assessment of the situation to determine if the concern is related to a data integrity violation. Those issues that appear to be violations are documented by the supervisor and referred to the Director of Quality Assurance for investigation.

Documented procedures for the confidential reporting of data integrity issues in the laboratory are part of the data integrity policy. These procedures assure that laboratory staff can privately discuss ethical issues or report items of ethical concern without fears of repercussions with senior staff.

Employees with data integrity concerns that they consider to be confidential are directed to the Corporate Human Resources Manager in Dayton, New Jersey. The HR Manager acts as a conduit to arrange a private discussion between the employee and the Corporate QA Director or a local QA Officer.

During the employee - QA discussion, the QA representative evaluates the situation presented by the employee to determine if the issue is a data integrity concern or a legitimate practice. If the practice is legitimate, the QA representative clarifies the process for the employee to assure understanding. If the situation appears to be a data integrity concern, the QA representative initiates a Data Integrity Investigation following the procedures specified in SOP EQA059.

Data Integrity Investigations. Follow-up investigations are conducted for all reported instances of ethical concern related to data integrity. Investigations are performed in a confidential manner by senior management according to a documented procedure. The outcome of the investigation is documented and reported to the company president who has the ultimate responsibility for determining the final course of action in the matter. Investigation documentation includes corrective action records, client notification information and disciplinary action outcomes, which is archived for a period of five years.

The investigations are conducted by the senior staff and supervisory personnel from the affected area. The investigations team includes the Laboratory Director and the Quality Assurance Director. Investigations are conducted in a confidential manner until it is completed and resolved.

The investigation includes a review of the primary information in question by the investigations team. The team performs a review of associated data and similar historical data to determine if patterns exist. Interviews are conducted with key staff to determine the reasons for the observed practices.

Following data compilation, the investigations team reviews all information to formulate a consensus conclusion. The investigation results are documented along with the recommended course of action.

Corrective Action, Client Notification & Discipline. Investigations that reveal systematic data integrity issues will be referred for corrective action, resolution and disposition (Section 13). If the investigation indicates that an impact to data has occurred and the defective data has been released to clients, client notification procedures will be initiated following the steps in Section 18.7.

In all cases of data integrity violations, some level of disciplinary action will be conducted on the responsible individual. The level of discipline will be consistent with the violation and may range from retraining and/or verbal reprimand to termination. A zero tolerance policy is in effect for unethical actions.

4.0 JOB DESCRIPTIONS OF KEY STAFF

4.1 ***Requirement***: Descriptions of key positions within the organization are defined to ensure that clients and staff understand duties and the responsibilities of the management staff and the reporting relationships between positions.

President/CEO. Responsible for overall process improvement for all business processes. Is also responsible for Quality Assurance, IT Development and Health and Safety. Reports directly to the Board of Directors.

Laboratory Director. Reports to the company President/CEO. Establishes laboratory operations strategy. Direct supervision of client services, organic chemistry, inorganic chemistry, field services, and sample management. Maintains operational responsibility for the designated regional laboratories as defined in the SGS Accutest Inc. Organization Chart. Assumes the responsibilities of the CEO in his absence.

Vice President, Chief Information Officer. Reports to President/CEO. Develops IT Software and hardware agenda. Provides system strategies to compliment company objectives. Maintains all software and hardware used for data handling.

Vice President, Chief Financial Officer. Reports to the company President /CEO. Responsibilities include overseeing the Financial Accounting and Human Resource Department, Corporate Purchasing, Corporate IT Help Desk, and Salary and Benefit Administration.

Director, Quality Assurance. Reports to the company President/CEO and functions independently from laboratory operations. Establishes the company quality agenda, develops quality procedures, provides assistance to operations on quality procedure implementation, coordinates all quality control activities, monitors the quality system, and provides quality system feedback to management to be used for process improvement. Assumes the responsibilities of the Laboratory Director in the absence of the Laboratory Director and the President/CEO.

Director Client Services. Reports to the Laboratory Director. Establishes and maintains communications between clients and the laboratory pertaining to client requirements which are related to sample analysis and data deliverables. Initiates client orders and supervises sample login operations.

Manager, Organics (Organics Technical Director). Reports to the laboratory director. Directs the operations of the organics group, consisting of organics preparation and instrumental analysis. Establishes daily work schedule. Supervises method implementation, application, and data production. Responsible for following Quality System requirements. Maintains laboratory instrumentation in an operable condition. Assumes the responsibilities of the Laboratory Director in his absence.

Manager, Inorganics (Inorganics Technical Director). Reports to the laboratory director. Directs the operations of the inorganics group, consisting of wet chemistry and the metals laboratories. Establishes daily work schedule. Supervises method implementation, application, and data production. Responsible for following Quality System requirements. Maintains laboratory instrumentation in an operable condition. Assumes the responsibilities of the Laboratory Director in his absence.

Manager, Field Services. Reports to the laboratory director. Conducts field sampling and analysis of "analyze immediately" parameters in support of ongoing field projects. Responsible for proper collection, preservation, documentation and shipment of field samples. Maintains field sampling and field instrumentation required to perform primary responsibilities.

Manager, Sample Management. Reports to the laboratory director. Develops, maintains and executes all procedures required for receipt of samples, verification of preservation, and chain of custody documentation. Responsible for maintaining and documenting secure storage, delivery of samples to laboratory units on request and courier services.

Director, Environmental Health and Safety. Reports to the President/CEO. Responsible for developing company safety program and chemical hygiene plan. Reviews and updates these plans annually. Responsible for employee training on relevant health and safety topics. Documents employee training. Manages laboratory waste management program.

Manager, Wet Chemistry. Reports to the Lab Director. Executes daily analysis schedule. Supervises the analysis of samples for wet chemistry parameters using valid, documented methodology. Maintains instrumentation in an operable condition. Reviews data for compliance to quality and methodological requirements. Assumes the responsibilities of the Inorganics Manager in his absence.

Manager, Metals. Reports to the Lab Director. Executes daily analysis schedule. Supervises the analysis of samples for metallic elements using valid, documented methodology. Documents all procedures and data production activities. Maintains instrumentation in an operable condition. Reviews data for compliance to quality and methodological requirements.

Manager, Organic Preparation. Reports to the Lab Director. Executes the daily sample preparation schedule. Performs the extract of multi-media samples for organic constituents using valid, documented methodology. Prepares documentation for extracted samples. Assumes custody until transfer for analysis.

Technical Support Supervisor, Organics. Reports to the organic manager. Oversees all instrument maintenance and new equipment installation. Conducts method development and implementation tasks.

Manager, Semi VOA. Reports to the Lab Director. Expedites the analysis of samples and sample extracts. Executes daily analysis schedule. Supervises the analysis of samples for organic parameters using valid, documented methodology. Documents all data and data production activities. Maintains instrumentation in an operable condition. Reviews data for compliance to quality and methodological requirements. Assumes the responsibilities of the Organics Manager in his absence.

Supervisor, Report Generation. Reports to the organics manager. Compiles raw and processed sample data and assembles into client-ready reports. Initiates report scanning for archiving purposes. Maintains raw batch data in accessible storage. Mails completed reports to clients according to specified report turnaround schedule.

Quality Assurance Officers. Reports to the Director, Quality Assurance. Performs quality control data review for trend monitoring purposes. Conducts internal audits and prepares reports for management review. Oversees proficiency testing program. Process quality control data for statistical purposes. Assumes the responsibilities of the Quality Assurance Director in his absence.

4.2 ***Employee Screening, Orientation, and Training***.

All potential laboratory employees are screened and interviewed by human resources and technical staff prior to their hire. The pre-screen process includes a review of their qualifications including education, training and work experience to verify that they have adequate skills to perform the tasks of the job.

Newly hired employees receive orientation training beginning the first day of employment by the Company. Orientation training consists of initial health and safety training including general laboratory safety, personal protection and building evacuation. Orientation also includes quality assurance program training, data integrity training, and an overview of the Company's goals, objectives, mission, and vision.

All technical staff receives training to develop and demonstrate proficiency for the methods they perform. New analysts work under supervision until the supervisory staff is satisfied that a thorough understanding of the method is apparent and method proficiency has been demonstrated, through a precision and accuracy study that has been documented, reviewed and approved by the QA Staff. Data from the study is compared to method acceptance limits. If the data is unacceptable, additional training is required. The analyst may also demonstrate proficiency by producing acceptable data through the analysis of an independently prepared proficiency sample.

Individual proficiency is demonstrated annually for each method performed. Data from initial and continuing proficiency demonstrations are archived in the individual's training folder.

4.3 ***Training Documentation***. The human resources department prepares a training file for every new employee. All information related to qualifications, experience, external training

courses, and education are placed into the file. Verification documentation for orientation, health & safety, quality assurance, and ethics training is also included in the file.

Additional training documentation is added to the file as it is developed. This includes documentation of SOP understanding, data for initial and continuing demonstrations of proficiency, performance evaluation study data and notes and attendance lists from group training sessions.

The Quality Assurance Department maintains the employee training database. This database is a comprehensive inventory of training documentation for each individual employee. The database enables supervisors to obtain current status information on training data for individual employees on a job specific basis. It also enables the management staff to identify training documentation in need of completion.

Employee specific database records are created by human resources on the date of hire. Data base fields for job specific requirements such as SOP documentation of understanding and annual demonstration of analytical capability are automatically generated when the supervisor assigns a job responsibility. Employees acknowledge that their SOP responsibilities have been satisfied using a secure electronic process which updates the database record. Reports are produced which summarize the qualifications of individual employees or departments.

5.0 SIGNATORY APPROVALS

Requirement: Procedures have been developed for establishing the traceability of data and documents. The procedure consists of a signature hierarchy, indicating levels of authorization for signature approvals of data and information within the organization. Signature authority is granted for approval of specific actions based on positional hierarchy within the organization and knowledge of the operation that requires signature approval. SOP EQA032 Signature Authority explains the process of SGS Accutest Inc. Signature Authority and the use of electronic signatures in the laboratory. A log of signatures and initials of all employees is maintained by the QA Staff for cross-referencing purposes.

5.1 *Signature Hierarchy*.

President/CEO. Approval of quality assurance policy in lieu of the Director, Quality Assurance. IT Development and Health and Safety purchase approvals in Lieu of IT and H & S managers.

Laboratory Director. Approval of final reports in the absence of the President. Approval of SOPs, project specific QAPs, data review and approval in lieu of technical managers. Establishes and implements technical policy.

Vice President, Chief Information Officer. Department specific supplies purchase. MIS policy.

Director, Quality Assurance. Approval of final reports and quality assurance policy in the absence of the President. Approval of SOPs, project specific QAPs, data review and approval in lieu of technical managers.

Director, Client Services. QAP and sampling and analysis plan approval. Project specific contracts, pricing, and price modification agreements. Approval and acceptance of incoming work, Client services policy.

Managers, Technical Departments. Methodology and department specific QAPs. Data review and approval, department specific supplies purchase. Technical approval of SOPs.

Manager, Sample Management. Initiation of laboratory sample custody and acceptance of all samples. Approval of department policies and procedures. Department specific supplies purchase.

Director, Environmental Health & Safety. Approval of health and safety policy in the absence of the President. Approval of health and safety SOPs. Waste manifesting and approval.

Assistant Managers: Technical Departments. Data review approval, purchasing of expendable supplies.

Supervisor, Field Services. Sampling plan design and approval. Data review for field parameters. State form certification. Department policies and procedures. Department specific supplies purchase.

Supervisors, Technical Departments. Data review approval, purchasing of expendable supplies.

5.2 ***Signature Requirements***. All laboratory activities related to sample custody and generation or release of data must be approved using either initials, signatures or electronic, password protected procedures. The individual, who applies his signature initial or password to an activity or document, is authorized to do so within the limits assigned to them by their supervisor. All written signatures and initials must be applied in a readable format that can be cross-referenced to the signatures and initials log if necessary.

5.3 ***Signature and Initials Log***. The QA group maintains a signature and initials log. New employee signatures and initials are appended to the log on the first day of employment. Signature of individuals no longer employed by the company are retained, but annotated with their date of termination.

5.4 ***Electronic Signature Log.*** Key technical staff will sign a liability document for their signatures designating the use of their electronic signatures on an annual basis. Quality Assurance team keeps a wet copy of these signatures on form QA115.

6.0 DOCUMENTATION & DOCUMENT CONTROL

Requirement: Document control policies have been established which specify that any document used as an information source or for recording analytical or quality control information must be managed using defined document control procedures. Accordingly, policies and procedures required for the control, protection, and storage of any information related to the production of analytical data and the operation of the quality system to assure its integrity and traceability have been established and implemented in the laboratory. The system contains sufficient controls for managing, archiving and reconstructing all process steps which contributed to the generation of an analytical test result. Using this system, an audit trail for reported data can be produced, establishing complete traceability for the result.

6.1 ***Administrative Records***. Administrative (non-analytical) records are managed by the quality assurance department. These records consist of electronic documents which are retained in a limited access electronic directory or paper documents, which are released to the technical staff upon specific request.

Form Generation, Modification & Control. The quality assurance group approves and manages all forms used as either stand-alone documents or in logbooks to ensure their traceability. Forms are generated as computer files only and are maintained in a limited access master directory. The QA staff also manages and approves modifications to existing forms. Obsolete editions of modified forms are retained for seven years.

Approved forms are assigned a 5-character alphanumeric code. The first two alpha characters designate the department that uses the form; the next three digits are sequentially assigned number.

New forms must include the name SGS Accutest Inc. and appropriate spaces for signatures of approval and dates. Further design specifications are the responsibility of the originating department.

The technical staff is required to complete all forms to the maximum extent possible. If information for a specific item is unavailable, the analyst is required to "Z" the information block. The staff is also required to "Z" the uncompleted portions of a logbook or logbook form if the day's analysis does not fill the entire page of the form.

Logbook Control. All laboratory logbooks are controlled documents that are comprised of approved forms used to document specific processes. New logs are numbered and issued to a specific individual who is assigned responsibility for the log. Old logs are returned to QA for entry into the document archive system where they are retained for seven (7) years. Laboratory staff may hold a maximum of two consecutively dated logbooks of the same type in the laboratory including the most recently issued book to simplify review of recently completed analysis. The Organic prep department maintains multiple active copies of prep logbooks to facilitate production.

Controlled Documents. Key laboratory documents that are distributed internally and externally are numbered for tracking purposes. Individuals receiving documents, who must be informed when changes occur, receive controlled copies of those documents. Controlled status simplifies document updates and retrieval of outdated documents. Control is maintained through a document numbering procedure and document control logbook which identifies the individual receiving the controlled document and the date of receipt. Key documents are also distributed as uncontrolled documents if the recipient does not require updated copies when changes occur. Key documents in uncontrolled status are numbered and tracked using the same procedures as controlled documents.

Quality Systems Manual (QSM). All QSMs are assigned a number prior to distribution. The number, date of distribution, and identity of the individual receiving the document are recorded in the document control logbook. The numbering system is restarted with each new volume, which corresponds to the annual revision of the QSM. Electronic versions are distributed as read only files that are password protected.

Standard Operating Procedures (SOPs). SOPs are maintained by pre-designating the numbers of official copies of documents that are placed into circulation within the laboratory. Official documents are copied to green paper and placed into the appropriate laboratory section as follows:

Administrative: One master copy for the administrative file.

Sample Management: One controlled green copy for the sample management file.

Organics Laboratories: Two controlled green copies, one for the affected laboratory area, and one for the organics laboratory file.

Inorganics Laboratories: Two controlled green copies, one for the affected laboratory area, and one for the inorganics laboratory file.

Field Services: One controlled green copy for each field sampling team (generally a single field technician).

The original, signed copy of the SOP is maintained in the master SOP binder by the QA staff. The QA staff collects outdated versions of SOPs as they are replaced and archived for a period of seven (7) years in the QA archives. Electronic versions of outdated SOPs are moved from the active SOP directory to the inactive directory.

6.2 ***Technical Records***. All records related to the analysis of samples and the production of an analytical result are archived in secure document storage or on electronic media and contain sufficient detail to produce an audit trail which re-creates the analytical result. These records include information related to the original client request, bottle order, sample login and custody, storage, sample preparation, analysis, data review and data reporting.

Each department involved in this process maintains controlled documents which enable them to maintain records of critical information relevant to their department's process.

6.3 ***Quality Control Support Data & Records***. All information and data related to the quality system is stored in a restricted access directory on the network server. Information on this directory is backed-up daily. Users of the quality assurance information and data have "read-only" access to the files contained in the directory. The QA staff and the laboratory director have write capability in this directory.

This directory contains all current and archived quality system manuals, SOPs, control limits, MDL studies, precision and accuracy data, official forms, internal audit reports, proficiency test scores and metrics calibration information.

The following information is retained in the directory:

- Quality System Manuals
- Standard Operating Procedures
- ASTM & NIST Methods
- Bottleware & Preservative QC Data
- Certification Documentation
- Change Management Data
- External Audit Reports
- Internal Audit Reports
- Corrective Action Database
- Laboratory Forms Directory
- Health & Safety Manuals
- Inactive Standard Operating Procedures
- Method Detection Limit Data
- Metrics Inventory & Calibration Data
- Performance Limits
- Proficiency Test Scores & Statistics
- Project Specific Analytical Requirements
- QC Report Reviews
- Regulatory Agency Quality Documents
- Staff Bios And Job Descriptions
- State Specific Methods

6.4 ***Analytical Records***. All data related to the analysis of field samples are retained as either paper or electronic records that can be retrieved to compile a traceable audit trail for any reported result. All information is linked to the client job and sample number, which serves as a reference for all sample related information tracking.

Critical times in the life of the sample from collection through analysis to disposal are documented. This includes date and time of collection, receipt by the laboratory, preparation times and dates, analysis times and dates and data reporting information. Analysis times are calculated in hours for methods where holding time is specified in hours (≤72 hours).

Sample preparation information is recorded in a separate controlled logbook. It includes sample identification numbers, types of analysis, preparation and cleanup methods, sample weights and volumes, reagent lot numbers and volumes and any other information pertinent to the preparation procedure.

Information related to the identification of the instrument used for analysis is permanently attached to the electronic record. The record includes an electronic data file that indicates all instrument conditions employed for the analysis, including the type of analysis conducted. The

analyst's identification is electronically attached to the record. The instrument tuning and calibration data is electronically linked to the sample or linked though paper logs which were used in the documentation of the analysis. Quality control and performance criteria are permanently linked to the paper archive or electronic file.
Paper records for the identity, receipt, preparation and evaluation of all standards and reagents used in the analysis are documented in prepared records and maintained in controlled documents or files. Lot number information linking these materials to the analysis performed is recorded in the logbooks associated with the samples in which they were used.

Manual calculations or peak integrations that were performed during the data review are retained as paper or scanned documents and included as part of the electronic archive. Signatures for data review are retained on paper or as scanned versions of the paper record for the permanent electronic file.

6.5 ***Confidential Business Information (CBI).*** Operational documents including SOPs, Quality Manuals, personnel information, internal operations statistics, and laboratory audit reports are considered confidential business information. Strict controls are placed on the release of this information to outside parties.

Release of CBI to outside parties or organizations may be authorized upon execution of a confidentiality agreement between SGS Accutest Inc. and the receiving organization or individual. CBI information release is authorized for third party auditors and commercial clients in electronic mode as Adobe Acrobat .PDF format only.

6.6 ***Software Change Documentation & Control.*** Changes to software are documented as text within the code of the program undergoing change. Documentation includes a description of the change, reason for change and the date the change was placed into effect. Documentation indicating the adequacy of the change is prepared following the evaluation by the user who requested the change.

6.7 ***Report and Data Archiving***. SGS Accutest Inc. produces digital files of all raw and processed data which is maintained for a minimum period of seven (7) years. The archived files consist of all raw data files and source documents associated with the analysis of field samples and proficiency test samples. Data files and source documents associated with method calibration and project and method quality control are also archived. After seven years, the files may be discarded unless contractual arrangements exist which dictate different requirements. Client or regulatory agency specific data retention practices are employed for several government organizations such as the Department of Defense and the Massachusetts Department of Environmental Protection that require a retention period of ten (10) years. Data archiving may also be extended up to ten (10) years for specific commercial clients in response to contractual requirements.

Complete date and time stamped PDF reports are generated automatically from the laboratory information management system (LIMS) using the source documents archived on the document server. These source documents are maintained on a document server and

archived to primary and clone tapes. The primary tapes remain on premises while the clone tapes are taken to a secure offsite location for permanent storage. Both the primary and clone tapes remain in storage for the remainder of the archive period.

6.8 ***Training***. The company maintains a training record for all employees that documents that they have received instruction on administrative and technical tasks that are required for the job they perform. Training records for individuals employed by the company are retained for a period of six months following their termination of employment.

Training File Origination. The Human Resources Group (HR) initiates training files. The QA staff, through the Quality Assurance officer, retains the responsibility for the maintenance and tracking of all training related documentation in the file. The file is begun on the first day of employment. Information required for the file includes a copy of the individual's most current resume, detailing work experience and a copy of any college diplomas and transcript(s). Information added on the first day includes documentation of health and safety training, quality assurance training and a signed data integrity training and ethical conduct agreement.

Training documentation, training requirements, analyst proficiency information and other training related support documentation is tracked using a customized database application (Section 4.3). Database extracts provide an itemized listing of specific training requirements by job function. Training status summaries for individual analysts portray dates of completion for job specific training requirements.

6.9 ***Technical Training***. The supervisor of each new employee is responsible for developing a training plan for each new employee. The supervisor evaluates the employees training progress at regular frequencies. Supporting documentation, including demonstration of capability and precision and accuracy studies, which demonstrate an analyst's proficiency for a specific test, are added to the training file as completed. Employees and supervisors verify documentation of understanding (DOU) for all assigned standard operating procedures in the training database. Certificates or diplomas for any off-site training are also added to the file.

7.0 REFERENCE STANDARD TRACEABILITY

Requirement: Documented procedures, which establish traceability between any measured value and a national reference standard, are established by the laboratory as required. All metric measurements are traceable to NIST reference weights or thermometers that are calibrated on a regular schedule. All chemicals used for calibration of a quantitative process are traceable to an NIST reference that is documented by the vendor using a certificate of traceability. The laboratory maintains a documentation system that establishes the traceability links. The procedures for verifying and documenting traceability are documented in standard operating procedures.

7.1 ***Traceability of Metric Measurements - Thermometers***. SGS Accutest Inc. uses NIST thermometers to calibrate commercially purchased thermometers prior to their use in the laboratory and annually thereafter for liquid in glass thermometers or quarterly for electronic temperature measuring devices. If necessary, thermometers are assigned correction factors that are determined during their calibration using an NIST thermometer as the standard. The correction factor is documented in a thermometer calibration database and on a tag attached to the thermometer. The correction factor is applied to temperature measurements before recording the measurement in the temperature log. Calibration of each thermometer is verified and documented on a regular schedule. The NIST thermometer is checked for accuracy by an ISO 17025 approved vendor every five (5) years following the specifications for NIST thermometer calibration verification detailed in the united States Environmental Protection Agency's "Manual for the Certification of Laboratories Analyzing Drinking Water", Fifth Edition, February2005.

7.2 ***Traceability of Metric Measurements – Calibration Weights***. SGS Accutest Inc. uses calibrated weights, which are traceable to NIST standard weights to calibrate all balances used in the laboratory. Balances are calibrated to specific tolerances within the intended use range of the balance. Calibration checks are required on each day of use. If the tolerance criteria are not achieved, corrective action specified in the balance calibration SOP is applied before the balance can be used for laboratory measurements. Recalibration of all calibration weights is conducted and documented on a biannual basis.

7.3 ***Traceability of Chemical Standards***. All chemicals, with the exception of bulk dry chemicals and acids, purchased as reference standards for use in method calibration must establish traceability to NIST referenced material through a traceability certificate. Process links are established that enable a calibration standard solution to be traced to its NIST reference certificate.

Chemical standards used for analysis must meet the purity specifications of the method. These specifications must be stated in the reagents section of the method SOP.

7.4 ***Assignment of Reagent, Bulk Chemical and Standard Expiration Dates.*** Expiration date information for all purchased standards, prepared standard solutions and selected reagents is provided to SGS Accutest Inc. by the vendor as a condition of purchase. Neat materials, bulk chemicals including solvents, acids and inorganic reagents are not required to be purchased

with expiration dates. An expiration date of five (5) years from the date of receipt shall be established. Prepared solutions are labeled with the expiration date provided by the manufacturer. In-house prepared solutions are assigned expiration dates that are consistent with the method that employs their use unless documented experience indicates that an alternate date can be applied. If alternate expiration dates are employed, their use is documented in the method SOP. Expiration dates for prepared inorganic reagents, which have not exhibited instability, are established at two years from the date of preparation for tracking purposes.

The earliest expiration date has been established as the limiting date for assigning expiration dates to prepared solutions. The assignments of expiration dates that are later than the expiration date of any derivative solution or material are prohibited.

7.5 ***Documentation of Traceability***. Traceability information is documented in individual logbooks designated for specific measurement processes. The quality assurance group maintains calibration documentation for metric references in separate logbooks.

Balance calibration verification is documented in logbooks that are assigned to each balance. The individual conducting the calibration is required to initial and date all calibration activities. Any defects that occur during calibration are also documented along with the corrective action applied and a demonstration of return to control. Annual service reports and certificates are retained on file by the QA staff.

Temperature control is documented in logbooks or an electronic temperature monitoring database assigned to the equipment being monitored. A calibrated thermometer or probe is assigned to each individual item. Uncorrected and corrected measurements are recorded. Logbooks document with the date and initials of the individual conducting the measurement on a daily or as used basis. The temperature database records temperatures automatically every 15 minutes. Corrective action, if required, is also documented including the demonstration of return to control.

Initial traceability of chemical standards is documented via a vendor-supplied certificate (not available for bulk dry chemicals and acids) that includes lot number, expiration date and certified concentration information. Solutions prepared using the vendor supplied chemical standards are documented in logbooks assigned to specific analytical processes. Alternatively, documentation may be entered into the electronic standards and reagent tracking log. The documentation includes links to the vendor's lot number, an internal lot number, and dates of preparation, expiration date, and the preparer's initials.

SGS Accutest Inc. employs commercially prepared standard solutions whose traceability can be demonstrated through a vendor supplied certificate of analysis that includes an experimental verification of the standard's true concentration. The test value for the verification analysis must agree within 1% of the vendor's true value before it can be employed for calibration purposes. If the test value differs from the nominal value by more than 1%, then the test value is used as the true value in laboratory calibrations and calculations. Purchased standards which

do not have a certificate of analysis cannot be used for calibration or calibration verification purposes and are rejected or returned to the vendor.

Supervisors conduct regular reviews of logbooks, which are verified using a signature and date.

8.0 TEST PROCEDURES, METHOD REFERENCES, AND REGULATORY PROGRAMS

Requirements: The laboratory employs client specified or regulatory agency approved methods for the analysis of environmental samples. A list of active methods is maintained, which specifies the type of analyses performed and cross-references the methods to applicable environmental regulations. Routine procedures used by the laboratory for the execution of a method are documented in standard operating procedures. Method performance and sensitivity are demonstrated annually where required. Defined procedures for the use of method sensitivity limits for data reporting purposes are established by the Director of Quality Assurance and used consistently for all data reporting purposes.

