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TECHNICAL MEMORANDUM

SUB-SLAB VAPOR, INDOOR AIR AND OUTDOOR AIR SAMPLING

PROPERTY 16
PRE-DESIGN INVESTIGATION
SOIL AND NAPL OPERABLE UNIT
DEL AMO SUPERFUND SITE

1.0 INTRODUCTION AND BACKGROUND

This Technical Memorandum presents results of sub-slab vapor, indoor air and outdoor air sampling completed during two sampling events at Property 16 at the Del Amo Superfund Site (Site), as shown on Figure 1. Sampling was completed in accordance with the approved pre-design investigation, as described in the Remedial Design (RD) Work Plan for the Soil and NAPL Operable Unit[1]. The purpose of the investigation was to evaluate the potential for sub-slab vapor intrusion and the need to implement Building Engineering Controls (BECs) at the existing building on the property. Historical(2009) sub-slab vapor data for the property indicate that tetrachloroethene (PCE), trichloroethene (TCE), benzene and chloroform are the principal constituents of concern (COCs) with respect to potential vapor intrusion. In accordance with Section 12.4.2 of the Soil and NAPL Operable Unit Record of Decision (ROD)[2], "If new analytical data for one or more of the identified areas demonstrate that the described cleanup goal has been met prior to implementation of the remedy through natural attenuation or other mechanisms, the intent of this ROD will have been met and active remediation will not be required." This technical memorandum updates and supersedes AECOM's previous February 7, 2018 memorandum, which was limited to summarizing findings for the first, summer of 2017 sampling event.

Property 16 is located within the southwestern portion of the former copolymer plancor and northwestern portion of the styrene plancor that were part of the synthetic rubber plant that operated at the Site from 1942 until 1972. Styrene was produced in the styrene plancor and was polymerized with butadiene within the copolymer plancor to produce synthetic rubber. Rubber plant facilities were razed following the sale of the Site in 1972 and the area was subdivided and gradually redeveloped as a business park. Property 16 has been occupied by a commercial printing facility since 1979 that is currently operated by LSC Communications, Inc. (LSC), formerly R.R. Donnelley.

Information documenting use of chlorinated solvents at Property 16 was previously presented in a July 17, 2013 presentation to US Environmental Protection Agency (USEPA) and an associated Position Paper regarding potentially responsible parties at the Site. Large quantities of solvents, and PCE in particular, were used for printing operations at the LSC facility based on information submitted to USEPA by RR Donnelley for a CERCLA Section 104(e) Request for Information and from California Department of Toxic Substances Control (DTSC) hazardous waste tracking system data. DTSC data indicates that in excess of seven tons of PCE-containing hazardous waste was generated at the LSC facility between 1993 and 2001. USEPA subsequently issued a June 10, 2014 "General Notice of Potential Liability" letter to RR Donnelley indicating that "Based on records obtained from various local government agencies, the location of shallow soil contamination beneath the facility, and your responses to EPA's 104(e) Information Request Letters, it appears that releases from the facility may be a source of PCE and chloroform contamination… *For the reasons described above, EPA believes that your company has contributed to the hazardous substances that have come to be located at the portion of the Site known as Operable Unit #1 (OU1). EPA considers your company to be a PRP [potentially responsible party] at OU1 as an operator and owner of property from which there has been a release of hazardous substances."*

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[1] AECOM, 2016. Remedial Design Work Plan for the Soil and NAPL Operable Unit, Del Amo Superfund Site, Los Angeles, California. December 2, 2016.

[2] USEA, 2011. Record of Decision, Del Amo Facility Superfund Site, Soil and NAPL Operable Unit, Los Angeles, CA. Revised July 26, 2013

2.0 FIELD INVESTIGATION

Field investigations were undertaken in the summer of 2017 and the winter of 2018 to allow for seasonal variations in weather and building ventilation on sub-slab and indoor air concentrations. The summer field investigation occurred from September 19th – October 2nd 2017, and the winter field investigation occurred from February 28th – March 7th, 2018. Both events included a building walk-through, chemical product inventory and removal, indoor and outdoor air sampling, and sub-slab vapor sampling. Further details regarding each of these activities are described below.

2.1 Building Walk-Through

A walk-through of the Property 16 building and inventory of chemicals stored and used within the facility were conducted prior to each sampling event to identify potential indoor volatile organic compound (VOC) sources. Chemical inventory occurred on between September 19th – 22nd for the summer investigation and February 28 – March 2nd for the winter investigation. A photo-ionization detector (PID) was used to aid in identifying VOC sources and areas of potential chemical use throughout the facility. Facility conditions observed during the walk-throughs are described below, and pertain to both sampling events. Site photographs are presented on Figure 2 and Figure 3.

Work benches are present throughout the facility and are used daily for cleaning and repairing equipment. Open buckets of used rags, open containers of unidentified liquids, oil and ink saturated equipment, and flammable storage cabinets were observed at work bench areas, as presented on Figure 2. The flammable storage cabinets primarily contain 16 oz. aerosol cans of lubricants and cleaners, including some with Property 16 vapor intrusion COCs (Figure 2D). Gasoline was found in larger containers within some of the storage cabinets. The work bench tables are coated in spilled ink and oils, have equipment under repair/cleaning and have elevated PID readings (Figure 2B and 2C). Based on employee interviews, 12-pack containers of aerosol cleaners, degreasers and lubricants are resupplied bi-monthly. Other storage cabinets with containers of non-flammable chemicals, unlabeled liquids, and overstock products are also located throughout the facility.

Abundant 275-gallon ink and cleaning solution totes without secondary containment are stored in open areas of the building, and regularly used and replaced. Hundreds of five-gallon buckets containing "Special Ink" are stored within the facility in ink storage areas. Fifty-gallon drums containing synthetic motor oil, lubricants, VOC-containing cleaning solutions and unlabeled liquid were observed throughout the building (Figure 2A, 2E and 3A).

2.2 Chemical Inventory and Removal

Per EPA Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air[3], when sampling indoor air "EPA recommends removing potential indoor sources of vapor-forming chemicals from the building to strive to ensure that the concentrations measured in the indoor air samples are attributable to the vapor intrusion pathway."

[3] USEPA, 2015. OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air. June, 2015

Due to the volume of chemicals present and the need for chemical use during the 24-hour/day, seven days/week printing operations, complete removal of all VOC products prior to the sampling events was not possible. Safety Data Sheets (SDS) for chemical products identified during the chemical inventories were reviewed to assess their respective composition and evaluate whether removal was appropriate prior to sampling. Removed VOC products were placed in an outdoor container downwind of the building and sampling locations. VOC product removal followed the following guidelines:

- Products known to contain the principal vapor intrusion COCs (PCE, TCE, benzene and chloroform) were removed from the building, regardless of their location;
- VOC-containing products observed to be located within relatively small, enclosed rooms where indoor air sampling was planned were removed;
- VOC-containing products observed to be within a 50-foot radius of air sampling locations within open areas of the building were removed;
- VOC-containing products were not removed when present within enclosed rooms where no sampling was planned, or when present in open areas of the building outside a 50-foot radius from sampling locations, unless they were known to contain one or more of the principal COCs; and,
- Product removal was completed 72 hours prior to both sampling events in accordance with the RD Work Plan[1] and the *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* [4].

Removed VOC products were placed in an outdoor container downwind of the building and sampling locations prior to sampling. Principal COC-containing products removed included the following:

Product	Container Type and Size	Containers Removed		Product COCs	% COC Composition
		Summer	Winter		
I-Chem Multipurpose Lubricant	16 oz. aerosol can	44	18	PCE	70-90
				TCE	5-10
CRC Lectra-Motive Electric Parts Cleaner	16 oz. aerosol can	65	47	PCE	90-100
Gorilla Cleaner Safety Solvent	16 oz. aerosol can	3	1	TCE	95-99
Gasoline	5 gallon canister	2	3	Benzene	0.1-4.9

More COC-containing products were observed and removed from the facility during the initial summer sampling event than for the subsequent winter event. Used and old canisters identified by AECOM during the summer inventory had been discarded prior to the winter event. Many hundreds of other VOC-containing product containers were additionally removed from the building for both events; however, complete removal of products containing target COCs is not realistic due to the scale of the

[4] USEPA, 2015. OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air. June, 2015

facility and large number of workers, work stations, storage cabinets, products present, and on-going operations.

2.3 Indoor and Outdoor Air Sampling

Air sampling locations are indicated on Figure 4. Air sampling included collection of time-integrated air samples from 13 indoor locations and two ambient/outdoor air locations along the western (upwind) side of the building during both sampling events. The time-integrated indoor air samples served to characterize exposure concentrations and were collected over a 12-hour period. A second sample was collected during nighttime hours at four of the 13 indoor locations to assess conditions over a cumulative 24-hour period. Ambient/outdoor air samples were collected to evaluate background VOC conditions and were collected over a 12-hour period.

Additional indoor air grab samples were collected from three locations during the summer and four locations during the winter to document point-in-time conditions at potential indoor VOC source areas. These locations were identified based on frequent PCE and TCE product use and elevated PID readings noted during the building walk-through. Grab samples were collected both prior to and after the previously described VOC product removal. Conditions observed at air grab sample locations are presented on Figures 5 and 6.

Time-integrated indoor air sample collection was completed on September 27-28, 2017 and March 6-7, 2018 in general accordance with the procedures described in the Field Sampling Plan (FSP; Appendix F of the RD Work Plan). Samples were collected using laboratory-supplied, individually certified clean Summa canisters equipped with flow control valves. Summa canister vacuum readings and total organic vapor concentrations for indoor ambient air in the vicinity of sampling locations were recorded hourly over the duration of the sampling period.

Meteorological data for the sampling date were obtained from the Southeast Torrance Personal Weather Station (station identification KCATORRA18) located approximately 0.9 miles south of Property 16. During the summer sampling event, outside air temperature ranged from 57 to 77°F on the day air sampling was conducted. Wind direction was from the northwest to west northwest at speeds ranging from 4.6 to 19.6 miles per hour (mph). The diurnal variation in barometric pressure was 0.08 inches of mercury (inHG) with a decreasing trend throughout the day. During the winter sampling event, outside air temperatures ranged from 47 to 81°F on the day air sampling was conducted. Wind direction was from the west at speeds ranging from 2 to 6 mph. The diurnal variation in barometric pressure was 0.11 inHG with a decreasing trend throughout the afternoon. There were no large changes in barometric pressure during either sampling event.

2.4 Sub-Slab Vapor Sampling

Sub-slab vapor samples were collected at the seven locations indicated on Figure 4 on September 29 and October 3, 2017 for the summer event and on March 7, 2018 for the winter event. Vapor Pin® technology was approved by USEPA[5] to collect the sub-slab vapor samples as an alternative to the traditional vapor probe sampling procedures presented in the FSP (Appendix F of the RD Work Plan). Vapor Pin® sampling probes were installed in holes cut into the concrete slab and were sealed with

[5] USEPA, 2016. Email from Anhtu Nguyen of USEPA to Julie-Doane Allmon of AECOM; November 16, 2016

silicone sleeves to prevent leakage. Leak testing, purging and vapor sample collection were completed in accordance with the FSP. Leak testing field data forms are provided in Attachment 2. Sample collection was completed using Summa canisters approximately 24 hours after Vapor Pin installation, allowing sufficient time for equilibration of subsurface conditions. A minimum of three system volumes of vapor were purged prior to sample collection and silicone sleeves were not reused.

Meteorological data for the sub-slab sampling dates were obtained from the Southeast Torrance Personal Weather Station (station identification KCATORRA18) located approximately 0.9 miles south of Property 16. Outside air temperature during the summer sampling event ranged from 59 to 77°F. Wind direction was from the northwest to west-northwest at speeds ranging from 5.8 to 18.4 mph. The diurnal variation in barometric pressure was 0.03 inHG with a decreasing trend throughout the day. During the winter sampling event outside air temperature ranged from 47 to 72 °F. Wind direction was from the west at a maximum speed of 6 mph. The diurnal variation in barometric pressure was 0.08 inHG with a decreasing trend throughout the day. There were no large changes in barometric pressure during either sampling event.

3.0 LABORATORY ANALYSES, RESULTS, AND EVALUATION

Samples were analyzed for VOCs using either USEPA Method TO-15 or TO-15 SIM, as described below. The TO-15 method has higher detection limits than TO-15 SIM, but includes the following compounds that are not included in the TO-15 SIM analyte list:

1,1-Difluoroethane
1,2,4-Trichlorobenzene
2-Hexanone
4-Methyl-2-Pentanone
Benzyl Chloride
Bromoform
Isopropanol
Vinyl Acetate
n-Butylbenzene
sec-Butylbenzene
tert-Butylbenzene

Comprehensive laboratory reports are presented electronically in Attachment 1 and results are further described below.

3.1 Outdoor Air

Ambient/outdoor air samples were analyzed for VOCs by USEPA Method TO-15 SIM. Detected VOC concentrations are summarized in Table 1 and vapor intrusion COC concentrations (PCE, TCE, benzene, and chloroform) are additionally presented on Figure 7. Ambient/outside air concentrations contribute to background levels in indoor air and aid in evaluation of the sub-slab vapor and indoor air data. While not subject to ROD action levels/cleanup goals or remedy, outdoor air quality at Property 16 was characterized through comparison of detected VOC concentrations with either Regional Screening Level (RSL) values from Table 12-3 of the ROD for the limited VOCs listed there (benzene, PCE and TCE), or DTSC Note 3 criteria for chemicals not listed in the ROD table. For chemicals not

listed in either the ROD table or Note 3, USEPA 2017 RSLs were used. The appropriate criteria for detected VOCs are collectively referred to as screening levels. California Human Health Screening Levels (CHHSLs) listed in ROD Table 12-3 were not considered, as these criteria are no longer recommended by DTSC's Human and Ecological Risk Office (HERO) for risk screening because they do not reflect current risk assessment guidance.

Exceedances of the outdoor air screening levels were limited to carbon tetrachloride in all samples and benzene in one sample from the winter event.

3.2 Sub-Slab Vapor

Sub-slab vapor samples were analyzed for VOCs by USEPA Method TO-15. Detected VOC concentrations are summarized in Table 2 and COC concentrations are additionally presented on Figure 8. The detected concentrations were evaluated through comparison with the ROD-specified action levels/cleanup goals (action levels and cleanup goals are identical). Action levels/cleanup goals are included in Table 2 and were calculated by dividing either the compound-specific industrial air RSL or the ambient/outdoor concentration (whichever is higher) by an attenuation factor. RSLs used in the calculation are listed in ROD Table 12-4.2, and for VOCs without a ROD-listed RSL, DTSC Note 3 or November 2017 USEPA industrial air RSL values were used. An attenuation factor of 0.0011 was used, consistent with the USEPA-approved Baseline Risk Assessment[6] and the evaluation process included in the RD Work Plan.

Detected VOC concentrations in sub-slab vapor exceeding their respective action levels/clean-up goals during the recent summer and winter sampling events are limited to PCE and TCE at locations SGL0938, SGL0939 and SGL0941. These locations are in proximity to historical sub-slab vapor sampling locations where a potential for vapor intrusion was previously identified (Figure 8). The summer and winter event results are generally comparable for each of the seven sampling locations with the exception of SGL0941, where PCE and TCE were substantially lower for the winter event compared to the summer event, although still elevated relative to the action levels/cleanup goals. Based on the combined summer 2017 and winter 2018 sub-slab vapor data, the potential for vapor intrusion is limited to PCE and TCE. Further insight regarding vapor intrusion is provided by evaluation of indoor air data, as described below.

3.3 Indoor Air

Indoor air samples included time-integrated samples, collected over 12 hours, and grab samples that were collected over a duration of a few minutes. Both day and night samples were collected for some time-integrated sample locations. The grab samples were collected both prior to and after VOC product removal.

3.3.1 Indoor Air Grab Samples

The indoor air grab samples were analyzed for VOCs using USEPA Method TO-15. Detected concentrations are summarized in Table 3 and COC concentrations are presented on Figure 9. Air grab sample data are not used for remedial decision making, but are used to document point-in-time

[6] Geosyntec/URS 2006. Baseline Risk Assessment Report, Del Amo Superfund Site, Los Angeles, California. September 7, 2006.

conditions at suspected indoor VOC source areas that could potentially influence primary (time-integrated) indoor air sample results. While action levels/cleanup goals do not apply to the grab samples for the above reasons, concentrations of one or more VOCs were elevated in each of the seven grab samples with respect to the ROD-listed RSLs, or for detected compounds without ROD-listed RSLs, their respective DTSC Note 3 or November 2017 USEPA industrial air RSL values, collectively referred to as the indoor air screening criteria. Grab sample locations where exceedances of these criteria occurred are summarized below:

Grab Sample Location	Area Description (Figure 4)	Sample Collection Timing	VOCs with Screening Level Exceedances
WAL0084 (Summer)	Adjacent to parts cleaning room and VOC product storage cabinet; ink spills and open buckets of cleaning solvents observed; elevated total organic vapor concentrations observed during building walk-through.	After VOC product removal and during time-integrated air sampling	TCE
WAL0085 (Summer)	Work station area with frequent PCE and/TCE product use and VOC storage; elevated total organic vapor concentrations observed during building walk-through.	After VOC product removal and concurrent with primary air sampling	PCE
WAL0086 (Summer)	"Special ink storage" and ink mixing area; PCE, TCE and benzene product storage area; elevated total organic vapor concentrations observed during building walk-through.	After VOC product removal and concurrent with primary air sampling	Benzene, PCE
WAL0087 (Winter)	“Sig Lab” where PCE and TCE containing products are used daily; sample collected when a flammable storage cabinet was opened to mimic VOC release to the facility throughout the day. Abundant flammable storage cabinets similar to this are located throughout the facility and the doors are opened and closed throughout the day.	Prior to VOC product removal	Acetone, Benzene, Methylene Chloride, PCE and TCE
WAL0088 (Winter)	Sticker printing and adhesive area. High ambient PID readings in vicinity of working area.	Prior to VOC product removal	PCE
(WAL0089) Winter	Work station area with frequent PCE and/TCE product use and, VOC storage (non-COC products not removed prior to sampling); and elevated total organic vapor concentrations observed during Property 16 building walk-through. Adjacent to door leading to the “color booth room” door where in which PCE exceedances in indoor air were detected have been noted (WAL0079; see Section 3.3.2).	After VOC product removal and concurrent with primary air sampling	PCE
WAL0090 (Winter)	Adjacent to parts cleaning room and VOC product storage cabinet (VOC products removed during sampling event); ink spills and open buckets of cleaning solvents observed; elevated total organic vapor concentrations observed during Property 16 building walk-through.	After VOC product removal and concurrent with primary air sampling	No Exceedances

Based on the building walk-through and air grab sample results from both sampling events, indoor sources of VOCs and PCE in particular, are present in the building. Moreover, while VOC products

were removed to the extent feasible prior to sampling, complete removal of all indoor sources is not possible and time-integrated indoor air results were therefore likely impacted by indoor sources. As stated in the EPA *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*[7], *"…*even after removing indoor sources, their effects may linger depending on source strength, relative humidity in the building, the extent to which the contaminants have been absorbed by carpets and other fabrics or "sinks," and air exchange rate."