8.1 ***Method Selection & Application***. SGS Accutest Inc. employs methods for environmental sample analysis that are consistent with the client's application, which are appropriate and applicable to the project objectives. SGS Accutest Inc. informs the client if the method proposed is inappropriate or outdated and suggests alternative approaches.

SGS Accutest Inc. employs documented, validated regulatory methods in the absence of a client specification and informs the client of the method selected. These methods are available to the client and other parties as determined by the client. Documented and validated in-house methods may be applied if they are appropriate to the project. The client is informed of the method selection.

8.2 ***Standard Operating Procedures***. Standard operating procedures (SOP) are prepared for routine methods executed by the laboratory, processes related to laboratory operations and sample or data handling. All SOPs are formatted to meet the specifications established by the National Environmental Laboratory Accreditation Conference, which are detailed in Chapter Five – Quality Systems of the established Standards. The procedures describe the process steps in sufficient detail to enable an individual, who is unfamiliar with the procedure to execute it successfully.

SOPs are evaluated annually and edited if necessary. Reviewed SOPs that do not require modification include an evaluation summary form indicating that an evaluation was conducted and modifications were not needed. SOPs can be edited on a more frequent basis if changes are required for any reason. These may include a change to the methodology, elimination of systematic errors that dictate a need for process changes or modifications to incorporate a new version of the method promulgated by the originating regulatory agency. Procedural modifications are indicted using a revision number. SOPs are available for client review at the SGS Accutest Inc. facility upon request.

The complete list of the laboratories SOPs available as of the date of publication of this QSM version are detailed in Appendix II.

8.3 ***Method Validation***. Standard methods from regulatory sources are primarily used for all analysis. Standard methods do not require validation by the laboratory. Non-standard, in-

house methods are validated prior to use. Validation is also performed for standard methods applied outside their intended scope of use. Validation is dependent upon the method application and may include analysis of quality control samples to develop precision and accuracy information for the intended use. A final method validation report is generated, which includes all data in the validation study. A statement of adequacy and/or equivalency is included in the report. A copy of the report is archived in the quality assurance directory of the company server.

Non-standard methods are validated prior to use. This includes the validation of modified standard methods to demonstrate comparability with existing methods. Demonstrations and validations are performed and documented prior to incorporating technological enhancements and nonstandard methods into existing laboratory methods used for general applications. The demonstration includes method specific requirements for assuring that significant performance differences do not occur when the enhancement is incorporated into the method. Validation is dependent upon method application and may include the analysis of quality control samples to develop precision and accuracy information for intended use.

The study procedures and specifications for demonstrating validation include comparable method sensitivity, calibration response, method precision; method accuracy and field sample consistency for several classes of analytical methods are detailed in this document. These procedures and specifications may vary depending upon the method and the modification.

8.4 ***Estimated Uncertainty.*** A statement of the estimated uncertainty of an analytical measurement accompanies the test result when required. Estimated uncertainty is derived from the performance limits established for spiked samples of similar matrices. The degree of uncertainty is derived from the negative or positive bias for spiked samples accompanying a specific parameter. When the uncertainty estimate is applied to a measured value, the possible quantitative range for that specific parameter at that measured concentration is defined. Well recognized regulatory methods that specify values for the major sources of uncertainty and specify the data reporting format do not require a further estimate of uncertainty.

8.5 ***Demonstration of Capability***. Confirmation testing is conducted to demonstrate that the laboratory is capable of performing the method before its application to the analysis of environmental samples. The results of the demonstration tests are compared to the quality control specifications of the method to determine if the performance is acceptable.

Capability demonstrations are conducted initially for every analyst on each method performed and annually on a method specific basis thereafter. Acceptable demonstrations are documented for individual training files and retained by the QA staff. New analytes, which are added to the list of analytes for an accredited method, are evaluated for applicability through a demonstration of capability similar to those performed for accredited analytes.

8.6 ***Method Detection Limit Determination***. Annual method detection limit (MDL) studies are performed as appropriate for routine methods used in the laboratory. MDL studies are also performed when there is a change to the method that affects how the method is performed or when an instrumentation change that impacts sensitivity occurs. The procedure used for

determining MDLs is described in 40 CFR, Part 136, and Appendix B. Studies are performed for each method on water, soil and air matrices for every instrument that is used to perform the method. MDLs are established at the instrument level. The highest MDL of the pooled instrument data is used to establish a laboratory MDL. MDLs are experimentally verified through the analysis of spiked quality control samples at 1-4 times the concentration of the experimental MDL. The verification is performed on every instrument used to perform the analysis. The quality assurance staff manages the annual MDL determination process and is responsible for retaining MDL data on file. Approved MDLs are appended to the LIMS and used for data reporting purposes.

8.7 ***Limit of Detection (LOD).*** For the DoD ELAP the limit of detection (LOD) for each method and target analyte of concern is established for each instrument that is used to perform the method. The LOD is established by initially spiking a water and/or soil matrix at approximately two to three times the calculated MDL (for a single-analyte standard) or two to four times the calculated MDL (for a multi-analyte standard). The LOD undergoes all sample processing steps and is validated by the qualitative identification of the analytes of interest. The spike concentration establishes the LOD and must be verified quarterly. If the spike concentration in the LOD cannot be verified at the initial level with appropriate analytical quality control, a higher LOD must be defined and verified.

8.8 ***Instrument Detection Limit Determination***. Instrument detection limits (IDLs) are determined for all inductively coupled argon plasma emission spectrophotometers and mass spectrometers. The IDL is determined for the wavelength (emission) of each element and the ion (mass spectrometry) of each element used for sample analysis. The IDL data is used to estimate instrument sensitivity in the absence of the sample matrix. IDL determinations are conducted at the frequency specified in the appropriate SOPs' for ICP and ICP/MS analysis.

8.9 ***Method Reporting Limit.*** The method reporting limit for organic methods is determined by the concentration of the lowest calibration standard in the calibration curve. This value is adjusted based on several sample preparation factors including sample volume, moisture content (soils), digestion, distillation or dilution. The low calibration standard is selected by department managers as the lowest concentration standard that can be used for calibration while continuing to meet the calibration linearity criteria of the method being used. The validity of the method reporting limits are confirmed through the analysis of a spiked quality control sample at the method reporting limit concentration. By definition, detected analytes at concentrations below the low calibration standard cannot be accurately quantitated and are qualified as estimated values.

The reporting limit for inorganics methods is defined as the concentration which is greater than the MDL where method quality control criteria has been achieved. The reporting limit for general chemistry methods employing multiple point calibrations must be greater than or equal to the concentration of the lowest standard of the calibration range.

The reporting limit established for both organic and inorganic analysis is above the calculated method detection limit where applicable.

8.10 ***Limit of Quantitation (LOQ).*** For the DoD ELAP the limit of quantitation (LOQ) for each analyte of concern is determined. The LOQ is set within the range of calibration is greater than the established LOD. Precision and bias criteria for the LOQ are established to meet client requirements and are verified quarterly.

8.11 ***Reporting of Quantitative Data.*** Analytical data for all methods is reported without qualification to the reporting limit established for each method. Data, for organic methods may be reported to the established method detection limit depending upon the client's requirements provided that all qualitative identification criteria for the detected parameter have been satisfied. All parameters reported at concentrations between the reporting limit and the method detection limit are qualified as estimated.

Data for inorganic methods are reported to the established method reporting limits. Inorganic data for specific methods may also be reported to the established method detection limit at client request. However, this data is always qualified as estimated.

Measured concentrations of detected analytes that exceed the upper limit of the calibration range are either diluted into the range and reanalyzed or qualified as an estimated value. The only exception to this applies to ICP and ICP/MS analysis, which can be reported to the upper limit of the experimentally determined linear range without qualification.

8.12 ***Precision and Accuracy Studies***. Annual precision and accuracy (P&A) studies, which demonstrate the laboratories ability to generate acceptable data, are performed for all routine methods used in the laboratory. The procedure used for generating organic P&A data is referenced in the majority of the regulatory methodology in use. The procedure requires quadruplicate analysis of a sample spiked with target analytes at a concentration in the working range of the method. This data may be compiled from a series of existing blank spikes or laboratory control samples. Accuracy (percent recovery) of the replicate analysis is averaged and compared to established method performance limits. Values within method limits indicate an acceptable performance demonstration. Precision and accuracy date is also used to annually demonstrate analytical capability for individual analysts. Annual demonstration of capability data is archived in individual training files.

Performance Limits. The Quality Assurance Director is responsible for compilation and maintenance of all precision and accuracy data used for performance limits. Quality control data for all test methods are accumulated and stored in the laboratory information management system (LIMS). Parameter specific QC data are extracted semi-annually for methods 8260, 8270, 8081, 8082 and annually for remaining methods. Each method is statistically processed to develop laboratory specific warning limits and control limits. The new limits are reviewed and approved by the supervisory staff prior to their use for data assessment. The new limits are used to evaluate QC data for compliance with method requirements for a period of one year. Laboratory generated limits appear on all data reports.

8.13 ***Method Sources & References.*** The Quality Assurance Staff maintains a list of active methods used for the analysis of samples. This list includes valid method references from

sources such as USEPA, ASTM or Standard Methods designations and the current version and version date.

Updated versions of approved reference methodology are placed into use as changes occur. The Quality Assurance Director informs operations management of changes in method versions as they occur. The operations management staff selects an implementation date. The operations staff is responsible for completing all method use requirements prior to the implementation date. This includes modification of SOPs, completion of MDL and precision and accuracy studies and staff training. Documentation of these activities is provided to the QA staff who retains this information on file. The updated method is placed into service on the implementation date and the old version is de-activated.

Multiple versions of selected methods may remain in use to satisfy client specific needs. In these situations, the default method version becomes the most recent version. Client specific needs are communicated to the laboratory staff using method specific analytical method codes, which clearly depict the version to be used. The old method version is maintained as an active method until the specified client no longer requires the use of the older version.

SGS Accutest Inc. will not use methodology that represents significant departures from the reference method unless specifically directed by the client. If clients direct the laboratory to use a method modification that represents a significant departure from the reference method, the request will be documented in the project file.

8.14 ***Analytical Capabilities***. Appendix III provides a detailed listing of the methodology employed for the analysis of test samples.

9.0 SAMPLING, SAMPLE MANAGEMENT, LOGIN, CUSTODY, STORAGE AND DISPOSAL

Requirement: The laboratory must employ a system which ensures that client supplied product or supplied product (the sample) is adequately evaluated, acknowledged, and secured upon delivery to the laboratory. The system also assures that product chain of custody is maintained and that sample receipt conditions and preservation status are documented and communicated to the client and internal staff. The login procedure assigns, documents, and maps the specifications for the analysis of each unique sample to assure that the requested analysis is performed on the correct sample and enables the sample to be tracked throughout the laboratory analytical cycle. The system includes procedures for reconciling defects in sample condition or client provided data, which are identified at sample arrival. The system specifies the procedures for proper sample storage, transfer to the laboratory, and disposal after analysis. The system is also documented in standard operating procedures.

9.1 ***Order Receipt and Entry***. New orders are initiated and processed by the client services group (See Chapter 14, Procedures for Executing Client Specifications). The new order procedure includes mechanisms for providing bottles to clients, which meet the size, cleanliness, and preservation specifications for the analysis to be performed.

For new orders, the project manager prepares a bottle request form, which is submitted to sample management. This form provides critical project details to the sample management staff, which are used to prepare and assemble the sample bottles for shipment to the client prior to sampling.

The bottle order is assembled using bottles that meet USEPA specifications for contaminant free sample containers. SGS Accutest Inc. uses a combination of commercially supplied pre-cleaned bottles and bottles that have been tested for residual contamination and verified to meet USEPA specifications prior to use. Sterile bottles for microbiological samples are purchased from commercial sources.

Bottles, which are not purchased pre-cleaned, are checked to assure that they are free of contamination from targeted analytes before being released for use. Sterile bottles are checked for contamination with each lot. The QA staff retains a copy of the documentation of in-house contamination and sterility checks and maintains the responsibility for approving and releasing bottle lots for use following a review of the check data.

Preservative solutions that are specified for the analysis requested are dispensed into the sample bottle prior to shipment. All preservative solutions are prepared in the laboratory or purchased from commercial suppliers. Each solution is checked to assure that it is free of contamination from the compounds being analyzed before being released for use.

Reagent water for trip and field blanks is poured into appropriately labeled containers. All bottles are packed into ice chests with blank chain of custody forms and the original bottle

order form. Completed bottle orders are delivered to clients using SGS Accutest Inc. couriers or commercial carriers for use in field sample collection.

9.2 ***Sampling***. Documented procedures are employed by the field staff for field sample collection and are accessible during sample collection activities. Field activities are documented in controlled notebooks which detail relevant field conditions, site data and the results of field measurements. Appropriate custody procedures for collected samples are initiated by the field staff at the time of sample collection. Samples are documented, labeled and preserved according to the specifications of the method and/or regulatory program prior to being shipped to the laboratory.

9.3 ***Sample Receipt and Custody***. Samples are delivered to the laboratory using a variety of mechanisms including SGS Accutest Inc. couriers, commercial shippers, and client self-delivery. Documented procedures are followed for arriving samples to assure that custody and integrity are maintained and handling/ preservation requirements are documented and maintained.

Sample custody documentation is initiated when the individual collecting the sample collects field samples. Custody documentation includes all information necessary to provide an unambiguous record of sample collection, sample identification, and sample collection chronology. Initial custody documentation employs either SGS Accutest Inc. or client generated custody forms.

SGS Accutest Inc. generates a chain of custody in situations where the individuals who collected the sample did not generate custody documentation in the field.

SGS Accutest Inc. defines sample custody as follows:

∴ The sample is in the actual custody or possession of the assigned responsible person,

∴ The sample is in a secure area.

The SGS Accutest Inc. facility is defined as a secure facility. Perimeter security has been established, which limits access to authorized individuals only. Visitors enter the facility through the building lobby and must register with the receptionist prior to entering controlled areas. While in the facility, visitors are required to wear a visitor's badge and must be accompanied by their hosts at all times. After hours, building access is controlled using a computerized passkey reader system. This system limits building access to individuals with a pre-assigned authorization status. After hours visitors are not authorized to be in the building. Clients delivering samples after hours must make advanced arrangements through client services and sample management to assure that staff is available to take delivery and maintain custody.

Upon arrival at SGS Accutest Inc., the sample custodian reviews the chain of custody for the samples received to verify that the information on the form corresponds with the samples

delivered. This includes verification that all listed samples are present and properly labeled, checks to verify that samples were transported and received at the required temperature, verification that the sample was received in proper containers, verification that sufficient volume is available to conduct the requested analysis, and a check of individual sample containers to verify test specific preservation requirements including the absence of headspace for volatile compound analysis.
Sample conditions and other observations are documented on the chain of custody by the sample custodian prior to completing acceptance of custody and in an online database that creates a permanent record of all sample login activities. The sample custodian accepts sample custody upon verification that the custody document is correct. Discrepancies or non-compliant situations are documented and communicated to the SGS Accutest Inc. project manager, who contacts the client for resolution. The resolution is documented and communicated to sample management for execution.

The sample management staff maintains an electronic sample receipt log. This log details all sample-related information in a searchable database that is updated upon data entry and backed up daily. The log records include critical date information, numbers of samples, numbers of bottles for each parameter, descriptions of bottles for each parameter, preservation conditions, bottle refrigerator location, and bottle conditions. Data entry into the log is secured using individual passwords.

During initial login, each bottle is assigned a unique number and is labeled with a barcode corresponding to that number. A bar-coding and scanning system electronically tracks sample custody transfers between individuals within the laboratory. Internal custody documentation may be required for compliance with regulatory agency or contractual specifications. A documented, chronological record of each sample transfer identifying each individual having possession of the sample is created in the laboratory information management system, which can be printed and included in data reports to demonstrate continuous custody.

9.4 ***Laboratory Preservation of Improperly Preserved Field Samples.*** SGS Accutest Inc. will attempt to preserve field samples that were received without proper preservation to the extent that it is feasible and supported by the methods in use. Laboratory preservation of improperly preserved or handled field samples is routinely performed for metals samples. Special handling procedures may also be applied to improperly preserved volatile organics.

Aqueous metals samples that were not nitric acid preserved to pH 2 in the field are laboratory preserved and held for twenty (24) hours to equilibrate prior to analysis. Aqueous metals samples requiring field filtration may be filtered in the laboratory within seventy-two (72) hours of receipt provided that the sample has not been acid preserved.

Unpreserved volatile organics samples may be analyzed within seven (7) days to minimize degradation of volatile organics if the laboratory is notified in advance of the failure to preserve upon collection. Laboratory preservation of unpreserved aqueous samples is not possible. A pH check of volatile organic samples prior to analysis will compromise the sample by allowing volatile organics to escape during the check. If the laboratory is not notified of the failure to field

preserve an aqueous volatile organic sample, the defect will not be identified until sample analysis has been completed and the data is qualified accordingly.

9.5 ***Sample Tracking Via Status Change.*** An automated, electronic LIMS procedure records sample exchange transactions between departments and changes in analytical status. This system tracks all preparation, analytical, and data reporting procedures to which a sample is subjected while in the possession of the laboratory. Each individual receiving samples must acknowledge the change in custody and operational status in the LIMS. This step is required to maintain an accurate electronic record of sample status, dates of analytical activity, and custody throughout the laboratory.

Sample tracking is initiated at login where all chronological information related to sample collection dates and holding times are entered into the LIMS. This information is entered on an individual sample basis.

9.6 ***Sample Acceptance Policy***. Incoming samples must satisfy SGS Accutest Inc.'s sample acceptance criteria before being logged into the system. Sample acceptance is based on the premise that clients have exercised proper protocols for sample collection. This includes complete documentation, sufficient volume, proper chemical preservation, temperature preservation, sample container sealing and labeling, and appropriate shipping container packing.

The sample management staff will make every attempt to preserve improperly preserved samples upon arrival. However, if preservation is not possible, the samples may be refused unless the client authorizes analysis. No samples will be accepted if holding times have been exceeded or will be exceeded before analysis can take place unless the client authorizes analysis.

Sample acceptance criteria include proper custody and sample labeling documentation. Proper custody documentation includes an entry for all physical samples delivered to the laboratory with an identification code that matches the sample bottle and a date and signature of the individual who collected the sample and delivered them to the laboratory.

SGS Accutest Inc. reserves the right to refuse any sample which in its sole and absolute discretion and judgment is hazardous, toxic and poses or may pose a health, safety or environmental risk during handling or processing. The company will not accept samples for analysis using methodology that is not performed by the laboratory or for methods that lab does not hold valid accreditations unless arrangements have been made to have the analysis conducted by a qualified subcontractor.

SGS Accutest Inc. does not accept radioactive samples, however, the policy for sample handling of Naturally Occurring Radioactive Materials (NORM) is described below:

Samples that meet the Federal Department of Transportation and International Air Transportation Association criteria could be accepted and handled following normal procedures (except for disposal) in the lab. This corresponds to samples with United Nations

(UN) labels indicating levels of < 500 uR/hour. Samples containing levels at or higher than 500 uR/hour will not be accepted by SGS Accutest Inc. Clients must inform SGS Accutest Inc. of the level of radiation by screening the samples and documenting the level on the Chain of Custody or other form in order for the samples to be accepted.

SGS Accutest Inc. would require that any shipments containing samples of this type must be clearly labeled with UN labels showing the measured level of radioactivity as < 500 uR/hour.

These samples cannot be disposed of in our normal waste streams. Therefore, on completion of analysis, the samples would be returned to the client or disposed of using an alternate waste handler. In either case, the client would be responsible for the additional shipping or disposal charges, as well as processing charges for segregating the waste stream in the lab.

9.7 ***Assignment of Unique Sample Identification Codes***. Unique identification codes are assigned to each sample bottle to assure traceability and unambiguously identify the tests to be performed in the laboratory.

The sample identification coding process begins with the assignment of a unique alphanumeric job number. A job is defined as a group of samples received on the same day, from a specific client pertaining to a specific project. A job may consist of groups of samples received over a multi-day period. The first two characters of the job number are alpha-characters that identify the laboratory facility. The next characters are numeric and sequence by one number with each new job.

Unique sample numbers are assigned to each bottle collected as a discrete entity from a designated sample point. This number begins with the job number and incorporates a second series of numbers beginning at one and continuing chronologically for each point of collection. The test to be performed is clearly identified on the bottle label. Multiple sample bottles collected for analysis of the same parameter are numbered bottle 1, 2, etc.

Alpha suffixes may be added to the sample number to identify special designations such as subcontracted tests, in-house QC checks, or re-logs. Multiple sample bottles for a specific analysis are labeled Bottle 1, Bottle 2, etc.

9.8 ***Subcontracted Analysis***. Subcontract laboratories are employed to perform analysis not performed by SGS Accutest Inc. The quality assurance staff evaluates subcontract laboratories to assure their quality processes meet the standards of the environmental laboratory industry prior to engagement. Throughout the subcontract process, SGS Accutest Inc. follows established procedures to assure that sample custody is maintained and the data produced by the subcontractor meets established quality criteria.

*Subcontracting Procedure***.** Subcontracting procedures are initiated through several mechanisms, which originate with sample management. Samples for analysis by a subcontractor are logged into the SGS Accutest Inc. system using regular login procedures. If subcontract parameters are part of the project or sample management has received subcontracting instructions for a

specific project, a copy of the chain of custody is given to the appropriate project manager with the subcontracted parameters highlighted. This procedure triggers the subcontract process at the project management level. The project manager contacts an approved subcontractor that carries accreditation in the venue of the project location to place the subcontract order. A subcontract order form (SOF) is simultaneously prepared in electronic format, by the project manager and filed with the original chain of custody. The SOF and the subcontract chain of custody are forwarded to sample management, via E-Mail, for processing. A copy is filed with the original CoC.

Sample management signs the subcontract chain of custody and ships the sample(s) to the subcontractor. The subcontract CoC is filed with the original CoC and the request for subcontract. Copies are distributed to the login department, the project manager, sample management and the client.

Clients are verbally notified of the need to subcontract analysis as soon as the need is identified by the client services staff. This may occur during the initial project setup or at the time of login if the project setup had not been initiated through the client services staff. Copies of the subcontract CoC and the original CoC, which are electronically distributed to clients, constitutes documented client notification of the laboratories intent to subcontract analysis.

Subcontractor data packages are reviewed by the QA Staff to assess completeness and quality compliance. If completeness defects are detected, the subcontractor is asked to immediately upgrade the data package. If data quality defects are detected, the QA staff retains the package for further review. The QA staff will pursue a corrective action solution before releasing defective data to the client.

Approved subcontract data is entered into the laboratory information management system (LIMS) if possible and incorporated into the final report. All subcontract data is footnoted to provide the client with a clear indication of its source. Copies of original subcontract data are included in the data report depending on the reporting level specified by the client. Applicable subcontractor accreditation information is provided with the subcontractor data.

*Subcontract Laboratory Evaluation***.** The QA staff evaluates subcontract laboratories prior to engagement. The subcontract laboratory must provide SGS Accutest Inc. with proof of a valid certification to perform the requested analysis for the venue where they were collected and for a specific program should an approval or accreditation be required. In addition, the QA staff may require a copy of the laboratory's Quality Systems Manual, copies of SOPs used for the subcontracted analysis, a copy of the most recent performance evaluation study for the subcontracted parameter, copies of the internal data integrity policy and copies of the most recent regulatory agency or third party accreditor audit report. Certification verification must be submitted to SGS Accutest Inc. annually. If possible, the QA staff may conduct a site visit to the laboratory to inspect the quality system. SGS Accutest Inc. assumes the responsibility for the performance of all subcontractors who have successfully demonstrated their qualifications and should obtain an example data deliverable package prior to initiation of

subcontract work for compliance review. Qualification of a subcontract laboratory may be bypassed if the primary client directs SGS Accutest Inc. to employ a specific subcontractor.

9.9 ***Sample Storage***. Following sample transfer to the sample custodian, samples are assigned to various secured, refrigerated storage areas depending upon the test to be performed and the matrix of the samples. The location (refrigerator and shelf) of each sample is recorded on the chain of custody adjacent to the line corresponding to each sample number and also entered into the LIMS. Samples remain in storage until the laboratory technician requests that they be transferred into the laboratory for analysis.

Second shift staff is authorized to retrieve samples from storage and initiate custody transfer. All sample request forms must be completed regardless of who performs the transfer.

Samples for volatile organics analysis are placed in storage in designated refrigerators by the sample custodian and immediately transferred to the organics group control. Sample custody is transferred to the department designee. These samples are segregated according to matrix to limit opportunities for cross contamination to occur.

Organics staff is authorized to retrieve samples from these storage areas for analysis. When analysis is complete, the samples are placed back into storage.

9.10 ***Sample Login***. Following sample custody transfer to the laboratory, the documentation that describes the clients analytical requirements are delivered to the sample login group for coding and entry to the Laboratory Information Management System (LIMS). This process translates all information related to collection time, turnaround time, sample analysis, and deliverables into a code which enables client requirements to be electronically distributed to the various departments within the laboratory for scheduling and execution.

The technical staff is alerted to client or project specific requirements through the use of a unique project code that is electronically attached to the job during login. The unique project code directs the technical staff to controlled specifications documents detailing the unique requirements.

9.11 ***Sample Retrieval for Analysis***. Individual laboratory departments prepare and submit written requests to the sample custodian to retrieve samples for analysis. The sample custodian retrieves all samples except volatile organics and delivers them to the requesting department. Retrieval priorities are established by the requesting department and submitted to the sample custodian when multiple requests are submitted. Internal custody transfers using the bar code scanning system occur whenever the samples change hands or locations.
After sample analysis has been completed, the department requests pick-up and return of the sample to the storage area. The sample custodian retrieves the sample and completes the custody transfer from the department of the transfer back to sample management or sample storage.

9.12 ***Sample Disposal***. SGS Accutest Inc. retains all samples and sample extracts under proper storage for a minimum of 30 days following completion of the analysis report. Longer storage periods are accommodated on a client specific basis if required. Samples may also be returned to the client for disposal.
SGS Accutest Inc. disposes of all laboratory wastes following the requirements of the Resource Conservation and Recovery Act (RCRA). The Company has obtained and maintains a waste generator identification number, NJD982533622.

Sample management generates a sample disposal dump sheet from the LIMS tracking system each week, which lists all samples whose holding period has expired. Data from each sample is compared to the hazardous waste criteria established by the New Jersey Department of Environmental Protection (NJDEP).

Samples containing constituents at concentrations above the criteria are labeled as hazardous and segregated into five general waste categories for disposal as follows:

- Waste Oil
- Soil (solids – positive and negative hazardous characteristics)
- Mixed Aqueous
- Sludges (semi-solids)
- PCB Hazardous Waste (USEPA 40 CFR 761 criteria).

Non-hazardous aqueous samples are diluted and disposed directly into the laboratory sink. All aqueous liquids pass through a neutralization system before entering the municipal system. Solid samples are emptied into consolidation drums and disposed as hazardous waste or non-hazardous wastes depending upon the results of hazardous characteristics determination. Samples classified as PCB hazardous wastes are labeled and packaged according to the requirements in 40 CFR 761.

Empty glass and plastic bottles from aqueous and solid samples are segregated for recycling. Recycled materials are collected by a commercial contractor and transferred to a county transfer facility for separation into various materials categories. These operations are classified as secure facilities employing cameras, security guards and fiber optic security systems.
The recyclable material is transported to a recycling facility for further processing. Separated glass is transported to a processing facility where it is acid washed in two, separate wash baths, rinsed in boiling water and ground into ½ inch chunks. The chunks are transported to an end product user for re-manufacturing into a glass product.

Separated plastic is transported to a processing facility where it is acid washed to remove the labels and adhesives and boiled for sterilization. The sample containers and any remaining labels are shredded and ground resulting in complete destruction of remaining labels the ground material is sent by rail car or tractor-trailer to various end users that melt and reform the material into useful products of their industry. The recycling facility employs a Code of Ethics in which all client names are confidential and are not divulged to any individual or corporation without written permission from the client.

Laboratory wastes are collected by waste stream in designated areas throughout the laboratory. Waste streams are consolidated twice each week by the waste custodian and transferred to stream specific drums for disposal through a permitted waste management contractor. Filled, consolidated drums are tested for hazardous characteristics and scheduled for removal from the facility for appropriate disposal based on the laboratory data.

All solvent extracts and digestates are collected for disposal following the thirty-day holding period and drummed according to their specific waste stream category. Chlorinated solvent extracts are drummed as chlorinated wastes (i.e., Methylene Chloride). Non-chlorinated solvent extracts are drummed as non-chlorinated wastes (i.e., acetone, hexane, methanol, and mixed solvents). Digestates are collected for disposal following the thirty-day holding period and drummed as corrosive liquid containing metals.

10.0 LABORATORY INSTRUMENTATION AND MEASUREMENT STANDARDS

Requirement: The laboratory has established procedures, which assure that instrumentation is performing to a pre-determined operational standard prior to the analysis of any samples. In general, these procedures follow the regulatory agency requirements established in promulgated methodology. The instrumentation selected to perform specified analysis are uniquely identified and capable of providing the method specified uncertainty of measurement needed. These procedures are documented and incorporated into the standard operating procedures for the method being executed.

10.1 ***Mass Tuning – Mass Spectrometers***. The mass spectrometer tune and sensitivity is monitored to assure that the instrument is assigning masses and mass abundances correctly and that the instrument has sufficient sensitivity to detect compounds at low concentrations. This is accomplished by analyzing a specific mass tuning compound at a fixed concentration. If the sensitivity is insufficient to detect the tuning compound, corrective action must be performed prior to the analysis of standards or samples. If the mass assignments or mass abundances do not meet criteria, corrective action must be performed prior to the analysis of standards or samples.

10.2 ***Wavelength Verification – Spectrophotometers***. Spectrophotometer detectors are checked on a regular schedule to verify proper response to the wavelength of light needed for the test in use. If the detector response does not meet specifications, corrective action (detector adjustment or replacement) is performed prior to the analysis of standards or samples.

10.3 ***Inter-element Interference Checks (Metals)***. Inductively Coupled Plasma Emission Spectrophotometers (ICP) are subject to a variety of spectral interferences, which can be minimized or eliminated by applying interfering element correction factors and background correction points. Interfering element correction factors are checked on a specified frequency through the analysis of check samples containing high levels of interfering elements. Analysis of single element interferant solutions is also conducted at a specified frequency.

If the check indicates that the method criteria have not been achieved for any element in the check standard, the analysis is halted and data from the affected samples are not reported. Sample analysis is resumed after corrective action has been performed and the correction factors have been re-calculated.

New interfering element correction factors are calculated and applied whenever the checks indicate that the correction factors are no longer meeting criteria. At a minimum, correction factors are replaced once a year.

Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) also is subject to isobaric elemental and polyatomic ion interferences. These interferences are corrected through the use of calculations. The accuracy of corrections is dependent on the sample matrix and instrument conditions and is verified by quality control checks on individual runs.

10.4 ***Calibration and Calibration Verification***. Many tests require calibration using a series of reference standards to establish the concentration range for performing quantitative analysis. Instrument calibration is performed using standards that are traceable to national standards. Method specific procedures for calibration are followed prior to any sample analysis. In general, if a reference method does not specify the number of calibration standards, the minimum number is two (one of which is at the reporting limit or limit of quantitation).

Calibration is performed using a linear regression calculation or calibration factors calculated from the curve. The calibration must meet method specific criteria for linearity or precision. If the criteria are not achieved, corrective action (re-calibration or instrument maintenance) is performed. The instrument must be successfully calibrated before analysis of samples can be conducted.

Initial calibration for metals analysis performed using inductively coupled plasma (ICP) employs the use of a single standard and a calibration blank to establish linearity. Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) can be calibrated using either a two point or a multi-point calibration, as long as all quality control criteria for the analysis can be achieved. The calibration blank contains all reagents that are placed into the calibration standard with the exception of the target elements. Valid calibration blanks must not contain any target elements.

Initial calibrations must be verified using a single concentration calibration standard from a second source (i.e. separate lot or different provider). The continuing validity of existing calibrations must be regularly verified using a single calibration standard. The response to the standard must meet pre-established criteria that indicate the initial calibration curve remains valid. If the criteria are not achieved corrective action (re-calibration) is performed before any additional samples may be analyzed.

If continuing calibration verification results are outside established criteria, data associated with the verification may be fully useable under the following conditions:

- When the acceptance criteria for the continuing calibration verification are exceeded high, i.e., high bias, and there are associated samples that are non-detects, then those non-detects may be reported.

- When the acceptance criteria for the continuing calibration verification are exceeded low, i.e., low bias, those sample results may be reported if they exceed a maximum regulatory limit/decision level.

Calibration verification is also performed whenever it appears that the analytical system is out of calibration or no longer meets the calibration requirements. It is also performed when the time period between calibration verifications has expired.

Sample results are quantitated from the initial instrument calibration unless otherwise required by regulation, method, or program specific criteria.

10.5 ***Linear Range Verification and Calibration (ICP & ICP/MS Metals)***. Linear range verification is performed for all ICP and ICP/MS instrumentation. The regulatory program or analytical method specifies the verification frequency. A series of calibration standards are analyzed over a broad concentration range. The data from these analyses are used to determine the valid analytical range for the instrument. ICP instrument calibration is routinely performed using a single standard at a concentration within the linear range and a blank.

Some methods or analytical programs require a low concentration calibration check to verify that instrument sensitivity is sufficient to detect target elements at the reporting limit. The analytical method or regulatory program defines the criteria used to evaluate the low concentration calibration check. If the low calibration check fails criteria, corrective action is performed and verified through reanalysis of the low concentration calibration check before continuing with the field sample analysis. . ICP-MS instrument calibration is normally performed using multiple standards within the linear range and a blank, but may be done with a single standard at a concentration within the linear range and a blank.

10.6 ***Retention Time Development and Verification (GC)***. Chromatographic retention time windows are developed for all analysis performed using gas chromatographs with conventional detectors. An initial experimental study is performed, which establishes the width of the retention window for each compound. The retention time width of the window defines the time ranges for elution of specified target analytes on the primary and confirmation columns. Retention time windows are established upon initial calibration, applying the retention time range from the initial study to each target compound. Retention times are regularly confirmed through the analysis of an authentic standard during calibration verification. If the target analytes do not elute within the defined range during calibration verification, the instrument must be recalibrated and new windows defined. New studies are performed when major changes, such as column replacement are made to the chromatographic system.

10.7 ***Equipment List.*** See Appendix IV for a listing of all equipment used for measurement and/or calibration in laboratory processes.

11.0 INSTRUMENT MAINTENANCE

Requirement. Documented procedures have been established for conducting equipment maintenance. The procedure includes maintenance schedules if required or documentation of daily maintenance activities. All instrument maintenance activities are documented in instrument specific logbooks.

11.1 ***Routine, Daily Maintenance***. Routine, daily maintenance is required on an instrument specific basis and is performed each time the instrument is used. Daily maintenance includes activities to insure a continuation of good analytical performance. This may include performance checks that indicate if non-routine maintenance is needed. If performance checks indicate the need for higher level maintenance, the equipment is taken out of service until maintenance is performed. Analysis cannot be continued until all performance checks meet established criteria and a return to operational control has been demonstrated and documented. The individual assigned to the instrument is responsible for daily maintenance.

11.2 ***Non-routine Maintenance***. Non-routine maintenance is initiated for catastrophic occurrences such as instrument failure. The need for non-routine maintenance is indicated by failures in general operating systems that result in an inability to conduct required performance checks or calibration. Equipment in this category is taken out of service, tagged accordingly and repaired before attempting further analysis. Before initiating repairs, all safety procedures for safe handling of equipment during maintenance, such as lock-out/tag-out are followed. Analysis is not resumed until the instrument meets all operational performance check criteria, is capable of being calibrated and a return to operational control has been demonstrated and documented. Section supervisors are responsible for identifying non-routine maintenance episodes and initiating repair activities to bring the equipment on-line. This may include initiating telephone calls to maintenance contractors if necessary. They are responsible for documenting all details related to the occurrence and repair.

11.3 ***Scheduled Maintenance***. Modern laboratory instrumentation rarely requires regular preventative maintenance. If required, the equipment is placed on a schedule, which dictates when maintenance is needed. Examples include annual balance calibration by an independent provider or ICP preventative maintenance performed by the instrument manufacturer. Section supervisors are responsible for initiating scheduled maintenance on equipment in this category. Scheduled maintenance is documented using routine documentation practices.

11.4 ***Maintenance Documentation***. Routine and non-routine maintenance activities are documented in logbooks assigned to instruments and equipment used for analytical measurements. The logbooks contain preprinted forms, which specify the required maintenance activities. The analyst or supervisor performing or initiating the maintenance activity is required to check the activity upon its completion and initial the form. This includes documenting that the instrument has been returned to operational control following the completion of the activity. Non-routine maintenance (repairs, upgrades) is documented on the back page of the service log.

12.0 QUALITY CONTROL PARAMETERS, PROCEDURES, AND CORRECTIVE ACTION

Requirement: All procedures used for test methods incorporate quality control parameters to monitor elements that are critical to method performance. Each quality parameter includes acceptance criteria that have been established by regulatory agencies for the methods in use. Criteria may also be established through client dictates or through the accumulation and statistical evaluation of internal performance data. Data obtained for these parameters during routine analysis must be evaluated by the analyst, and compared to the method criteria in use. If the criteria are not achieved, the procedures must specify corrective action and conformation of control before proceeding with sample analysis. QC parameters, procedures, and corrective action must be documented within the standard operating procedures for each method. In the absence of client specific objectives the laboratory must define qualitative objectives for completeness and representativeness of data.

12.1 ***Procedure***. Bench analysts are responsible for methodological quality control and sample specific quality control. Each method specifies the control parameters to be employed for the method in use and the specific procedures for incorporating them into the analysis. These control parameters are analyzed and evaluated with every designated sample group (batch).

The data from each parameter provides the analyst with critical decision making information on method performance. The information is used to determine if corrective action is needed to bring the method or the analysis of a specific sample into compliance. These evaluations are conducted throughout the course of the analysis. Each control parameter is indicative of a critical control feature. Failure of a methodological control parameter is indicative of either instrument or batch failure. Failure of a sample control parameter is indicative of control difficulties with a specific sample or samples.

Sample Batch. All samples analyzed in the laboratory are assigned to a designated sample batch, which contains all required quality control samples and a defined maximum number of field samples that are prepared and/or analyzed over a defined time period. The maximum number of field samples in the batch is 20. SGS Accutest Inc. has incorporated the TNI Standard batching policy as the sample-batching standard. This policy incorporates the requirement for blanks and spiked blanks as a time based function as defined by TNI Standard. Accordingly, the specified time period for a sample batch is 24 hours. Matrix spike/matrix spike duplicate, matrix spikes and duplicates are defined as sample frequency based functions and may be applied to several batches until the frequency requirement has been reached. A matrix spike/matrix spike duplicate, matrix spikes and/or duplicate is required every 20 samples.

Client criteria that defines a batch as a time based function which includes a matrix spike/matrix spike duplicates as a contractual specification will be honored. The typical batch contains a blank and a laboratory control sample (LCS or spiked blank). Batch documentation includes lot specifications for all reagents and standards used during preparation of the batch.

12.2 ***Methodological Control Parameters and Corrective Action***. Prior to the analysis of field samples the analyst must determine that the method is functioning properly. Specific control parameters indicate whether critical processes meet specified requirements before continuing with the analysis. Method specific control parameters must meet criteria before sample analysis can be conducted. Each of these parameters is related to processes that are under the control of the laboratory and can be adjusted if out of control.

Method Blank. A method blank is analyzed during the analysis of any field sample. The method blank is defined as a sample. It contains the same standards (internal standards, surrogates, matrix modifiers, etc.) and reagents that are added to the field sample during analysis, with the exception of the sample itself. If the method blank contains target analytes(s) at concentrations that exceed method detection limit concentrations (organics) or reporting limit concentrations (inorganics), the source of contamination is investigated and eliminated before proceeding with sample analysis. Target analyte(s) in method blanks at concentrations no greater than one-half of the reporting limit concentrations (metals) may be requested on a client or project specific basis. Systematic contamination is documented for corrective action and resolved following the established corrective action procedures.

Laboratory Control Samples (LCS or Spiked Blanks). A laboratory control sample (spiked blank or commercially prepared performance evaluation sample) is analyzed along with field samples to demonstrate that method accuracy is within acceptable limits. These spike solutions may be from different sources than the sources of the solutions used for method calibration depending upon the method requirements. All target components are included in the spike mixture over a two year period. The performance limits are derived from published method specifications or from statistical data generated from the analysis of laboratory method performance samples. Spiked blanks are blank matrices (reagent water or clean sand) spiked with target parameters and analyzed using the same methods used for samples. Accuracy data is compared to laboratory derived limits to determine if the method is in control. Laboratory control samples (LCS) are commercially prepared spiked samples in an inert matrix. Performance criteria for recovery of spiked analytes are pre-established by the commercial entity preparing the sample. The sample is analyzed in the laboratory as an external reference.

Accuracy data is compared to the applicable performance limits. If the spike accuracy exceeds the performance limits, corrective action, as specified in the SOP for the method is performed and verified before continuing with a field sample analysis. In some cases, decisions are made to continue with sample analysis if performance limits are exceeded, provided the unacceptable result has no negative impact on the sample data.

Blanks and spikes are routinely evaluated before samples are analyzed. However, in situations where sample analysis is performed using an auto sampler, they may be evaluated after sample analysis has occurred. If the blanks and spikes do not meet criteria, sample analysis is repeated.

Proficiency Testing. Proficiency test samples (PTs) are single or double blind spikes, introduced to the laboratory to assess method performance. PTs may be introduced as double

blinds submitted by commercial clients, single or double blinds from regulatory agencies, or internal blinds submitted by the QA group.

A minimum of two single blind studies must be performed each year for every parameter in aqueous and solid matrices for each field of testing for which the laboratory maintains accreditation. Proficiency samples must be purchased as blinds from an A2LA accredited vendor. Data from these studies are provided to the laboratory by the vendor and reported to accrediting agencies. If unsatisfactory performance is noted, corrective action is performed to identify and eliminate any sources of error. A new single blind must be analyzed if required to demonstrate continuing proficiency.

PT samples performed for accrediting agencies or clients, which do not meet performance specifications, require a written summary that documents the corrective action investigation, findings, and corrective action implementation. A copy of this summary shall be submitted to the TNI Standard Primary Accrediting Authority, NJDEP Office of Quality Assurance for review.

Single or double blind proficiency test samples may be employed for self-evaluation purposes. Data from these analyses are compared to established performance limits. If the data does not meet performance specifications, the system is evaluated for sources of acute or systematic error. If required, corrective action is performed and verified before initiating or continuing sample analysis.

Trend Analysis for Control Parameters. The quality assurance staff is responsible for continuous analytical improvement through quality control data trend analysis. Accuracy data for spiked parameters in the spiked blank are statistically evaluated weekly for trends indicative of systematic problems. Data from LCS parameters and surrogates are pooled on a method, matrix, and instrument basis. This data is evaluated by comparison to existing control and warning limits. Trend analysis is performed automatically as follows:

- Any point outside the control limit
- Any three consecutive points between the warning and control limits
- Any eight consecutive points on the same side of the mean.
- Any six consecutive points increasing or decreasing

The results of the trend analysis are transmitted as .PDF files for supervisory evaluation prior to sample analysis. Trends that indicate the potential loss of statistical control are further evaluated to determine the impact on data quality and to determine if corrective action is necessary. If corrective action is indicated, the supervisor informs the analysts of the corrective actions to be performed. Return to control is demonstrated before analysis resumes.

12.3 ***Sample Control Parameters and Corrective Action***. The analysis of samples can be initiated following a successful demonstration that the method is operating within established controls. Additional controls are incorporated into the analysis of each sample to determine if the method is functioning within established specifications for each individual sample. Sample

QC data is evaluated and compared to established performance criteria. If the criteria are not achieved the method or the SOP specifies the corrective action required to continue sample analysis. In many cases, failure to meet QC criteria is a function of sample matrix and cannot be remedied. Each parameter is designed to provide quality feedback on a defined aspect of the sampling and analysis episode.

Duplicates. Duplicate sample analysis is used to measure analytical precision. This can also be equated to laboratory precision for homogenous samples. Precision criteria are method dependent. If precision criteria are not achieved, corrective action or additional action may be required. Recommended action must be completed before sample data can be reported.

Laboratory Spikes & Spiked Duplicates. Spikes and spiked duplicates are used to measure analytical precision and accuracy for the sample matrix selected. Precision and accuracy criteria are method dependent. If precision and accuracy criteria are not achieved, corrective action or additional action may be required. Recommended action must be completed before reporting sample data. All target components are included in the spike mixture over a two year period.

Serial Dilution (Metals). Serial dilutions of metals samples are analyzed to determine if analytical matrix effects may have impacted the reported data. If the value of the serially diluted samples does not agree with the undiluted value within a method-specified range, the sample matrix may be causing interferences, which may lead to either a high or low bias. If the serial dilution criterion is not achieved, it must be flagged to indicate possible bias from matrix effects.

Post Digestion Spikes. Digested samples are spiked and analyzed to determine if matrix interferences are biasing the results when the pre-digestion spike (matrix spike) recovery falls outside the control limits. It may also be used to determine potential interferences per client's specification. The sample is spiked at the concentration specified in the method SOP. No action is necessary if the post digestion spike is outside of the method criteria, unless a preparation problem is suspected with the spike, in which case the post digestion spike should be re-prepared and reanalyzed.

Surrogate Spikes (Organics). Surrogate spikes are organic compounds that are similar in behavior to the target analytes but unlikely to be found in nature. They are added to all quality control and field samples to measure method performance for each individual sample. Surrogate accuracy limits are derived from published method specifications or from the statistical evaluation of laboratory generated surrogate accuracy data. Accuracy data is compared to the applicable performance limits. If the surrogate accuracy exceeds performance limits, corrective action, as specified in the method or SOP is performed before sample data can be reported.

Internal Standards (Organic Methods). Internal standards are retention time and instrument response markers added to every sample to be used as references for quantitation. Their response is compared to reference standards and used to evaluate instrument sensitivity on a sample specific basis. Internal standard retention time is also compared to reference

standards to assure that target analytes are capable of being located by their individual relative retention time.

If internal standard response criteria are not achieved, corrective action or additional action may be required. The recommended action must be completed before sample data can be reported.

If the internal standard retention time criteria are not achieved corrective action or additional action may be required. This may include re-calibration and re-analysis. Additional action must be completed before sample data is reported.

Internal Standards (ICP and ICP/MS Metals). Internal standards are used on ICP instruments to compensate for variations in response caused by differences in sample matrices. Multiple internal standards are used for each sample on ICP/MS instruments to compensate for variations in response caused by differences in sample matrices. This adjustment is performed automatically during sample analysis. The internal standard response of replicated sample analysis is monitored to detect potential analytical problems. If analytical problems are suspected, then the field samples may be reanalyzed or reanalyzed upon dilution to minimize the interferences. A different internal standard may be employed for quantitation in situations where the field sample contains the element typically used as the internal standard.

12.4 ***Laboratory Derived Quality Control Criteria.*** Control criteria for in-house methods and client specific modifications that exceed the scope of published methodology are defined and documented prior to the use of the method. The Quality Assurance Director is responsible for identifying additional control criteria needs. Control parameters and criteria, based on best technical judgment are established using input provided by the operations staff. These control parameters and criteria are documented and incorporated into the method.

The laboratory-derived criteria are evaluated for technical soundness on spiked samples prior to the use of the method on field samples. The technical evaluation is documented and archived by the Quality Assurance Staff.

When sufficient data from the laboratory developed control parameter is accumulated, the data is statistically processed and the experimentally derived control limits are incorporated into the method.

12.5 ***Bench Review & Corrective Action***. The bench chemists are responsible for all QC parameters. Before proceeding with sample analysis, they are required to successfully meet all instrumental QC criteria. They have the authority to perform any necessary corrective action before proceeding with sample analysis. Their authority includes the responsibility for assuring that departures from documented policies and procedures do not occur.

The bench chemists are also responsible for all sample QC parameters. If the sample QC criteria are not achieved, they are authorized and required to perform the method specified corrective action before reporting sample data.

12.6 ***Data Qualifiers.*** An alpha character coding system is employed for defining use limitations for reported data. These limitations are applied to analytical data by the analyst to clarify the usefulness of the reported data for data user. Common data qualifiers and their definitions are as follows:

Organics.

J: Indicates an estimated value. Applied to calculated concentrations for tentatively identified compounds and qualitatively identified compounds whose concentration is below the reporting limit, but above the MDL.

N: Indicates qualitative evidence of a tentatively identified compound whose identification is based on a mass spectral library search and is applied to all TIC results.

C: Applied to pesticide data that has been qualitatively confirmed by GC/MS.

B: Used for analytes detected in the sample and its associated method blank.

E: Applied to compounds whose concentration exceeds the upper limit of the calibration range.

Metals and Inorganics.

B: Applied if the reported concentration value was less than the reporting limit but greater than the MDL.

U: Applied if the reading is less than the MDL (or IDL if IDL reporting is being used).

E: Estimated concentration caused by the presence of interferences, normally applied when the serial dilution is out.

N: Spike sample recovery not within control limits.

*: Duplicate or matrix spike duplicate analysis not within control limits.

12.7 ***Data Package Review.*** SGS Accutest Inc. employs at least two levels of data review, the final review must be performed by a manager, supervisor or designated reviewer, to assure that reported data has satisfied all quality control criteria and that client specifications and requirements have been met. Each production department has developed specific data review procedures, which must be completed before data is released to the client.

Analytical Review. The analyst conducts the primary review of all data. This review begins with a check of all instrument and method quality control and progresses through sample quality control, concluding with a check to assure that the client's requirements have been executed. Analyst checks focus on a review of qualitative determinations and checks of precision and accuracy data to verify that existing laboratory criteria have been achieved.

Checks at this level may include comparisons with project specific criteria if applicable. The analyst has the authority and responsibility to perform corrective action for any out-of-control parameter or nonconformance at this stage of review.

Analysts who have met the qualification criteria for the method in use perform secondary, peer level data reviews. Analyst qualification requirements include a valid demonstration of capability and demonstrated understanding of the method SOP. Section supervisors may perform secondary review in-lieu of a peer review. Managers, Supervisors or designated reviewers evaluate 100% of the data produced by their department. It includes a check of all manual calculations; an accuracy check of manually transcribed data from bench sheets to the LIMS, a check of calibration and continuing calibration, all QC criteria and a comparison of the data package to client specified requirements. Also included are checks to assure the appropriate methodology was applied and that all anomalous information was properly flagged for communication in the case narrative. Supervisors have the authority to reject data and initiate re-analysis, corrective action, or reprocessing.

All laboratory data requiring manual entry into LIMS system is double-checked by the analysts performing initial data entry and the section supervisor. Verification of supervisory review is indicated on the raw data summary by the manager, supervisor, or designated reviewer's initials and date.

Electronic data that is manually edited at the bench by the primary analyst is automatically flagged by the instrument data system indicating an override by the analyst. All manual overrides must be verified and approved by a supervisor who initials and dates all manual changes.

Hard copies (or PDF's) of manually integrated chromatographic peaks are printed that clearly depict the manually drawn baseline. The hard copy (or PDF) is reviewed and approved by the section manager, supervisor or designated reviewer (initialed and dated) and included in the data package of all full tier reports or the archived batch records of commercial report packages.

Edits to electronic data that have already been committed to the LIMS database are controlled through the use of the Master Edit function in LIMS. Permission to access this program is limited to those approved by the upper levels of laboratory management and is controlled by the Information Technology staff. A GALP electronic audit record trail is maintained for all changes that are made and is automatically appended to the record.

The group manager performs a tertiary review on a spot check basis. This review includes an evaluation of QC data against acceptance criteria and a check of the data package contents to assure that all analytical requirements and specifications were executed.

Report Generation Review. The report generation group reviews all data and supporting information delivered by the laboratory for completeness and compliance with client specifications. Missing deliverables are identified and obtained from the laboratory. The

group also reviews the completed package to verify that the delivered product complies with all client specifications. Non-analytical defects are corrected before the package is sent to the client.

Project Management/Quality Control Review. Spot-check data package reviews are performed by the project management staff. Project management reviews focus on project specifications. If the project manager identifies defects in the product prior to release, he initiates immediate corrective action to rectify the situation.

The QA staff performs a post-delivery check of completed data packages to verify completeness and compliance with established quality control procedures. Approximately 10% of Full-Deliverables data packages are reviewed. A formal checklist is used to assess data report completeness and accuracy. Detected deficiencies are documented on the checklist and corrective actions initiated as necessary. Data review checklists are electronic documents, which are archived in the QA Directory of the network server.

The QA review focuses on all elements of the deliverable including the client's specifications and requirements, analytical quality control, sample custody documentation and sample identification. QA reviews at this step in the production process are geared towards systematic process defects, which require procedural changes to effect a corrective action. However, if defects are identified that have an adverse effect on data, the client is immediately informed following standard notification procedures. QA data review is not used in lieu of a peer level review or a supervisory review.

Data Reporting. Analytical data is released to clients following a secondary review by the manager, supervisor or designated reviewer. Data release at this stage of the process is limited to electronic information, which is released to clients through a secure, encrypted, password protected, Internet connection. Hard copy support data is compiled by the report generation group and assembled into the final report. The report is sent to the client following reviews by the report generation staff.