3.3.2 Time-Integrated Indoor Air Samples

The 17 time-integrated indoor air samples from the two sampling events (13 day samples and four night samples) were analyzed for VOCs by USEPA Method TO-15 SIM. Detected VOC concentrations are summarized in Table 4 and COC concentrations are additionally presented on Figure 10. Time-integrated indoor air results were compared to the previously defined indoor air screening levels. Action level/cleanup goal exceedances for the two sampling events are summarized below:

Sampling Event	VOCs with Action Level Exceedances	Exceedance Locations	Sampling Period	Concentration (µg/m^3)	Action Level (µg/m^3)	Outdoor/Ambient Concentration (µg/m^3)
Summer 2017	benzene	WAL0072	day	1.7	1.6	0.9 - 1.0
	chloroform	WAL0083	day	1.6	0.53	0.25 - 0.28
	PCE	WAL0076	day	2.6	2.1	0.18 - 1.2
		WAL0079	night	8		
	Carbon Tetrachloride	All Samples	day	0.53-0.83	0.29	0.54 - 0.55
			night	0.60-0.79		
Winter 2018	Benzene	WAL0073	day	1.8	1.6	0.81 - 1.8
		WAL0078	night	2.1		
		WAL0079	night	2.3		
	Chloroform	WAL0083	day	0.55	0.53	0.19 - 0.22
	PCE	WAL0071	day	2.6	2.1	0.17 - 0.22
		WAL0072	day	6.4		
		WAL0076	day	1.4/2.1*		
		WAL0077	day	8.4/7.5*		
		WAL0078	day	47		
			night	4.9/4.8*		
		WAL0079	day	9.3		
			night	2.3		
		WAL0082	day	3.2		
	Carbon Tetrachloride	All Samples	day	0.49 - 0.66	0.29	0.64 - 0.73
			night	0.55 - 0.61		

* Duplicate sample result

Concentrations of carbon tetrachloride, chloroform, benzene and PCE in time-integrated indoor air samples exceed action levels in multiple samples collected during two rounds of sampling at Property

[7] USEPA, 2015. OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air. June, 2015

16. Most exceedances are only slightly above the referenced screening level/ background levels with the exception of the PCE result (47 µg/m^3) for the daytime sample at WAL0078 during the Winter 2018 sampling event.

3.3.3 Multiple Lines of Evidence Vapor Intrusion Data Analysis

Carbon tetrachloride concentrations exceeded the action level in all time-integrated indoor air samples. However, the concentrations were within or less than the range of background concentrations, as established through the outdoor air samples. Carbon tetrachloride was not present at detectable levels in the sub-slab vapor samples.

Chloroform exceedances were limited to two time-integrated indoor air samples, both collected at WAL0083, located adjacent to kitchen sinks. Chloroform was not detected in sub-slab vapor samples at concentrations in excess of action levels, indicating that the indoor air exceedances are unlikely to be due to vapor intrusion. The elevated chloroform is inferred to be associated with off-gassing of trihalomethanes from the chlorinated municipal water supply, which is enhanced by the heated water that is commonly present at kitchen sinks.

Benzene concentrations slightly exceeded the action level in one summer sample and three winter indoor air samples. There is no spatial pattern to the exceedances; the summer exceedance location was not repeated in the winter sampling event, and the winter event night sample exceedances event were not duplicated in their corresponding day samples. The benzene exceedance concentrations (1.7-2.3 µg/m^3) are not considered significant or indicative of vapor intrusion given that they approach or exceed background levels (0.81-1.8 µg/m^3 based on outdoor air concentrations) and that sub-slab vapor benzene concentrations are more than an order of magnitude below action levels (Table 2). In addition, multiple indoor benzene sources were observed throughout the facility during the facility walk-through and chemical inventory (Figures 2 and 3).

PCE action level exceedances occurred in two summer indoor air samples and nine winter samples. The greater number of exceedances for the winter event are believed to be associated with a greater period of time that exterior doors at the facility are kept closed and consequentially lesser air circulation and mixing with outdoor air.

Although elevated PCE concentrations are observed in some sub-slab vapor samples, the PCE exceedances in indoor air are not attributed to vapor intrusion for the following reasons:

(1) **There is no correlation between the sub-slab vapor and indoor air VOC concentrations.** Sub-slab vapor data (Table 2 and Figure 8) show that while both PCE and TCE concentrations far exceed action levels at locations SGL0938, SGL0939 and SGL0941, only PCE exceeds action levels at multiple indoor air locations, with the maximum indoor air TCE concentration (2.8 µg/m^3) being well below its action level (6.1 µg/m^3). This discrepancy indicates a lack of correlation between VOCs in indoor air and sub-slab vapor VOCs. A more quantitative analysis is provided in Figure 11, showing the relative proportions of TCE and PCE for each indoor air and sub-slab vapor sample with action level exceedances for these two compounds. As shown, the proportions of PCE to TCE in the indoor air samples are inconsistent with

(higher than) those for the sub-slab vapor samples. In accordance with the RD Work Plan description of indoor air data evaluation, "*…a lack of correlation between compounds detected in indoor air and those detected in sub-slab vapor would tend to indicate there is no significant vapor intrusion.*" This is further supported by the OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air[8] which states that for a conclusion that vapor intrusion is solely responsible for vapor concentrations in indoor air, "*The predominant vapor-forming chemicals in the sub-slab soil gas and their relative proportions in indoor air and sub-slab soil gas would be expected to be similar…*".

(2) PCE in aerosol spray form is used on a daily basis at numerous locations in the building as part of normal business operations and is a continuing indoor source.
While removal of PCE-containing products was conducted prior to sampling, complete removal of all interior PCE sources is not possible at an industrial-scale printing facility with pervasive PCE use such as the LSC facility. As one example, a previously unidentified container of I-Chem Multi-Purpose Lubricant, (70-90% PCE) was observed on a work desk following VOC product removal and completion of the winter indoor air sampling event. Site personnel indicated that the product had been with a worker's personal belongings at the facility during the product removal process rather than in a chemical storage cabinet, and it was therefore not observed or removed by AECOM prior to sampling. As described in the RD Work Plan, "Any identified indoor sources of PCE, TCE or chloroform that cannot be contained or removed will be problematic in that it may not be possible to discriminate between their contribution to indoor air and the potential vapor intrusion contribution." Such problems are further acknowledged in the OSWER Technical Guide[8]*: "A potential shortcoming of indoor air testing is that indoor sources and outdoor sources unrelated to subsurface contamination and to releases from the subject site – "background" – may contribute to the presence of volatile chemicals in occupied buildings…, particularly if these sources cannot be removed from the building prior to and throughout the duration of sampling indoors. This shortcoming of indoor air testing is unavoidable when the subsurface environment contains the very same volatile chemicals that contemporaneously arise in indoor air due to background sources…*"

OSHA PELs rather than USEPA RSL or DTSC screening level values are the appropriate criteria for evaluation of indoor air data for facilities such as the subject property, where regular, wide-spread use of PCE and other VOCs is part of normal operations. PCE and other VOC concentrations in indoor air at the LSC facility are multiple orders of magnitude lower than their respective PELs (Table 4).

4.0 QUALITY ASSURRANCE/QUALITY CONTROL

Data validation results indicate that the sub-slab vapor, indoor air, and ambient/outdoor air data presented in this memorandum are usable for their intended purpose. Comprehensive data validation results are presented under separate cover for the summer[9] and winter[10] sampling events.

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[8] USEPA, 2015. OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air. June, 2015

[9] AECOM, 2017. Summary of Data Validation for Eurofins/Calscience Reports: 17-09-2204, 17-09-2359, and 17-10-0090 Del Amo Superfund Site, Los Angeles, California. November 16, 2017.

[10] AECOM, 2018. Summary of Data Validation for Eurofins/Calscience Reports: 18-03-0118 and 18-03-0580 Del Amo Superfund Site, Los Angeles, California. May 2, 2018.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Concentrations of carbon tetrachloride, chloroform, benzene and PCE in time-integrated indoor air samples exceed action levels in multiple samples collected during two rounds of sampling at the LSC facility on Property 16. However, these exceedances are attributable to various indoor and background sources rather than vapor intrusion from impacted subsurface soil. This conclusion is based on a multiple-lines-of-evidence evaluation including comparison of the suite of VOCs detected in indoor air, sub-slab vapor and outdoor air, the magnitude and relative proportions of the VOC concentrations in each media, and the documented ongoing, pervasive use of PCE and other VOCs at the LSC facility.

Implementation of building engineering controls or other corrective actions for vapor intrusion at the facility are not appropriate or recommended.

TABLES

TABLE 1
SUMMARY OF OUTDOOR AIR VOC CONCENTRATIONS
PROPERTY 16

Location	Sample	Sample Date	Detected VOCs and Concentrations (µg/m3)																									
			Acetone	Benzene	2-Butanone	Bromomethane	Carbon Tetrachloride	Chloroethane	Chloroform	Chloromethane	Dichlorodifluoromethane	1,2-Dichloroethane	1,1-Difluoroethane	1,4-Dichlorobenzene	4-Ethyl Toluene	Ethylbenzene	Isopropanol	Methyl Tert-butyl ether (MTBE	Methylene Chloride	Styrene	Tetrachloroethene (PCE)	Toluene	1,1,2-Trichloro-1,2,2-Trifluoroethane	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	o-Xylene	p/m-Xylene
AML0036	**AAS00327**	9/27/2017	**15**	**0.90**	**1.3 J**	**0.037 J**	**0.55**	<0.029	**0.25**	**1.3**	**2.7**	<0.058	--	<0.096	**0.16 J**	**0.50**	--	<0.044	**1.5**	**0.44**	**1.2**	**2.4**	**0.59**	**1.5**	**0.65**	**0.18**	**0.58**	**1.50**
	AAS00329	3/6/2018	**19**	**1.8**	**2.4**	<0.097	**0.64**	<0.066	**0.22**	**1.2**	**3.6**	**0.12**	**1.0**	<0.15	<0.25	**0.84**	**4.6**	<0.090	**1.4**	**0.95**	**0.17**	**4.5**	**0.84**	**1.9**	**0.83**	**0.21**	**1.1**	**2.9**
AML0037	**AAS00328**	9/27/2017	**15**	**1.0**	**1.4 J**	**0.051 J**	**0.54**	**0.050 J**	**0.28**	**1.3**	**2.4**	<0.058	--	**0.11 J**	**0.15 J**	**0.52**	--	**0.062 J**	**1.4**	**0.46**	**0.18**	**3.0**	**0.60**	**1.5**	**0.60**	**0.18**	**0.64**	**1.60**
	AAS00330	3/6/2018	**30**	**0.81**	**1.7**	<0.097	**0.73**	<0.066	**0.19**	**1.1**	**3.2**	**0.10**	**0.85**	<0.15	<0.25	**0.60**	**4.2**	<0.090	**1.1**	**0.39**	**0.22**	**3.3**	**0.72**	**1.7**	**0.52**	**0.13**	**0.81**	**2.1**
ROD Table 12.3 RSL			NA	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1	NA	NA	NA	NA	NA	NA	NA
DTSC "Note 3" &" Note 5"			NA	0.42	NA	NA	0.29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	3,900	2.1	1,300	5,300	NA	NA	180	NA	NA
USEPA 2017 RSL			140,000	1.6	22,000	22	2	44,000	0.53	390	440	NA	NA	1.1	NA	4.9	NA	47	1,200	4,400	47	22,000	22,000	NA	260	260	440	440
Cal-Osha PELs			1,200,000	1,000,000	590,000	22,000	12,600	NA	9,780	105000	4950000	NA	NA	60000	NA	22000	NA	144000	87000	215000	170000	37000	7600000	NA	125000	125000	435000	435000

Notes:
All non-detects reported as < Method Detection Limit (MDL)
µg/m3 - micrograms per cubic meter
VOC - Volatile Organic Compound
Table includes data from Eurofins lab reports 17-09-2204, 17-9-2359, 17-10-0090 and 18-03-0580
Cal-Osha PELs are for reference and not used for evaluation criteria
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
* Based on 12 hrs/day, 60 hrs/wk work schedule
Values in red exceed action level/cleanup goal
Value used for evaluation criteria
NA Not Applicable
-- Not Analyzed For

TABLE 2
SUMMARY OF SUB-SLAB VAPOR VOC CONCENTRATIONS
PROPERTY 16

Location	Sample	Sample Date	Detected VOCs and Concentrations (µg/m3)																											
			Acetone	Benzene	Bromomethane	2-Butanone	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Dichlorodifluoromethane	1,1-Dichloroethane	1,1-Dichloroethene	c-1,2-Dichloroethene	t-1,2-Dichloroethene	1,1-Difluoroethane	4-Ethyl Toluene	Ethylbenzene	Isopropanol	4-Methyl-2-Pentanone	Styrene	Tetrachloroethene (PCE)	Toluene	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,1,1-Trichloroethane	Trichloroethene (TCE)	1,2,4-Trimethylbenzene	Trichlorofluoromethane	o-Xylene	p/m-Xylene
SGL0935	VSS01321	9/29/2017	54	0.97 J	<1.0	5.3	2.9 J	<0.46	3.6	3.3	0.88 J	4.0	0.47 J	<0.36	<1.1	<0.95	44	<1.6	<1.7	7.4 J	<4.1	<1.5	30	3.8	<4.9	<0.61	1.8 J	<5.0	8.5	<1.4	<3.4
	VSS01334	3/7/2018	13	0.72 J	<2.5	<5.2	<5.8	<1.2	2.3 J	3.1 J	<0.74	<2.6	NA	NA	NA	NA	NA	<4.0	<4.3	<6.4	<10	<3.9	22	<3.4	<12	<1.5	24	<12	<12	<3.4	<8.6
SGL0936	VSS01322	10/3/2017	26	2.3 J	<1.6	9.9	<3.7	<0.74	<1.4	9.7	1.2 J	1.8 J	<0.63	<0.58	<1.8	<1.5	58	<2.6	2.8 J	<4.1	<6.5	<2.5	780	15	<7.8	<0.98	100	<8.0	<7.4	4.3	12J
	VSS01335	3/7/2018	17	1.9	<1.0	<2.1	<2.4	<0.47	<0.87	10	<0.30	1.5 J	<0.40	<0.37	<1.1	<0.96	<3.0	<1.6	3.4	<2.6	<4.1	<1.6	660	24	<4.9	0.94 J	53	<5.0	10	4.2	13
SGL0937	VSS01323	9/29/2017	14	<0.28	<1.0	<2.1	<2.4	<0.47	<0.88	0.88 J	0.57 J	3.4	<0.40	<0.37	<1.1	<0.97	<3.0	<1.7	<1.7	4.8 J	<4.2	<1.6	85	3.2	<5.0	67	7.6	<5.1	8.1	<1.4	<3.5
	VSS01336	3/7/2018	31	0.56 J	<1.0	<2.1	<2.3	<0.46	<0.86	1.3 J	<0.30	1.7 J	<0.39	<0.36	<1.1	<0.95	20	<1.6	<1.7	200	<4.1	<1.5	61	5.3	<4.9	52	2.6 J	<5.0	9.4	<1.4	<3.4
SGL0938	VSS01324	9/29/2017	<26	<2.7	<10	<21	<23	<4.6	<8.6	34	<3.0	12 J	5.2 J	17 J	240	120	<29	<16	<17	<26	<41	<15	12,000	<14	<49	<6.1	17,000	<50	<46	<14	<34
	VSS01337	3/7/2018	7.2	2.0	<1.0	<2.1	<2.3	<0.46	<0.86	24	<0.30	5.2	4.2	7.7	180	96	<2.9	<1.6	<1.7	<2.6	<4.1	<1.5	8,100	6.8	<4.9	<0.61	14,000	<5.0	9.0	<1.4	4.7 J
SGL0939	VSS01325	9/29/2017	140	42	<10	<21	<23	<4.6	<8.6	370	<3.0	100	<3.9	350	69	70	<29	<16	<17	87 J	<41	<15	230,000	<14	140	<6.1	130,000	<50	400	<14	<34
	VSS01328[1]	9/29/2017	150	38	<10	<21	<23	<4.6	<8.6	350	<3.0	100	<3.9	330	67	68	<29	<16	<17	82 J	<41	<15	190,000	<14	130	<6.1	110,000	<50	380	<14	<34
	VSS01338	3/7/2018	19	21	<1.0	<2.2	<2.4	0.53 J	<0.90	230	0.38 J	33	2.5	280	46	45	<3.1	<1.7	2.4	6.6 J	<4.2	<1.6	210,000	13	120	1.1 J	120,000	<5.2	290	2.6	8.4 J
	VSS01341[2]	3/7/2018	41	22	<1.0	3.4 J	<2.4	0.54 J	<0.89	220	0.40 J	30	2.5	270	48	46	<3.0	<1.7	2.5	13	<4.2	<1.6	220,000	15	110	1.1 J	110,000	<5.1	260	2.8	9.2
SGL0940	VSS01326	9/29/2017	140	4.3	1.2 J	10	<2.3	<0.46	<0.86	2.3 J	1.7	3.2	<0.39	<0.36	<1.1	<0.95	<2.9	2.5	7.3	16	<4.1	<1.5	27	12	<4.9	<0.61	2.3 J	6.3 J	<4.6	5.5	19
	VSS01339	3/7/2018	9.1	0.48 J	<1.0	<2.1	<2.3	<0.46	<0.86	1.1 J	<0.30	1.9 J	<0.39	<0.36	<1.1	<0.95	<2.9	<1.6	<1.7	<2.6	<4.1	<1.5	24	5.4	<4.9	<0.61	1.6 J	<5.0	<4.6	<1.4	<3.4
SGL0941	VSS01327	9/29/2017	63	28	<10	<21	<23	<4.6	<8.6	250	<3.0	47	<3.9	<3.6	<11	<9.5	<29	<16	<17	<26	<41	<15	110,000	<14	57 J	31	82,000	<50	130	<14	<34
	VSS01340	3/7/2018	120	17	<1.0	17	<2.4	<0.47	3.3	130	3.7	18	2.7	<0.37	<1.1	8.2	<3.0	<1.6	3.6	35	6.0 J	2.3 J	42,000	25	45	20	45,000	<5.0	93	4.9	13
ROD Table 12.3 RSL/0.0011			NA	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,900	NA	NA	NA	5,600	NA	NA	NA	NA
DTSC "Note 3" or			NA	380	NA	NA	NA	NA	NA	NA	NA	NA	7,000	280,000	32,000	320,000	NA	NA	NA	NA	4,800,00	NA	1,800	1,200,000	4,800,000	4,000,000	5,000*	NA	NA	NA	NA
USEPA 2017 RSL/0.0011			130,000,000	1,500	20,000	20,000,000	2,800,000	2,800,000	40,000,000	480	355,000	400,000	7,000	7,000	NA	NA	160,000,000	NA	NA	4,500	NA	800	43,000	20,000,000	20,000,000	20,000,000	2,700	240,000	240,000	400,000	400,000