All data reports include specified information, which is required to identify the report and its contents. This information includes a title, name and address of the laboratory, a unique report number, total number of pages in the report, clients name and address, analytical method identification, arriving sample condition, sample and analysis dates, test results with units of measurement, authorized signature of data release, statement of applicability, report reproduction restrictions and TNI Standard requirements certification. Data reports for the Department of Defense ELAP also include the time of preparation and analysis.

12.8 ***Electronic Data Reduction.*** Raw data from sample analysis is entered into the laboratory information management system (LIMS) using automated processes or manual entry. Final data processing is performed by the LIMS using procedures developed by the Company.

All LIMS programs are tested and validated prior to use to assure that they consistently produce correct results. The Information Technology Staff performs software validation

testing. The testing procedures are documented in an SOP. Software programs are not approved for use until they have demonstrated that they are capable of performing the required calculations.

12.9 ***Representativeness***. Data representativeness is based on the premise that qualitative and quantitative information developed for field samples is characteristic of the sample that was collected by the client and analyzed in the laboratory. The laboratory objective for representativeness defines data as representative if the criteria for all quality parameters associated with the analysis of the sample are achieved.

12.10 ***Comparability***. Analytical data is defined as comparable when data from a sample set analyzed by the laboratory is representatively equivalent to other sample sets analyzed separately regardless of the analytical logistics. The laboratory will achieve 100% comparability for all sample data which meets the criteria for the quality parameters associated with its analysis using the method requested by the client.

13.0 CORRECTIVE ACTION SYSTEM

Requirement. The laboratory employs policies and procedures for correcting defective processes, systematic errors, and quality defects enabling the staff to systematically improve product quality. The system includes procedures for communicating items requiring corrective action to responsible individuals, corrective action tracking procedures, corrective action documentation, monitoring of effectiveness, and reports to management. The system is fully documented in a standard operating procedure. Individual corrective actions and responses are documented in a dedicated database.

13.1 ***Procedure***. Corrective action is the step that follows the identification of a process defect. The type of defect determines the level of documentation, communication, and training necessary to prevent re-occurrence of the defect or non-conformance. The formal system is maintained by the quality assurance department. Operations management is responsible for working within the system to resolve identified deficiencies.

Routine Corrective Action. Routine corrective action is defined as the procedures used to return out of control analytical systems back to control. This level of corrective action applies to all analytical quality control parameters or analytical system specifications.

Bench analysts have full responsibility and authority for performing routine corrective action. The resolution of defects at this level does not require a procedural change or staff re-training. The analyst is free to continue work once corrective action is complete and the analytical system has been returned to control. Documentation of routine corrective actions is limited to logbook comments for the analysis being performed.

Process Changes. Corrective actions in this category require procedural modifications. They may be the result of systematic defects identified during audits, the investigation of client inquiries, failed proficiency tests, product defects identified during data review, or method updates. Resolution of defects of this magnitude requires formal identification of the defect, development and documentation of a corrective action plan, and staff training to communicate the procedural change.

Technical Corrective Action. Technical corrective action encompasses routine corrective action performed by bench analysts for out of control systems and corrective actions performed for data produced using out of control systems. Technical corrective action for routine situations is conducted using the procedures detailed above.

Non-routine corrective actions apply to situations where the bench analysts failed to perform routine corrective action before continuing analysis. Supervisors and Department Managers perform corrective action in these situations. Documentation of all non-routine corrective actions is performed using the corrective action system.

Sample re-analysis is conducted if sufficient sample and holding time remain to repeat the analysis using an in-control system. If insufficient sample or holding time remains, the data is

processed and qualifiers applied that describe the out of control situation. The occurrence is further documented in the case narrative and in the corrective action response. The corrective action must include provisions for retraining the analysts who failed to perform routine corrective action.

13.2 ***Documentation & Communication***. Routine corrective actions are documented as part of the analytical record. Notations are made in the comments section of the analytical chronicle or data sheet detailing the nonconformance and corrective action. Continuation of the analysis indicates that return to control was successful.

Corrective actions for process changes are documented, tracked and monitored for effectiveness. Supervisors or senior staff members may initiate corrective actions by generating a corrective action using the corrective action database application.

The corrective action database is an Access application. The initiator generates the corrective action investigation form, which is documented, tracked, distributed to responsible parties and archived through the application. The application assigns a tracking number, initiation data and due date to each action and copies the corrective action form to the database. E-mail message containing the form is automatically distributed to the responsible parties for resolution.

The responsible party identifies the root cause of the defect, initiates the immediate fix and develops and implements the procedural change. Existing documentation such as SOPs are edited to reflect the change. The affected staff is informed of the procedural change through a formal training session. The training is documented and copies are placed into individual training files. The corrective action form is completed by the responsible party and returned to the QA staff via e-mail using the database application.

Initial and completed corrective action forms are maintained in the corrective action database. This entire database is backed up and archived daily. The corrective action tracking form is maintained as an active report in the database.

Monitoring. The QA Staff monitors the implemented corrective action until it is evident that the action has been effective and the defect has been eliminated. The corrective action database is updated by QA to reflect closure of the corrective action. The QA staff assigns an error code to the corrective action for classification of the type of errors being committed. Additional monitoring of the corrective action is conducted during routine laboratory audits.

Additional monitoring of the corrective action is conducted by adding the corrective action to a verification list by the QA staff at closure. Verification is performed by the QA Staff to assure that the corrective action has remained in effect is scheduled for six (6) months from the initial closure date.

If QA determines that the corrective action response has not effectively remedied the deficiency, the process continues with a re-initiation of the corrective action. Corrective action

continues until the defect is eliminated. If another procedural change is required, it is treated as a new corrective action, which is documented and monitored using established procedures.

Client Notification. Defective processes, systematic errors, and quality defects, detected during routine audits may have negative impacts on data quality. In some cases, data that has been released to clients may be affected. If defective data has been released for use, SGS Accutest Inc. will notify the affected clients of the defect and provide specific details regarding the magnitude of the impact to their data.

14.0 PROCEDURES FOR EXECUTING CLIENT SPECIFICATIONS

Requirement. Systems have been established for evaluating and processing client specifications for routine and non-routine analytical services. The systems enable the client services staff to identify, evaluate, and document the requested specifications to determine if adequate resources are available to perform the analysis. The system includes procedures for communicating the specifications to the laboratory staff for execution and procedures for verifying the specifications have been executed.

14.1 ***Client Specific Requirements***. The project manager is the primary contact for clients requesting laboratory services. Client specifications are communicated using several mechanisms. The primary sources of information are the client's quality assurance project plan (QAPjP) and the analytical services contract both of which detail the analytical, quality control and data reporting specifications for the project. In the absence of a QAPjP, projects specifications can also be communicated using contracts, letters of authorization, or letters of agreement, which may be limited to a brief discussion of the analytical requirements and the terms and conditions for the work. These documents may also include pricing information, liabilities and scope of work, in addition to the analytical requirements. QAPjPs include detailed analytical requirements and data quality objectives, which supersede those found in the referenced methods. This information is essential to successful project completion.

The client services staff provides additional assistance to clients who are unsure of the specifications they need to execute the sampling and analysis requirements of their project. They provide additional support to clients who require assistance in results interpretation as needed, provided they possess the expertise required to render an opinion.

The project manager is responsible for obtaining project documents, which specify the analytical requirements. Following project management review, copies are distributed to the QA Director and the appropriate departmental managers for review and comment. The original QAPjP is filed in a secure location.

14.2 ***Requirements for Non-Standard Analytical Specifications***. Client requirements that specify departures from documented policies, procedures, or standard specifications must be submitted to SGS Accutest Inc. in writing. These requirements are reviewed and approved by the technical staff before the project is accepted. Once accepted, the non-standard requirements become analytical specifications, which follow the routine procedure for communicating client specifications. Departures from documented policies, procedures, or standard specifications that do not follow this procedure are not permitted.

14.3 ***Evaluation of Resources.*** A resource evaluation is completed prior to accepting projects submitted by clients. The evaluation is initiated by the client services staff who prepares a brief synopsis that includes the logistical requirements of the project. Logistical specifications for new projects are summarized in writing for evaluation by the affected departments. The specifications are evaluated by the department manager from a scheduling and hardware

resources perspective. The project is not accepted unless the department managers have the necessary resources to execute the project according to client specifications.

14.4 ***Documentation***. New projects are initiated using LIMS or a project set up form, which is completed prior to the start of the project. This form details all of the information needed to correctly enter the specifications for each client sample into the laboratory information management system (LIMS). The form includes data reporting requirements, billing information, data turnaround times, QA level, state of origin, and comments for detailing project specific requirements. The project manager is responsible for obtaining this information from the client and completing the form prior to sample arrival and login.

Sample receipt triggers project creation and the login process. The information on the set-up form is entered into the LIMS immediately prior to logging in the first sample. The set up form may be accompanied by a quotation, which details the analytical product codes and sample matrices. These details are also entered into the LIMS during login.

Special information is distributed to the laboratory supervisors and login department in electronic or hardcopy format upon project setup. All, project specific information is retained by the project manager in a secure file. The project manager maintains a personal telephone log, which details conversations with the client regarding the project.

Department managers prepare summary sheets that detail client specific analytical requirements for each test. Bench analysts use these sheets to obtain information regarding client specific analytical requirements before analyzing samples. A program code is established for each client that links the client specifications to a client project. This code is attached to a project by the project manager at login and listed on the work list for each work group conducting analysis for clients with standing requirements.

14.5 ***Communication***. A pre-project meeting is held between client services and the operations managers to discuss the specifications described in the QAPjP, contract and/or related documents. Project logistics are discussed and finalized and procedures are developed to assure proper execution of the client's analytical specifications and requirements. Questions, raised in the review meeting, are discussed with the client for resolution. Exceptions to any requirements, if accepted by the client, are documented and incorporated into the QAPjP or project documentation records.

Non-standard specifications for individual clients are documented in the LIMS at the client account level or program level. Simple specifications are documented as comments for each project. Once entered into the LIMS, these specifications become memorialized for all projects related to the client account. Complex specifications are assigned program codes that link the specification to detailed analytical specifications.

Upon sample arrival, these specifications are accessed through a terminal or printed as a hard copy and stored in a binder for individuals who require access to the specification. Specifications that are not entered into the LIMS are prohibited unless documented in an

interdepartmental memo, which clearly identifies the project, client and effective duration of the specification.

14.6 ***Operational Execution***. A work schedule is prepared for each analytical department on a daily basis. Analytical specifications or program codes from recently arrived samples have now been entered into the LIMS database. The database is sorted by analytical due date and holding time, into product specific groups. Samples are scheduled for analysis by due date and holding time. The completed schedule, which is now defined as a work list, is printed. The list contains the client requested product codes, program codes and specifications required for the selected sample(s). Special requirements are communicated to the analyst using the comments section or relayed through verbal instructions provided by the supervisor. The bench analyst assumes full responsibility for performing the analysis according to the specifications printed on the work sheet.

14.7 ***Verification***. Prior to the release of data to the client, the report generation staff review the report and compare the completed product to the client specifications documentation to assure that all requirements have been met. Project managers perform a spot check of projects with unique requirements to assure that the work was executed according to specifications.

15.0 CLIENT COMPLAINT RESOLUTION PROCEDURE

Requirement. The laboratory follows a formal system for managing and reconciling client complaints. The system includes procedures for documenting the complaint and communicating it to the appropriate department for resolution. The system also includes a quality assurance evaluation to determine if the complaint is related to systematic defects requiring corrective action and process changes.

15.1 ***Procedure***. Client complaints are communicated to client services representatives, quality assurance staff, or senior management staff for resolution. The individual receiving the complaint retains the responsibility for documentation and communicating the nature of the complaint to the responsible department(s) for resolution. The responsible party addresses the complaint. The resolution is communicated to quality assurance (QA) and the originator for communication to the client. QA reviews the complaint and resolution to determine if systematic defects exist. If systematic defects are present, QA initiates a corrective action for the responsible party who develops and implements a response that eliminates the defect. If systematic defects are not present and the resolution is satisfactory, the QA Staff will close the complaint/inquiry with a no further action is necessary tag.

15.2 ***Documentation***. Client's complaints are documented by the individual receiving the complaint using the Data Query and Corrective Action Inquiry Process. This process generates an E-Mail message that contains detailed information essential to the complaint resolution. A record of the telephone conversation is maintained by client services. The message is distributed to the QA staff and the party bearing responsibility for resolution by E-Mail. The complaint resolution is documented on the message by the responsible party and returned to the originator. A copy is sent to QA for review and database archiving.

15.3 ***Corrective Action***. Responses to data queries are required from the responsible party. At a minimum, the response addresses the query and provides an explanation to the complaint. Formal corrective action may focus on the single issue expressed in the complaint. Corrective action may include reprocessing of data, editing of the initial report, and re-issue to the client. If the QA review indicates a systematic error, process modification is required. The defective process at the root of the complaint is changed. SOPs are either created or modified to reflect the change. The party responsible for the process implements process changes.

15.4 ***QA Monitoring***. Process changes, implemented to resolve systematic defects, are monitored for effectiveness by QA. If monitoring indicates that the process change has not resolved the defect, QA works with the department management to develop and implement an effective process. If monitoring indicates that the defect has been resolved, monitoring is slowly discontinued and the corrective action is closed. Continued monitoring is incorporated as an element of the annual system audit.

16.0 CONTROL OF NONCONFORMING PRODUCT

Requirement: Policies and procedures have been developed and implemented that describe the procedures employed by the laboratory when any aspect of sample analysis or data reporting do not conform to established procedures or client specifications. These procedures include steps to ensure that process defects are corrected and affected work is evaluated to assess its impact to the client.

Procedure. Nonconforming product is identified through routine internal review and audit practices or through client inquiry. The individuals who identify the nonconformance or receiving a nonconformance inquiry immediately inform the Laboratory Director and the Quality Assurance Director. The Laboratory Director initiates an evaluation of the nonconformance through the Quality Assurance Department and takes full responsibility for managing the process and identifying the course of action to take, initiating corrective action and mitigating the impact of the nonconformance to the client. Reference SOP EQA 065 Control of Non-Conforming Product and EQA 038 Complaints & Data Inquiry for specific procedures on handling non-conformances and Data Inquires.

16.1 ***Corrective Action.*** The outcome of the evaluation dictates the course of action. This includes client notification when the quality of data reported has been impacted and may also include corrective action if applicable. Immediate corrective action is performed using the procedures specified in SGS Accutest Inc. SOP EQA011. However, additional action may be required including cessation of analysis and withholding and or recalling data reports. If the evaluation indicates that nonconforming data may have been issued to clients, the client is immediately notified and data may be recalled following the procedures specified in SOP EQA011. If work has been stopped because of a nonconformance, the Laboratory Director is the only individual authorized to direct a resumption of analysis.

Non-conformances caused by systematic process defects require retraining of the personnel involved as an element of the corrective action solution.

17.0 CONFIDENTIALITY PROTECTION PROCEDURES

Requirements: Policies and procedures have been developed to protect client data from release to unauthorized parties or accidental release of database information through accidental electronic transmission or illegal intrusion. These policies have been communicated to clients and staff. Electronic systems are regularly evaluated for effectiveness.

17.1 ***Client Anonymity***. Information related to the Company's clients is granted to employees on a "need to know" basis. An individual's position within the organization defines his "need to know". Individuals with "need to know" status are given password access to systems that contain client identity information and access to documents and document storage areas containing client reports and information. Access to client information by individuals outside of the Company is limited to the client and individuals authorized by the client.

Individuals outside of the Company may obtain client information through subpoena issued by a court of valid jurisdiction. Clients are informed when subpoenas are received ordering the release of their information.

Client information may be released directly to regulatory agencies without receiving client authorization under specified circumstances. These circumstances require that the regulatory agency have statutory authority under the regulations for laboratory certification and that SGS Accutest Inc.'s operations fall under the purview of the regulation. In these situations, SGS Accutest Inc. will inform the client of the regulatory agencies request for information pertaining to his data and proceed with the delivery of the information to the regulatory agency.

17.2 ***Documents***. Access to client documents is restricted to employees in need to know positions. Copies of all client reports are stored in secure electronic archives with restricted access. Reports and report copies are distributed to individuals who have been authorized by the client to receive them. Data reports or data are not released to third parties without verbally expressed or written permission from the client.

17.3 ***Electronic Data***.

Database Intrusion. Direct database entry is authorized for employees of SGS Accutest Inc. only on a need to know basis. Entry to the database is restricted through a user specific multiple password entry system. Direct access to the database outside the facility is possible through secured channels set up by SGS Accutest Inc. A unique password is required for access to the local area network. A second unique password is required to gain access to the database. The staff receives read or write level authorization on a hierarchical privilege basis.

Internet Access. Access to client information is through an HTTP Web application only. It does not contain a mechanism that allows direct access to the database. Clients can gain access to their data only using a series of SGS Accutest Inc. assigned client and user specific

passwords. The viewable data, which is encrypted during transmission, consists of an extraction of database information only.

Client Accessibility. Accessibility to client data delivered via electronic means follows strict protocols to insure confidentiality. Clients accessing electronic data are assigned a company account. The account profile, which is established by the MIS staff, grants explicit access to specific information pertaining to the client's project activity. Passwords are assigned on an individual basis within a client account. These accounts can be activated or deactivated by the MIS staff only.

17.4 ***Information Requests***. Client specific data or information is not released to third parties without verbally expressed or written permission from the client. Written permission is required from third parties, who contact the Company directly for the release of information. Verbal requests will be honored only if they are received directly from the client. These requests must be documented in a record of communication maintained by the authorized recipient.

17.5 ***Transfer of Records***. Archived data, which has previously been reported and transmitted to clients, is the exclusive property of SGS Accutest Inc. In the event of a cessation of business activities due to business failure or sale, The Company's legal staff will be directed to arrange for the final disposition of archived data.

The final disposition of archived data will be accomplished using the approach detailed in the following sequence:

1. All data will be transferred to the new owners for the duration of the required archive period as a condition of sale.

2. If the new owners will not accept the data or the business has failed, letters will be sent to clients listed on the most recent active account roster offering them the option to obtain specific reports (identified by SGS Accutest Inc. Job Number) at their own expense.

3. A letter will be sent to the TNI Standard accrediting authority with organizational jurisdiction over the company offering them the option to obtain all unclaimed reports at their own expense.

4. All remaining archived data will be recycled using the most expedient means possible.

18.0 QUALITY AUDITS AND SYSTEM REVIEWS

Requirement: The quality assurance group conducts regularly scheduled audits of the laboratory to assess compliance with quality system requirements, technical requirements of applied methodology, and adherence to documentation procedures. The information gathered during these audits is used to provide feedback to senior management and perform corrective action where needed for quality improvement purposes.

18.1 ***Quality System Reviews***. Quality system reviews are performed annually by the Quality Assurance Director for the Company President. In this review, the laboratory is evaluated for compliance with the laboratory Quality Systems Manual (QSM) and the quality system standards of the National Environmental Laboratory Accreditation Conference. Findings, which indicate non-compliance or deviation from the QSM, are flagged for corrective action. Corrective actions require either a return to compliance or a plan change to reflect an improved quality process. The Quality Assurance Director is responsible for making and documenting changes to the QSM. These changes are reviewed by the Company President and The Laboratory Director prior to the approval of the revised system.

18.2 ***Quality System Audits.*** Quality system audits are conducted to evaluate the effectiveness and laboratory compliance with individual quality system elements. These audits are conducted on an established schedule. Audit findings are documented and communicated to the management staff and entered into the corrective action system for resolution. If necessary, retraining is conducted to assure complete understanding of the system requirements.

18.3 ***Test Method Assessments.*** Test Method Assessments are performed throughout the year following an established schedule. Selected analytical procedures are evaluated for compliance with standard operating procedures (SOPs) and method requirements. If non-conformances exist, the published method serves as the standard for compliance. SOPs are edited for compliance if the document does not reflect method requirements. Analysts are trained to the new requirements and the process is monitored by quality assurance. Analysts are retrained in method procedures if an evaluation of bench practices indicates non-compliance with SOP requirements.

18.4 ***Documentation Audits***. Documentation audits are conducted during routine internal audits. The audit includes a check of measurement processes that require manual documentation. It also includes checks of data archiving systems and a search to find and remove any inactive versions of SOPs that may still be present in the laboratory and being accessed by the analysts. Non-conformances are corrected on the spot. Procedural modifications are implemented if the evaluation indicates a systematic defect.

18.5 ***Corrective Action Monitoring***. Defects or non-conformances that are identified during client or internal audits are documented in the corrective action systems and corrected through process modifications and/or retraining. Once a corrective action has been designed and implemented, it is monitored for compliance on a regular basis by the QA staff. Spot

corrections are performed if the staff is not following the new procedure. Monitoring of the corrective action continues until satisfactory implementation has been verified.

18.6 ***Preventive Action.*** Laboratory systems or processes, which may be faulty and pose the potential for non-conformances, errors, confusing reports or difficulties establishing traceability may be identified during internal audits. These items are highlighted for systematic change using the corrective action system and managed to resolution using the procedures for corrective action identified in EQA041.

18.7 ***Client Notification.*** Defective processes, systematic errors, and quality defects, detected during routine audits may have negative impacts on data quality. In some cases, data that has been released to clients may be affected. If defective data has been released for use, SGS Accutest Inc. will immediately notify the affected clients of the defect and provide specific details regarding the magnitude of the impact to their data.

18.8 ***Management Reports.*** Formal reports of all audit and proficiency testing activity are prepared for the management staff and presented as they occur. Additional reports may be presented orally at regularly scheduled staff meetings

Management reports may also address the following topics:

- Status and results of internal and external audits,
- Status and results of internal and external proficiency testing,
- Identification of quality control problems in the laboratory,
- Discussion of corrective action program issues,
- Status of external certifications and approvals,
- Status of staff training and qualifications,
- Discussion of new quality system initiatives.
- Recommendations for further action on listed items are included in the report.

19.0 HEALTH AND SAFETY

Requirement. The company operates a formal health and safety program that complies with the requirements of the Occupational Health and Safety Administration. The program consists of key policies and practices that are essential to safe laboratory operation. All employees are required to receive training on the program elements. Job specific training is conducted to assure safe practices for specific tasks. All employees are required to participate in the program, receive initial and annual training, and comply with the program requirements. All plan and program requirements are detailed in the Health and Safety Program Manual.

19.1 **Policy.** SGS Accutest Inc. Laboratories will provide a safe and healthy working environment for its employees and clients while protecting the public and preserving the Company's assets and property. The company will comply with applicable government regulations pertaining to safety and health in the laboratory and the workplace.

The objective of the SGS Accutest Inc. Health and Safety Program is to promote safe work practices that minimize the occurrence of injuries and illness to the staff through proper health and safety training, correct laboratory technique application and the use of engineering controls.

19.2 **Responsibilities.** The Health and Safety Program assists managers, supervisors and non-supervisory employees in control of hazards and risks to minimize the potential for employee and client injuries, damage to client's property and damage or destruction to SGS Accutest Inc.'s facility.

The Director, Health and Safety (EHS Director) is responsible for implementing the Program's elements and updating its contents as necessary. He/she also conducts periodic audits to monitor compliance and assess the program's effectiveness. The EHS Director is also responsible for creating and administering safety training for all new and existing employees.

The employee is responsible for following all safety rules established for their protection, the protection of others and the proper use of protective devices provided by the Company. The employee is also expected to comply with the requirements of the program at all times. Department Managers and Supervisors are responsible for ensuring the requirements of the Safety Program are practiced daily. The Company President retains the ultimate responsibility for the program design and implementation.

19.3 **Program Elements.** The SGS Accutest Inc. Health and Safety Program consists of key program elements that complement the company's health and safety objective. These elements form the essence of the health and safety policy and assure that the objectives of the program are achieved.

Safety Education and Training and Communication. Training is conducted to increase the staff's awareness of laboratory hazards and their knowledge of the safety practices and

procedures required to protect them from those hazards. It is also used to communicate general safety procedures required for safe operation in a chemical laboratory.

Initial health and safety training for new employees is conducted during orientation. The training focuses on the SGS Accutest Inc. Safety and Health Program and includes specific training for the hazards that may be associated with the employees duties. Training is also conducted for all program elements focusing on general, acceptable, laboratory safety procedures. Targeted training is conducted to address hazards or safety procedures that are specific to individual employee's work assignments. All training activities are documented and archived in individual training folders. A health and safety training inventory is maintained in the training database.

Safety Committee. The safety committee provides the employee with an opportunity to express their views and concerns on safety issues in a forum where those concerns will be addressed. This committee meets monthly to assure that the interests of the company and the well being of the employee are protected. They also serve as a catalyst for elevating the level of safety awareness among their peers.

Hazard Identification and Communication. The hazard communication program enables employees to readily identify laboratory hazards and the procedures to protect themselves from those hazards. This program complies with OSHA's Hazard Communication Standard, Title 29 Code of Federal Regulations 1910.1200 that requires the company to adopt and adhere to the following key elements:

- Safety Data Sheets (SDS) must be available to any employee wishing to view them,
- The Company must maintain a Hazardous Chemicals Inventory (by location), which is updated on an annual basis,
- Containers are properly labeled,
- All employees must be provided with annual Hazard Communication and Right to Know training,

The hazard communication program also complies with the requirements of the New Jersey Worker and Community Right to Know Law, NJAC 8:95.

Identification of Workplace Hazards. The workplace hazard identification procedures have been designed to assure that hazards that have the potential to cause personnel injury or destruction of property are identified, managed and/or systematically eliminated from the operation. This system eliminates hazards, limits the potential for injury and increases the overall safety of the work environment.

Employee Exposure Assessment. Employee exposure assessment is performed to identify and evaluate potential exposure hazards associated with the employees work station. The

exposure assessment data is used to determine if changes or modifications to the work station are needed to limit exposure to laboratory conditions that could negatively affect an employee's health or disclosed existing medical conditions.

Bloodborne Pathogens. SGS Accutest Inc. has implemented awareness training on the OSHA Bloodborne Pathogen Standard, 29CFR1910.1030 to reduce occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV) and other bloodborne pathogens that employees may encounter in their workplace.

Respiratory Protection Plan. The respiratory protection plan assures that SGS Accutest Inc. employees are protected from exposure to respiratory hazards. This program is used in situations where engineering controls and/or safe work practices do not completely control the identified hazards. In these situations, respirators and other protective equipment are used. Supplemental respiratory protection procedures are applied to specified maintenance personnel, employees who handle hazardous wastes in the hazardous waste storage area, and any employee that voluntarily elects to wear a respirator.

Chemical Hygiene Plan. The Chemical Hygiene Plan complies with the requirements of the Occupational Safety and Health Administration's Occupational Exposure to Hazardous Chemicals in the Laboratory Standard, 29 CFR 1910.1450. This plan establishes procedures, identifies safety equipment, personal protective equipment, and work practices that protect employees from the hazardous chemicals in the laboratory when properly used and applied.

Chemical Spill Response Plan. The chemical spill response plan has been designed to minimize the risks from a chemical spill or accidental chemical release in the laboratory. Risk minimization is accomplished through a planned response that follows a defined procedure. The designated staff have been trained to execute spill response procedures according to the specifications of the plan, which identifies the appropriate action to be taken based on the size of the spill.

Emergency Action & Evacuation Plan. The Emergency Action and Evacuation Plan details the procedures used to protect and safeguard SGS Accutest Inc.'s employees and property during emergencies. Emergencies are defined as fires or explosions, gas leaks, building collapse, hazardous material spills, emergencies that immediately threaten life and health, bomb threats and natural disasters such as floods, hurricanes or tornadoes, terrorism or terrorist actions. The plan identifies and assigns responsibility for executing specific roles in situations requiring emergency action. It also describes the building security actions coinciding with the "Alert Condition", designated by the Department of Homeland Security.

Lockout/Tagout Plan. Lockout/tagout procedures have been established to assure that laboratory employees and outside contractors take steps to render equipment inoperable and/or safe before conducting maintenance activities. The plan details the procedures for conducting maintenance on equipment that has the potential to unexpectedly energize, start up, or release energy or can be operated unexpectedly or accidentally resulting in serious injury

to employees. The plan ensures that employees performing maintenance render the equipment safe through lock out or tag out procedures.

Personal Protection Policy. Policies have been implemented which detail the personal protection requirements for employees. The policy includes specifications regarding engineering controls, personal protective equipment (PPE), hazardous waste, chemical exposures, working with chemicals and safe work practices. Safety requirements specific to processes or equipment are reviewed with the department supervisor or the EHS Director before beginning operations.

Visitor and Contractor Safety Program. A safety brochure is given to all visitors and contractors who visit or conduct business at the facility. The brochure is designed to inform anyone who is not an employee of SGS Accutest Inc. of the laboratory safety procedures. The brochure directs them to follow all safety programs and plans while on SGS Accutest Inc. property. This program also outlines procedures for visitors and contractors in the event of an emergency. Visitors are required to acknowledge receipt and understanding of the SGS Accutest Inc. policy.

Appendix I

Glossary of Terms

GLOSSARY OF TERMS

Acceptance Criteria: specified limits placed on characteristics of an item, process, or service defined in requirement documents.

Accuracy: the degree of agreement between an observed value and an accepted reference value. Accuracy includes a combination of random error (precision) and systematic error (bias) components which are due to sampling and analytical operations; a data quality indicator.

Analyst: the designated individual who performs the "hands-on" analytical methods and associated techniques and who is the one responsible for applying required laboratory practices and other pertinent quality controls to meet the required level of quality.

Audit: a systematic evaluation to determine the conformance to quantitative *and qualitative* specifications of some operational function or activity.

Batch: environmental samples that are prepared and/or analyzed together with the same process and personnel, using the same lot(s) of reagents. A preparation batch is composed of one to 20 environmental samples of the same TNI Standard-defined matrix, meeting the above mentioned criteria and with a maximum time between the start of processing of the first and last sample in the batch to be 24 hours. An analytical batch is composed of prepared environmental samples (extracts, digestates or concentrates) which are analyzed together as a group.

Blank: a sample that has not been exposed to the analyzed sample stream in order to monitor contamination during sampling, transport, storage or analysis. The blank is subjected to the usual analytical and measurement process to establish a zero baseline or background value and is sometimes used to adjust or correct routine analytical results.

Blind Sample: a sub-sample for analysis with a composition known to the submitter. The analyst/laboratory may know the identity of the sample but not its composition. It is used to test the analyst's or laboratory's proficiency in the execution of the measurement process.

Calibration: to determine, by measurement or comparison with a standard, the correct value of each scale reading on a meter, instrument, or other device. The levels of the applied calibration standard should bracket the range of planned or expected sample measurements.

Calibration Curve: the graphical relationship between the known values, such as concentrations of a series of calibration standards and their instrument response.

Calibration Method: a defined technical procedure for performing a calibration.

Calibration Range: the range of concentrations between the lowest and highest calibration standards of a multi-level calibration curve. For metals analysis with a single-point calibration, the low-level calibration check standard and the high standard establish the linear calibration range, which lies within the linear dynamic range.

Calibration Standard: a substance or reference material used to calibrate an instrument.

Certified Reference Material (CRM): a reference material one or more of whose property values are certified by a technically valid procedure, accompanied by or traceable to a certificate or other documentation, which is issued by a certifying body.

Chain of Custody (COC): an unbroken trail of accountability that ensures the physical security of samples and includes the signatures of all who handle the samples.

Confirmation: verification of the identity of a component through the use of an approach with a different scientific principle from the original method. These may include, but are not limited to second column confirmation, alternate wavelength, derivatization, mass spectral, interpretation, alternative detectors or, additional cleanup procedures.

Continuing Calibration Verification (CCV): the verification of the initial calibration that is required during the course of analysis at periodic intervals. Continuing calibration verification applies to both external standard and internal standard calibration techniques, as well as to linear and non-linear calibration models.

Corrective Action (CA): the action taken to eliminate the causes of an existing nonconformity, defect or other undesirable situation in order to prevent recurrence.

Data Reduction: the process of transforming raw data by arithmetic or statistical calculations, standard curves, concentration factors, etc., and collation into a more useable form.

Demonstration of Capability (DOC): a procedure to establish the ability of the analyst to generate acceptable accuracy.

Documentation of Understanding (DOU): certifies that the analyst or technician has read and understood the procedures detailed in the Standard Operating Procedure (SOP) and will follow the SOP as written.

Document Control: the act of ensuring that documents (and revisions thereto) are proposed, reviewed for accuracy, approved for release by authorized personnel, distributed properly and controlled to ensure use of the correct version at the location where the prescribed activity is performed.

Duplicate Analyses (DUP): the analyses or measurements of the variable of interest performed identically on two sub-samples of the same sample. The results from duplicate analyses are used to evaluate analytical or measurement precision but not the precision of sampling, preservation or storage internal to the laboratory.

Field of Testing: TNI Standard's approach to accrediting laboratories by program, method and analyte. Laboratories requesting accreditation for a program-method-analyte combination or for an

up-dated/improved method are required submit to only that portion of the accreditation process not previously addressed (see TNI Standard, section 1.9ff).

Laboratory Control Sample-LCS (such as laboratory fortified blank, spiked blank, or QC check sample): a sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes from a source independent of the calibration standards or a material containing known and verified amounts of analytes. It is generally used to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.

Limit of Detection (LOD): an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific. DoD clarification is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

Limit of Quantitation (LOQ): the minimum levels, concentrations, or quantities of a target analyte that can be reported with a specified degree of confidence. DoD clarification is the lowest concentration that produces a quantitative result within specified limits of precision and bias. The LOQ shall be at or above the concentration of the lowest initial calibration standard.

Matrix: the component or substrate that contains the analyte of interest. For purposes of batch and QC requirement determinations, the following matrix distinctions shall be used:

Aqueous: any aqueous sample excluded from the definition of Drinking Water matrix or Saline/Estuarine source. Includes surface water, groundwater, effluents, and TCLP or other extracts.

Drinking Water: any aqueous sample that has been designated a potable or potential potable water source. Saline/Estuarine: any aqueous sample from an ocean or estuary, or other salt-water source such as the Great Salt Lake. Non-aqueous Liquid: any organic liquid with <15% settleable solids.

Solids: includes soils, sediments, sludges and other matrices with >15% settleable solids.

Chemical Waste: a product or by-product of an industrial process that results in a matrix not previously defined.

Air: whole gas or vapor samples including those contained in flexible or rigid wall containers and the extracted concentrated analytes of interest from a gas or vapor that are collected with a sorbent tube, impinger solution, filter, or other device.

Biota: animal or plant tissue, consisting of entire organisms, homogenates, and/or organ or structure specific subsamples.

Matrix Spike-MS (spiked sample or fortified sample): a sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target

analyte concentration is available. Matrix spikes are used, for example, to determine the effect of the matrix on a method's recovery efficiency.

Matrix Spike Duplicate -MSD (spiked sample or fortified sample duplicate): a second replicate matrix spike prepared in the laboratory and analyzed to obtain a measure of the precision of the recovery for each analyte.

Method Blank (MB): a sample of a matrix similar to the batch of associated samples (when available) that is free from the analytes of interest, which is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses.

Method Detection Limit (MDL): the minimum concentration of a substance (an analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.

National Environmental Laboratory Accreditation Program (NELAP): the overall National Environmental Laboratory Accreditation Program.

NELAP Standards: the plan of procedures for consistently evaluating and documenting the ability of laboratories performing environmental measurements to meet nationally defined standards established by the National Environmental Laboratory Accreditation Conference.

Performance Audit: the routine comparison of independently obtained *qualitative and quantitative* measurement system data with routinely obtained data in order to evaluate the proficiency of an analyst or laboratory.

Precision: the degree to which a set of observations or measurements of the same property, obtained under similar conditions, conform to themselves; a data quality indicator. Precision is usually expressed as standard deviation, variance or range, in either absolute or relative terms.

Preservation: refrigeration and/or reagents added at the time of sample collection (or later) to maintain the chemical and/or biological integrity of the sample.

Proficiency Testing: a means of evaluating a laboratory's performance under controlled conditions relative to a given set of criteria through analysis of unknown samples provided by an external source.

Proficiency Test Sample (PT): a sample, the composition of which is unknown to the analyst and is provided to test whether the analyst/laboratory can produce analytical results within specified acceptance criteria.

Quality Assurance: an integrated system of activities involving planning, quality control, quality assessment, reporting and quality improvement to ensure that a product or service meets defined standards of quality with a stated level of confidence.

Quality Control (QC): the overall system of technical activities whose purpose is to measure and control the quality of a product or service so that it meets the needs of users.

Quality Manual: a document stating the management policies, objectives, principles, organizational structure and authority, responsibilities, accountability, and implementation of an agency, organization, or laboratory, to ensure the quality of its product and the utility of its product to its users.

Quality System: a structured and documented management system describing the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of an organization for ensuring quality in its work processes, products (items), and services. The quality system provides the framework for planning, implementing, and assessing work performed by the organization and for carrying out required QA and QC.

Reporting Limits (RL): the maximum or minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be quantified with the confidence level required by the data user.

Reagent Blank (method reagent blank or method blank): a sample consisting of reagent(s), without the target analyte or sample matrix, introduced into the analytical procedure at the appropriate point and carried through all subsequent steps to determine the contribution of the reagents and of the involved analytical steps.

Reference Material: a material or substance one or more properties of which are sufficiently well established to be used for the calibration of an apparatus, the assessment of a measurement method, or for assigning values to materials.

Reference Method: a method of known and documented accuracy and precision issued by an organization recognized as competent to do so.

Reference Standard: a standard, generally of the highest metrological quality available at a given location, from which measurements made at that location are derived.

Replicate Analyses: the measurements of the variable of interest performed identically on two or more sub-samples of the same sample within a short time interval.

Sample Duplicate (SD): two samples taken from and representative of the same population and carried through all steps of the sampling and analytical procedures in an identical manner. Duplicate samples are used to assess variance of the total method including sampling and analysis.

Spike: a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery efficiency or for other quality control purposes.

Standard: the document describing the elements of laboratory accreditation that has been developed and established within the consensus principles of TNI Standard and meets the approval requirements of TNI Standard procedures and policies.

Traceability: the property of a result of a measurement whereby it can be related to appropriate standards, generally international or national standards, through an unbroken chain of comparisons.

Validation: the process of substantiating specified performance criteria.

Work Cell: A defined group of analysts that together perform the method analysis. Members of the group and their specific functions within the work cell must be fully documented. A "work cell" is considered to be all those individuals who see a sample through the complete process of preparation, extraction, or analysis. The entire process is completed by a group of capable individuals; each member of the work cell demonstrates capability for each individual step in the method sequence.

Appendix II

Standard Operating Procedures Directory

SGS Accutest Inc. Laboratories
Standard Operating Procedures

Section	Standard Operating Procedure Title	Number
Air Toxics	Air Analysis by TO-15	EAT001
Air Toxics	Summa Canister Cleaning and Certification	EAT002
Air Toxics	Air Analysis of Tedlar Bag/Summa Canister by TO-3	EAT003
Air Toxics	Laboratory Analysis of Dissolved Gases in Aqueous Samples	EAT004
Air Toxics	Air Analysis by NJDEP – SRWM Low Level USEPA TO-15	EAT005
Air Toxics	Calibration of Flow Controllers	EAT006
Air Toxics	Air Analysis by TO-15 for Minnesota Department of Health	ETA007
General Chem	Percent Solids - SM2540 G-97, ASTM D4643-00	EGN007
General Chem	Anionic Surfactants As MBAS	EGN008
General Chem	Nonionic Surfactants as CTAS	EGN009
General Chem	Total Solids, 160.3, SM2540 B-97	EGN010
General Chem	Composite Sample	EGN015
General Chem	Total Dissolved Solids (Total Filterable Residue) SM2540 C-97	EGN020
General Chem	Settleable Solids, 160.5	EGN021
General Chem	Nitrate/Nitrite & Nitrate Only By Cad. Red. Analysis	EGN026
General Chem	Total Volatile Solids, 160.4	EGN030
General Chem	Chlorine, Total Residual And Free	EGN033
General Chem	Total Alkalinity, 310.1	EGN037
General Chem	Acidity (pH 8.2)	EGN044
General Chem	Bicarbonate, Carbonate, Free Carbon Dioxide	EGN045
General Chem	Viscosity	EGN067
General Chem	Total Suspended Solids (Non-Filterable Residue)	EGN087
General Chem	Chemical Oxygen Dem: Hach 8000, Aqueous Samples - Soil Modified	EGN099
General Chem	Hardness As Caco3 By Titration	EGN101
General Chem	Orthophosphate	EGN102
General Chem	Nitrogen, Nitrite -Total-Waters/Soluble-Soils	EGN103
General Chem	Turbidity, 180.1	EGN116
General Chem	Sulfide	EGN118
General Chem	Sulfite.	EGN119
General Chem	Apparent Color By Visual Comparison Method	EGN120
General Chem	Specific Conductance At 25.0 C	EGN124
General Chem	Chloride	EGN131
General Chem	Turbidity for Metals Drinking Waters	EGN132
General Chem	Odor & Odor at Elevated Temp.(Threshold Odor Test)	EGN133
General Chem	Biological Oxygen Demand (5 Day BOD)	EGN134
General Chem	Winkler Titration For DO Standardization	EGN135
General Chem	Dissolved Oxygen	EGN136
General Chem	Reactive Sulfide And Reactive Cyanide	EGN137
General Chem	Ignitability	EGN140
General Chem	TCLP - Semi-volatiles/Metals Extraction	EGN141
General Chem	TCLP- Volatiles Extraction	EGN142
General Chem	Paint Filter Test	EGN143
General Chem	Cyanides Amenable To Chlorination Preparation	EGN144
General Chem	Temperature	EGN146

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Section	Standard Operating Procedure Title	Number
General Chem	Iodine, Colorimetric Analysis	EGN148
General Chem	pH by Electrode – Water	EGN151
General Chem	Salinity - SM182520B	EGN158
General Chem	pH & Corrosivity for Soils/ Solid Wastes SW486 9045	EGN200
General Chem	BTU (Gross Calorific Value)	EGN202
General Chem	Percent Sulfur	EGN203
General Chem	Bulk Density (Dry Basis)	EGN204
General Chem	Percent Ash (Dry Basis)	EGN205
General Chem	Total Organic Content	EGN206
General Chem	Cyanide (Lachat Autoanalyzer)	EGN207
General Chem	Total Chlorine ASTM D808-91	EGN208
General Chem	Total Organic Chlorine ASTM D808-91	EGN209
General Chem	Total Kjeldahl Nitrogen (Lachat Autoanalyzer)	EGN210
General Chem	Specific Gravity	EGN211
General Chem	Hexavalent Chromium (Soils)	EGN214
General Chem	Ammonia (Lachat Autoanalyzer)	EGN216
General Chem	Phenols (Lachat Autoanalyzer)	EGN217
General Chem	Total Organic Halides	EGN218
General Chem	Total Organic Halides, Solid And Oil Matrices	EGN219
General Chem	Pour Point	EGN221
General Chem	Base Sediment In Petroleum Samples	EGN222
General Chem	Water Content In Petroleum Samples	EGN223
General Chem	Ignitability, Bunsen Burner Method	EGN226
General Chem	Organic Matter (Loss on Ignition)	EGN227
General Chem	Sulfide Analysis For Reactive Sulfides	EGN228
General Chem	Hexavalent Chromium In Waters by EPA 7196a Mod.	EGN230
General Chem	Hexavalent Chromium In Waters by SM18 4500 CR D	EGN231
General Chem	Total Organic Carbon In Soil Samples	EGN233
General Chem	Total Organic Carbon In Aqueous Samples	EGN234
General Chem	pH and Corrosivity for Aqueous and Multiphasic Wastes	EGN238
General Chem	Synthetic Precipitation Leaching Procedure for Non-Volatile Anal.	EGN239
General Chem	Synthetic Precipitation Leaching Procedure for Volatile Analytes	EGN240
General Chem	Cation Exchange Capacity Of Soils (Sodium Acetate)	EGN242
General Chem	Ferrous Iron	EGN243
General Chem	Specific Gravity (For Sludges And Solids)	EGN247
General Chem	N-Hexane Extract. Mat. & Silica Gel Treatment by Gravimetric Anal.	EGN249
General Chem	Oil & Grease – Gravimetric Anal. (So & Sl) – Hexane Extraction	EGN250
General Chem	Neutral Leaching of Solid Waste Sam. Using Shake Extraction	EGN252
General Chem	Oxidation-Reduction Potential	EGN253
General Chem	Titrimetric Method For Free Carbon Dioxide	EGN255
General Chem	Total Phosphorous EPA 365.3	EGN256
General Chem	Dissolved Silica	EGN257
General Chem	Grain Size and Sieve Testing	EGN258
General Chem	Hardness By Calculation	EGN259

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Section	Standard Operating Procedure Title	Number
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General Chem	Massachusetts Sieve Test	EGN262
General Chem	Volatile Suspended Solids	EGN264
General Chem	Unburned Combustibles (Volatile Solids)	EGN266
General Chem	Particulate Matter	EGN267
General Chem	Elutriate Preparation	EGN268
General Chem	Phosphorus, Hydrolyzable	EGN271
General Chem	Perchlorate by Ion Chromatography in Groundwater and Soil	EGN272
General Chem	Percent Lipids by Gravimetric Analysis	EGN273
General Chem	Cyanide Distillation/Aqueous Samples/Micro Method	EGN275
General Chem	Cyanide Distillation/Soil Samples/Micro Method	EGN276
General Chem	Calibration of General Chemistry Distillation Tubes	EGN277
General Chem	Phenols Distillation, Water Samples	EGN279
General Chem	Phenols Micro Distillation, Soil Samples	EGN280
General Chem	Inorganic Anions Determination by ion chromatography using IC 2000	EGN281
General Chem	Leaching of Solid Waste Samples using China Leaching Procedure	EGN283
General Chem	Ammonia Distillation, Water & Solid samples	EGN284
General Chem	Weak Acid Dissociable Cyanide / Micro-Distillation Method	EGN286
General Chem	Ferrous Iron for Hexavalent Chromium Sample Characterization	EGN288
General Chem	Calibration of Coliform Collection Bottles	EGN287
General Chem	Inorganic Carbon by Calculation	EGN289
General Chem	Procedure for Homogenization of Biota Samples	EGN290
General Chem	Hexavalent Chromium in Water by Ion Chromatography	EGN291
General Chem	Hexavalent Chromium in Soils by Ion Chromatography	EGN292
General Chem	Procedure for Wand Mixer Homogenization of Soil Samples	EGN293
General Chem	Hydrogen Sulfide	EGN294
General Chem	TCLPME-Multiple Extractions Procedure	EGN295
General Chem	Modified Elutriate Preparation	EGN296
General Chem	Procedure for Particle Size Reduction (Crushing) of Solid Matrices	EGN297
General Chem	Acid Volatile Sulfides	EGN298
General Chem	Pore Water Extraction from Soils for NVOC and Metals Analysis	EGN299
General Chem	Iodide, Colorimetric Analysis	EGN300
General Chem	Percent Solids and Moisture in Soil/Solid Matrices	EGN301
General Chem	Un-Ionized Ammonia	ENG302
General Chem	Density, ASTM Definition	EGN303
General Chem	HEM by Gravimetric Analysis Using Solid Phase Extraction	EGN304
General Chem	Hexavalent Chromium on Wipe Samples	EGN305
General Chem	Modified Mehlich Buffer pH	EGN306
General Chem	Screening Procedure to test for presence of sulfide	EGN307
General Chem	Black Carbon in Soil Samples	EGN308
General Chem	Physical Appearance (Sample Description)	EGN309
General Chem	Orthophosphate	EGN310
General Chem	Oxidizer Screen	EGN311
General Chem	Hexavalent Chromium by 218.7	EGN312
Facilities Maint.	Facilities Maintenance	EFM001

SGS Accutest Inc. Laboratories
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Section	Standard Operating Procedure Title	Number
Field Operations	Aqueous Grab Sampling Procedures	EFP001
Field Operations	Use of Automatic Wastewater Sampler	EFP002
Field Operations	Free and Total residual Chlorine	EFP003
Field Operations	Decontamination of Sampling Equipment	EFP004
Field Operations	Dissolved Oxygen	EFP005
Field Operations	Dissolved Oxygen by Winkler Titration	EFP006
Field Operations	Metal Sample Field Filtering Procedure	EFP008
Field Operations	Sampling Procedure for Monitoring Wells	EFP013
Field Operations	Subsurface Soil Sampling Procedure	EFP016
Field Operations	Surface Soil Sampling Procedure	EFP017
Field Operations	Residential Potable Well Sampling Procedure	EFP018
Field Operations	Potable Water Line Sampling Procedure	EFP019
Field Operations	Sampling for NJ Private Well Testing Act	EFP020
Field Operations	Field Sampling Coordinates by GPS	EFP021
Field Operations	Sampling Drinking Water Wells for Volatile Organics	EFP022
Field Operations	Sampling Drinking Water Wells for Metals	EFP023
Field Operations	Sampling Drinking Water Wells for Nitrates & Nitrites	EFP024
Field Operations	Sampling Drinking Water Wells for Gross Alpha	EFP025
Field Operations	Sampling Drinking Water Wells for Coliform Bacteria	EFP026
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Field Operations	Field Oxidation-Reduction Potential	EFP029
Field Operations	Turbidity, Field Test	EFP030
Field Operations	Analysis for Dissolved Oxygen by DO Probe	EFP031
Field Operations	Field pH in Water by Electrode	EFP032
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Health & Safety	Measuring Face Velocities in Laboratory Fume Hoods	EHS002
Health & Safety	Proper Handling of Compressed Gas Cylinders	EHS003
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Health & Safety	Handling and Management of Inorganic Wastes (Formerly EGN265)	EHS005
Health & Safety	Handling, Treatment, and Disposal of Foreign Soils	EHS006
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Health & Safety	Organic Prep Air Monitoring	EHS008
Health & Safety	Laboratory Visitor Safety Procedure	EHS009
Information Tech	Information Security & Integrity Procedure	EMI001
Information Tech	Procedures for Requesting Software or Software Revisions	EMI002
Information Tech	Development, Implementation, Delivery, & Revision of EDDs	EMI003
Information Tech	Data Systems Maintenance and Information Handling	EMI006
Metals Analysis	Mercury Analysis of Non-Potable and Potable Water Samples	EMA215
Metals Analysis	Metals by ICP-MS: EPA 200.8	EMA216

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Section	Standard Operating Procedure Title	Number
Metals Analysis	Metals by ICP-MS: SW846 6020	EMA217
Metals Analysis	Metals by ICP Atomic Emission Spectrometry using Solid State ICP	EMA222
Metals Analysis	Metals by ICP Atomic Emission Spectrometry – EPA 200.7	EMA223
Metals Analysis	Low Level Mercury by EPA 1631	EMA224
Metals Analysis	Low Level Mercury by EPA 245.7	EMA225
Metals Analysis	Metals by inductively coupled plasma-Mass Spectrometry (ICP-MS)	EMA226
Metals Analysis	Metals by Inductively coupled plasma atomic emission spectrometry (ICP) using Using Solid State ICP	EMA227
Metals Analysis	Cold Vapor Analysis of Mercury For Soil Samples	EMA228
Metals Prep	Digestion of DW for ICP Analysis	EMP048
Metals Prep	Non-Potable Waters Digestion For ICP/Flame Analysis	EMP070
Metals Prep	Soil Digestion For ICP Analysis	EMP073
Metals Prep	Non-Potable Water Digestion for Flame/ICP (Total & Dissolved)	EMP081
Metals Prep	Digestion Of Non-Potable Waters For Total Recoverable Metals	EMP200
Metals Prep	Metals Spiking Solution and Standards Preparation and Use	EMP202
Metals Prep	Calibration of Metals Digestion Tubes	EMP203
Metals Prep	ICP and ICP/MS Analysis of TPPM-10 Filters	EMP207
Metals Prep	Digestion of Waters for Acid Extractable Metals	EMP208
Metals Prep	Lab Preservation Filtration of Metals Samples	EMP209
Microbiology	Microbiological Quality Control	EMB001
Microbiology	Coliform, Total By Colilert, SM18 9223 B	EMB002
Microbiology	Total Coliform: Membrane Filtration/Fecal Coliform Confirmation	EMB003
Microbiology	Total Plate Count SM18 9215B	EMB008
Microbiology	General Petroleum Degraders	EMB009
Microbiology	Calibration of Microbiology Coliform Collection Bottles	EMB010
Microbiology	Coliform, Fecal	EMB127
Organics-GC	Dibromo-3-chloropropane & 1,2,3-Trichloropropane	EGC504
Organics-GC	Acrolein and Acrylonitrile by EPA 603	EGC603
Organics-GC	Pesticides & PCBs in Wastewater by EPA 608	EGC608
Organics-GC	1,2-DBE, 1,2-DB-3-CP & 1,2,3-TCP by Micro-extraction and GC	EGC8011
Organics-GC	Pesticides Analysis by SW8081	EGC8081
Organics-GC	PCB Analysis SW8082	EGC8082
Organics-GC	Herbicides by SW846 – 8151	EGC8151
Organics-GC	Conn. Total Semi-volatile Petroleum Hydrocarbons	EGCCTGRO
Organics-GC	Alcohols by Direct Aqueous Injection GC/FID SW 8015	EGCALDAI
Organics-GC	Analysis of Explosives by GC/ECD	EGCBUSACH-PPM
Organics-GC	Connecticut Extractable Petroleum Hydrocarbon Analysis	EGCCTETPH
Organics-GC	Petroleum Range Organics Analysis By GC/FID (Florida)	EGCFLPRO
Organics-GC	Massachusetts Extractable Petroleum Hydrocarbons	EGCMAEPH
Organics-GC	Massachusetts Volatile Petroleum Hydrocarbons	EGCMAVPH
Organics-GC	New Jersey Extractable Petroleum Hydrocarbons	EGCNJEPH