Notes:

All non-detects reported as < Method Detection Limit (MDL)

µg/m^3 - micrograms per cubic meter

VOC - Volatile Organic Compound

Table includes data from Eurofins lab reports 17-09-2204, 17-9-2359, 17-10-0090 and 18-03-0580

1 Action level/cleanup goal calculated by dividing the higher of the industrial air Regional Screening Level by an attenuation factor of 0.0011

* Value calculated based on a 12-hour workday and 60 hrs/wk

Values in red exceed action level/cleanup goal

Value used as action level/cleanup goal

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

[1]Duplicate of VSS1325

[2]Duplicate of VSS1338

TABLE 3
SUMMARY OF AIR GRAB SAMPLE VOC CONCENTRATIONS
PROPERTY 16

Location	Sample Collection Time[1]	Sample	Sample Date	Type	Detected VOCs and Concentrations (µg/m3)																			
					Acetone	Benzene	sec - Butylbenzene	2-Butanone	Carbon Disulfide	Chloromethane	Dichlorodifluoromethane	1,1-Dichloroethene	1,1-Difluoroethane	Isopropanol	Methylene Chloride	Styrene	Tetrachloroethene (PCE)	Toluene	1,1,1-Trichloroethane	Trichloroethene (TCE)	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylene	o-Xylene
WAL0084	Sampling[2]	WAS00024	9/27/2017	Day	**83**	**0.90 J**	<1.4	**7.5**	<2.3	**1.7**	**3.1**	<0.39	**3.7 J**	**5.1 J**	<3.8	<1.5	<0.74	**3.0**	<0.61	**7.6**	<5.0	<1.8	<3.4	<1.4
WAL0085	Sampling[2]	WAS00025	9/27/2017	Day	**330**	**0.96 J**	<1.4	**750**	<2.3	**1.4**	**3.0**	**3.6**	<2.9	**20**	<3.8	<1.5	**7.9**	**30**	**160**	**2.7 J**	**5.0 J**	<1.8	**3.5 J**	**1.5 J**
WAL0086	Sampling[2]	WAS00026	9/27/2017	Day	**89**	**2.7**	**2.9 J**	**4.2 J**	**6.3 J**	**2.2**	**3.2**	<0.49	**11**	**20**	<4.7	<1.9	**5.3**	**12**	<0.76	**1.1 J**	<6.2	<2.3	**5.4 J**	**2.1 J**
WAL0087	Pre-removal[1]	WAS00047	3/1/2018	Day	**11,00,000**	**1.9**	<1.4	**56**	<2.3	**1.9**	**2.7**	**0.83 J**	<2.9	**30**	**13 J**	<1.5	**1,400**	**14**	**2.5 J**	**230**	<5.0	<1.8	<3.4	<1.4
WAL0088	Pre-removal[1]	WAS00048	3/1/2018	Day	**16,000**	**1.4 J**	<1.4	**6.1**	<2.3	**1.1**	**2.2 J**	<0.36	**5.6**	**8.8 J**	<3.8	<1.5	**2.7 J**	**22**	<0.61	<0.61	<5.0	<1.8	<3.4	<1.4
WAL0089	Sampling[2]	WAS00049	3/6/2018	Day	**41**	**1.2 J**	---	<2.1	**7.9**	**1.3**	**2.1 J**	<2.0	**5.2 J**	**52**	<3.8	**1.6 J**	**2.9 J**	**5.2**	<0.61	<0.61	<5.0	<1.8	<3.4	<1.4
WAL0090	Sampling[2]	WAS00050	3/6/2018	Day	**19**	**1.2 J**	---	**2.3 J**	<2.3	**1.3**	**1.9 J**	<2.0	<2.9	**3.4 J**	<3.8	<1.5	<0.74	**4.3**	<0.61	<0.61	<5.0	<1.8	<3.4	<1.4
ROD Table 12.3 RSL					NA	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1	NA	NA	6.1	NA	NA	NA	NA
DTSC "Note 3" & "Note 5"					NA	0.42	1,800	NA	NA	NA	NA	310	NA	NA	12	3,900	2	1,300	4,400	6*	NA	180	NA	NA
USEPA 2017 RSL					140,000	1.6	NA	22,000	3,100	390	440	7.7	180,000	880	1,200	4,400	47	22,000	22,000	3.0	260	260	440	440
Cal-Osha PELs					1,200,000	1,000,000	NA	590,000	3,000	105,000	4,950,000	NA	NA	NA	87,000	215,000	170,000	37,000	1,900,000	135,000	125,000	NA	435,000	NA

Notes:
All non-detects reported as < Method Detection Limit (MDL)
(µg/m3 - micrograms per cubic meter
VOC - Volatile Organic Compound
NA - Not analyzed or not available
Table includes data from Eurofins lab reports 17-09-2204, 17-9-2359, 17-10-0090, 18-03-0118 and 18-03-0580
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
* Value based on a 12-hour workday and 60 hrs/wk
Values in red exceed Action Level/Cleanup Goal
1 Grab sample was collected pre- VOC removal at a signficant indoor source area
2 Grab sample collected post - VOC removal during the day time 12 hr indoor air sampling
Value used for evaluation criteria
--- Not Analyzed For

TABLE 4

SUMMARY OF INDOOR AIR VOC CONCENTRATIONS

PROPERTY 16

Location	Sample	Sample Date	Type	Detected VOCs and Concentrations (µg/m3)																																				
				Acetone	Benzene	Bromodichloromethane	Bromomethane	2-Butanone	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,3-Dichlorobenzene	1,2-Dichloroethane	1,1-Dichloroethene	1,2-Dichloropropane	1,1-Difluoroethane	1,1-Dichloroethene	1,2-Dichloroethene	Ethylbenzene	4-Ethyltoluene	Isopropanol	Methyl-t-Butyl Ether (MTBE)	Methylene Chloride	Styrene	1,1,2,2-Tetrachloroethane	Tetrachloroethene (PCE)	Toluene	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,1,1-Trichloroethane	Trichloroethene (TCE)	Trichlorofluoromethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	p/m-Xylene	o-Xylene
WAL0071	WAS00007	9/27/2017	Day	90	1.0	<0.075	0.035 J	2.1	<0.19	0.73	<0.065	<0.082	0.033 J	0.48	0.90	0.10 J	2.9	<0.096	0.070 J	<0.053	--	--	0.19	<0.050	0.49	0.19 J	--	<0.044	1.5	0.38	<0.084	1.3	4.6	0.61	<0.056	0.32	2.7	0.92	0.33	1.5	0.61
	WAS00030	3/6/2018	Day	110	1.4	<0.075	<0.028	2.5	<0.19	0.52	<0.12	<0.21	<0.066	0.23	1.4	<0.096	2.4	<0.15	0.18	<0.053	<0.066	49	<0.099	<0.099	1.1	<0.081	23	<0.044	1.1	0.85	<0.17	2.6	5.5	0.85	<0.14	<0.084	1.9	0.90	0.24	3.6	1.6
WAL0072	WAS00008	9/27/2017	Day	30	1.7	<0.075	0.049 J	1.8	0.21 J	0.55	1.4	<0.082	0.037 J	0.38	2.6	0.11 J	2.4	<0.096	0.20	<0.053	--	--	<0.037	<0.050	1.2	0.31	--	<0.044	1.6	0.75	0.23	0.37	6.8	1.2	<0.056	<0.084	3.0	1.2	0.40	4.4	1.4
	WAS00031	3/6/2018	Day	130	1.3	<0.075	0.14	2.3	<0.19	0.54	<0.12	<0.21	<0.066	0.28	0.72	<0.096	2.4	<0.15	0.13	<0.053	<0.066	1800	<0.099	<0.099	0.99	0.29	94	<0.044	1.1	0.80	<0.17	6.4	15	0.53	<0.14	0.14	4.2	1.7	0.59	3.2	1.3
WAL0073	WAS00009	9/27/2017	Day	28	1.1	0.16 J	0.031 J	1.7	<0.19	0.62	<0.065	<0.082	0.035 J	0.39	1.0	0.16	2.6	<0.096	<0.058	0.98	--	--	<0.037	<0.050	0.54	0.14 J	--	0.055 J	2.1	0.55	0.13J	0.18	2.7	0.58	0.13J	0.48	1.5	0.72	0.22	1.7	0.65
	WAS00032	3/6/2018	Day	45	1.8	<0.075	<0.028	2.8	<0.19	0.57	<0.12	<0.21	<0.066	0.26	1.2	<0.096	2.9	<0.15	0.13	0.55	<0.066	12	<0.099	<0.099	0.80	<0.081	25	<0.044	1.5	0.71	<0.17	0.22	5.1	0.59	<0.14	<0.084	1.7	0.90	0.23	2.9	1.1
WAL0074	WAS00010	9/27/2017	Day	43	1.0	<0.075	0.061 J	1.4 J	0.22 J	0.55	<0.065	<0.082	0.040 J	0.28	1.4	<0.096	2.6	<0.096	<0.058	<0.053	--	--	<0.037	<0.050	0.52	0.14 J	--	0.075 J	1.7	0.44	<0.084	0.29	3.2	0.60	<0.056	<0.084	1.6	0.67	0.16	1.7	0.63
	WAS00011	9/27/2017	Night	44	0.6	<0.075	0.045 J	1.3 J	<0.19	0.64	<0.065	<0.082	<0.029	0.18	1.1	<0.096	2.7	<0.096	0.084 J	<0.053	--	--	<0.037	<0.050	0.28	<0.081	--	<0.044	0.70	0.22	<0.084	0.22	2.1	0.62	<0.056	<0.084	1.6	0.37	0.094 J	0.93	0.37
	WAS00033	3/6/2018	Day	56	1.4	<0.075	<0.028	1.6	<0.19	0.57	<0.12	<0.21	<0.066	0.19	0.91	<0.096	2.4	<0.15	<0.058	<0.053	<0.066	45	<0.099	<0.099	0.76	<0.081	54	<0.044	1.0	0.62	<0.17	1.6	6.2	0.53	<0.14	0.35	1.5	0.86	0.22	2.5	0.97
	WAS00034	3/7/2018	Night	46	1.4	<0.075	<0.028	2.3	<0.19	0.61	<0.12	<0.21	<0.066	0.31	1.2	<0.096	2.6	<0.15	0.17	<0.053	<0.066	13	<0.099	<0.099	0.89	<0.081	20	0.21	1.4	0.88	<0.17	1.8	16	0.55	<0.14	0.33	1.7	0.96	0.25	2.8	1
WAL0075	WAS00012	9/27/2017	Day	16	1.0	<0.075	0.050 J	1.4 J	1.3 J	0.54	<0.065	<0.082	<0.029	0.27	1.2	0.10 J	2.6	<0.096	<0.058	<0.053	--	--	<0.037	<0.050	0.54	0.14 J	--	0.062 J	1.8	0.47	<0.084	0.47	3.2	0.58	<0.056	0.98	1.5	0.56	0.16	1.6	0.62
	WAS00035	3/6/2018	Day	25	1.2	<0.075	<0.028	<0.15	<0.19	0.57	<0.12	<0.21	<0.066	0.17	0.92	<0.096	2.5	<0.15	<0.058	<0.053	<0.066	1.4	<0.099	<0.099	0.55	<0.081	5.0	<0.044	1.7	0.62	<0.17	0.29	3.3	0.56	<0.14	0.14	1.6	0.59	0.15	1.9	0.74
WAL0076	WAS00013	9/27/2017	Day	260	0.93	<0.075	<0.028	1.8	<0.19	0.75	<0.065	<0.082	<0.029	0.32	0.94	<0.096	2.6	<0.096	<0.058	<0.053	--	--	0.061 J	<0.050	0.47	0.14 J	--	0.063 J	1.4	0.46	<0.084	2.6	4.7	0.61	<0.056	0.50	1.6	0.71	0.18	1.5	0.60
	WAS00014	9/27/2017	Night	370	0.68	<0.075	0.044 J	2.6	<0.19	0.60	<0.065	<0.082	<0.029	0.21	1.4	<0.096	3.1	<0.096	<0.058	<0.053	--	--	<0.037	<0.050	0.51	0.14 J	--	<0.044	0.95	0.56	<0.084	0.60	4.8	0.62	<0.056	0.16	1.6	0.72	0.19	1.7	0.62
	WAS00036	3/6/2018	Day	60	0.84	<0.075	<0.028	<0.15	<0.19	0.50	<0.12	<0.21	<0.066	0.16	0.97	<0.096	2.8	<0.15	0.23	<0.053	<0.066	1.1	<0.099	<0.099	0.44	<0.081	12	<0.044	0.90	0.55	<0.17	2.1	15	0.64	<0.14	1.4	1.5	0.70	0.17	1.4	0.58
	WAS00037	3/7/2018	Night	42	1.6	<0.075	<0.028	2.3	<0.19	0.58	<0.12	<0.21	<0.066	0.33	1.1	<0.096	2.6	<0.15	<0.058	<0.053	<0.066	5.4	<0.099	<0.099	1.1	<0.081	13	0.14	3.2	1.1	<0.17	1.7	54	0.55	<0.14	1.0	1.6	1.4	0.36	3.2	1.2
WAL0077	WAS00015	9/27/2017	Day	190	1.2	<0.075	0.059 J	1.7	0.44 J	0.57	0.19	<0.082	<0.029	0.28	1.3	0.15 J	2.2	<0.096	<0.058	<0.053	--	--	<0.037	<0.050	0.68	0.21 J	--	<0.044	1.7	0.52	<0.084	1.3	5.1	0.62	<0.056	0.31	2.4	1.1	0.31	2.2	0.87
	WAS00027[1]	9/27/2017	Day	180	1.5	<0.075	0.1	1.4 J	0.34 J	0.83	<0.065	<0.082	<0.029	0.32	1.1	0.12 J	2.5	<0.096	<0.058	<0.053	0.11 J	--	<0.037	<0.050	0.7	0.22 J	--	0.071 J	2.4	0.53	<0.084	1.1	4.6	0.7	<0.056	0.26	2.5	1.2	0.32	0.9	2.3
	WAS00038	3/6/2018	Day	290	1.3	<0.075	<0.028	2.8	<0.19	0.57	<0.12	<0.21	<0.066	0.18	1.2	<0.096	2.7	<0.15	<0.058	<0.053	<0.066	9.3	<0.099	<0.099	0.58	<0.081	29	<0.044	1.1	0.77	<0.17	8.4	12	0.71	<0.14	1.1	1.8	1.1	0.25	1.8	0.79
	WAS00052[2]	3/6/2018	Day	370	1.3	<0.075	<0.028	2.0	<0.19	0.66	<0.12	<0.21	<0.066	0.21	1.2	<0.096	3.4	<0.15	0.12	<0.053	<0.066	11	<0.099	<0.099	0.58	<0.081	22	<0.044	1.4	0.80	<0.17	7.5	12	0.84	<0.14	1.0	2.2	1.2	0.28	1.9	0.79
WAL0078	WAS00016	9/27/2017	Day	100	1.3	<0.075	0.051 J	1.8	0.23 J	0.55	0.45	<0.082	0.042 J	0.30	1.3	0.12 J	2.2	<0.096	<0.058	<0.053	--	--	<0.037	<0.050	0.74	0.23 J	--	0.078 J	1.4	0.60	<0.084	0.65	4.8	0.63	<0.056	<0.084	2.8	1.3	0.35	2.5	0.95
	WAS00028[3]	9/27/2017	Day	70	1.2	<0.075	0.073 J	1.9	0.24 J	0.53	0.38	<0.082	0.040	0.29	1.3	<0.096	2.4	<0.096	<0.058	<0.053	<0.066	--	<0.037	<0.050	0.6	0.2	--	<0.044	1.3	0.5	<0.084	0.64	4.3	0.6	<0.056	<0.084	2.6	1.2	0.3	0.8	2.1
	WAS00017	9/27/2017	Night	180	0.7	<0.097	0.046 J	1.4 J	<0.25	0.79	<0.084	<0.11	<0.038	0.30	0.97	<0.13	2.8	<0.13	<0.075	<0.068	--	--	<0.049	<0.065	0.35	<0.10	--	<0.057	0.94	0.28	<0.11	0.97	2.9	0.69	<0.073	<0.11	2.6	0.59	0.17	1.2	0.47
	WAS00029[4]	9/27/2017	Day	170	1.0	<0.075	0.043 J	2.6	0.24 J	0.74	0.082	<0.082	<0.029	0.27	0.99	<0.096	2.6	<0.096	0.089 J	<0.053	<0.066	--	<0.037	<0.050	0.58	0.16 J	--	<0.044	0.62	0.48	<0.084	0.54	4.1	0.62	<0.056	0.23	2.2	1	0.27	0.71	1.9
	WAS00039	3/6/2018	Day	100	1.3	<0.075	<0.028	2.3	<0.19	0.58	<0.12	<0.21	<0.066	0.23	1.1	<0.096	2.9	<0.15	0.11	<0.053	<0.066	11	<0.099	<0.099	0.58	<0.081	47	<0.044	1.1	0.79	<0.17	47	4.3	0.70	<0.14	<0.084	2.0	1.1	0.24	2	0.77
	WAS00040	3/7/2018	Night	230	1.4	<0.075	<0.028	2.1	<0.19	0.55	<0.12	<0.21	<0.066	0.35	1.1	<0.096	3.1	<0.15	<0.058	<0.053	<0.066	12	<0.099	<0.099	0.85	<0.081	57	0.18	1.8	1.1	<0.17	4.9	8.6	0.66	<0.14	0.14	1.7	1.4	0.32	2.4	0.94
	WAS00051[5]	3/7/2018	Night	210	2.1	<0.075	0.11	4.1	<0.19	0.61	<0.12	<0.21	<0.066	0.47	0.98	<0.096	2.5	<0.15	0.23	<0.053	<0.066	15	<0.099	<0.099	1.3	0.25	86	0.23	2.2	1.6	<0.17	4.8	11	0.62	<0.14	0.22	1.9	1.9	0.46	3.6	1.3
WAL0079	WAS00018	9/27/2017	Day	37	1.1	<0.075	0.045 J	1.8	0.20 J	0.54	0.11 J	<0.082	0.032 J	0.28	1.3	0.10 J	2.2	<0.096	0.070 J	0.054 J	--	--	<0.037	<0.050	0.65	0.19 J	--	0.072 J	1.3	3.8	<0.084	0.48	3.6	0.59	<0.056	0.15	2.0	1.0	0.25	2.0	0.77
	WAS00019	9/27/2017	Night	25	0.94	<0.075	0.041 J	1.9	0.20 J	0.66	0.15	<0.082	0.038 J	0.25	0.99	0.10 J	2.3	<0.096	0.11	<0.053	--	--	<0.037	<0.050	0.57	0.15 J	--	<0.044	0.72	3.4	<0.084	8.0	3.7	0.61	<0.056	0.14	1.5	0.98	0.26	1.8	0.68
	WAS00041	3/6/2018	Day	46	1.2	<0.075	<0.028	<0.15	<0.19	0.54	<0.12	<0.21	<0.066	0.18	0.86	<0.096	2.5	<0.15	<0.058	<0.053	<0.066	5.4	<0.099	<0.099	0.71	<0.081	43	<0.044	1.2	2.6	<0.17	9.3	4.2	0.53	<0.14	0.25	1.5	1.5	0.37	2.2	0.91
	WAS00042	3/7/2018	Night	57	2.3	<0.075	0.12	3.1	<0.19	0.57	<0.12	<0.21	<0.066	0.46	1.0	0.17	2.5	<0.15	0.23	<0.053	0.12	7.3	<0.099	<0.099	1.4	0.29	36	0.15	2.0	2.2	<0.17	2.3	10	0.60	<0.14	0.33	1.7	1.9	0.48	4.2	1.6
WAL0080	WAS00020	9/27/2017	Day	29	1.3	<0.075	0.032 J	1.1 J	0.22 J	0.77	0.18	<0.082	<0.029	0.28	1.2	0.29	2.4	<0.096	<0.058	<0.053	--	--	<0.037	0.062J	0.80	0.21 J	--	0.065 J	5.9	0.50	<0.084	0.44	3.9	0.60	<0.056	2.8	2.0	0.94	0.28	2.6	1.0
	WAS00043	3/6/2018	Day	28	1.0	<0.075	<0.028	<0.15	<0.19	0.52	<0.12	<0.21	<0.066	0.15	0.93	<0.096	2.8	<0.15	<0.058	<0.053	<0.066	5.1	<0.099	<0.099	0.53	<0.081	4.1	<0.044	0.94	0.46	<0.17	0.71	3.6	0.62	<0.14	<0.084	1.3	0.55	0.14	1.8	0.71
WAL0081	WAS00021	9/27/2017	Day	31	0.90	<0.075	0.050 J	1.3 J	0.42 J	0.55	<0.065	<0.082	0.030 J	0.28	1.3	0.15 J	2.6	<0.096	0.061 J	<0.053	--	--	<0.037	<0.050	0.54	0.13 J	--	0.056 J	1.7	0.47	<0.084	0.64	4.8	0.60	<0.056	0.41	1.5	0.56	0.15	1.7	0.67
	WAS00044	3/6/2018	Day	51	1.1	<0.075	<0.028	1.5	<0.19	0.65	<0.12	<0.21	<0.066	0.17	1.1	<0.096	3.5	<0.15	<0.058	<0.053	<0.066	1.1	<0.099	<0.099	0.63	<0.081	10	<0.044	0.97	0.70	<0.17	0.78	7.7	0.60	<0.14	0.52	1.6	0.80	0.18	2.3	0.91
WAL0082	WAS00022	9/27/2017	Day	15	0.86	<0.075	0.030 J	1.2 J	<0.19	0.55	<0.065	<0.082	<0.029	0.25	1.2	0.23	2.6	0.24	<0.058	<0.053	--	--	<0.037	<0.050	0.54	0.14 J	--	0.063 J	1.4	0.43	<0.084	1.6	2.6	0.59	<0.056	0.60	1.5	0.63	0.15	1.8	0.64
	WAS00045	3/6/2018	Day	41	0.90	<0.075	<0.028	1.6	<0.19	0.53	<0.12	<0.21	<0.066	0.14	0.88	<0.096	2.6	<0.15	<0.058	<0.053	<0.066	0.68	<0.099	<0.099	0.54	<0.081	6.4	<0.044	0.89	0.38	<0.17	3.2	3.4	0.50	<0.14	0.88	1.4	0.66	0.16	1.9	0.76
WAL0083	WAS00023	9/27/2017	Day	28	0.93	0.25	0.037 J	1.2 J	<0.19	0.56	<0.065	0.12 J	0.039 J	1.6	1.3	0.14 J	2.6	<0.096	<0.058	<0.053	--	--	<0.037	<0.050	0.65	0.15 J	--	0.056 J	1.6	0.70	<0.084	0.17	2.7	0.61	<0.056	<0.084	2.5	0.62	0.20	2.2	0.83
	WAS00046	3/6/2018	Day	28	0.99	0.27	<0.028	1.6	<0.19	0.49	<0.12	<0.21	<0.066	0.55	0.78	0.16	2.3	<0.15	<0.058	<0.053	<0.066	0.83	<0.099	<0.099	0.53	<0.081	4.4	<0.044	0.86	0.63	<0.17	0.26	2.8	0.52	<0.14	<0.084	1.5	0.40	0.13	1.6	0.65
ROD Table 12.3 RSL				NA	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1	NA	NA	NA	6.1	NA	NA	NA	NA	NA
DTSC "Note 3" & "Note 5"				NA	0.42	0.33	NA	NA	NA	0.29	NA	0.58	NA	NA	NA	NA	NA	530	NA	350	NA	NA	310	35	NA	NA	NA	NA	12	3,900	0.21	2	1,300	5,300	4,400	6*	5,300	NA	180	NA	NA
USEPA 2017 RSL				140,000	1.6	0.33	22	22,000	3,100	2	220	NA	44,000	0.53	390	1.1	440	NA	0.47	NA	NA	180,000	7.7	NA	4.9	NA	880	47	1,200	4,400	0.21	47	22,000	22,000	22,000	3.0	NA	260	260	440	440
Cal-Osha PELs				1,200,000	1,000,000	NA	5,000	590,000	3,000	12,600	46,000	NA	105,000	9,780	105,000	60,000	4,950,000	NA	4,000	NA	NA	NA	NA	NA	22,000	NA	NA	144,000	87,000	215,000	7,000	170,000	37,000	7,600,000	NA	135,000	5,600,000	125,000	125,000	435,000	NA

Notes:
All non-detects reported as < Method Detection Limit (MDL)
µg/m3 - micrograms per cubic meter
VOC - Volatile Organic Compound
NA - Not analyzed or not available
Table includes data from Eurofins lab reports 17-09-2204, 17-9-2359, 17-10-0090 and 18-03-0580
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
* Value based on a 12-hour workday and 60 hrs/wk
Values in red exceed action level/cleanup goal
Value used as action level/cleanup goal

[1]Duplicate of WAS00015
[2]Duplicate of WAS00038
[3]Duplicate of WAS00016
[4]Duplicate of WAS00017
[5]Duplicate of WAS00040

FIGURES

V:\Projects\GIS\Ladd\DelAmo\SiteLocMaps\694-141P

N

0 600 1,200

Scale in Feet

Source:
NAIP dated 2014 ArcGIS Image

Figure 1
LOCATION MAP
Property 16

AECOM

V/Projects/GIS_Proj/Ladd/DelAmo/1016-120L

Figure 2A. Misc. unlabeled buckets of fluid

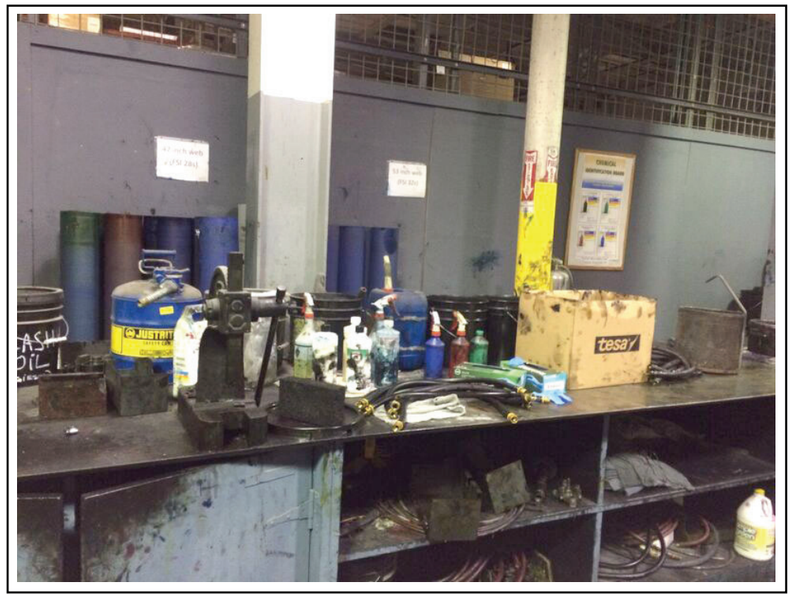

Figure 2B. Work bench location with used equipment

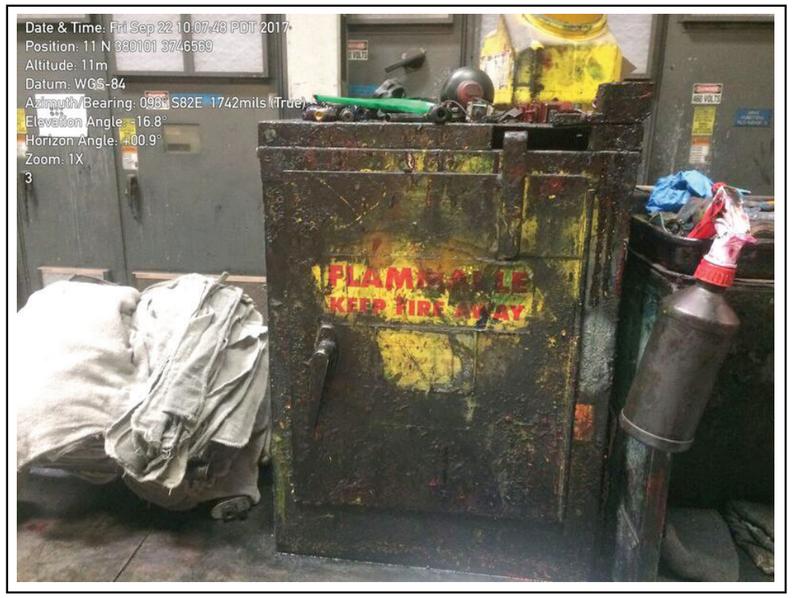

Figure 2C. Flammable storage cabinet coated in ink and oil

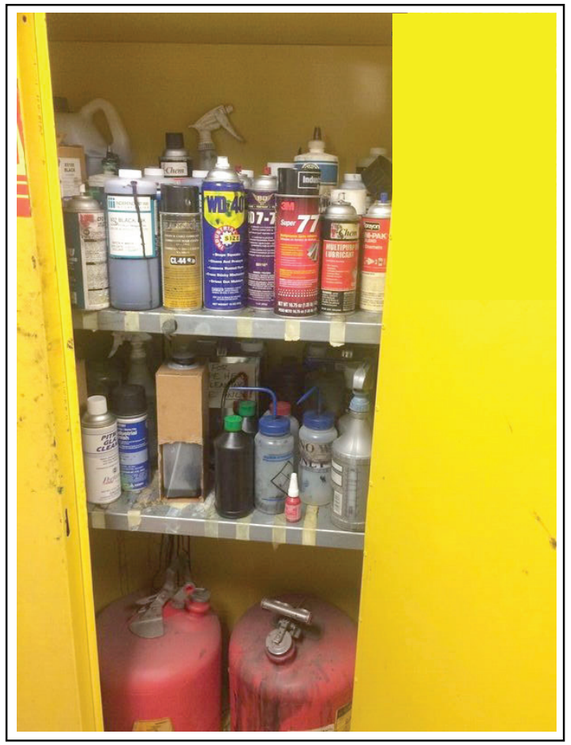

Figure 2D. Content inside of typical flammable storage cabinet

Figure 2E. Drum of Mobil lubricant

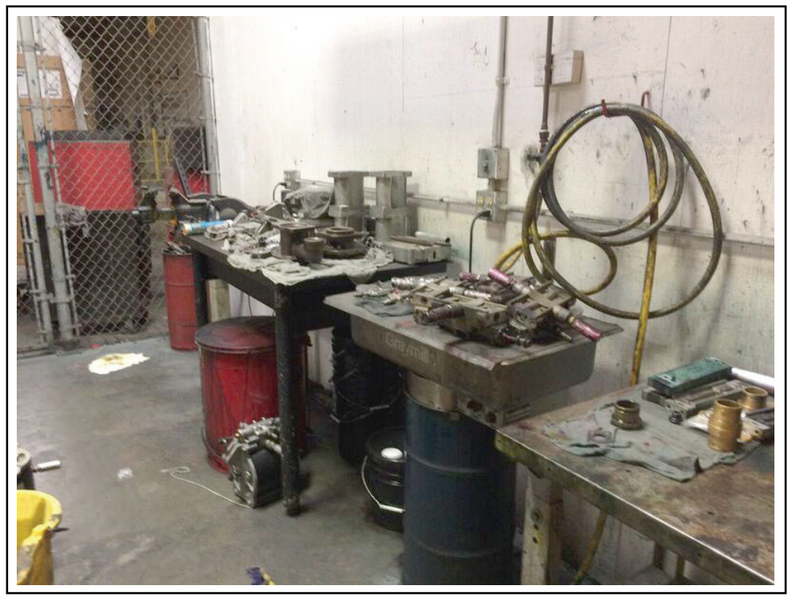

Figure 2F. Work bench with used equipment

FIGURE 2

SITE PHOTOGRAPHS
SUMMER INVESTIGATION
Property 16
Del Amo Superfund Site

AECOM

Figure 3A. Ink totes and plungers throughout the facility.

Figure 3B. Open drums of Mobil SHC grease.

Figure 3C. Sig Lab with significant PCE/TCE use observed.

Figure 3D. Spilled unidentified liquid on floor of facility adjacent to equipment.

FIGURE 3

SITE PHOTOGRAPHS
WINTER INVESTIGATION
Property 16
Del Amo Superfund Site

AECOM

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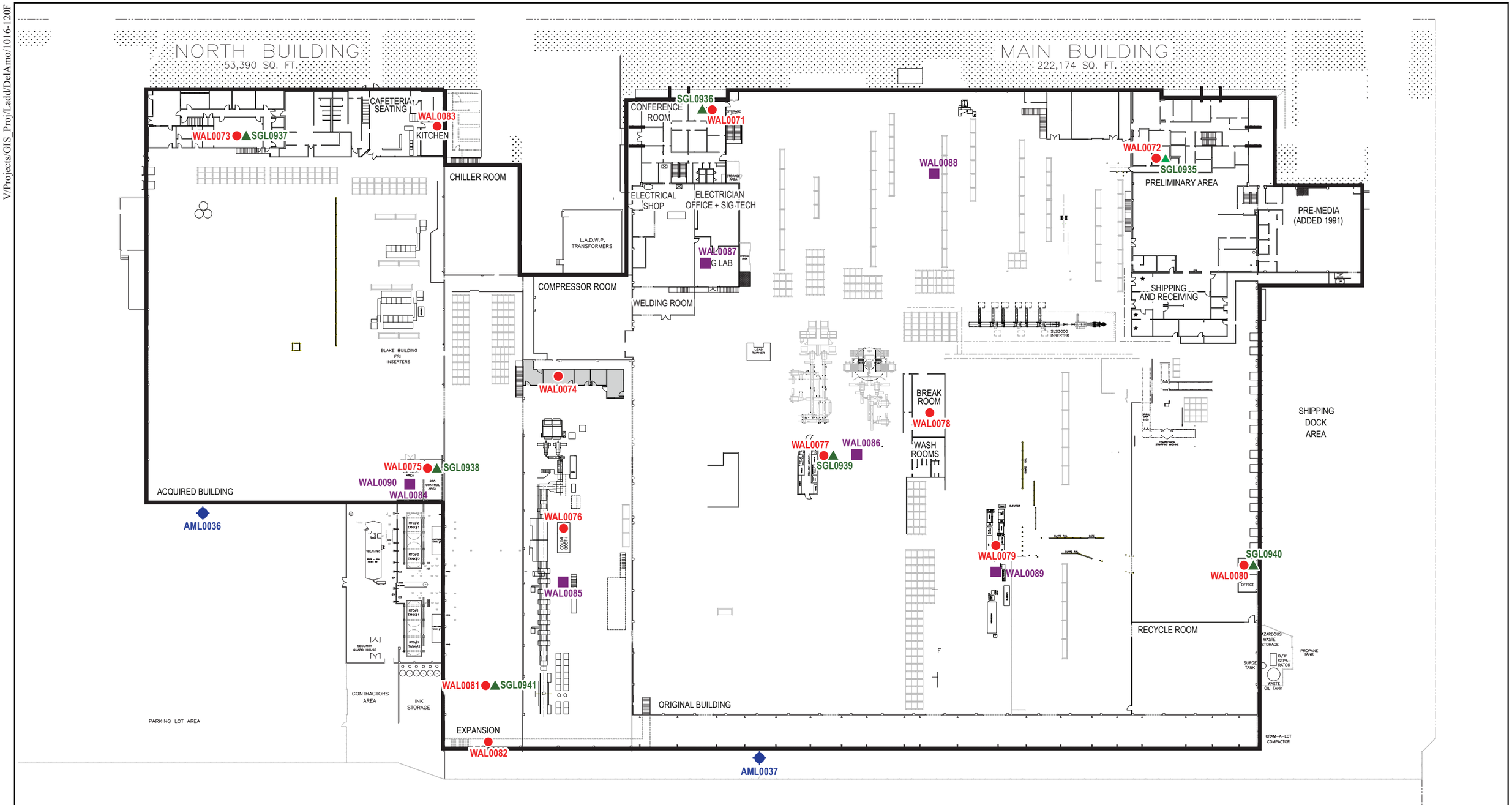

EXPLANATION

- *Indoor air sampling location*
- *Outdoor air sampling location*
- *Sub-slab vapor sampling location*
- *Air grab sampling location*

N

0' 30' 60' 90' 120'

Total area = 285,000 ft²

FIGURE 4

SAMPLING LOCATIONS
Property 16

Del Amo Superfund Site

AECOM

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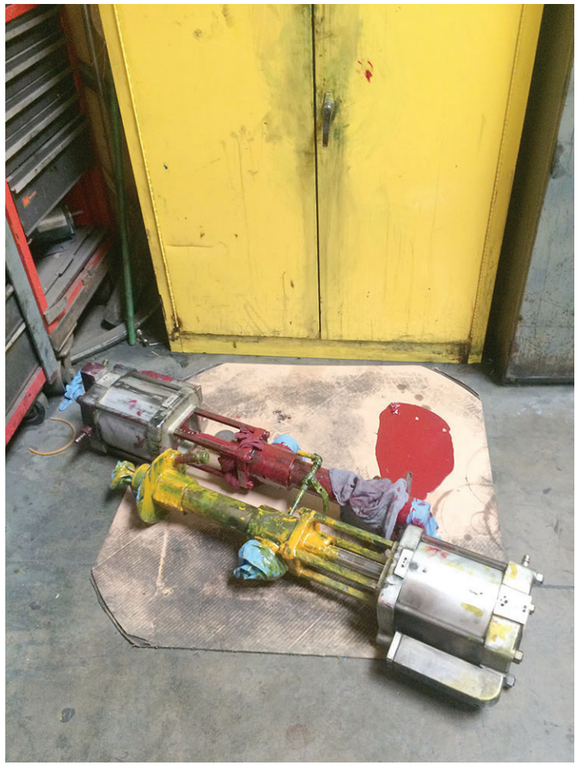


Figure 5A. Area of air grab sample WAL0084. Parts cleaning room with VOC product storage cabinet.
Elevated total organic vapor concentrations and spilled ink observed during site walk.