SGS Accutest Inc. Laboratories
Standard Operating Procedures

Section	Standard Operating Procedure Title	Number
Organics-GC	Oil Identification by Gas Chromatography Fingerprint	EGCOILID
Organics-GC	Texas Total Petroleum Hydrocarbons	EGCTX1005
Organics-GC	Wisconsin Diesel Range Organics	EGCWIDRO
Organics-GC/MS	Volatile Organics in Drinking Water by EPA 524	EMS524
Organics-GC/MS	Volatile Organics in Wastewater by EPA 624	EMS624
Organics-GC/MS	Semi-Volatile Organics by EPA 625	EMS625
Organics-GC/MS	Volatile Organics by SW8260B	EMS8260B
Organics-GC/MS	Ethylene/Propylene Glycol Analysis DAI-GC/MS(SIM)	EMS8260DAI
Organics-GC/MS	Semi-Volatile Organics by SW8270	EMS8270
Organics-GC/MS	NDMA By chemical Ionization Gas Chromatography/mass spectrometry (GC/MS) With large volume injection	EMSNDMA
Organics Prep	Prep of Base Neutral/Acid Extractables: Water Matrices	EOP001
Organics Prep	Extraction of Semivolatile Organics from Solids By Sonication	EOP003
Organics Prep	Alumina Cleanup of Organic Extracts: SW3610	EOP005
Organics Prep	Continuous Liquid/Liquid Extraction Water: SW3520C	EOP007
Organics Prep	Sulfur Cleanup of Organic Extracts: SW846 3660B	EOP011
Organics Prep	Testing & Approval Of Organics Solvents	EOP013
Organics Prep	Preparation & Use of MDL Check Solution	EOP014
Organics Prep	Preparation of Petroleum Oils & Organic Wastes for PCBs by SW 8082	EOP017
Organics Prep	Removal of Sulfur from Extracts with Tetrabutylammonium Sulfite	EOP018
Organics Prep	Soxhlet Extraction of Solids For Semi-Volatile Organics	EOP020
Organics Prep	Preparation of Petroleum Products for EPA 8081	EOP021
Organics Prep	Preparation of Petroleum Products for BNA by EPA 8270C	EOP022
Organics Prep	Preparation for Aqueous DRO for Wisconsin	EOP023
Organics Prep	Solvent Extraction for Soil/Sediment DRO for Wisconsin	EOP024
Organics Prep	Pressurized Fluid Extraction (ASE)	EOP040A
Organics Prep	Microwave Extraction of Pesticides &/or PCBs from solid samples	EOP3546
Organics Prep	Calibration of Extract Vials	EOP026
Organics Prep	Alumina Column Cleanup SW3611	EOP3611
Organics Prep	Florisil Column Cleanup SW3620	EOP3620
Organics Prep	Silica Gel Cleanup SW3630	EOP3630
Organics Prep	Acid Base Partitioning SW3650	EOP3650
Organics Prep	Sulfuric Acid/Permanganate Cleanup SW3665	EOP3665
Organics Prep	Purge-And-Trap Extraction Of Aqueous Samples	EOP5030
Organics Prep	Collection/Preservation of Solids for VO Analysis: 5035	EOP5035
Organics Prep	Cleanup of Organic Extracts by Gel Permeation Chromatography	EOPGPC
Project Mgmt	Procedure For The Management Of Client Projects	EPM001
Project Mgmt	Client Specific Method Modifications	EPM002
Project Mgmt	Procedure For The Notification Of DW Exceedences	EPM003
Project Mgmt	Data Entry for Sample Log-In	EPM004
Project Mgmt	Subcontracting high volume	EPM005-01

SGS Accutest Inc. Laboratories
Standard Operating Procedures

Section	Standard Operating Procedure Title	Number
Quality Assurance	Preparation, Approval, Distribution & Archiving of SOPs	EQA001
Quality Assurance	Calibration of Analytical Balances	EQA002
Quality Assurance	Calibration of Thermometers	EQA003
Quality Assurance	Calibration and Use of Auto-Pipettes	EQA004
Quality Assurance	Temperature Monitoring-	EQA005
Quality Assurance	Sample Container Cleaning & Quality Control	EQA006
Quality Assurance	Calibration of Kuderna-Danish Collection Tubes	EQA007
Quality Assurance	Preparation and Analysis of Sample Preservatives	EQA008
Quality Assurance	Personnel Training and Analyst Proficiency	EQA009
Quality Assurance	Sample Batching Procedure	EQA010
Quality Assurance	Corrective Action Procedure	EQA011
Quality Assurance	Glassware Preparation For Inorganic Lab Use	EQA012
Quality Assurance	Preparation Of Glassware For Organics Extraction	EQA013
Quality Assurance	Standards Traceability Documentation Procedure	EQA014
Quality Assurance	Template for Standard Operating Procedures	EQA016
Quality Assurance	Management/Reporting Of Proficiency Test (PT) Samples	EQA017
Quality Assurance	Creating/Distributing/Tracking Internal Chains Of Custody	EQA018
Quality Assurance	Creating New Accounts	EQA019
Quality Assurance	Creating New Projects	EQA020
Quality Assurance	Creating Product Codes	EQA021
Quality Assurance	Procedures For The Purchase Of Laboratory Supplies	EQA023
Quality Assurance	Control & Archiving Of Laboratory Documents	EQA025
Quality Assurance	Confidentiality Protection Procedures	EQA027
Quality Assurance	Quality System Review	EQA028
Quality Assurance	Contract Review	EQA029
Quality Assurance	Procedure for the Development and Application of MDLs and RLs	EQA030
Quality Assurance	Subcontracting Procedures	EQA031
Quality Assurance	Signature Authority	EQA032
Quality Assurance	Review of Inorganic Data	EQA034
Quality Assurance	Review of Organic Data	EQA035
Quality Assurance	Documentation of Equipment Maintenance	EQA036
Quality Assurance	Procedures for Accepting Departures from Laboratory Specifications	EQA037
Quality Assurance	Client Complaints Resolution Procedure	EQA038
Quality Assurance	Employee Technical Ethics Responsibilities	EQA039
Quality Assurance	Internal Audit Procedure	EQA041
Quality Assurance	Procedure for Obtaining Representative Sample Aliquots	EQA042
Quality Assurance	Procedure for Development &use of In-House Q C Criteria	EQA043
Quality Assurance	Manual Integration of Chromatographic Peaks	EQA044
Quality Assurance	Deionized Water Quality Control	EQA046
Quality Assurance	Management and Control of Change	EQA047
Quality Assurance	Laboratory Equipment Purchase and Removal From Service	EQA048
Quality Assurance	Calibration of Microliter Syringes	EQA049
Quality Assurance	Autosampler Vial Labeling Procedure (formally EOP041-01)	EQA050
Quality Assurance	pH for Volatile Samples	EQA051
Quality Assurance	Quality Control Review of Data Packages	EQA054
Quality Assurance	Procedures for Determining Method Comparability	EQA055
Quality Assurance	Refrigerator Storage Holding Blank Procedure	EQA056

SGS Accutest Inc. Laboratories
Standard Operating Procedures

Section	Standard Operating Procedure Title	Number
Quality Assurance	Data Integrity Training Procedure	EQA057
Quality Assurance	Data Integrity Monitoring Procedure	EQA058
Quality Assurance	Procedure for Conducting Data Integrity Investigations	EQA059
Quality Assurance	Quality Control Requirements for Organics by GC/GCMS using EPA 500 & 600 Series, SW846 8000 Series and CLP Methodologies	EQA060
Quality Assurance	Procedure for the Confidential Reporting of Data Integrity Issues	EQA061
Quality Assurance	Calibration of Volumetric Dispensers for Volume Critical Processes	EQA062
Quality Assurance	Calibration of Volumetric Dispensers / Non-Critical Volumes Processes	EQA063
Quality Assurance	Glassware Preparation for use in VOA analysis	EQA064
Quality Assurance	Control of Non-Conforming Product	EQA065
Quality Assurance	Client Notification of Key Personnel Changes	EQA066
Quality Assurance	Review of Inorganic Notebooks	EQA067
Quality Assurance	Disposal of Spent Semi-Volatile Organic Extracts	EQA068
Quality Assurance	Compressed Gas Management	EQA069
Quality Assurance	Procedure for Tracking Quality Control Non-Conformances	EQA070
Quality Assurance	Procedure for the Development and Application of Experimental Method Detection Limits, limits of detection, and limits of quantitation for inorganic applications	EQA071
Quality Assurance	Procedure for Particle Size Reduction (Crushing)/Homogenization of solid matrices	EQA072
Quality Assurance	Compositing Samples	EQA073
Report Generation	Report Generation–Data Package	ERG002
Sample Mgmt.	Sample Storage	ESM001
Sample Mgmt.	Chain Of Custody And Log In Procedure	ESM002
Sample Mgmt.	Temperature Maintenance Of Shipping Coolers	ESM004
Sample Mgmt.	Cooler Packaging And Shipping Procedure	ESM008
Sample Mgmt.	Procedures for Sample Couriers	ESM011
Sample Mgmt.	Summa Canister Shipment & Retrieval: NJDEP 03-X-35135	ESM012

Appendix III

Analytical Capabilities

Method Capabilities by NELAP Accredited Fields of Testing

Analytes	Method Number	Program	Chemistry Field
Alkalinity	SM 2320 B-11	Drinking Water	Inorganic Analysis
Ammonia	SM 4500-NH_3 H-11	Drinking Water	Inorganic Analysis
Chloride, Fluoride, Sulfate	EPA 300.0	Drinking Water	Inorganic Analysis
Chlorine, Total Residual	SM 4500-CL F-11	Drinking Water	Inorganic Analysis
Color, Apparent	SM 2120 B-11	Drinking Water	Inorganic Analysis
Conductivity	SM 2510 B-11	Drinking Water	Inorganic Analysis
Cyanide	EPA 335.4	Drinking Water	Inorganic Analysis
Foaming Agents (MBAS)	SM 5540 C-11	Drinking Water	Inorganic Analysis
Nitrate	EPA 353.2	Drinking Water	Inorganic Analysis
Nitrite	SM 4500-NO_2 B	Drinking Water	Inorganic Analysis
Odor	SM 2150 B-11	Drinking Water	Inorganic Analysis
Organic Carbon, Total (TOC)	SM 5310 B-11	Drinking Water	Inorganic Analysis
Dissolved Organic Carbon (DOC)	5310 B, C, D	Drinking Water	Inorganic Analysis
Orthophosphate	SM 4500-P E-11	Drinking Water	Inorganic Analysis
Perchlorate	EPA 314.0	Drinking Water	Inorganic Analysis
pH, Hydrogen Ion	SM 4500-H^+ B-11	Drinking Water	Inorganic Analysis
Silica, Dissolved	SM 4500-Si D(18th/19th ed)	Drinking Water	Inorganic Analysis
Temperature	SM 2550 B	Drinking Water	Inorganic Analysis
Total Dissolved Solids	SM 2540 C-11	Drinking Water	Inorganic Analysis
Total Organic Halides (TOX)	SM 5320 B	Drinking Water	Inorganic Analysis
Turbidity	EPA 180.1	Drinking Water	Inorganic Analysis
Hardness, Calcium	EPA 200.7	Drinking Water	Metals Analysis
Hardness, Total	EPA 200.7	Drinking Water	Metals Analysis
Hardness, Total	SM 2340 C-11	Drinking Water	Metals Analysis
Mercury	EPA 245.1	Drinking Water	Metals Analysis
Metals	EPA 200.7	Drinking Water	Metals Analysis
Metals	EPA 200.8	Drinking Water	Metals Analysis
DBCP, EDB & TCP	EPA 504.1	Drinking Water	Organics Analysis
Volatile Organics	EPA 524.2	Drinking Water	Organics Analysis
Total Coliform/E. Coli	SM 9223 B	Drinking Water	Microbiology
Heterotrophic Bacteria	SM 9215 B	Drinking Water	Microbiology

Method Capabilities by NELAP Accredited Fields of Testing

Analytes	Method Number	Program	Chemistry Field
Acidity as $CaCO_3$	SM 2310 B-11	Wastewater	Inorganic Analysis
Alkalinity as $CaCO_3$	SM 2320 B-11	Wastewater	Inorganic Analysis
Ammonia	SM20 4500-NH_3-B+H-11	Wastewater	Inorganic Analysis
Biochemical Oxygen Demand	SM 5210 B-11	Wastewater	Inorganic Analysis
Bromide, Chloride, Fluoride, Sulfate	EPA 300.0	Wastewater	Inorganic Analysis
Carbonaceous BOD (CBOD)	SM 5210 B-11	Wastewater	Inorganic Analysis
Chemical Oxygen Demand (COD)	SM 5220 B or C-11	Wastewater	Inorganic Analysis
Chloride	SM 4500-Cl C-11	Wastewater	Inorganic Analysis
Chlorine, Total Residual	SM 4500-Cl F-11	Wastewater	Inorganic Analysis
Chromium (VI)	SM 3500-Cr B-11	Wastewater	Inorganic Analysis
Chromium (VI)	EPA 218.7	Wastewater	Inorganic Analysis
Color, Apparent	SM 2120 B-11	Wastewater	Inorganic Analysis
Cyanide (Sample Preparation)	SM 4500-CN C+E-11	Wastewater	Inorganic Analysis
Cyanide (Analytical Finish)	EPA 335.4	Wastewater	Inorganic Analysis
Cyanide Amenable to Chlorine	SM 4500-CN-B or C-11+G-11	Wastewater	Inorganic Analysis
Hardness, Total as $CaCO_3$	SM 2340C-11	Wastewater	Inorganic Analysis
Iron, Ferrous	SM 3500-Fe B-11	Wastewater	Inorganic Analysis
Kjeldahl Nitrogen, Total	EPA 351.2	Wastewater	Inorganic Analysis
Nitrate/Nitrite	EPA 353.2	Wastewater	Inorganic Analysis
Nitrite	SM 4500-NO_2 B-11	Wastewater	Inorganic Analysis
Oil & Grease, HEM-LL	EPA 1664A	Wastewater	Inorganic Analysis
Oil & Grease, SGT-HEM, Non-Polar	EPA 1664A	Wastewater	Inorganic Analysis
Organic Nitrogen	SM 4500-N B+G EPA 351.2	Wastewater	Inorganic Analysis
Orthophosphate	EPA 365.3	Wastewater	Inorganic Analysis
Oxygen, Dissolved, Winkler	SM 4500-O C-11	Wastewater	Inorganic Analysis
Oxygen, Dissolved	SM 4500-O G-11	Wastewater	Inorganic Analysis
pH Hydrogen Ion	SM 4500-H B-11	Wastewater	Inorganic Analysis
pH Aqueous Electrometric	SW-846 9040C	Wastewater	Inorganic Analysis
Temperature Thermometric	SM 2550 B-00	Wastewater	Inorganic Analysis
Phenols	EPA 420.4	Wastewater	Inorganic Analysis
Phenols (Analytical Finish)	SW846 9066	Wastewater	Inorganic Analysis
Phosphorus (Total)	EPA 365.3	Wastewater	Inorganic Analysis
Residue, Filterable (TDS)	SM 2540 C-11	Wastewater	Inorganic Analysis
Residue, Nonfilterable (TSS)	SM 2540 D-11	Wastewater	Inorganic Analysis

Method Capabilities by NELAP Accredited Fields of Testing

Analytes	Method Number	Program	Chemistry Field
Residue, Settleable	SM 2540 F-11	Wastewater	Inorganic Analysis
Residue, Total	SM 2540 B-11	Wastewater	Inorganic Analysis
Residue, Volatile	EPA 160.4	Wastewater	Inorganic Analysis
Total, fixed, and volatile solids (SQAR)	SM 2540 G, 18th Ed.	Wastewater	Inorganic Analysis
Salinity	SM 2520 B-11	Wastewater	Inorganic Analysis
Silica, Dissolved	SM 4500-SiO_2 C-11	Wastewater	Inorganic Analysis
Specific Conductance	SM 2510 B-11	Wastewater	Inorganic Analysis
Specific Conductance	SW846 9050A	Wastewater	Inorganic Analysis
Sulfide (S)	SM 4500-S B,C + F-11	Wastewater	Inorganic Analysis
Sulfite (SO_3)	SM 4500-SO_3 B-11	Wastewater	Inorganic Analysis
Surfactants (Methylene Blue)	SM 5540 C-11	Wastewater	Inorganic Analysis
Temperature	SM 2550 B-00	Wastewater	Inorganic Analysis
Total Organic Carbon (TOC)	SM 5310 B-11	Wastewater	Inorganic Analysis
Total Organic Halides (TOX)	SW846 9020B	Wastewater	Inorganic Analysis
Turbidity	EPA 180.1	Wastewater	Inorganic Analysis
Metals, Total – Water	SW846 3010A	Wastewater	Metals Prep
Metals, Total – Water, Rec. + Dissolved	SW846 3005A	Wastewater	Metals Prep
Hardness, Total as $CaCO_3$	EPA 200.7	Wastewater	Metals Analysis
Hardness, Total as $CaCO_3$	SM 2340 C-11	Wastewater	Metals Analysis
Mercury	EPA 245.1	Wastewater	Metals Analysis
Metals, ICP	EPA 200.7	Wastewater	Metals Analysis
Metals, ICP/MS	EPA 200.8	Wastewater	Metals Analysis
Mercury, Low-Level	EPA 245.7	Wastewater	Metals Analysis
Mercury, Low-Level	EPA 1631E	Wastewater	Metals Analysis
Mercury, Liquid Waste	SW846 7470A	Wastewater	Metals Analysis
Separatory Funnel Extraction	SW-846 3510C	Wastewater	Semivolatile Organics
Continuous Liquid-Liquid Extraction	SW-846-3520C	Wastewater	Semivolatile Organics
Purge & Trap Aqueous	SW-846 5030B	Wastewater	Volatile Organics
Acrolein & Acrylonitrile	EPA 603	Wastewater	Organics Analysis
Base/Neutrals and Acids	EPA 625	Wastewater	Organics Analysis
Extractable Petroleum Hydrocarbons	NJDEP EPH	Wastewater	Organics Analysis
Organochlorine Pests & PCBs	EPA 608	Wastewater	Organics Analysis

Method Capabilities by NELAP Accredited Fields of Testing

Analytes	Method Number	Program	Chemistry Field
Petroleum Hydrocarbons	NJ-OQA-QAM-25	Wastewater	Organics Analysis
Volatile Organics	EPA 624	Wastewater	Organics Analysis
Semi-Volatile Organics GC/MS, Extract or Dir Inj, Capillary	SW-846 8270C SW-846 8270D	Wastewater	Semivolatile Organic Analysis
Coliform, Fecal (Count per 100 mL)	SM 9222 D-97	Wastewater	Microbiology
Coliform, Total (Count per 100 mL)	SM 9222 B-97	Wastewater	Microbiology
Heterotrophic Plate Count	SM 9215 B-00	Wastewater	Microbiology
Soluble Sulfides	SW846 9034	Solid/Haz. Waste	Inorganic Analysis
Bomb Calorimetry	ASTM D-240	Solid/Haz. Waste	Inorganic Analysis
Bromide, Chloride, Fluoride, Sulfate	SW846 9056/A	Solid/Haz. Waste	Inorganic Analysis
Cation, Exchange Capacity	SW846 9081	Solid/Haz. Waste	Inorganic Analysis
Chromium (VI) Digestion	SW846 3060A	Solid/Haz. Waste	Inorganic Analysis
Chromium (VI)	SW846 7196A	Solid/Haz. Waste	Inorganic Analysis
Chromium (VI)	SW846 7199	Solid/Haz. Waste	Inorganic Analysis
Corrosivity/pH, >20% H2O	SW846 9040C	Solid/Haz. Waste	Inorganic Analysis
Cyanide	SW846 9010C	Solid/Haz. Waste	Inorganic Analysis
Cyanide, Amenable to Chlorine	SW846 9010C	Solid/Haz. Waste	Inorganic Analysis
Cyanide	SW846 9012B	Solid/Haz. Waste	Inorganic Analysis
Extractable Organic Halides	SW846 9023	Solid/Haz. Waste	Inorganic Analysis
Free Liquid	SW846 9095	Solid/Haz. Waste	Inorganic Analysis
Ignitability	SW846 1010A	Solid/Haz. Waste	Inorganic Analysis
Oil & Grease, HEM	EPA 1664A	Solid/Haz. Waste	Inorganic Analysis
Oil & Grease and Sludge, HEM	SW846 9071B	Solid/Haz. Waste	Inorganic Analysis
pH, Hydrogen Ion	SW846 9040C	Solid/Haz. Waste	Inorganic Analysis
pH, Soil and Waste	SW846 9045D	Solid/Haz. Waste	Inorganic Analysis
Phenols (Sample Preparation)	SW846 9065	Solid/Haz. Waste	Inorganic Analysis
SPLP Metals/Organics	SW846 1312	Solid/Haz. Waste	Inorganic Analysis
TCLP Metals/Semi Volatile Organics	SW846 1311	Solid/Haz. Waste	Inorganic Analysis
TCLP Volatile Organics	SW846 1311	Solid/Haz. Waste	Inorganic Analysis
Total Organic Carbon (TOC)	SW846 9060 A	Solid/Haz. Waste	Inorganic Analysis
Metals, Solids	SW846 3050B	Solid/Haz. Waste	Metals Prep
Mercury, Solid Waste	SW846 7471A/B	Solid/Haz. Waste	Metals Analysis
Metals by ICP	SW846 6010B/C	Solid/Haz. Waste	Metals Analysis

Method Capabilities by NELAP Accredited Fields of Testing

Analytes	Method Number	Program	Chemistry Field
Metals by ICP/MS	SW846 6020/6020A	Solid/Haz. Waste	Metals Analysis
Semivolatiles, Acid/Base Partition	SW846 3650B	Solid/Haz. Waste	Organics Prep
Semivolatiles, Alumina Cleanup	SW846 3610B	Solid/Haz. Waste	Organics Prep
Semivolatiles, Alumina Cleanup (Petro)	SW846 3611B	Solid/Haz. Waste	Organics Prep
Semivolatiles, Florisil Cleanup	SW846 3620B/C	Solid/Haz. Waste	Organics Prep
Semivolatiles, Gel Permeation Cleanup	SW846 3640A	Solid/Haz. Waste	Organics Prep
Semivolatiles, Silica Gel Cleanup	SW846 3630C	Solid/Haz. Waste	Organics Prep
Semivolatiles, Sulfur Cleanup	SW846 3660B	Solid/Haz. Waste	Organics Prep
Semivolatiles, Sulfuric Acid/MnO_2	SW846 3665A	Solid/Haz. Waste	Organics Prep
Semivolatile Prep, Waste Dilution	SW846 3580A	Solid/Haz. Waste	Organics Prep
Semivolatile Prep Solid, Sonication	SW846 3550B/C	Solid/Haz. Waste	Organics Prep
Semivolatile Prep Solids, Soxhlet	SW846 3540C	Solid/Haz. Waste	Organics Prep
Semivolatile Prep Water	SW846 3520C	Solid/Haz. Waste	Organics Prep
Semivolatile Prep Water	SW846 3510C	Solid/Haz. Waste	Organics Prep
Volatile, Headspace	SW846 3810	Solid/Haz. Waste	Organics Prep
Volatile, Purge & Trap, Solids–High	SW846 5035H/5035AH	Solid/Haz. Waste	Organics Prep
Volatile, Purge & Trap, Solids–Low	SW846 5035L/5035AL	Solid/Haz. Waste	Organics Prep
Volatile, Purge & Trap, Water	SW846 5030B	Solid/Haz. Waste	Organics Prep
Microwave Extraction	SW846 3546	Solid/Haz. Waste	Organics Prep
Alcohols	SW846 8015B	Solid/Haz. Waste	Organics Analysis
Base/Neutrals and Acids	SW846 8270C/D	Solid/Haz. Waste	Organics Analysis
Chlorinated Herbicides	SW846 8151A	Solid/Haz. Waste	Organics Analysis
DBCP, EDB & TCP	SW846 8011	Solid/Haz. Waste	Organics Analysis
Diesel Range Organic	SW846 8015B/C	Solid/Haz. Waste	Organics Analysis
Dissolved Gas/Aqueous Media	RSK-175	Solid/Haz. Waste	Organics Analysis
Ethylene Glycol & Propylene Glycol	SW846 8260B	Solid/Haz. Waste	Organics Analysis
Extractable Petroleum Hydrocarbons	NJDEP EPH	Solid/Haz. Waste	Organics Analysis
Gasoline Range Organic	SW846 8015B/C	Solid/Haz. Waste	Organics Analysis
Organochlorine Pesticides	SW846 8081A/B	Solid/Haz. Waste	Organics Analysis
PCBs	SW846 8082/A	Solid/Haz. Waste	Organics Analysis
Petroleum Hydrocarbons	NJ-OQA-QAM-25	Solid/Haz. Waste	Organics Analysis
Volatile Organics	SW846 8260B/C	Solid/Haz. Waste	Organics Analysis
Volatile Organics	EPA TO- 3	Clean Air Act	Organics Analysis
Volatile Organics	EPA TO-15	Clean Air Act	Organics Analysis

Method Capabilities—Non-NELAP Methods

Analytes	Method Number	Program	Chemistry Field
Phenols	EPA 420.4	Drinking Water	Inorganic Analysis
Carbon Dioxide	SM 4500-CO_2 C or D	Wastewater	Inorganic Analysis
Iodide	SM 4500-I B	Wastewater	Inorganic Analysis
Nonionic Surfactants as CTAS	SM 5540 D	Wastewater	Inorganic Analysis
Particulate Matter	EPA 160.2M	Wastewater	Inorganic Analysis
Petroleum Hydrocarbons	EPA 418.1	Wastewater	Inorganic Analysis
Phosphorus, Hydrolyzable	EPA 365.3	Wastewater	Inorganic Analysis
Redox Potential vs H^+	ASTM D1498-76	Wastewater	Inorganic Analysis
Specific Gravity	ASTM D1298-85	Wastewater	Inorganic Analysis
Total Organic Content	ASTM D2974-87	Wastewater	Inorganic Analysis
Unburned Combustibles	EPA 160.1+160.4	Wastewater	Inorganic Analysis
Viscosity	ASTM D445/6	Wastewater	Inorganic Analysis
Volatile Suspended Solids	EPA 160.2+160.4	Wastewater	Inorganic Analysis
Weak Acid Dissociable Cyanide Prep	SM 4500-CN I	Wastewater	Inorganic Analysis
Ammonia	EPA 350.1M	Solid/Haz. Waste	Inorganic Analysis
Ammonia	EPA 350.2M	Solid/Haz. Waste	Inorganic Analysis
Base Sediment	ASTM D473-81	Solid/Haz. Waste	Inorganic Analysis
Bulk Density (Dry Basis)	ASTM D2937-94M	Solid/Haz. Waste	Inorganic Analysis
Chemical Oxygen Demand	HACH 8000M	Solid/Haz. Waste	Inorganic Analysis
Chloride	EPA 325.3M	Solid/Haz. Waste	Inorganic Analysis
Combustion, Bomb Oxidation	SW846 5050	Solid/Haz. Waste	Inorganic Analysis
Grain Size & Sieve Testing	ASTM D422-63	Solid/Haz. Waste	Inorganic Analysis
Heat Content, BTU	ASTM D3286-85	Solid/Haz. Waste	Inorganic Analysis
Ignitability (Flashpoint)	ASTM D93-90/SW846 Ch 7	Solid/Haz. Waste	Inorganic Analysis
Multiple Extractions	SW846 1320	Solid/Haz. Waste	Inorganic Analysis
Neutral Leaching Procedure	ASTM D3987-85	Solid/Haz. Waste	Inorganic Analysis
Nitrate/Nitrite	EPA 353.2M	Solid/Haz. Waste	Inorganic Analysis
Organic Matter (Ignition Loss)	AASHTO T267-86M	Solid/Haz. Waste	Inorganic Analysis
Orthophosphate	EPA 365.2M	Solid/Haz. Waste	Inorganic Analysis
Percent Ash (Dry Basis)	ASTM D482-91	Solid/Haz. Waste	Inorganic Analysis
Percent Solids	ASTM D4643-00	Solid/Haz. Waste	Inorganic Analysis
Percent Sulfur	ASTM D129-61	Solid/Haz. Waste	Inorganic Analysis
Phosphorus, Total	EPA 365.3M	Solid/Haz. Waste	Inorganic Analysis
Phosphorus, Hydrolyzable	EPA 365.3M	Solid/Haz. Waste	Inorganic Analysis