Figure 5B. Area of air grab sample WAL0085. Work bench and VOC and TCE/PCE product storage cabinet present with elevated total organic vapor concentrations observed during site walk.

Figure 5C. Area of air grab sample WAL0086. Ink storage and ink mixer area, with VOC product storage cabinet, including PCE and TCE-containing products.
Elevated total organic vapor concentrations observed during site walk.

FIGURE 5

AIR GRAB SAMPLE AREA CONDITIONS
Property 16

Del Amo Superfund Site

AECOM

Area of air grab sample WAL0087. Sig Lab flammable storage cabinet with aerosol canisters containing PCE and TCE. Sample collected prior to removal of chemicals to show daily operating conditions.

Air grab sample WAL0089. Work bench and VOC and TCE/PCE products storage cabinet present with elevated total organic vapor concentrations observed during site walk.

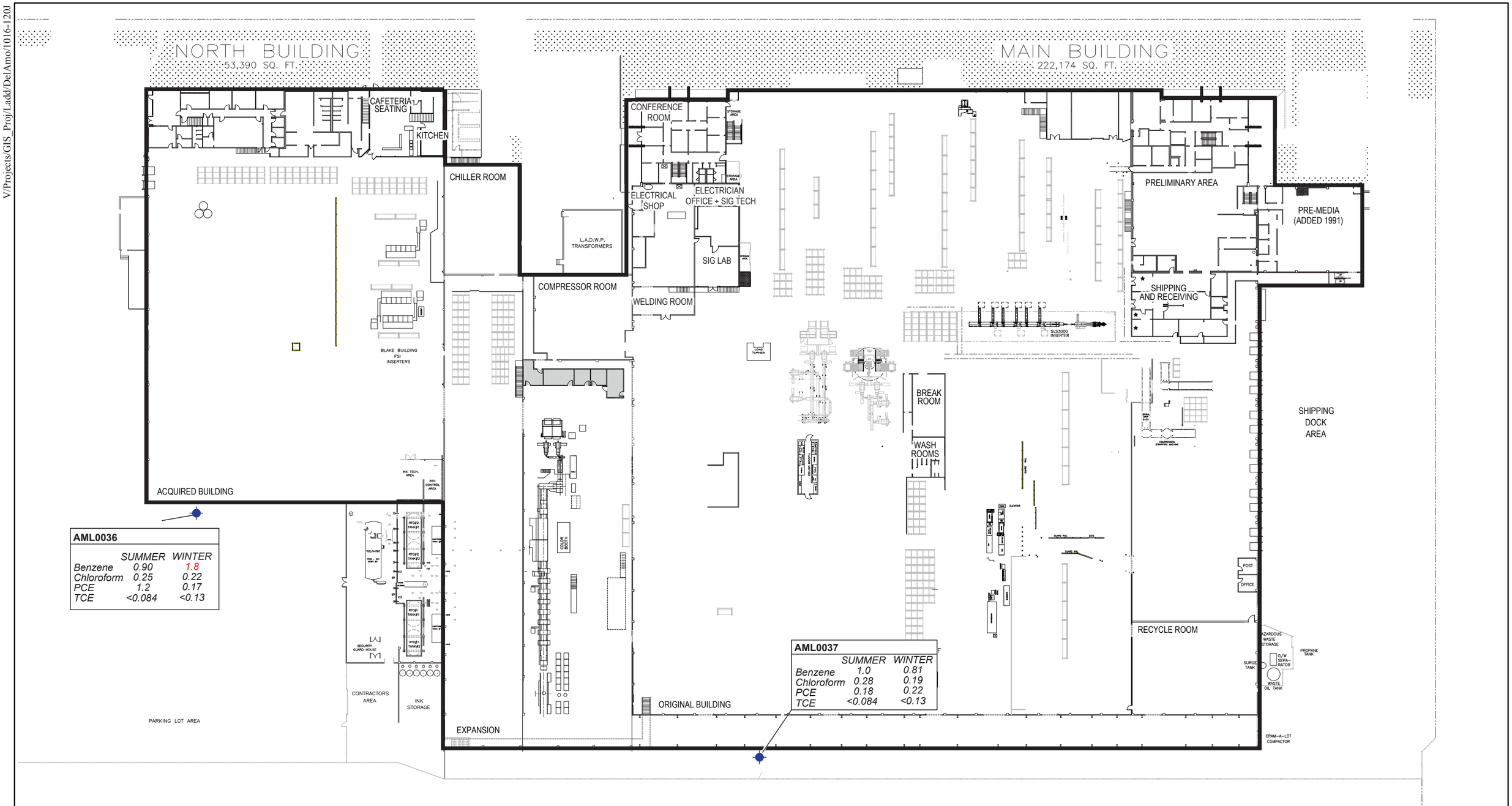
FIGURE 6

AREA OF AIR GRAB SAMPLES WAL0087 AND WAL0089
Property 16

Del Amo Superfund Site

AECOM

V/Projects/GIS_Proj/Ladd/DelAmo/1016-1200



EXPLANATION

Outdoor air sampling location

AML0036

	SUMMER	WINTER
Benzene	0.90	1.8
Chloroform	0.25	0.22
PCE	1.2	0.17
TCE	<0.084	<0.13

Detected COC concentrations (mg/m3). concentrations in red indicate exceedances of Action Level/Cleanup Goal

NOTES:

COC	Constituents of concern
µg/m³	Micrograms per cubic meter
PCE	Tetrachloroethane
TCE	Trichloroethane

N

0' 30' 60' 90' 120'

Total area = 285,000 ft²

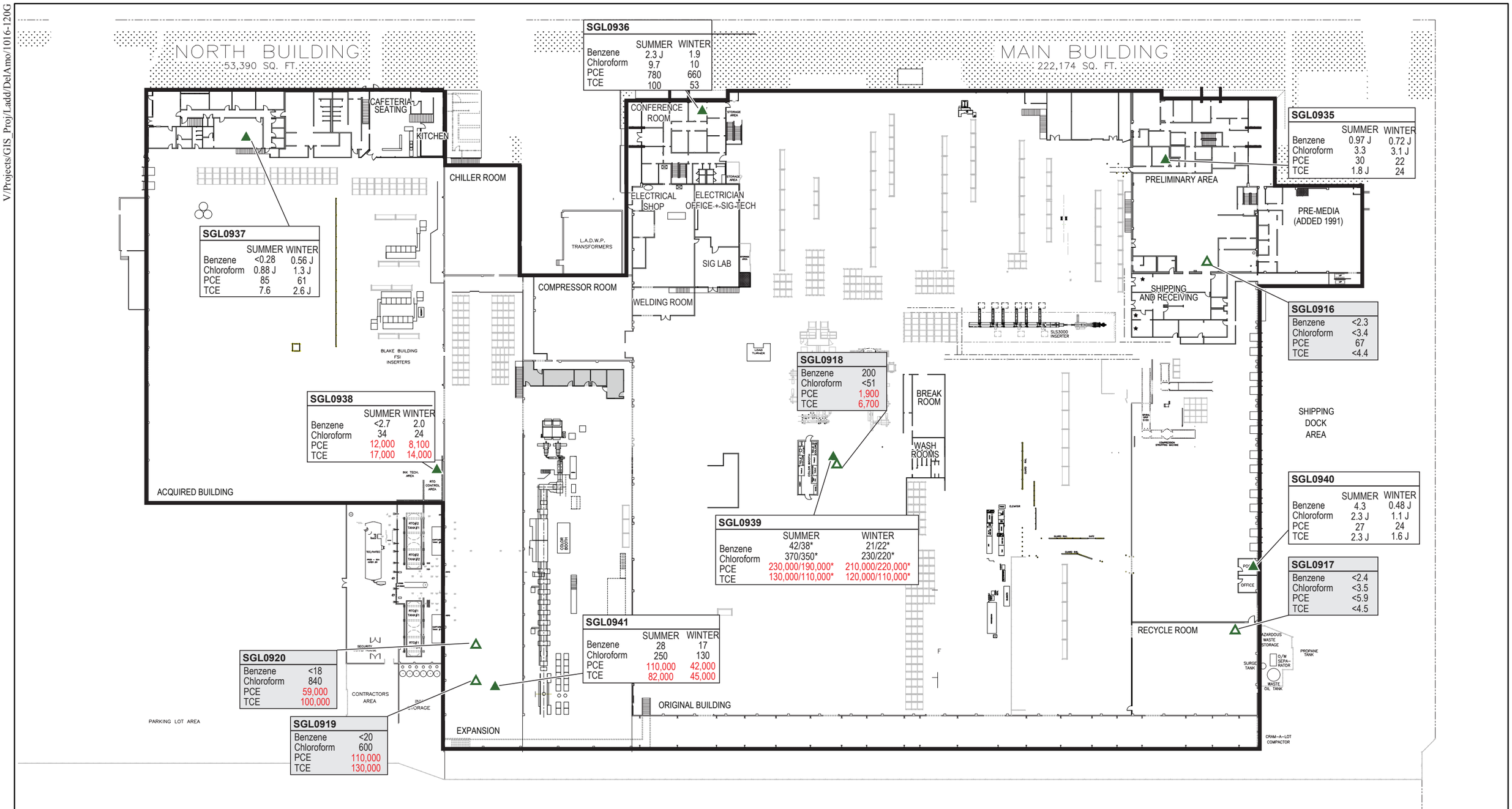
FIGURE 7

OUTDOOR AIR COC CONCENTRATIONS Property 16

Del Amo Superfund Site

AECOM

V:/Projects/GIS_Proj/Ladd/DelAmo/1016-120G



EXPLANATION

▲ Sub-slab vapor sampling location

△ Historical (2009) sub-slab vapor sampling location

SGL0941	
Benzene	28.0
Chloroform	250
PCE	110,000
TCE	82,000

Detected COC concentrations ($\mu g/m^3$). Concentrations in red indicate exceedance of Action Level/Cleanup Goal.

SGL0919	
Benzene	<20
Chloroform	600
PCE	110,000
TCE	130,000

Shaded box represents historical (2009) sub-slab vapor sampling location results

NOTES:

COC	Constituents of concern
$\mu g/m^3$	Micrograms per cubic meter
PCE	Tetrachloroethane
TCE	Trichloroethane
*	Duplicate sample result

N

0' 30' 60' 90' 120'

Total area = 285,000 ft²

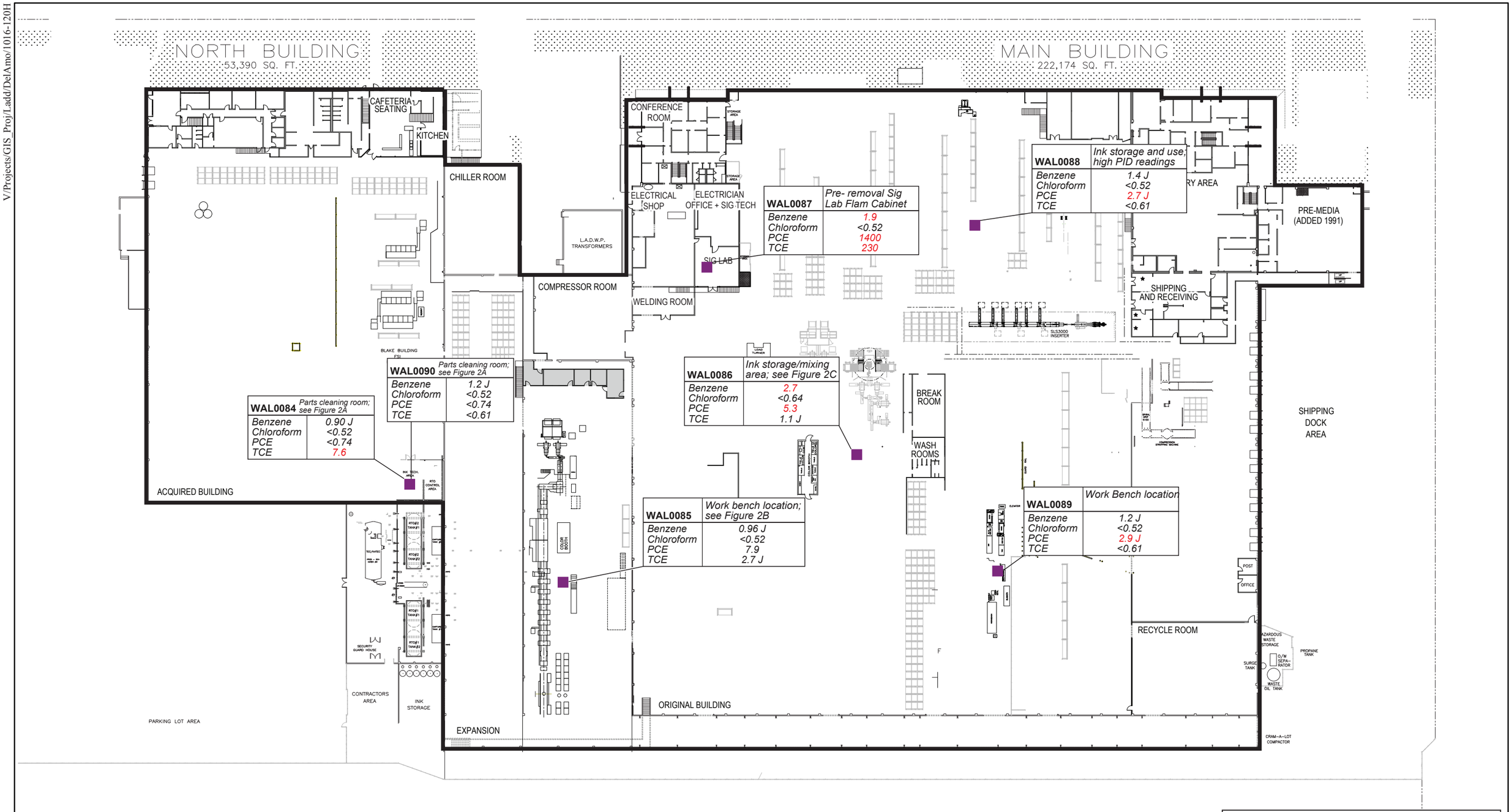
FIGURE 8

SUB-SLAB VAPOR COC CONCENTRATIONS Property 16

Del Amo Superfund Site

AECOM

V:/Projects/GIS_Proj/Ladd/DelAmo/1016-120H



EXPLANATION

■ *Air grab sampling location*

WAL0085	
Benzene	0.96 J
Chloroform	7.9
PCE	ND
TCE	2.7 J

Detected COC concentrations (µg/m³). Concentrations in red indicate exceedance of the Action Level/Clean up goal.

NOTES:

COC	Constituents of concern
µg/m³	Micrograms per cubic meter
PCE	Tetrachloroethane
TCE	Trichloroethane
RSL	Regional screening level

N

0' 30' 60' 90' 120'

Total area = 285,000 ft²

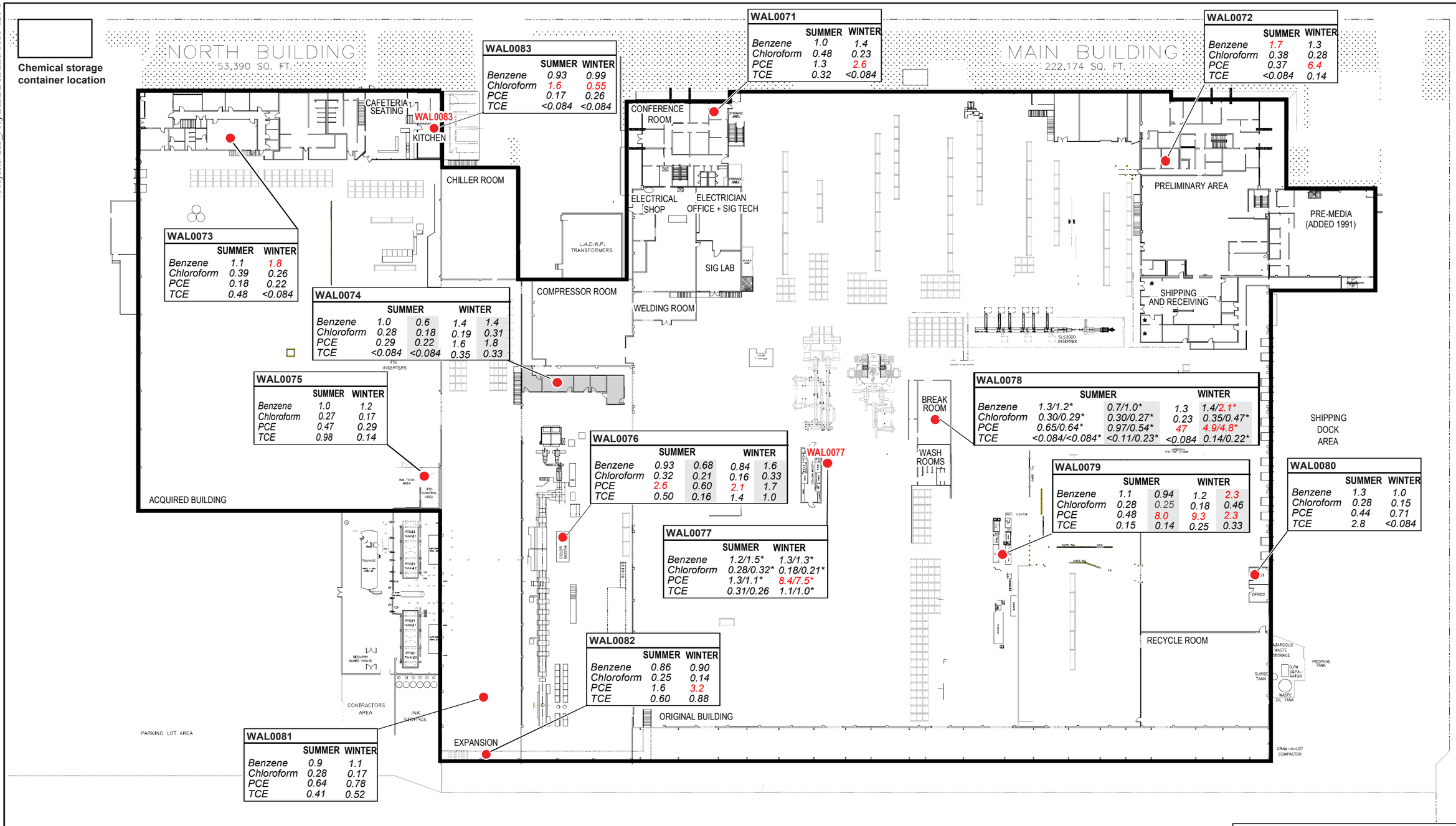
FIGURE 9

AIR GRAB SAMPLE COC CONCENTRATIONS Property 16

Del Amo Superfund Site

AECOM

V:/Projects/GIS_Proj/Ladd/DelAmo/1016-120-I



EXPLANATION

● *Indoor air sampling location*

WAL0076	2017		2018	
Benzene	0.93	0.68	0.84	1.6
Chloroform	0.32	0.21	0.16	0.33
PCE	2.6	0.60	2.1	1.7
TCE	0.50	0.16	1.4	1.0

Detected COC concentrations (µg/m³). Concentrations in red indicate exceedance of Action Level/Cleanup Goal. Where present, second value is for night sample.

NOTES:

COC	Constituents of concern
µg/m³	Micrograms per cubic meter
PCE	Tetrachloroethane
TCE	Trichloroethane
*	Duplicate sample result

N

0' 30' 60' 90' 120'

Total area = 285,000 ft²

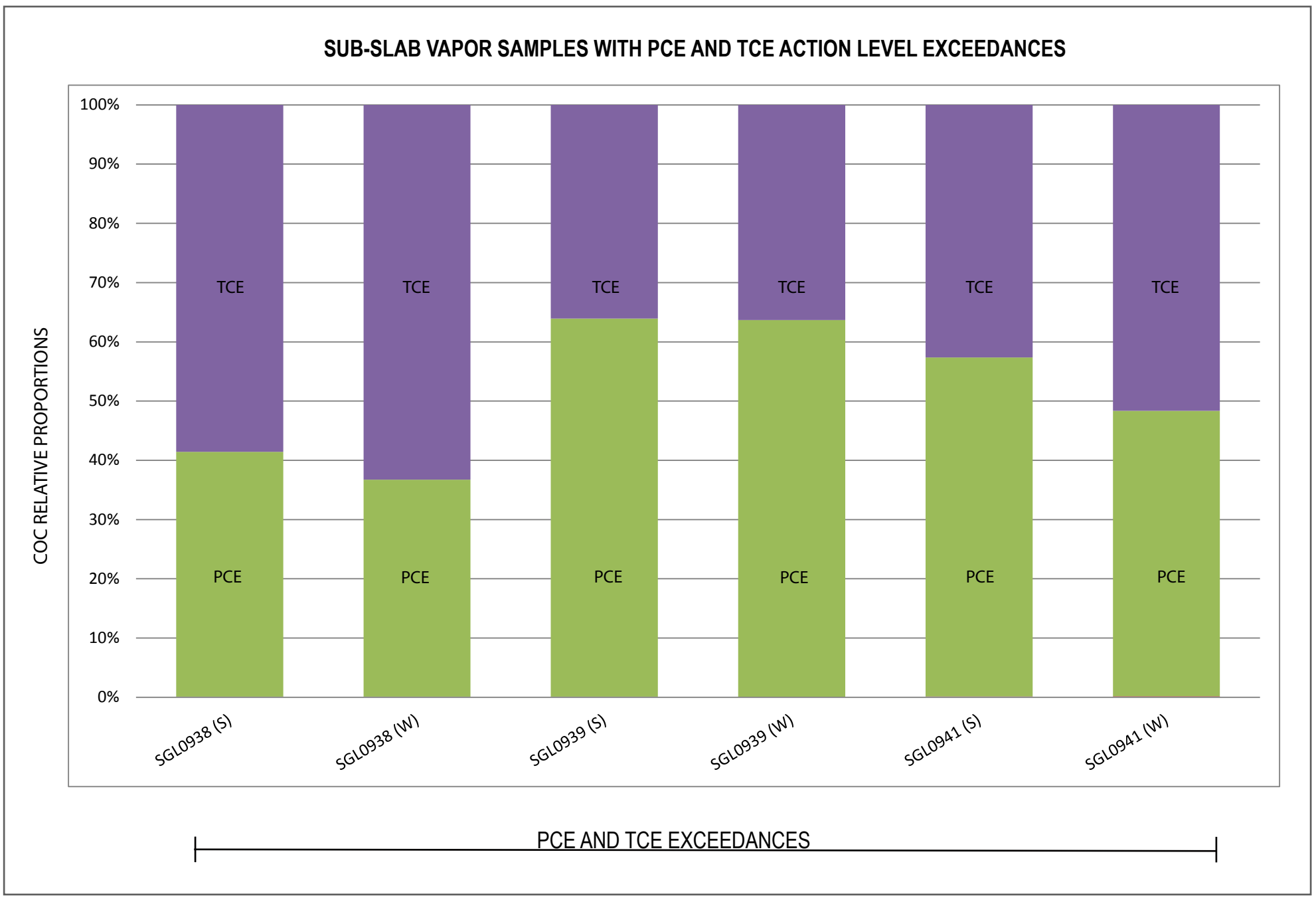
FIGURE 10

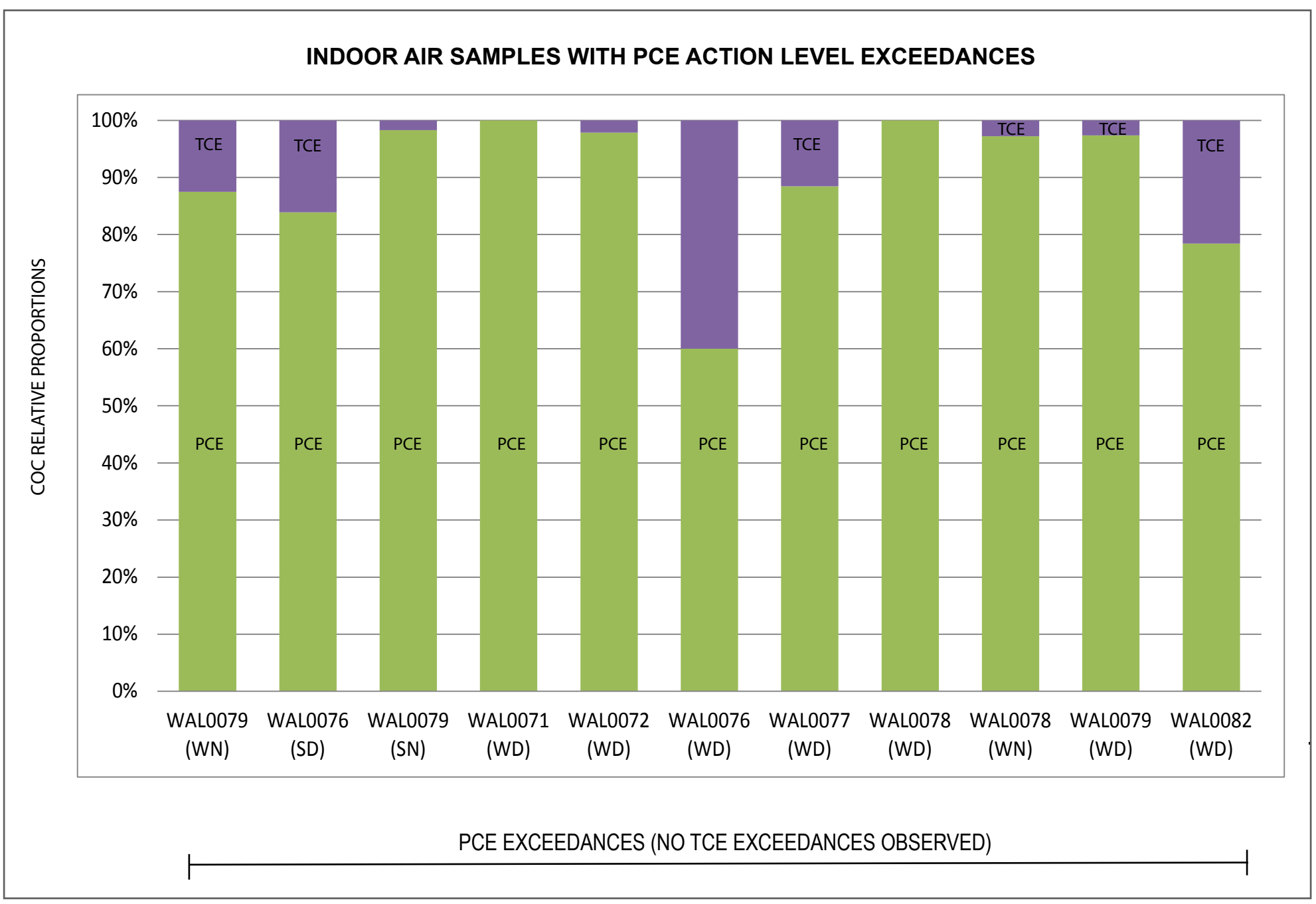
INDOOR AIR COC CONCENTRATIONS Property 16

Del Amo Superfund Site

AECOM

V:\Projects_Proj\Shell\Del Amo\900 GIS\907 - Illustrator\2018.04.04.LSC





EXPLANATION

TCE	Trichloroethene
PCE	Tetrachloroethene
S	Sample taken during summer investigation
W	Sample taken during winter investigation
SD	Sample taken during summer investigation during the daytime
WD	Sample taken during winter investigation during the nighttime
WN	Sample taken during winter investigation during the daytime

NOTES

COC	constituent of concern
%	percent

FIGURE 11

PCE AND TCE PROPORTIONS IN SUB-SLAB VAPOR AND INDOOR AIR SAMPLES

Property 16

Del Amo Superfund Site

AECOM

ATTACHMENT 1

LABORATORY ANALYTICAL REPORTS

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Supplemental Report 1

The original report has been revised to include the Level IV deliverables package.

WORK ORDER NUMBER: 18-03-0118

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AECOM

Client Project Name: Del Amo Superfund Site, Los Angeles

Attention: Julie Doane-Allmon
130 Robin Hill Road
Suite 100
Santa Barbara, CA 93117-3153

Approved for release on 04/06/2018 by:
Vikas Patel
Project Manager

ResultLink

Email your PM

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Client Project Name: Del Amo Superfund Site, Los Angeles
Work Order Number: 18-03-0118

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3 QC Association Summary. 5

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5.1 EPA TO-15 Full List (Air). 7

6 Quality Control Sample Data. 15
6.1 LCS/LCSD. 15

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10 Chain-of-Custody/Sample Receipt Form. 27

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12 Level IV Data Package - EPA TO-15 Full List. 34

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Work Order Narrative

Work Order: 18-03-0118 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/02/18. They were assigned to Work Order 18-03-0118.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

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Sample Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	18-03-0118
		Project Name:	Del Amo Superfund Site, Los Angeles
		PO Number:	98636
		Date/Time Received:	03/02/18 09:20
		Number of Containers:	2
Attn:	Julie Doane-Allmon		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
WAS00047	18-03-0118-1	03/01/18 10:00	1	Air
WAS00048	18-03-0118-2	03/01/18 09:30	1	Air

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QC Association Summary

Work Order: 18-03-0118

Client Sample ID	Method Name	Type	Ext Name	Instrument	MS/MSD/SDP	LCS/LCSD
WAS00047	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180302L01
WAS00047	EPA TO-15 Full List	R	N/A	GC/MS OOO	*2	180303L01
WAS00047	EPA TO-15 Full List	R	N/A	GC/MS OOO	*2	180305L01
WAS00048	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180302L01
WAS00048	EPA TO-15 Full List	R	N/A	GC/MS OOO	*2	180303L01

2 = Limited sample received, no MS/MSD performed

R = Rerun

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	18-03-0118
		Project Name:	Del Amo Superfund Site, Los Angeles
		Received:	03/02/18
Attn:	Julie Doane-Allmon		Page 1 of 1

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00047 (18-03-0118-1)						
Acetone	1100000		41000	ug/m3	EPA TO-15	N/A
Benzene	1.9		1.6	ug/m3	EPA TO-15	N/A
2-Butanone	56		4.4	ug/m3	EPA TO-15	N/A
Chloromethane	1.9		1.0	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	2.7		2.5	ug/m3	EPA TO-15	N/A
1,1-Dichloroethene	0.83	J	0.36*	ug/m3	EPA TO-15	N/A
Isopropanol	30		12	ug/m3	EPA TO-15	N/A
Methylene Chloride	13	J	3.8*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	1400		37	ug/m3	EPA TO-15	N/A
Toluene	14		1.9	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	2.5	J	0.61*	ug/m3	EPA TO-15	N/A
Trichloroethene	230		2.7	ug/m3	EPA TO-15	N/A
Vinyl Chloride	0.87	J	0.35*	ug/m3	EPA TO-15	N/A
WAS00048 (18-03-0118-2)						
Acetone	16000		480	ug/m3	EPA TO-15	N/A
Benzene	1.4	J	0.27*	ug/m3	EPA TO-15	N/A
2-Butanone	6.1		4.4	ug/m3	EPA TO-15	N/A
Chloromethane	1.1		1.0	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	2.2	J	1.0*	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	5.6		5.4	ug/m3	EPA TO-15	N/A
Isopropanol	8.8	J	2.6*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	2.7	J	0.74*	ug/m3	EPA TO-15	N/A
Toluene	22		1.9	ug/m3	EPA TO-15	N/A

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

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Analytical Report

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles			Page 1 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00047	**18-03-0118-1-A**	**03/01/18 10:00**	**Air**	**GC/MS OOO**	**N/A**	**03/03/18 00:16**	**180302L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Benzene	1.9	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	56	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	1.9	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	2.7	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	0.83	2.0	0.36	1.00	J
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles			Page 2 of 8

Parameter	Result	RL	MDL	DF	Qualifiers
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	30	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	13	17	3.8	1.00	J
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Toluene	14	1.9	1.4	1.00	
1,1,1-Trichloroethane	2.5	2.7	0.61	1.00	J
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	230	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	0.87	1.3	0.35	1.00	J
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	108	68-134	
1,2-Dichloroethane-d4	106	67-133	
Toluene-d8	96	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00047	**18-03-0118-1-A**	**03/01/18 10:00**	**Air**	**GC/MS OOO**	**N/A**	**03/03/18 21:35**	**180303L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	1400	37	8.1	10.9	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	111	68-134	
1,2-Dichloroethane-d4	111	67-133	
Toluene-d8	89	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles			Page 3 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00047	**18-03-0118-1-A**	**03/01/18 10:00**	**Air**	**GC/MS OOO**	**N/A**	**03/05/18 15:17**	**180305L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	1100000	41000	23000	8720	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-134	
1,2-Dichloroethane-d4	98	67-133	
Toluene-d8	96	70-130	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles			Page 4 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00048	**18-03-0118-2-A**	**03/01/18 09:30**	**Air**	**GC/MS OOO**	**N/A**	**03/03/18 01:08**	**180302L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Benzene	1.4	1.6	0.27	1.00	J
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	6.1	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	1.1	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	2.2	2.5	1.0	1.00	J
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	5.6	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles			Page 5 of 8

Parameter	Result	RL	MDL	DF	Qualifiers
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	8.8	12	2.6	1.00	J
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	2.7	3.4	0.74	1.00	J
Toluene	22	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	ND	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	68-134	
1,2-Dichloroethane-d4	104	67-133	
Toluene-d8	97	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00048	**18-03-0118-2-A**	**03/01/18 09:30**	**Air**	**GC/MS OOO**	**N/A**	**03/03/18 23:09**	**180303L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	16000	480	260	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	106	68-134	
1,2-Dichloroethane-d4	111	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles			Page 6 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19815**	**N/A**	**Air**	**GC/MS OOO**	**N/A**	**03/02/18 14:44**	**180302L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Benzene	ND	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	ND	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles			Page 7 of 8

Parameter	Result	RL	MDL	DF	Qualifiers
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	ND	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	ND	3.4	0.74	1.00	
Toluene	ND	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	ND	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	98	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19819**	**N/A**	**Air**	**GC/MS OOO**	**N/A**	**03/03/18 14:24**	**180303L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	4.8	2.6	1.00	
Tetrachloroethene	ND	3.4	0.74	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-134	
1,2-Dichloroethane-d4	101	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles			Page 8 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19823**	**N/A**	**Air**	**GC/MS OOO**	**N/A**	**03/05/18 14:33**	**180305L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	4.8	2.6	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	68-134	
1,2-Dichloroethane-d4	98	67-133	
Toluene-d8	98	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles			Page 1 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19815	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/02/18 11:26**	**180302L01**
095-01-021-19815	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/02/18 12:41**	**180302L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	246.7	133	252.6	136	31-151	11-171	2	0-30	
Acetone	59.39	59.05	99	58.01	98	67-133	56-144	2	0-30	
Benzene	79.87	81.21	102	79.90	100	70-130	60-140	2	0-30	
Benzyl Chloride	129.4	141.8	110	141.6	109	38-158	18-178	0	0-30	
Bromodichloromethane	167.5	168.7	101	166.7	100	70-130	60-140	1	0-30	
Bromoform	258.4	264.7	102	266.3	103	63-147	49-161	1	0-30	
Bromomethane	97.08	96.80	100	95.61	98	70-139	58-150	1	0-30	
2-Butanone	73.73	74.52	101	74.19	101	66-132	55-143	0	0-30	
n-Butylbenzene	137.2	137.4	100	136.7	100	50-150	33-167	1	0-30	
sec-Butylbenzene	137.2	133.7	97	132.5	97	50-150	33-167	1	0-30	
tert-Butylbenzene	137.2	135.9	99	134.3	98	50-150	33-167	1	0-30	
Carbon Disulfide	77.85	77.81	100	76.64	98	68-146	55-159	2	0-30	
Carbon Tetrachloride	157.3	156.9	100	154.5	98	70-136	59-147	2	0-30	
Chlorobenzene	115.1	115.7	100	115.5	100	70-130	60-140	0	0-30	
Chloroethane	65.96	65.69	100	64.26	97	65-149	51-163	2	0-30	
Chloroform	122.1	120.1	98	118.8	97	70-130	60-140	1	0-30	
Chloromethane	51.63	50.08	97	48.53	94	69-141	57-153	3	0-30	
Dibromochloromethane	213.0	213.0	100	213.7	100	70-138	59-149	0	0-30	
1,2-Dibromoethane	192.1	196.7	102	195.7	102	70-133	60-144	0	0-30	
1,2-Dichlorobenzene	150.3	158.9	106	158.4	105	48-138	33-153	0	0-30	
1,3-Dichlorobenzene	150.3	155.2	103	154.8	103	56-134	43-147	0	0-30	
1,4-Dichlorobenzene	150.3	164.5	109	163.5	109	52-136	38-150	1	0-30	
Dichlorodifluoromethane	123.6	124.9	101	121.1	98	67-139	55-151	3	0-30	
1,1-Dichloroethane	101.2	99.66	98	98.49	97	70-130	60-140	1	0-30	
1,2-Dichloroethane	101.2	100.4	99	98.87	98	70-132	60-142	1	0-30	
1,1-Dichloroethene	99.12	97.57	98	95.13	96	70-135	59-146	3	0-30	
c-1,2-Dichloroethene	99.12	100.5	101	100.7	102	70-130	60-140	0	0-30	
t-1,2-Dichloroethene	99.12	101.5	102	99.54	100	70-130	60-140	2	0-30	
1,2-Dichloropropane	115.5	114.7	99	112.4	97	70-130	60-140	2	0-30	
c-1,3-Dichloropropene	113.5	120.4	106	119.1	105	70-130	60-140	1	0-30	
t-1,3-Dichloropropene	113.5	122.1	108	121.4	107	70-147	57-160	1	0-30	
Dichlorotetrafluoroethane	174.8	175.5	100	175.5	100	51-135	37-149	0	0-30	
1,1-Difluoroethane	67.54	61.07	90	59.92	89	70-131	60-141	2	0-30	
Ethylbenzene	108.6	112.1	103	112.2	103	70-130	60-140	0	0-30	
4-Ethyltoluene	122.9	129.6	105	127.7	104	68-130	58-140	2	0-30	
Hexachloro-1,3-Butadiene	266.6	309.2	116	314.7	118	44-146	27-163	2	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles			Page 2 of 9