Method Capabilities—Non-NELAP Methods

Analytes	Method Number	Program	Chemistry Field
Pour Point	ASTM D97-87	Solid/Haz. Waste	Inorganic Analysis
Reactive Cyanide	SW846 7.3.3.2	Solid/Haz. Waste	Inorganic Analysis
Reactive Sulfide	SW846 7.3.4.2	Solid/Haz. Waste	Inorganic Analysis
Redox Potential vs H^+	ASTM D1498-76M	Solid/Haz. Waste	Inorganic Analysis
Specific Gravity of Solids	ASTM D1429-86M	Solid/Haz. Waste	Inorganic Analysis
Sulfide (S)	EPA 376.1 M	Solid/Haz. Waste	Inorganic Analysis
Sulfite (SO_3)	EPA 377.1M	Solid/Haz. Waste	Inorganic Analysis
Total Chlorine	ASTM D808-91	Solid/Haz. Waste	Inorganic Analysis
Total Kjeldahl Nitrogen	EPA 351.2M	Solid/Haz. Waste	Inorganic Analysis
Total Organic Carbon	CORP ENG 81	Solid/Haz. Waste	Inorganic Analysis
Total Organic Carbon	LLOYD KAHN 1988	Solid/Haz. Waste	Inorganic Analysis
Total Organic Chlorine	ASTM D808-91M	Solid/Haz. Waste	Inorganic Analysis
Total Plate Count	SM 9215BM	Solid/Haz. Waste	Inorganic Analysis
Total Volatile Solids	EPA 160.4M	Solid/Haz. Waste	Inorganic Analysis
Water Content	ASTM D95-83	Solid/Haz. Waste	Inorganic Analysis
Diesel Range Organic	TCEQ 1005	Solid/Haz. Waste	Organics Analysis
Extractable Petroleum HCs	Massachusetts EPH	Solid/Haz. Waste	Organics Analysis
Extractable Petroleum HCs	Missouri DRO	Solid/Haz. Waste	Organics Analysis
Total Petroleum Hydrocarbons	FLDEP FL-PRO	Solid/Haz. Waste	Organics Analysis
Total Petroleum Hydrocarbons	Connecticut ETPH	Solid/Haz. Waste	Organics Analysis
Volatile Petroleum HCs	Massachusetts VPH	Solid/Haz. Waste	Organics Analysis
Volatile Petroleum HCs	Missouri GRO	Solid/Haz. Waste	Organics Analysis

Appendix IV

Laboratory Equipment

Equipment	Manufacture & Description	Serial Number	Operating System Software	Data Processing Software	Location	Purchase
GC-AA	GC Agilent 7890A/FID/Entech AutoAir7000	CN10361127	HP Chemstation	HP Enviroquant	Air Laboratory	N/A
GC-II	GC HP5890/ FID	320A40375	HP Chemstation	HP Enviroquant	Air Laboratory	N/A
GCMS- 5W	Agilent Technologies 5975C / 7890A / Entech7200pre-concentrator pre-concentrator	US13207902/CN13141001/1123	HP Chemstation	HP Chemstation	Air Laboratory	2013
GCMS-2W	Agilent Technologies 5975C / 7890A Entech 7016CA	CN10361158 / US10323601 / CN10361158	HP Chemstation	HP Enviroquant	Air Laboratory	2012
GCMS-3W	Agilent Technologies 5973 / 6890N Entech 7016A	CN10425086 / US41746669 / 1351	HP Chemstation	HP Enviroquant	Air Laboratory	2007
GCMS-Q	Hewlett-Packard 5890ll / 5971 MSD / Entech Air Samp 7000	3033A31092 / 3188A02934	HP Chemstation	HP Enviroquant	Air Laboratory	1993
GCMS-W	Agilent Technologies 5973 / 6890N AS Entech 7016CA	US44621451 / CN10517032 / 1119	HP Chemstation	HP Enviroquant	Air Laboratory	2005
GC-QT	Agilent 6890 / PID / FID / Entech 7032AB-L autosampler	US10148124/1176	HP Chemstation	HP Enviroquant	Air Laboratory	2010
GC-WW	Hewlett-Packard6890 / PID	US00010037	HP Chemstation	HP Enviroquant	Air Laboratory	2010
OVEN – 10A	Entech 3100A Canister cleaner	0404-4596	None	None	Air Laboratory	N/A
OVEN – 10C	Entech 3100A Canister cleaner	0404-4597	None	None	Air Laboratory	N/A
OVEN – 10E	Entech 3100A Canister cleaner	N/A	None	None	Air Laboratory	N/A
OVEN -10F	Entech 3100A Canister cleaner	N/A	None	None	Air Laboratory	N/A
Test Gauge	Ashcroft (TG-1)	None	None	None	Air Laboratory	N/A
Test Gauge	Ashcroft (TG-2)	None	None	None	Air Laboratory	N/A
Test Gauge	Ashcroft (TG-3)	None	None	None	Air Laboratory	N/A
Test Gauge	Ashcroft (TG-4)	None	None	None	Air Laboratory	N/A
DO Meter	YSI-51B	92A035818	None	None	Field Serv.	1998
DO Meter	YSI-55/12ft	00C0598BG	None	None	Field Serv.	2000

PH Meter-10	YSI	JC02538	None	None	Field Serv.	2007
PH Meter-11	YSI	JC02540	None	None	Field Serv.	2010
PH Meter-9	Orion 250A	O18019	None	None	Field Serv.	2007
SCON Meter	YSI-30	J0183	None	None	Field Serv.	2004
Balance- Top Load	Ohaus Adventure AV212 (B-36)	8029131104	None	None	IC Lab	2008
ASE	Dionex ASE 200	99030375	None	None	Inorganics	1999
Balance-Analytical	Ohaus Adventurer (B-24)	1225032523P	None	None	Inorganics	2004
Balance-Analytical	Mettler AE 160 (B-5)	C11620	None	None	Inorganics	1999
Balance- Top Load	Ohaus Adv. Pro (B43)	8032501223	None	None	Inorganics	2012
Balance- Top Load	Denver Inst. Co. XL500 (B-14)	B045530	None	None	Inorganics	Pre-2000
Balance- Top Load	Ohaus Adv. Pro (B52)	B334691952	None	None	Inorganics	2013
Balance- Top Load	Ohaus Explorer (B-16)	E1581119212171	None	None	Inorganics	2001
Balance- Top Load	Ohaus Adventurer (B-21)	E1021218270448	None	None	Inorganics	2001
Balance- Top Load	Ohaus Adventurer AV412 (B-27)	8026251106	None	None	Inorganics	2005
Balance- Top Load	Sartorius TE31025 (B-32)	21950273	None	None	Inorganics	2007
Balance- Top Load	Ohaus Adventure AV212 (B-35)	8029171184	None	None	Inorganics	2008
Balance- Top Load	Ohaus Adventurer-Pro (B-38)	8030441010	None	None	Inorganics	2009
Balance- Top Load	Denver P-214 (B-39)	25450279	None	None	Inorganics	2010
Balance- Top Load	A+D HR-250A (B53)	687601248	None	None	Inorganics	2012
Balance- Top Load	Ohaus Adv. Pro (B37)	8029161122	None	None	Inorganics	2013

Calorimeter	PARR 1261EA	1499	None	None	Inorganics	1996
COD Block	HACH DRB200	11020C0029	None	None	Inorganics	2010
Distillation Block 1	Lachat Micro Distillation system	A2000738	None	None	Inorganics	2010
Distillation Block 12	Lachat Micro Distillation system	A2000726	None	None	Inorganics	2010
Distillation Block 3	Lachat Micro Distillation system	A2000807	None	None	Inorganics	2010
DO Meter	YSI 5000	07B1560	None	None	Inorganics	2008
FIA Analyzer	Lachat Quikchem 8000	13200001620	None	None	Inorganics	
Flashpoint	Koehler – K16200	R07002295	None	None	Inorganics	2010
Flashpoint	Koehler – K16200	R07002563B	None	None	Inorganics	2010
Hg Analyzer	HYDRAA II	64013	Envoy	Envoy	Inorganics	2011
Hg Analyzer	Leeman Mercury Analyzer HYDRAAF Gold+	9003	WIN Hg Runner	WIN Hg Runner	Inorganics	2010
Hg Analyzer 7	Hydra II	64631	Envoy	Envoy	Inorganics	2013v
IC-2	Dionex ICS2000	2090737	Dionex Chrom. Client	Dionex Chrom. Client	Inorganics	2004
IC-3	Dionex ICS2000	2110028	Dionex Chrom. Client	Dionex Chrom. Client	Inorganics	2004
IC-4	Dionex ICS2000	4060060	Dionex Chrom. Client	Dionex Chrom. Client	Inorganics	2004
IC-6	Dionex ICS3000	6040160	Dionex Chrom. Client	Dionex Chrom. Client	Inorganics	2006
IC-9	Dionex IC5000+	13120208	Dionex Chrom. Client	Dionex Chrom. Client	Inorganics	2013
IR Spec.	Buck Scientific HC-404	687	None	None	Inorganics	1997
Oven (Inc-21)	Fisher	N/A	None	None	Inorganics	2014
Oven (Inc-7)	Precision	699030922	None	None	Inorganics	2014
Oven Inc 19	Total Dissolved Solids(180°C)	20-2100149111	None	None	Inorganics	2014
PH Meter-46	Thermo Orion 4 Star	B10299	None	None	Inorganics	2008

PH Meter-47	Thermo Orion 4 Star	B04869	None	None	Inorganics	2008
PH Meter-50	Orion Star Series	B27564	None	None	Inorganics	2010
PH Meter-51	Mettler	14011	None	None	Inorganics	2013
pH Meter-53	VWR Symphony B10P	1223350009	None	None	Inorganics	2013
PH Meter-54	Thermo Orion 710A	X08035	None	None	Inorganics	2013
PH Meter-55	Thermo-Orion	X10686	None	None	Inorganics	2014
pH Meter-57	VWR Symphony B10P	1411150002	None	None	Inorganics	2014
pH Meter-59	VWR Symphony B10P	14087S0006	None	None	Inorganics	2014
PH Meter-60	VWR Symphony B10P	1413950006	None	None	Inorganics	2014
PH-EH Meter-22	Thermo Orion 4 Star	SN00742	None	None	Inorganics	2008
SCON Meter	Amber Science 1056	01020851056-101	None	None	Inorganics	2001
SCON Meter	Orion 145+	78035	None	None	Inorganics	2004
Solvent Evaporator	Horizon SPE-DEX 3000XL	09-1031	None	None	Inorganics	2010
Solvent Evaporator	Horizon SPEED VAP III	09-0739	None	None	Inorganics	2010
TCLP Rotator 4	Assoc. Design and Mfg. Co. 3740-24-BRE-TM	N/A	None	None	Inorganics	2000
TCLP Rotator 5	Analytical Testing Corp. 42R5BCI-E3	0685KZJP0013	None	None	Inorganics	2002
TCLP Rotator 7&8	Assoc. Design and Mfg. Co. 3740-48BRE	N/A	None	None	Inorganics	2000
TCLP Rotator 9&10	Assoc. Design and Mfg. Co. 3740-48BRE	2132337	None	None	Inorganics	1996
TOC-L Analyzer	Shimadzu TOC-L	H52516900071	Shimadzu TOC Control	Shamadzu TOC Control	Inorganics	2012
TOC-L Analyzer	Shimadzu TOC-L	H52515000114NK	Shimadzu TOC Control	Shamadzu TOC Control	Inorganics	2013
TOC-V Analyzer	Shimadzu TOC-V CSH	H52504400192NK	Shimadzu TOC Control	Shimadzu TOC Control	Inorganics	2007
TOX Analyzer	Mitsubishi TOX-100	N/A	None	None	Inorganics	1996

TOX Analyzer	Mitsubishi TOX-100	A7M 42997	None	None	Inorganics	2008
UVVIS Spec E	Spectronix 20 Genesys	3SGD.352011	None	None	Inorganics	2007
UVVIS Spec J	Thermo Electron Corp. Genesys 20	3SGQ235018	None	None	Inorganics	20012
UVVIS Spec L	Thermo Electron Corp. Genesys 20	3SGS073003	None	None	Inorganics	2014
UVVIS Spec M	Spectronix 20 Genesys	3SG82480005	None	None	Inorganics	2013
UVVIS Spec N	Spectronix 20 Genesys	3SGS247010	None	None	Inorganics	2013
IC-8	Dionex IC5000	11030895	Dionex Chrom. Client	Dionex Chrom Client	Inorganics	
PH Meter-23	Thermo Orion Model 310	SN013786	None	None	Inorganics	2008
Hot Block 8	Environmental Express	N/A	None	None	Mercury Prep	
Hot Block 7	Environmental Express	N/A	None	None	Mercury Prep	
ICP	Thermo ICP 6500 Duo	ICP-20074909	ITEVA	ITEVA	Metals	2007
ICP	Thermo ICP 6500 Duo	ICP-20114506	ITEVA	ITEVA	Metals	2011
ICP	Thermo ICP 6500 Duo	ICP-20072601	ITEVA	ITEVA	Metals Analysis	2007
ICP	Thermo ICP 6500 Duo	IC5D20122506	ITEVA	ITEVA	Metals Analysis	2012
ICP	Thermo ICP 6500 Duo	IC76DC134708	ITEVA/QTEGRA	ITEVA/QTEGRA	Metals Analysis	2014
ICP-MS	Agilent 7700 Series	JP12412081	MassHunter Workstation	MassHunter Workstation	Metals Analysis	2014
ICP-MS	Agilent 7700 Series	JP10340551	MassHunter Workstation	MassHunter Workstation	Metals Analysis	2010
Balance- Top Load	Ohaus Adventurer AR3130 (B-26)	1240-P	None	None	Metals Prep	2004
Hot Block 1	Environmental Express	N/A	None	None	Metals Prep	
Hot Block 2	Environmental Express	N/A	None	None	Metals Prep	
Hot Block 3	Environmental Express	N/A	None	None	Metals Prep	
Hot Block 4	Environmental Express	N/A	None	None	Metals Prep	
Hot Block 5	Environmental Express	N/A	None	None	Metals Prep	
Hot Block 6	Environmental Express	N/A	None	None	Metals Prep	

Balance- Top Load	Ohaus Scout II (B-20)	BJ320905	None	None	Methanol Prep	2002
Balance- Top Load	Ohaus Scout II (B-25)	BJ514770	None	None	Methanol Prep	2004
Autoclave	Tuttnauer	1308435	None	None	Microbiology	2011
Incubator (BOD)	VWR	702499	None	None	Microbiology	2011
Incubator (Plates)	Theclo Precision	11T3	None	None	Microbiology	N/A
Incubator(BOD)	ISOTEMP	317646	None	None	Microbiology	2010
Incubator-Water Bath	INC-2	1200991	None	None	Microbiology	N/A
Refrigerator	R-44	0503MCBR980W0087	None	None	Microbiology	N/A
Incubator (Plates)	Thelco Precision	4-D-5	None	None	Microbiology	N/A
Balance- Top Load	Ohaus Adventurer Pro (B-46)	B304755401	None	None	Organic Prep	Pre-2000
Balance- Top Load	Ohaus Adventurer Pro (B-45)	B033051054	None	None	Organic Prep	2002
Balance- Top Load	Ohaus Adventurer Pro (B-42)	B031331113	None	None	Organic Prep	2007
Balance- Top Load	Ohaus Adventurer Pro (B-47)	4755411	None	None	Organic Prep	2013
Buchi -1	Buchi Concentrator System	1000175446	None	None	Organic Prep	2014
Buchi -2	Buchi Concentrator System	1000175108	None	None	Organic Prep	2014
Buchi-3	Buchi Concentrator System	1000175657	None	None	Organic Prep	2014
Buchi-4	Buchi Concentrator System	Not in service	None	None	Organic Prep	N/A
Centrifuge	Thermo Scientific	41394883	None	None	Organic Prep	2014
GPC4	Waters 717	717-000152	None	None	Organic Prep	1992
Microwave-3	MARS 6 CEM	MJ2659 (warranty expires June 2014)	None	None	Organic Prep	2013
Microwave-4	MARS 6 CEM	MJ2198	None	None	Organic Prep	2013
Microwave-5	MARS 6 CEM	MJ2197	None	None	Organic Prep	2013
Mini Water Bath	Thermo Scientific	234221-1379	None	None	Organic prep	2014
N-EVAP 1	Organomation	59301	None	None	Organic Prep	2014
N-EVAP 2	Organomation	58202	None	None	Organic Prep	2014

Sonicator	Fisher	F550	None	None	Organic Prep	N/A
Sonicator	Bransen	BIO3037527	None	None	Organic Prep	N/A
Sonicator	Misonix	S3000	None	None	Organic Prep	1997
Water Bath 1	Organomation	13385	None	None	Organic Prep	2010
Water Bath 10	Organomation	58394	None	None	Organic prep	2014
Water Bath 11	Organomation	58384	None	None	Organic prep	2014
Water Bath 2	Thermo Scientific	176676-1289	None	None	Organic Prep	2014
Water Bath 3	Organomation	58471	None	None	Organic Prep	2010
Water Bath 4	Organomation	58421	None	None	Organic Prep	2014
Water Bath 5	Organomation	58422	None	None	Organic Prep	2014
Water Bath 8	Organomation	58424	None	None	Organic Prep	2014
Water Bath 9	Organomation	58425	None	None	Organic prep	2013
Water Bath 6	Organomation	58423	None	None	Organic Prep	2014
Water Bath 7	Organomation	58379	None	None	Organic Prep	2014
GC-SN	Hewlett Packard 5890 GC/5970 MSD/OI 4551/4560	2623A08318/2637A01687/D538475262/1542 461919	HP Chemstation	Hp Enviroquant	Organics,	Re-Built 2012
GC-SC	Hewlett-Packard 5890 / FID / OI4551 / 4560	2443AO3797	HP Chemstation	HP Enviroquant	Organics; Screening	1990
GC-SR	Hewlett-Packard 5890 / FID / Tekmar 7000	2612A07448	HP Chemstation	HP Enviroquant	Organics; Screening	1992
GC-ST	Hewlett-Packard 5890 / FID / NPD / HP 7673 AS / Tek	314OA38871	HP Chemstation	HP Enviroquant	Organics; Screening	1996
GC-SV	Hewlett-Packard 5890 / FID / OI4551 / 4560	LR47-359C / N244460743 / 3336A58859	HP Chemstation	HP Enviroquant	Organics; Screening	1996
GC 7y/7z	Agilent Technologies 6890N / 7683	US00043006 / US12211759 / CN52926441 / CN60931595	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GC-5G	Agilent Technologies 7890N/7693	CN12131022 / CN12060027 / CN12070097 / U20782/U20781	HP Chemstation	HP Enviroquant	Organics; SVOCs	2008
GC-5y-5z	Agilent Technologies 7890N / 7683	CN11461115 / CN11380009 / CN11390012 / CN73342671	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GC-6G	Agilent Technologies 6890N 7683	CN10611064 / CN44330971 / CN40334835 / U4788 / U18013	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GC-6y-6z	Agilent Technologies 7890N / 7683	CN11461118 / CN10310044 / CN83252932 / CN73342695	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010

GC-7G	Agilent Technologies 6890N 7683	US10606009 / CN53236207 / CN40434847 / U23574/ U24374	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GC-8y/8z	Agilent Technologies 6890N / 7683	US10240121 / GT030513A / CN43038210 / CN40334821	HP Chemstation	HP Enviroquant	Organics; SVOCs	2011
GCMS-4P	Agilent Technologies 5973 / 6890N AS 7683 AS	CN10251017 / US102440773 / CN34727122 / CN61031719	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GCMS-5P	Agilent Technologies 5973 / 6890N AS 7683 AS	CN10222060 / US21844818 / CN52834726 / CN21725012	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GC-XX	Hewlett-Packard 6890 / Dual ECD / HP 7683 AS	US00022968 / CN32023953 / CN32030876 / U0109 / U0905	HP Chemstation	HP Enviroquant	Organics; SVOCs	1998
GC-UV	Hewlett-Packard 5890 / Dual FID / OI 4551 / 4560	2921A23322	HP Chemstation	HP Enviroquant	Organics; Volatiles	1996
GC-2Y/2Z	Agilent Technologies 6890N 7683	CN10407032 / CN61633946 / US94209706 / US01112207	HP Chemstation	HP Enviroquant	Organics; SVOCs	2004
GC-OA	Agilent Technologies 6890N / 7683	US10240147 / CN23021337 / CN320308791 / U5591 / U7670	HP Chemstation	HP Enviroquant	Organics; SVOCs	2002
GC-YZ/ZZ	Hewlett-Packard 6890 / 6890	US00011065 / 3527A39121 / 3521A42714 / 3511A42110	HP Chemstation	HP Enviroquant	Organics; SVOCs	2008
GC-EF	Hewlett-Packard 5890 / Dual ECD / HP 7673 AS	2541A06786 / 2942A20889 /F1916 / F5562	HP Chemstation	HP Enviroquant	Organics; Volatiles	1992
GC-LM	Hewlett-Packard 6890 / PID / FID / OI 4551 / 4560 P&T	US00008927	HP Chemstation	HP Enviroquant	Organics; Volatiles	1998
GCMS-L	Hewlett-Packard 5890 / 5970 MSD / OI 4551 / 4560 P&T	2921A22898 / 2623A01291	HP Chemstation	HP Enviroquant	Organics; Volatiles	1992
GC-SY	Hewlett-Packard 5890 / FID / OI4551A / 4560	2643A10503	HP Chemstation	HP Enviroquant	Organics; Screening	1990
GC-1G	Agilent Technologies 6890N / 7683	US10322012 / CN23821917 / CN23326744 / U21778 / U5597	HP Chemstation	HP Enviroquant	Organics; SVOCs	2003
GC-2G	Agilent Technologies 6890N / 7683	CN10450110 / CN24922557 / CN45022276 / U17684 / U7668	HP Chemstation	HP Enviroquant	Organics; SVOCs	2005
GC-3G	Agilent Technologies 6890N / 7683	CN10450109 / CN24922566 / CN45022167 / U7666 / U7667	HP Chemstation	HP Enviroquant	Organics; SVOCs	2005
GC-3Y/3Z	Agilent Technologies 7890A / 7683B	CN10735014 / CN74345941 / CN83252932 / CN73342695	HP Chemstation	HP Enviroquant	Organics; SVOCs	2007
GC-4G	Agilent Technologies 6890N / 7693	CN10361136 / CN10340093 / CN10310033 / U17615 / U17614	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GC-4Y/4Z	Agilent Technologies 7890A / 7693B	CN10832133 / CN84451068 / CN83252936 / CN73342671	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GCMS-2M	Agilent Technologies 5975 / 6890N AS 7683	CN10612028 / US60532578 / CN4593809290 / US82601187	HP Chemstation	HP Enviroquant	Organics; SVOCs	2012

GCMS-2P	Agilent Technologies 5975C / 7890A / 7693	US10237403 / CN10241022 / CN10210021 / CN10180007	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GCMS-3E	Agilent Technologies 5975 / 6890N / 7683	CN10614011 / US61332852 / CN23326747 / US93901916	HP Chemstation	HP Enviroquant	Organics; SVOCs	2011
GCMS-3M	Agilent Technologies 5975B / 6890N / Agilent 7683B	US65125107 / CN10703029 / CN73943902 / US83801832	HP Chemstation	HP Enviroquant	Organics; SVOCs	2007
GCMS-3P	Agilent Technologies 5975C / 7890A / 7693	CN10361100 / CN10361163 /	HP Chemstation	HP Enviroquant	Organics; SVOCs	2010
GCMS-4M	Agilent Technologies 5975C / 7890A / 7683B	US73317574 / CN1074251 / CN74043923 / CN74145736	HP Chemstation	HP Enviroquant	Organics; SVOCs	2007
GCMS-4P	Agilent Technologies 5973 / 6890N AS 7683 AS	CN10251017 / US102440773 / CN34727122 / CN61031719	HP Chemstation	HP Enviroquant	Organics; SVOCs	2011
GCMS-6P	Agilent Technologies 5973 / 6890N AS 7683 AS	CN10536029 / US52420712 / US10310521 / CN55230259	HP Chemstation	HP Enviroquant	Organics; SVOCs	2011
GCMS-F	Agilent 6890 / 5973 MSD / 7683 AS	US00034179 / US01140200 / CN40327643 / CN138822139	HP Chemstation	HP Enviroquant	Organics; SVOCs	1998
GCMS-H	Hewlett-Packard 5890ll+ / 5972 MSD / HP 7673 AS	3336A58190 / 3501A02356 / 3123A25133	HP Chemstation	HP Enviroquant	Organics; SVOCs	1995
GCMS-M	Hewlett-Packard 6890 / 5973 MSD / HP 7683 AS	US00021813 / US802111003 / US81501001 / CN61038860	HP Chemstation	HP Enviroquant	Organics; SVOCs	1999
GCMS-P	Agilent Technologies 5973 / 6890N AS 7683 AS	US10251064 / US21844598 / CN74145733 / CN24828486	HP Chemstation	HP Enviroquant	Organics; SVOCs	2003
GCMS-R	Agilent Technologies 6890 / 5973 MSD / 7683	US00021820 / US81211033 / US84202752 / CN61639349	HP Chemstation	HP Enviroquant	Organics; SVOCs	2008
GCMS-Z	Agilent Technologies 5973 / 6890N AS 7683 AS	US10251028 / US21844586 / CN24828485 / CN23321564	HP Chemstation	HP Enviroquant	Organics; SVOCs	2003
Balance- Top Load	Ohaus Sport (B-28)	7124230518	None	None	Organics; Volatiles	2005
Balance- Top Load	Ohaus Adventure AV412 (B-34)	8028391117	None	None	Organics; Volatiles	2007
GC-AA	Agilent 7890A / AS 7683B	CN10832133 / US08232002	HP Chemstation	HP Enviroquant	Organics; Volatiles	2008
GC-GH	Hewlett-Packard 5890	2938A25059	HP Chemstation	HP Enviroquant	Organics; Volatiles	1990
GCMS-1A	Agilent Technologies 5973 / 6890N AS 4551A / 4660	CN10314026 / US30945331	HP Chemstation	HP Enviroquant	Organics; Volatiles	2003
GCMS-1B	Agilent Technologies 7890A / 5975C /Teledyne / Tekmar AquaTek AS	CN10845177 / US83111119	HP Chemstation	HP Enviroquant	Organics; Volatiles	2008
GCMS-1C	Agilent Technologies 5973 /	CN10425085 / US41746667	HP Chemstation	HP Enviroquant	Organics;	2004