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
2-Hexanone	102.4	115.0	112	114.2	112	70-136	59-147	1	0-30	
Isopropanol	61.45	52.85	86	62.04	101	57-135	44-148	16	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	91.27	101	89.97	100	68-130	58-140	1	0-30	
Methylene Chloride	86.84	89.83	103	84.04	97	69-130	59-140	7	0-30	
4-Methyl-2-Pentanone	102.4	109.3	107	107.8	105	70-130	60-140	1	0-30	
Styrene	106.5	111.7	105	111.1	104	65-131	54-142	1	0-30	
1,1,2,2-Tetrachloroethane	171.6	172.2	100	171.0	100	63-130	52-141	1	0-30	
Tetrachloroethene	169.6	169.9	100	168.5	99	70-130	60-140	1	0-30	
Toluene	94.21	93.64	99	94.86	101	70-130	60-140	1	0-30	
1,1,1-Trichloroethane	136.4	136.3	100	135.5	99	70-130	60-140	1	0-30	
1,1,2-Trichloroethane	136.4	137.3	101	136.4	100	70-130	60-140	1	0-30	
Trichloroethene	134.3	135.6	101	134.6	100	70-130	60-140	1	0-30	
Trichlorofluoromethane	140.5	136.6	97	143.8	102	63-141	50-154	5	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	192.0	100	189.5	99	70-136	59-147	1	0-30	
1,2,4-Trimethylbenzene	122.9	126.3	103	125.5	102	60-132	48-144	1	0-30	
1,3,5-Trimethylbenzene	122.9	125.8	102	126.4	103	62-130	51-141	0	0-30	
Vinyl Acetate	88.03	87.76	100	86.00	98	58-130	46-142	2	0-30	
Vinyl Chloride	63.91	62.92	98	62.36	98	70-134	59-145	1	0-30	
o-Xylene	108.6	108.2	100	107.1	99	69-130	59-140	1	0-30	
p/m-Xylene	217.1	216.6	100	216.5	100	70-132	60-142	0	0-30	

Total number of LCS compounds: 56
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles			Page 3 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19815	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/02/18 11:26**	**180302L01**
095-01-021-19815	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/02/18 12:41**	**180302L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	178.9	178.2	100	178.0	99	68-134	
1,2-Dichloroethane-d4	105.3	102.8	98	101.6	97	67-133	
Toluene-d8	102.4	101.6	99	101.8	99	70-130	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles			Page 4 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19819	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/03/18 11:35**	**180303L01**
095-01-021-19819	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/03/18 12:24**	**180303L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	263.8	142	261.9	141	31-151	11-171	1	0-30	
Acetone	59.39	59.12	100	58.82	99	67-133	56-144	1	0-30	
Benzene	79.87	76.16	95	78.33	98	70-130	60-140	3	0-30	
Benzyl Chloride	129.4	143.6	111	141.6	109	38-158	18-178	1	0-30	
Bromodichloromethane	167.5	170.9	102	170.3	102	70-130	60-140	0	0-30	
Bromoform	258.4	271.9	105	269.2	104	63-147	49-161	1	0-30	
Bromomethane	97.08	97.65	101	97.43	100	70-139	58-150	0	0-30	
2-Butanone	73.73	74.39	101	73.28	99	66-132	55-143	2	0-30	
n-Butylbenzene	137.2	141.6	103	138.6	101	50-150	33-167	2	0-30	
sec-Butylbenzene	137.2	136.1	99	133.8	97	50-150	33-167	2	0-30	
tert-Butylbenzene	137.2	139.5	102	136.4	99	50-150	33-167	2	0-30	
Carbon Disulfide	77.85	73.45	94	74.66	96	68-146	55-159	2	0-30	
Carbon Tetrachloride	157.3	164.5	105	162.7	103	70-136	59-147	1	0-30	
Chlorobenzene	115.1	112.1	97	113.0	98	70-130	60-140	1	0-30	
Chloroethane	65.96	65.40	99	64.57	98	65-149	51-163	1	0-30	
Chloroform	122.1	119.1	98	118.4	97	70-130	60-140	1	0-30	
Chloromethane	51.63	51.85	100	50.84	98	69-141	57-153	2	0-30	
Dibromochloromethane	213.0	216.3	102	212.5	100	70-138	59-149	2	0-30	
1,2-Dibromoethane	192.1	192.9	100	191.9	100	70-133	60-144	1	0-30	
1,2-Dichlorobenzene	150.3	164.7	110	160.3	107	48-138	33-153	3	0-30	
1,3-Dichlorobenzene	150.3	158.6	106	155.3	103	56-134	43-147	2	0-30	
1,4-Dichlorobenzene	150.3	167.4	111	164.5	109	52-136	38-150	2	0-30	
Dichlorodifluoromethane	123.6	131.7	107	128.2	104	67-139	55-151	3	0-30	
1,1-Dichloroethane	101.2	96.43	95	97.37	96	70-130	60-140	1	0-30	
1,2-Dichloroethane	101.2	104.3	103	101.7	100	70-132	60-142	3	0-30	
1,1-Dichloroethene	99.12	97.24	98	96.52	97	70-135	59-146	1	0-30	
c-1,2-Dichloroethene	99.12	95.92	97	97.35	98	70-130	60-140	1	0-30	
t-1,2-Dichloroethene	99.12	96.34	97	96.58	97	70-130	60-140	0	0-30	
1,2-Dichloropropane	115.5	111.2	96	112.6	97	70-130	60-140	1	0-30	
c-1,3-Dichloropropene	113.5	116.5	103	118.3	104	70-130	60-140	2	0-30	
t-1,3-Dichloropropene	113.5	121.9	107	122.4	108	70-147	57-160	0	0-30	
Dichlorotetrafluoroethane	174.8	182.4	104	180.3	103	51-135	37-149	1	0-30	
1,1-Difluoroethane	67.54	63.54	94	61.58	91	70-131	60-141	3	0-30	
Ethylbenzene	108.6	109.0	100	108.6	100	70-130	60-140	0	0-30	
4-Ethyltoluene	122.9	130.1	106	128.1	104	68-130	58-140	2	0-30	
Hexachloro-1,3-Butadiene	266.6	340.2	128	332.6	125	44-146	27-163	2	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles			Page 5 of 9

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
2-Hexanone	102.4	109.1	107	115.8	113	70-136	59-147	6	0-30	
Isopropanol	61.45	49.79	81	49.18	80	57-135	44-148	1	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	89.67	99	88.99	99	68-130	58-140	1	0-30	
Methylene Chloride	86.84	85.39	98	85.56	99	69-130	59-140	0	0-30	
4-Methyl-2-Pentanone	102.4	105.7	103	106.7	104	70-130	60-140	1	0-30	
Styrene	106.5	108.7	102	108.7	102	65-131	54-142	0	0-30	
1,1,2,2-Tetrachloroethane	171.6	166.1	97	165.3	96	63-130	52-141	0	0-30	
Tetrachloroethene	169.6	169.9	100	167.7	99	70-130	60-140	1	0-30	
Toluene	94.21	91.01	97	91.19	97	70-130	60-140	0	0-30	
1,1,1-Trichloroethane	136.4	138.9	102	137.3	101	70-130	60-140	1	0-30	
1,1,2-Trichloroethane	136.4	134.1	98	135.9	100	70-130	60-140	1	0-30	
Trichloroethene	134.3	134.1	100	134.5	100	70-130	60-140	0	0-30	
Trichlorofluoromethane	140.5	148.7	106	143.5	102	63-141	50-154	4	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	187.2	98	187.8	98	70-136	59-147	0	0-30	
1,2,4-Trimethylbenzene	122.9	129.5	105	126.7	103	60-132	48-144	2	0-30	
1,3,5-Trimethylbenzene	122.9	126.7	103	127.0	103	62-130	51-141	0	0-30	
Vinyl Acetate	88.03	87.16	99	85.82	97	58-130	46-142	2	0-30	
Vinyl Chloride	63.91	64.21	100	63.70	100	70-134	59-145	1	0-30	
o-Xylene	108.6	107.1	99	105.7	97	69-130	59-140	1	0-30	
p/m-Xylene	217.1	216.1	100	214.7	99	70-132	60-142	1	0-30	

Total number of LCS compounds: 56
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles			Page 6 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19819	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/03/18 11:35**	**180303L01**
095-01-021-19819	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/03/18 12:24**	**180303L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	178.9	182.5	102	178.7	100	68-134	
1,2-Dichloroethane-d4	105.3	108.9	103	105.9	101	67-133	
Toluene-d8	102.4	103.0	101	103.1	101	70-130	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles			Page 7 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19823	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/05/18 11:46**	**180305L01**
095-01-021-19823	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/05/18 12:39**	**180305L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	252.5	136	256.6	138	31-151	11-171	2	0-30	
Acetone	59.39	57.16	96	58.38	98	67-133	56-144	2	0-30	
Benzene	79.87	79.92	100	80.69	101	70-130	60-140	1	0-30	
Benzyl Chloride	129.4	141.0	109	142.1	110	38-158	18-178	1	0-30	
Bromodichloromethane	167.5	169.0	101	170.0	101	70-130	60-140	1	0-30	
Bromoform	258.4	266.8	103	269.8	104	63-147	49-161	1	0-30	
Bromomethane	97.08	96.56	99	97.91	101	70-139	58-150	1	0-30	
2-Butanone	73.73	72.63	99	71.48	97	66-132	55-143	2	0-30	
n-Butylbenzene	137.2	134.8	98	137.4	100	50-150	33-167	2	0-30	
sec-Butylbenzene	137.2	131.7	96	132.5	97	50-150	33-167	1	0-30	
tert-Butylbenzene	137.2	134.9	98	136.5	99	50-150	33-167	1	0-30	
Carbon Disulfide	77.85	75.90	97	76.83	99	68-146	55-159	1	0-30	
Carbon Tetrachloride	157.3	158.9	101	159.3	101	70-136	59-147	0	0-30	
Chlorobenzene	115.1	114.9	100	116.2	101	70-130	60-140	1	0-30	
Chloroethane	65.96	63.96	97	65.46	99	65-149	51-163	2	0-30	
Chloroform	122.1	119.4	98	120.4	99	70-130	60-140	1	0-30	
Chloromethane	51.63	49.16	95	49.72	96	69-141	57-153	1	0-30	
Dibromochloromethane	213.0	214.0	101	215.7	101	70-138	59-149	1	0-30	
1,2-Dibromoethane	192.1	194.9	101	198.0	103	70-133	60-144	2	0-30	
1,2-Dichlorobenzene	150.3	157.3	105	159.1	106	48-138	33-153	1	0-30	
1,3-Dichlorobenzene	150.3	155.0	103	156.2	104	56-134	43-147	1	0-30	
1,4-Dichlorobenzene	150.3	162.1	108	164.7	110	52-136	38-150	2	0-30	
Dichlorodifluoromethane	123.6	119.7	97	121.2	98	67-139	55-151	1	0-30	
1,1-Dichloroethane	101.2	96.95	96	98.62	97	70-130	60-140	2	0-30	
1,2-Dichloroethane	101.2	99.72	99	100.1	99	70-132	60-142	0	0-30	
1,1-Dichloroethene	99.12	95.35	96	97.77	99	70-135	59-146	3	0-30	
c-1,2-Dichloroethene	99.12	99.64	101	100.9	102	70-130	60-140	1	0-30	
t-1,2-Dichloroethene	99.12	98.51	99	100.2	101	70-130	60-140	2	0-30	
1,2-Dichloropropane	115.5	112.9	98	114.3	99	70-130	60-140	1	0-30	
c-1,3-Dichloropropene	113.5	119.3	105	120.5	106	70-130	60-140	1	0-30	
t-1,3-Dichloropropene	113.5	121.7	107	123.2	109	70-147	57-160	1	0-30	
Dichlorotetrafluoroethane	174.8	176.4	101	178.9	102	51-135	37-149	1	0-30	
1,1-Difluoroethane	67.54	61.13	91	61.68	91	70-131	60-141	1	0-30	
Ethylbenzene	108.6	110.9	102	112.4	104	70-130	60-140	1	0-30	
4-Ethyltoluene	122.9	127.6	104	130.8	106	68-130	58-140	2	0-30	
Hexachloro-1,3-Butadiene	266.6	320.0	120	323.5	121	44-146	27-163	1	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles			Page 8 of 9

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
2-Hexanone	102.4	117.4	115	118.1	115	70-136	59-147	1	0-30	
Isopropanol	61.45	63.32	103	55.71	91	57-135	44-148	13	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	90.05	100	91.16	101	68-130	58-140	1	0-30	
Methylene Chloride	86.84	83.39	96	84.56	97	69-130	59-140	1	0-30	
4-Methyl-2-Pentanone	102.4	107.2	105	106.6	104	70-130	60-140	1	0-30	
Styrene	106.5	110.8	104	110.7	104	65-131	54-142	0	0-30	
1,1,2,2-Tetrachloroethane	171.6	169.0	98	170.5	99	63-130	52-141	1	0-30	
Tetrachloroethene	169.6	170.7	101	172.0	101	70-130	60-140	1	0-30	
Toluene	94.21	93.41	99	94.38	100	70-130	60-140	1	0-30	
1,1,1-Trichloroethane	136.4	136.5	100	137.9	101	70-130	60-140	1	0-30	
1,1,2-Trichloroethane	136.4	137.7	101	137.8	101	70-130	60-140	0	0-30	
Trichloroethene	134.3	135.7	101	136.0	101	70-130	60-140	0	0-30	
Trichlorofluoromethane	140.5	154.2	110	138.9	99	63-141	50-154	10	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	189.5	99	192.3	100	70-136	59-147	1	0-30	
1,2,4-Trimethylbenzene	122.9	126.0	103	126.5	103	60-132	48-144	0	0-30	
1,3,5-Trimethylbenzene	122.9	125.6	102	126.6	103	62-130	51-141	1	0-30	
Vinyl Acetate	88.03	84.08	96	85.64	97	58-130	46-142	2	0-30	
Vinyl Chloride	63.91	62.59	98	63.01	99	70-134	59-145	1	0-30	
o-Xylene	108.6	106.6	98	107.5	99	69-130	59-140	1	0-30	
p/m-Xylene	217.1	215.5	99	217.3	100	70-132	60-142	1	0-30	

Total number of LCS compounds: 56
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	03/02/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0118
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles			Page 9 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19823	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/05/18 11:46**	**180305L01**
095-01-021-19823	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/05/18 12:39**	**180305L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	178.9	177.4	99	177.0	99	68-134	
1,2-Dichloroethane-d4	105.3	102.6	97	102.2	97	67-133	
Toluene-d8	102.4	103.0	101	102.5	100	70-130	

RPD: Relative Percent Difference. CL: Control Limits

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Summa Canister Vacuum Summary

Work Order: 18-03-0118

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
WAS00047	-29.50 in Hg	-4.80 in Hg	LC985	Summa Canister 1L
WAS00048	-29.50 in Hg	0.00 in Hg	LC505	Summa Canister 1L

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Sample Analysis Summary Report

Work Order: 18-03-0118

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA TO-15	N/A	953	GC/MS OOO	2

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Glossary of Terms and Qualifiers

Work Order: 18-03-0118 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Erick Ovalle

From: Cole, Steve <steve.j.cole@aecom.com>
Sent: Monday, March 05, 2018 10:44 AM
To: Erick Ovalle; Doane-Allmon, Julie; Weaver, Erich; Stempson, Bryan; Palladino, Sarah
Cc: Vikas Patel
Subject: RE: Sample receipt confirmation / 18-03-0118 / Del Amo Superfund Site, Los Angeles

EXTERNAL EMAIL*

Hi Erick,

The sample IDs should have three (3) zeros. Thank you for the catch!

Steven J Cole
Data Management Practice Lead, Project Environmental Scientist
D 1-213-996-2398
Steve.J.Cole@aecom.com

AECOM
300 S. Grand Ave., Suite 800, Los Angeles, CA 90071
T 1-213-593-8100 F 1-213-593-8053
www.aecom.com

From: Erick Ovalle [mailto:ErickOvalle@eurofinsUS.com]
Sent: Monday, March 05, 2018 10:41 AM
To: Doane-Allmon, Julie; Weaver, Erich; Cole, Steve; Stempson, Bryan; Palladino, Sarah
Cc: Vikas Patel
Subject: Sample receipt confirmation / 18-03-0118 / Del Amo Superfund Site, Los Angeles

Sample receipt confirmation attached. Please review and advise of any changes required.

The sample IDs on the COC has two zeros and the containers have three zeros. Please confirm which ID is correct?

Labeled as :

(-1) WA S00047
(-2) WA S00048

(date/time matched) :

Please call with any questions or concerns.

Best Regards,
Erick Ovalle
Project Manager Assistant

Eurofins Calscience

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7440 Lincoln Way
Garden Grove, CA 92841-1427
USA
Phone: +1 (714) 895-5494

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Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
- ☐ ACCUTEST (_____)
- ☑ CALSCIENCE (_____)
- ☐ TESTAMERICA (_____)
- ☐ Other (_____)

Lab Vendor # 1080777 (CalScience)

Please Check Appropriate Box:
- ☑ SGW FDG
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Julie Doane-Allmon

PlaNet Project ID: IDEA000680

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2018

PAGE: 1 of 1

PO #: 98636

GSAP Project ID: USCH/00305

SAMPLING COMPANY: AECOM

LOG CODE:

ADDRESS: 130 Robin Hill Road, Suite 100, Santa Barbara CA, 93117

PROJECT CONTACT (Hardcopy or PDF Report to): Julie Doane-Allmon, Erich Weaver

TELEPHONE: 805 692 0618 or 805-692-0648

FAX: 805-964-0259

Bill To Contact E-MAIL: julie.doane-allmon@aecom.com

SITE ADDRESS: Street and City: Del Amo Superfund Site, 20245 S. Vermont Ave., Torrance

State: CA

AECOM Project / Task Number: 60487624.2018.1.0401

EDF DELIVERABLE TO (Name, Company, Office Location): Steve Cole, AECOM, 300 S. Grand Ave., Ste. 800, LA, CA 90071

PHONE NO.: Direct: 213-996-2398

E-MAIL: steve.j.cole@aecom.com

CONSULTANT PROJECT NO.:

SAMPLER NAME(S) (Print): Sarah Palladino, Bryan Stempson

18-03-0118

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email results to: julie.doane-allmon@aecom.com; erich.weaver@aecom.com; steve.j.cole@aecom.com; Sarah.Palladino@aecom.com; Bryan.Stempson@aecom.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

UNIT COST | NON-UNIT COST

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TO-15
1	WAS0047	3/1/2018	1000	Air				X		1	X
2	WAS0048	3/1/2018	930	Air				X		1	X

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
B. Stempson		3/2/18	0920

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WORK ORDER NUMBER: 18-03-0778

SAMPLE RECEIPT CHECKLIST

COOLER 0 OF 0

CLIENT: AECOM

DATE: 03 / 02 / 2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): _____°C (w/ CF): _____°C; ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☑ Air ☐ Filter

Checked by: 836

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☐ Not Present	☑ N/A	Checked by: 836
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 836

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: **(Trip Blank Lot Number: _____)**

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9)
☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB
☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____
Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____
Air: ☐ Tedlar™ ☑ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 836

Reviewed by: 1140

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eurofins | Calscience

WORK ORDER NUMBER: 18-03- 0118

SAMPLE ANOMALY REPORT

DATE: 03 / 02 / 2018

SAMPLES, CONTAINERS, AND LABELS: | **Comments**

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ pH outside acceptable range (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☑ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☑ Client sample ID
  - ☐ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Labeled as:

(-1) WA S00047

(-2) WA S00048

(date/time matched).