	6890N AS 4551 / 4560				Volatiles	
GCMS-2A	Agilent Technologies 5973 / 6890N AS Tekmar Solatek 72	CN10314028 / US30945325	HP Chemstation	HP Enviroquant	Organics; Volatiles	2003
GCMS-2B	Agilent Technologies 5973 / 6890N AS 4551A / 4660	CN10441033 / US 43146954	HP Chemstation	HP Enviroquant	Organics; Volatiles	2004
GCMS-2C	Agilent Technologies 5973 / 6890N AS 4551A / 4560	CN10441035 / US 43146953	HP Chemstation	HP Enviroquant	Organics; Volatiles	2004
GCMS-2D	Agilent Technologies 5973 / 6890N AS 4552 / 4560	CN10432038 / US43146771	HP Chemstation	HP Enviroquant	Organics; Volatiles	2004
GCMS-2E	Agilent Technologies 5975 / 6890N AS 4551A / 4660	CN10612046 / US60532596	HP Chemstation	HP Enviroquant	Organics; Volatiles	2006
GCMS-3A	Agilent Technologies 5973 / 6890N AS 4551A / 4660	CN10432042 / US43146776	HP Chemstation	HP Enviroquant	Organics; Volatiles	2004
GCMS-3B	Agilent Technologies 6890 / 5973 / OI 4551A / 4660	US10240044 / US21844015	HP Chemstation	HP Enviroquant	Organics; Volatiles	2002
GCMS-3C	Agilent Technologies 5973 / 6890N AS 45551A / 4660	CN10517038 / US44621480	HP Chemstation	HP Enviroquant	Organics; Volatiles	2005
GCMS-3D	Agilent Technologies 5975B / 6890N AS 4551A / 4660	CN10637120 / US62724193	HP Chemstation	HP Enviroquant	Organics; Volatiles	2006
GCMS-3V	Agilent Technologies 5975C/7890A/OI 4552/ 4560	US1321790 / CN13141045	HP Chemstation	HP Enviroquant	Organics; Volatiles	2013
GCMS-4B	Agilent Technologies 5975C / 7890A	US10323601 / CN10361158	HP Chemstation	HP Enviroquant	Organics; Volatiles	2010
GCMS-4D	Agilent Technologies 5975C / 7890A	US10237301 / CN10241019	HP Chemstation	HP Enviroquant	Organics; Volatiles	2010
GCMS-4V	Agilent Technologies 5975C/7890A/OI 4100/ 4660	Us13307901 / CN13331029	HP Chemstation	HP Enviroquant	Organics; Volatiles	2013
GCMS-A	Hewlett-Packard 6890 / 5973 MSD / OI 4552 / 4560 ARCHON	US00033272 / US94212183	HP Chemstation	HP Enviroquant	Organics; Volatiles	2000
GCMS-C	Hewlett-Packard 6890 / 5973 MSD / OI 4552 / 4560 ARCHON	2643A122671 / 2807A1146	HP Chemstation	HP Enviroquant	Organics; Volatiles	1990
GCMS-D	Hewlett-Packard 6890 / 5973 MSD / OI 4551 / 4560 ARCHON	US00030551 / US93122843	HP Chemstation	HP Enviroquant	Organics; Volatiles	2001
GCMS-E	Hewlett-Packard 6890 / 5973 MSD / OI 4551 / 4560 ARCHON	US00031161 / US93112044	HP Chemstation	HP Enviroquant	Organics; Volatiles	2001

GCMS-G	Hewlett-Packard 5890ll / 5970 MSD / OI 4552 / 4660	2919A22540 / 2807A11004	HP Chemstation	HP Enviroquant	Organics; Volatiles	1989
GCMS-I	Hewlett-Packard 5890 / 5970 MSD / OI 4551 / 4560	2623A08318 / 2637A01687	HP Chemstation	HP Enviroquant	Organics; Volatiles	1986
GCMS-J	Hewlett-Packard 5890 / 5970 MSD / OI 4552 / 4560 P&T	2643A11557 / 3034A12779	HP Chemstation	HP Enviroquant	Organics; Volatiles	1990
GCMS-K	Hewlett-Packard 5890l1 / 5970 MSD / OI 4551 / 4560 P&T	2750A116838 / 2905A11628	HP Chemstation	HP Enviroquant	Organics; Volatiles	1990
GCMS-N	Hewlett-Packard 5890 / 5970 MSD / Tekmar 2000 / 2032 P&T	2750A17088 / 2716A10218	HP Chemstation	HP Enviroquant	Organics; Volatiles	1988
GCMS-S	Hewlett-Packard 6890 / 5973 MSD /OI 4552 / 4660 ARCHON	US00024322 / US82311313	HP Chemstation	HP Enviroquant	Organics; Volatiles	2000
GCMS-T	Hewlett-Packard 6890 / 5973 MSD / OI 4551A / 4660 P&T	US00024323 / US82311482	HP Chemstation	HP Enviroquant	Organics; Volatiles	2000
GCMS-U	Hewlett-Packard 6890 / 5973 MSD / HP 4551A / 4660	US00032623 / US94212203	HP Chemstation	HP Enviroquant	Organics; Volatiles	1999
GCMS-V	Agilent Technologies 5973 / 6890N AS 4552 / 4560	US10149085 / US10441917	HP Chemstation	HP Enviroquant	Organics; Volatiles	2002
GCMS-X	Agilent Technologies 5973 / 6890N AS 4552 / 4660	US21843889 / US10239071	HP Chemstation	HP Enviroquant	Organics; Volatiles	2002
GCMS-Y	Agilent Technologies 5973 / 6890N AS 4552 / 4560	US10240013 / US21844012	HP Chemstation	HP Enviroquant	Organics; Volatiles	2002
GC-PF	Agilent Technologies 6890N AS 4552 / 4560	US10235024 / 12995 / J542460192	HP Chemstation	HP Enviroquant	Organics; Volatiles	2002
PH Meter-13	VWR IS B20	5942	None	None	Sample Management	2010
Balance- Top Load	Ohaus Adventure AV412 (B-33)	8028391184	None	None	Sample Management	2007
Balance- Top Load	Ohaus Adventurer AV412 (B-30)	8026391160	None	None	Screen	2005

Appendix 2: Non-Conformance Summary

QC Lab – Former Hess Port Reading

Non-Conformance Summary

All non-conformances were reviewed as part of data evaluation. Based on the review, the data is deemed valid and reliable. Only select samples were utilized to verify the effectiveness of the remediation in the following jobs: JC23214, JC23248, JC31295, and JC32432. The following summarizes all non-conformances for all soil and groundwater sampling events, including the above specified jobs.

Soil Sampling Date: 06/28/16, Job Number: JC23137

Volatiles by GCMS By Method SW846 8260C

- Matrix Spike Recovery(s) for 1,4-Dichlorobenzene, Isopropylbenzene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Chlorobenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- RPD(s) for MSD for Chlorobenzene are outside control limits for sample JC23100-1MSD. Outside control limits due to matrix interference.

Extractables by GCMS By Method SW846 8270D

- Matrix Spike Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MSD for 1,4-Dioxane, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Diethyl phthalate, Hexachloroethane are outside control limits for sample OP95200-MSD. Analytical precision exceeds in-house control limits.

Extractables by GC By Method NJDEP EPH

- OP95187-BSD for C21-C40 Aliphatics: Analytical precision exceeds in-house control limits.

Metals By Method SW846 6010C

- Matrix Spike Recovery(s) for Aluminum, Antimony, Iron are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Aluminum, Antimony are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- RPD(s) for Serial Dilution for Selenium, Silver are outside control limits for sample MP94653-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Soil Sampling Date: 06/29/16, Job Number: JC23214

Wet Chemistry By Method SW846 3060A/7196A

- RPD(s) for Duplicate for Chromium, Hexavalent are outside control limits for sample GP98718-D1. RPD acceptable due to low duplicate and sample concentrations.

Volatiles by GCMS By Method SW846 8260C

- Matrix Spike Duplicate Recovery(s) for Methyl Tert Butyl Ether are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MSD for Benzene, Methyl Tert Butyl Ether, Xylene (total) are outside control limits for sample JC23533-1AMSD. Outside control limits due to matrix interference.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Ethylbenzene, m,p-Xylene, Xylene (total) are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- JC23214-17A for 1,2-Dichloroethane-D4: Outside control limits due to matrix interference.
- RPD(s) for MSD for 1,2,3-Trichlorobenzene are outside control limits for sample JC23100-6MSD. Outside control limits due to matrix interference.

Volatiles by GCMS By Method SW846 8260C

- Matrix Spike Recovery(s) for Methyl Acetate are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for Duplicate for Acetone, Methylene chloride are outside control limits for sample JC23214-10ADUP. High RPD due to possible sample analyzed from different vials.

Extractables by GCMS By Method SW846 8270D

- RPD(s) for MSD for Hexachlorocyclopentadiene are outside control limits for sample OP95296-MSD. Analytical precision exceeds in-house control limits.
- Matrix Spike Recovery(s) for Acenaphthene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Benzo(a)pyrene, Benzo(b)fluoranthene, Fluoranthene, Phenanthrene are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MSD for 1,4-Dioxane, bis(2-Chloroisopropyl)ether, Isophorone, N-Nitroso-di-n-propylamine, Nitrobenzene are outside control limits for sample OP95235-MSD. Analytical precision exceeds in-house control limits.

Extractables by GC By Method NJDEP EPH

- Matrix Spike / Matrix Spike Duplicate Recovery(s) for EPH (>C28-C40) are outside control limits. Outside control limits due to high level in sample relative to spike amount.

- Matrix Spike / Matrix Spike Duplicate Recovery(s) for EPH (C9-C28), Total EPH (C9-C40) are outside control limits. Outside control limits due to high level in sample relative to spike amount.

- Matrix Spike / Matrix Spike Duplicate Recovery(s) for C16-C21 Aliphatics, C16-C21 Aromatics, C21-C36 Aromatics are outside control limits. Outside control limits due to high level in sample relative to spike amount.

- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Total Aromatics, Total EPH are outside control limits. Outside the QC limits.

Metals By Method SW846 6010C

- Matrix Spike Recovery(s) for Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

- Matrix Spike Recovery(s) for Zinc, Antimony, Magnesium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

- Matrix Spike Duplicate Recovery(s) for Antimony, Magnesium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Aluminum, Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

- JC23214-1A for Thallium: Elevated detection limit due to dilution required for high interfering element.

Soil Sampling Date: 06/30/16, Job Number: JC23248

Wet Chemistry By Method SW846 3060A/7196A

- Matrix Spike Recovery(s) for Chromium, Hexavalent are outside control limits. Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (92_%) on this sample.

Volatiles by GCMS By Method SW846 8260C

- JC23248-1 for 1,2-Dichloroethane-D4: Outside control limits due to matrix interference.

- RPD(s) for Duplicate for Acetone, Methylene chloride are outside control limits for sample JC23214-10ADUP. High RPD due to possible sample analyzed from different vials.

Extractables by GCMS By Method SW846 8270D

- Blank Spike Recovery(s) for 4-Nitroaniline are outside control limits. High percent recoveries and no associated positive found in the QC batch.
- Matrix Spike Recovery(s) for 3,3'-Dichlorobenzidine are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for 3,3'-Dichlorobenzidine are outside control limits. Outside control limits due to matrix interference.
- JC23248-25: Elevated detection limit due to high final volume of viscous extract and dilution.
- JC23248-25 for 2-Fluorobiphenyl: Outside control limits due to dilution and matrix interference.
- JC23248-25 for Nitrobenzene-d5: Outside control limits due to dilution and matrix interference.
- JC23248-25 for Nitrobenzene-d5: Outside control limits due to dilution.
- JC23248-25 for 2-Fluorobiphenyl: Outside control limits due to dilution.
- JC23248-16 for 4-Nitroaniline: This compound in BS is outside in house QC limits bias high.
- JC23248-27 for 4-Nitroaniline: This compound in BS is outside in house QC limits bias high.
- JC23248-25 for Terphenyl-d14: Outside control limits due to dilution.
- Blank Spike Recovery(s) for 2-Nitroaniline are outside control limits. High percent recoveries and no associated positive found in the QC batch.
- Matrix Spike Recovery(s) for Acenaphthylene are outside control limits. Outside of in house control limits, but within reasonable method recovery limits.
- JC23248-26 for 2-Nitroaniline: This compound in BS is outside in house QC limits bias high.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline, 4-Nitroaniline, Atrazine, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Hexachlorocyclopentadiene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Chrysene, Fluoranthene, Phenanthrene, Pyrene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Extractables by GCMS By Method SW846 8270D BY SIM

- JC23248-25: Elevated detection limit due to high final volume of viscous extract and dilution.

Metals By Method SW846 6010C

- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

- Matrix Spike Recovery(s) for Silver, Calcium, Magnesium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

- Matrix Spike Duplicate Recovery(s) for Calcium, Magnesium, Antimony, Zinc are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Iron, Lead, Manganese, Aluminum, Barium, Chromium, Copper are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Metals By Method SW846 7471B

- Sample(s) JC23248-2AMS, JC23248-2AMSD were used as the QC samples for metals.

Wet Chemistry By Method SM4500H+ B-11

- JC23248-27 for pH: Sample received out of holding time for pH analysis.

Wet Chemistry By Method ASTM D3872-86

- The following samples were run outside of holding time for method ASTM D3872-86: JC23248-2R The ferrous iron test was analyzed after completion of Cr6 testing (outside of normal hold times for this parameter) in order to provide more information about the possible impact of the sample matrix on Cr6 recoveries.

Wet Chemistry By Method SM4500S2- A-11

- The following samples were run outside of holding time for method SM4500S2- A-11: JC23248-2R The sulfide screen test was analyzed after completion of Cr6 testing (outside of normal hold times for this parameter) in order to provide more information about the possible impact of the sample matrix on Cr6 recoveries.

Wet Chemistry By Method SW846 3060A/7196A

- Sample(s) JC23248-2RMS, JC23248-2RDUP were used as the QC samples for Chromium, Hexavalent.

Groundwater Sampling Date: 08/02/16, Job Number: JC25088

Volatiles by GCMS By Method SW846 8260C

- Blank Spike Recovery(s) for 1,1-Dichloroethene, Carbon disulfide are outside control limits. High percent recoveries and no associated positive reported in the QC batch.

- RPD(s) for Duplicate for Benzene, Isopropylbenzene, Tetrachloroethene, Trichloroethene are outside control limits. High RPD possibly due to sample analyzed from different vials.

- JC25088-5 for Carbon disulfide: This compound in BS is outside in house QC limits bias high.

- JC25088-5 for 1,1-Dichloroethene: This compound in BS is outside in house QC limits bias high.

- JC25088-1 for Carbon disulfide: This compound in BS is outside in house QC limits bias high.

- JC25088-1 for 1,1-Dichloroethene: This compound in BS is outside in house QC limits bias high.

- Sample(s) JC25088-2DUP, JC25088-3MS were used as the QC samples indicated.

- Matrix Spike Recovery(s) for Dichlorodifluoromethane, Freon 113 are outside control limits. Outside control limits due to matrix interference.

Extractables by GCMS By Method SW846 8270D

- Sample(s) JC25088-1MS, JC25088-1MSD were used as the QC samples indicated.

- Matrix Spike Recovery(s) for 2-Nitroaniline, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline, 4-Nitroaniline are outside control limits. Outside control limits due to matrix interference.

- Matrix Spike Duplicate Recovery(s) for 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline, 4-Nitroaniline, 2-Nitroaniline are outside control limits. Outside control limits due to matrix interference.

- RPD(s) for MS/MSD for 2-Nitroaniline are outside control limits. Analytical precision exceeds in-house control limits.

Extractables by GCMS By Method SW846 8270D BY SIM

- Sample(s) JC25088-2MS, JC25088-2MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846-8011

- Sample(s) JC25088-1MS, JC25088-2DUP were used as the QC samples indicated.

Metals By Method SW846 6010C

- RPD(s) for Serial Dilution for Antimony, Chromium, Copper, Lead, Nickel, Silver are outside control limits. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7470A

- Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference.

Soil Sampling Date: 11/07/16, Job Number: JC31295

Volatiles by GCMS By Method SW846 8260C

- RPD(s) for MSD for Bromomethane, Chloroethane, Trichlorofluoromethane are outside control limits for sample JC31447-22MSD. Outside control limits due to matrix interference.
- JC31295-2: Dilution required due to matrix interference.
- JC31295-7: Dilution required due to matrix interference.
- RPD(s) for MSD for Chloroethane are outside control limits for sample JC31393-3MSD. Outside control limits due to matrix interference.
- JC31295-21: Diluted due to high concentration of target compound.
- Blank Spike Recovery(s) for Freon 113 are outside control limits. High percent recoveries and no associated positive reported in the QC batch.
- JC31295-20: Dilution required due to matrix interference.
- JC31295-19: Dilution required due to matrix interference.
- JC31295-20 for Freon 113: This compound in BS is outside in house QC limits bias high.
- JC31295-19 for Freon 113: This compound in BS is outside in house QC limits bias high.
- Sample(s) JC31952-9MS, JC31952-9MSD were used as the QC samples indicated.

Volatiles by GCMS By Method SW846 8260C

- Matrix Spike Recovery(s) for Acetone are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for Duplicate for 2-Butanone (MEK), Acetone are outside control limits for sample JC31308-1DUP. High RPD due to possible sample analyzed from different vials.
- RPD(s) for Duplicate for Carbon disulfide are outside control limits for sample JC31308-9DUP. RPD acceptable due to low DUP and sample concentrations.
- RPD(s) for Duplicate for Methylene chloride are outside control limits for sample JC31741-1DUP. High RPD due to possible sample analyzed from different vials.

Volatiles by GCMS By Method SW846 8260C

- RPD(s) for MSD for Bromomethane, Chloroethane, Trichlorofluoromethane are outside control limits for sample JC31447-22MSD. Outside control limits due to matrix interference.
- JC31295-2: Dilution required due to matrix interference.

- JC31295-7: Dilution required due to matrix interference.
- RPD(s) for MSD for Chloroethane are outside control limits for sample JC31393-3MSD. Outside control limits due to matrix interference.
- JC31295-21: Diluted due to high concentration of target compound.
- Blank Spike Recovery(s) for Freon 113 are outside control limits. High percent recoveries and no associated positive reported in the QC batch.
- JC31295-20: Dilution required due to matrix interference.
- JC31295-19: Dilution required due to matrix interference.
- JC31295-20 for Freon 113: This compound in BS is outside in house QC limits bias high.
- JC31295-19 for Freon 113: This compound in BS is outside in house QC limits bias high.
- Sample(s) JC31952-9MS, JC31952-9MSD were used as the QC samples indicated.

Volatiles by GCMS By Method SW846 8260C

- Matrix Spike Recovery(s) for Acetone are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for Duplicate for 2-Butanone (MEK), Acetone are outside control limits for sample JC31308-1DUP. High RPD due to possible sample analyzed from different vials.
- RPD(s) for Duplicate for Carbon disulfide are outside control limits for sample JC31308-9DUP. RPD acceptable due to low DUP and sample concentrations.
- RPD(s) for Duplicate for Methylene chloride are outside control limits for sample JC31741-1DUP. High RPD due to possible sample analyzed from different vials.

Soil Sampling Date: 11/28/16, Job Number: JC32432

Volatiles by GCMS By Method SW846 8260C

- Blank Spike Recovery(s) for Freon 113, Vinyl chloride are outside control limits. High percent recoveries and no associated positive reported in the QC batch.
- Matrix Spike Recovery(s) for Chloromethane, Freon 113, Vinyl chloride are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Freon 113 are outside control limits. Outside control limits due to matrix interference.
- JC32432-1 for Vinyl chloride: This compound in BS is outside in house QC limits bias high.
- JC32432-1 for Freon 113: This compound in BS is outside in house QC limits bias high.

Groundwater Sampling Date: 01/09/17, Job Number: JC35066

Extractables by GCMS By Method SW846 8270D BY SIM

- RPD(s) for MSD for 1,4-Dioxane are outside control limits for sample OP99759A-MSD. Outside of in house control limits.

Metals By Method SW846 6010C

- RPD(s) for Serial Dilution for Arsenic, Chromium, Cobalt, Lead, Silver are outside control limits for sample MP98043-SD1.

- Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Groundwater Sampling Date: 02/08/17, Job Number: JC36917

Volatiles by GCMS By Method SW846 8260C

- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Trichloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Extractables by GCMS By Method SW846 8270D BY SIM

- Matrix Spike/Matrix Spike Duplicate Recovery(s) for 1,4-Dioxane are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Metals By Method SW846 6010C

- RPD(s) for Serial Dilution for Aluminum, Arsenic, Beryllium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc are outside control limits. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

- MP98619-SD1 for Iron: Serial dilution indicates possible matrix interference.

APPENDIX K:
LABORATORY REPORTS
& EDD CONFIRMATIONS

Bill Williams

From: srpedd@dep.nj.gov
Sent: Thursday, March 30, 2017 5:37 PM
To: Bill Williams
Cc: hazsite@dep.nj.gov
Subject: 006148, NJD045445483, HB206409 Passed
Attachments: erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; rstp-7-1-8.txt; DTST.TXT; EDSA_Error_Log.html; HZRESULT.TXT; HZSAMPLE.TXT; njd045445483_20160802_20160802.KML

The EDD submission shown below was processed 03/30/2017. This submission has passed and is cataloged in our system.
The email containing your EDD had the subject line of: PI#: 006148, SRP ID: E20130449 it was sent on:

Your submission has been issued an SRP Catalog ID: HB206409 Thank You

The following identifiers were in the DTST file:
Directory: <empty>
DESC: Port Reading, QC Lab - 8/2/16, GW
SRPID: njd045445483
Submit Date: 3/29/2017

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.

Bill Williams

From: srpedd@dep.nj.gov
Sent: Tuesday, April 4, 2017 10:40 AM
To: Bill Williams
Cc: hazsite@dep.nj.gov
Subject: 006148, NJD045445483, HB206569 Passed
Attachments: erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; rstp-7-1-8.txt; DTST.TXT; EDSA_Error_Log.html; HZRESULT.TXT; HZSAMPLE.TXT; njd045445483_20170109_20170109.KML

The EDD submission shown below was processed 04/04/2017. This submission has passed and is cataloged in our system.
The email containing your EDD had the subject line of: PI#: 006148, SRP ID: E20130449 it was sent on:

Your submission has been issued an SRP Catalog ID: HB206569 Thank You

The following identifiers were in the DTST file:
Directory: <empty>
DESC: Port Reading, QC Lab - 1/9/17, GW
SRPID: njd045445483
Submit Date: 4/3/2017

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.

Bill Williams

From: srpedd@dep.nj.gov
Sent: Tuesday, April 4, 2017 10:40 AM
To: Bill Williams
Cc: hazsite@dep.nj.gov
Subject: 006148, NJD045445483, HB206570 Passed
Attachments: erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; DTST.TXT; EDSA_Error_Log.html; HZRESULT.TXT; HZSAMPLE.TXT; njd045445483_20170109_20170109.KML

The EDD submission shown below was processed 04/04/2017. This submission has passed and is cataloged in our system.
The email containing your EDD had the subject line of: PI#: 006148, SRP ID: E20130449 it was sent on:

Your submission has been issued an SRP Catalog ID: HB206570 Thank You

The following identifiers were in the DTST file:
Directory: <empty>
DESC: Port Reading, QC Lab - 1/9/17, GW
SRPID: njd045445483
Submit Date: 4/3/2017

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.

Bill Williams

From: srpedd@dep.nj.gov
Sent: Tuesday, April 4, 2017 10:40 AM
To: Bill Williams
Cc: hazsite@dep.nj.gov
Subject: 006148, NJD045445483, HB206571 Passed
Attachments: erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; rstp-7-1-8.txt; DTST.TXT; EDSA_Error_Log.html; HZRESULT.TXT; HZSAMPLE.TXT; njd045445483_20170208_20170208.KML

The EDD submission shown below was processed 04/04/2017. This submission has passed and is cataloged in our system.
The email containing your EDD had the subject line of: PI#: 006148, SRP ID: E20130449 it was sent on:

Your submission has been issued an SRP Catalog ID: HB206571 Thank You

The following identifiers were in the DTST file:
Directory: <empty>
DESC: Port Reading, QC Lab - 20/8/17, GW
SRPID: njd045445483
Submit Date: 4/3/2017

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.

Bill Williams

From: srpedd@dep.nj.gov
Sent: Monday, April 10, 2017 6:39 PM
To: Bill Williams
Cc: hazsite@dep.nj.gov
Subject: 006148, NJD045445483, HB206735 Passed
Attachments: erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; rstp-7-1-8.txt; DTST.TXT; EDSA_Error_Log.html; HZRESULT.TXT; HZSAMPLE.TXT; njd045445483_20161107_20161107.KML

The EDD submission shown below was processed 04/10/2017. This submission has passed and is cataloged in our system.
The email containing your EDD had the subject line of: PI#: 006148, SRP ID: E20130449 it was sent on:

Your submission has been issued an SRP Catalog ID: HB206735 Thank You

The following identifiers were in the DTST file:
Directory: <empty>
DESC: Port Reading, QC Lab - 11/7/16, Soil
SRPID: njd045445483
Submit Date: 4/7/2017

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.

Bill Williams

From: srpedd@dep.nj.gov
Sent: Monday, April 10, 2017 6:39 PM
To: Bill Williams
Cc: hazsite@dep.nj.gov
Subject: 006148, NJD045445483, HB206736 Passed
Attachments: erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; rstp-7-1-8.txt; DTST.TXT; EDSA_Error_Log.html; HZRESULT.TXT; HZSAMPLE.TXT; njd045445483_20160630_20160630.KML

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The email containing your EDD had the subject line of: PI#: 006148, SRP ID: E20130449 it was sent on:

Your submission has been issued an SRP Catalog ID: HB206736 Thank You

The following identifiers were in the DTST file:
Directory: <empty>
DESC: Port Reading, QC Lab - 6/30/16, Soil/GW
SRPID: njd045445483
Submit Date: 4/7/2017

If you are using the email to process your EDD with your key document, include a copy of this email with your key document package.
This is an automated message.