MISCELLANEOUS: (Describe) | **Comments**

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments:

Reported by: 836

Reviewed by: 1140

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

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Case Narrative

Client Project Name: Del Amo Superfund Site, Los Angeles
Work Order Number: 18-03-0118

CONDITION UPON RECEIPT:

Eurofins Calscience received 2 air samples in Summa canisters on March 2nd, 2018. The Summa canisters were received in good condition and at ambient temperature.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
WAS00047	18-03-0118-1	03/01/18 10:00	03/02/18 09:20
WAS00048	18-03-0118-2	03/01/18 09:30	03/02/18 09:20

DATA SUMMARY:

As per the chain of custody (COC), the samples were analyzed using the following methodology:

- EPA TO-15 (M) Full List (Air)

The Summa canisters were individual certified 02/13/18 and 02/22/18.

All samples were analyzed within the suggested EPA holding time for the requested methods unless otherwise noted.

Sample results were reported in the RL/MDL format. In the instance where a result fell between the MDL and the RL, a "J" flag was applied to the data indicating an estimated value.

Any dilutions made to the sample(s) and/or QC will be noted in the following narrative. Reporting limits have been adjusted accordingly.

All samples and analytical QC were within acceptance criteria unless otherwise noted.

Manual integrations made to the data will be noted in the following narrative. The before and amended chromatograms have been included in the data package.

Minimum sample volume required to meet standard RL and MDLs is 400ml. In the event that insufficient volume is available for the analysis, a dilution factor will be applied to the data and the associated RL and MDL will be elevated by the same factor.

EPA TO-15(M) Full List (Air):

Samples -1 and -2 were analyzed for Volatile Organic Compounds by EPA Method TO-15 on 03/03/18 and 03/05/18 in batch #s 180302L01, 180303L01, and 180305L01 on GC/MS II

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Case Narrative

Client Project Name: Del Amo Superfund Site, Los Angeles
Work Order Number: 18-03-0118

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 02/13/18 on GC/MS OOO. The ICAL was within the 30% RSD acceptance criteria and the ICV was within the 30% D acceptance criteria.

Continuing Calibration Verification:

All values were within the 30% D acceptance criteria.

Tuning Reports:

All instrument tuning standards (BFB) were within acceptance criteria.

Sample and QC:

- *QC Batch # 180302L01 on GC/MS OOO;* (Associated with samples -1 and -2)

  The method blank was non-detect for all project-specific analytes and the LCS/LCSD was within acceptance criteria.

  All surrogate and internal standard recoveries were within acceptance criteria.

- *QC Batch # 180303L01 on GC/MS OOO;* (Associated with the dilution reanalysis of samples -1 and -2)

  The method blank was non-detect for all project-specific analytes and the LCS/LCSD was within acceptance criteria.

  All surrogate and internal standard recoveries were within acceptance criteria.

  Sample -1 was reanalyzed at a 10.9x dilution and sample -2 was reanalyzed at a 100x dilution.

- *QC Batch # 180305L01 on GC/MS OOO;* (Associated with the dilution reanalysis of sample -1)

  The method blank was non-detect for all project-specific analytes and the LCS/LCSD was within acceptance criteria.

  All surrogate and internal standard recoveries were within acceptance criteria.

  Sample -1 was reanalyzed at an 8270x dilution.

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EPA METHOD TO-15

RAW DATA

Return to Contents

EPA METHOD TO-15

INITIAL CALIBRATION

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ISS	GC/MS OOO METHOD:				TO-15		
	0.5	1.25	6.25	12.5	25	50	100
Bromochloromethane	738788	747915	741570	724762	693606	704160	647997
1,4-Difluorobenzene	2523780	2571614	2546897	2481223	2386026	2456099	2229205
Chlorobenzene-d5	2216252	2288782	2288885	2270789	2221093	2302354	2159695

TO-15/14 SUPER	GC/MS OOO METHOD: 180213IC		
	LOW	AVERAGE	HIGH
Bromochloromethane	**428468**	**714114**	**999760**
1,4-Difluorobenzene	**1473844**	**2456406**	**3438969**
Chlorobenzene-d5	**1349816**	**2249693**	**3149570**

SURROGATE	CANS	BAGS
1,2-Dichloroethane-d4	67-133	47-137
Toluene-d8	70-130	78-156
1,4-Bromofluorobenzene	68-134	57-129

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA TO-15

ICAL WORK ORDER: 099-10-024-22470-1156
ICAL BATCH ID: 180213IC
INSTRUMENT: GC/MS OOO

ANALYZED BY: 953
ICAL D/T ANALYZED: 2018-02-13 16:03
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
Acetone	C	Avg RF		0.486	0.437	0.434	0.436	0.460	0.446			0.450	0.00	4	0-30	4.483		PASS
Benzene	C	Avg RF	0.858	0.882	0.860	0.853	0.853	0.896	0.846			0.864	0.00	2	0-30	2.089		PASS
Benzyl Chloride	C	Avg RF		1.108	1.145	1.196	1.276	1.334	1.254			1.219	0.00	7	0-30	6.960		PASS
Bromodichloromethane	C	Avg RF	0.663	0.693	0.682	0.685	0.694	0.722	0.700			0.691	0.00	3	0-30	2.622		PASS
Bromoform	C	Avg RF	0.800	0.859	0.872	0.877	0.863	0.868	0.795			0.848	0.00	4	0-30	4.104		PASS
Bromomethane	C	Avg RF	0.805	0.776	0.729	0.719	0.714	0.765	0.741			0.750	0.00	4	0-30	4.456		PASS
1,3-Butadiene	C	Avg RF		0.795	0.748	0.735	0.722	0.748	0.706			0.742	0.00	4	0-30	4.119		PASS
2-Butanone	C	Avg RF		2.484	2.535	2.596	2.669	2.674	2.662			2.603	0.00	3	0-30	3.058		PASS
Carbon Disulfide	C	Avg RF	2.698	2.711	2.618	2.564	2.487	2.584	2.365			2.575	0.00	5	0-30	4.683		PASS
Carbon Tetrachloride	C	Avg RF	0.749	0.755	0.728	0.724	0.729	0.742	0.730			0.737	0.00	2	0-30	1.605		PASS
Chlorobenzene	C	Avg RF	0.998	1.011	0.947	0.933	0.917	0.963	0.891			0.952	0.00	5	0-30	4.525		PASS
Chloroethane	C	Avg RF	0.407	0.406	0.387	0.379	0.378	0.407	0.391			0.394	0.00	3	0-30	3.344		PASS
Chloroform	C	Avg RF	2.233	2.257	2.103	2.077	2.042	2.120	2.027			2.123	0.00	4	0-30	4.226		PASS
Chloromethane	C	Avg RF	0.973	0.939	0.908	0.905	0.905	0.939	0.888			0.922	0.00	3	0-30	3.175		PASS
Cyclohexane	C	Avg RF	0.583	0.614	0.603	0.597	0.594	0.601	0.570			0.595	0.00	2	0-30	2.436		PASS
Dibromochloromethane	C	Avg RF	0.796	0.843	0.824	0.801	0.788	0.814	0.751			0.802	0.00	4	0-30	3.639		PASS
Dichlorodifluoromethane	C	Avg RF	2.696	2.604	2.334	2.441	2.389	2.239	2.042			2.392	0.00	9	0-30	9.171		PASS
Diisopropyl Ether (DIPE)	C	Avg RF		5.450	5.175	5.054	4.832	4.397				4.982	0.00	8	0-30	7.940		PASS
1,1-Dichloroethane	C	Avg RF	2.246	2.223	2.096	2.054	2.053	2.121	2.049			2.120	0.00	4	0-30	3.903		PASS
1,1-Dichloroethene	C	Avg RF	2.200	2.124	2.025	1.987	1.994	2.034	1.893			2.037	0.00	5	0-30	4.879		PASS
1,2-Dibromoethane	C	Avg RF	0.639	0.690	0.692	0.681	0.673	0.712	0.660			0.678	0.00	4	0-30	3.508		PASS
Dichlorotetrafluoroethane	C	Avg RF	2.246	2.176	2.070	2.046	2.024	2.094	1.920			2.082	0.00	5	0-30	5.072		PASS

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor
LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA TO-15

ICAL WORK ORDER: 099-10-024-22470-1156
ICAL BATCH ID: 180213IC
INSTRUMENT: GC/MS OOO

ANALYZED BY: 953
ICAL D/T ANALYZED: 2018-02-13 16:03
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
1,2-Dichlorobenzene	C	Avg RF	0.952	1.087	0.997	0.993	0.972	1.008	0.949			0.994	0.00	5	0-30	4.706		PASS
1,2-Dichloroethane	C	Avg RF	1.630	1.683	1.609	1.612	1.628	1.696	1.697			1.651	0.00	2	0-30	2.402		PASS
1,2-Dichloropropane	C	Avg RF	0.396	0.407	0.389	0.386	0.384	0.400	0.381			0.392	0.00	2	0-30	2.445		PASS
1,3-Dichlorobenzene	C	Avg RF	1.016	1.121	1.023	1.021	0.977	1.015	0.939			1.016	0.00	5	0-30	5.460		PASS
1,4-Dichlorobenzene	C	Avg RF	0.798	1.086	1.047	1.038	0.993	1.054	0.969			0.998	0.00	10	0-30	9.655		PASS
1,4-Dioxane		Avg RF			0.184	0.193	0.188	0.201	0.185			0.190	0.00	4	0-30	3.650		PASS
c-1,3-Dichloropropene	C	Avg RF	0.413	0.492	0.523	0.525	0.537	0.577	0.554			0.518	0.00	10	0-30	10.242		PASS
c-1,2-Dichloroethene	C	Avg RF	0.983	1.045	1.018	1.015	1.010	1.082	1.024			1.025	0.00	3	0-30	3.026		PASS
t-1,2-Dichloroethene	C	Avg RF	0.957	0.985	0.949	0.946	0.935	1.001	0.942			0.959	0.00	3	0-30	2.552		PASS
t-1,3-Dichloropropene	C	Avg RF	0.351	0.448	0.499	0.505	0.516	0.555	0.541			0.488	0.00	14	0-30	14.182		PASS
Ethanol	C	Avg RF		0.439	0.416	0.400	0.384	0.390	0.354			0.397	0.00	7	0-30	7.277		PASS
Ethyl Acetate		Avg RF			0.355	0.357	0.353	0.350	0.312			0.345	0.00	5	0-30	5.473		PASS
Ethyl-t-Butyl Ether (ETBE)	C	Avg RF		4.158	4.041	3.981	3.961	4.036	3.761			3.990	0.00	3	0-30	3.288		PASS
Ethylbenzene	C	Avg RF	1.465	1.594	1.533	1.525	1.506	1.575	1.449			1.521	0.00	3	0-30	3.479		PASS
4-Ethyltoluene	C	Avg RF	1.531	1.673	1.614	1.610	1.576	1.620	1.511			1.591	0.00	4	0-30	3.525		PASS
Heptane	C	Avg RF		0.074	0.074	0.071	0.069	0.073	0.067			0.071	0.00	4	0-30	4.131		PASS
Hexachloro-1,3-Butadiene	C	Avg RF		1.029	0.882	0.928	0.887	0.886				0.922	0.00	7	0-30	6.768		PASS
Hexane	C	Avg RF		2.014	1.874	1.822	1.764	1.726	1.498			1.783	0.00	10	0-30	9.649		PASS
2-Hexanone	C	Avg RF		0.397	0.419	0.457	0.468	0.504	0.467			0.452	0.00	8	0-30	8.491		PASS
Methyl-t-Butyl Ether (MTBE)	C	Avg RF		2.710	2.602	2.573	2.586	2.714	2.559			2.624	0.00	3	0-30	2.656		PASS
Methylene Chloride	C	Avg RF		0.869	0.826	0.814	0.837	0.857	0.798			0.834	0.00	3	0-30	3.171		PASS
4-Methyl-2-Pentanone	C	Avg RF		0.313	0.330	0.345	0.343	0.358	0.341			0.338	0.00	5	0-30	4.526		PASS

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor
LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA TO-15

ICAL WORK ORDER: 099-10-024-22470-1156
ICAL BATCH ID: 180213IC
INSTRUMENT: GC/MS OOO

ANALYZED BY: 953
ICAL D/T ANALYZED: 2018-02-13 16:03
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
Naphthalene	C	Avg RF		1.172	1.698	1.983	1.961	2.055				1.774	0.00	20	0-30	20.438		PASS
o-Xylene	C	Avg RF	1.255	1.341	1.199	1.164	1.147	1.170	1.089			1.195	0.00	7	0-30	6.824		PASS
p/m-Xylene	C	Avg RF	1.307	1.378	1.245	1.230	1.211	1.235	1.116			1.246	0.00	7	0-30	6.528		PASS
Propene		Avg RF			1.365	1.371	1.242	1.311	1.310			1.320	0.00	4	0-30	3.950		PASS
Styrene	C	Avg RF		0.835	0.849	0.876	0.872	0.936	0.870			0.873	0.00	4	0-30	3.954		PASS
Tert-Amyl-Methyl Ether (TAME)	C	Avg RF		0.836	0.832	0.837	0.834	0.874	0.825			0.840	0.00	2	0-30	2.062		PASS
Tert-Butyl Alcohol (TBA)	C	Avg RF	2.255	2.371	2.329	2.220	2.057	1.929	1.830			2.142	0.00	10	0-30	9.653		PASS
Tetrachloroethene	C	Avg RF	0.699	0.701	0.661	0.646	0.629	0.637	0.579			0.650	0.00	7	0-30	6.513		PASS
Tetrahydrofuran	C	Avg RF		1.348	1.422	1.464	1.465	1.538	1.509			1.458	0.00	5	0-30	4.601		PASS
Toluene	C	Avg RF	1.159	1.185	1.125	1.113	1.085	1.141	1.041			1.121	0.00	4	0-30	4.266		PASS
Trichloroethene	C	Avg RF	0.394	0.409	0.405	0.402	0.398	0.413	0.389			0.401	0.00	2	0-30	2.128		PASS
Trichlorofluoromethane	C	Avg RF	2.448	2.372	2.309	2.454	2.244	2.295	2.281			2.343	0.00	4	0-30	3.539		PASS
1,1,2-Trichloro-1,2,2-Tri fluoroethane	C	Avg RF		2.160	1.986	1.946	1.897	1.953	1.824			1.961	0.00	6	0-30	5.737		PASS
1,1,1-Trichloroethane	C	Avg RF	2.406	2.377	2.285	2.246	2.280	2.388	2.351			2.333	0.00	3	0-30	2.661		PASS
1,1,2-Trichloroethane	C	Avg RF	0.307	0.335	0.328	0.325	0.322	0.339	0.325			0.326	0.00	3	0-30	3.127		PASS
1,2,3-Trichlorobenzene		Avg RF		0.832	0.960	0.991	0.983	1.046				0.963	0.00	8	0-30	8.249		PASS
1,2-Dibromo-3-Chloropr opane		Avg RF	0.413	0.532	0.583	0.624	0.617	0.643	0.612			0.575	0.00	14	0-30	13.879		PASS
2-Chlorotoluene	C	Avg RF	1.202	1.318	1.267	1.269	1.258	1.298	1.220			1.262	0.00	3	0-30	3.219		PASS
Allyl Chloride		Avg RF		1.896	1.866	1.828	1.807	1.760	1.686			1.807	0.00	4	0-30	4.184		PASS
Ethyl Methacrylate		Avg RF		0.529	0.556	0.556	0.543	0.567	0.516			0.544	0.00	3	0-30	3.480		PASS
n-Butylbenzene	C	Avg RF		1.772	1.701	1.766	1.733	1.748	1.623			1.724	0.00	3	0-30	3.220		PASS
n-Propylbenzene	C	Avg RF	2.038	2.251	2.085	2.072	2.025	2.028	1.839			2.048	0.00	6	0-30	5.905		PASS

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor
LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA TO-15

ICAL WORK ORDER: 099-10-024-22470-1156
ICAL BATCH ID: 180213IC
INSTRUMENT: GC/MS OOO

ANALYZED BY: 953
ICAL D/T ANALYZED: 2018-02-13 16:03
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
Isopropylbenzene	C	Avg RF	1.794	1.880	1.719	1.725	1.691	1.712	1.585			1.729	0.00	5	0-30	5.268		PASS
Propionitrile		Avg RF		0.960	1.003	1.020	1.026	1.067	1.060			1.023	0.00	4	0-30	3.824		PASS
p-Isopropyltoluene		Avg RF	1.763	2.012	1.821	1.806	1.776	1.785	1.654			1.802	0.00	6	0-30	5.940		PASS
sec-Butylbenzene	C	Avg RF		2.387	2.093	2.052	1.964	1.983	1.821			2.050	0.00	9	0-30	9.255		PASS
tert-Butylbenzene	C	Avg RF		1.765	1.591	1.564	1.519	1.519	1.390			1.558	0.00	8	0-30	7.886		PASS
N-Octane	S	Avg RF		0.450	0.427	0.421	0.417	0.410	0.371			0.416	0.00	6	0-30	6.255		PASS
N-Nonane	S	Avg RF		1.080	0.982	0.960	0.936	0.928	0.823			0.952	0.00	9	0-30	8.773		PASS
N-Decane		Avg RF		1.405	1.193	1.180	1.119	1.081	0.945			1.154	0.00	13	0-30	13.170		PASS
1,2,3-Trichloropropane		Avg RF		0.745	0.711	0.700	0.681	0.700	0.654			0.699	0.00	4	0-30	4.350		PASS
Acrolein	C	Avg RF		0.445	0.412	0.406	0.409	0.430	0.422			0.421	0.00	4	0-30	3.585		PASS
Acrylonitrile	C	Avg RF	1.077	1.124	1.124	1.125	1.124	1.130	1.116			1.117	0.00	2	0-30	1.622		PASS
Methyl Methacrylate	C	Avg RF		0.235	0.263	0.274	0.278	0.298	0.287			0.273	0.00	8	0-30	8.008		PASS
Propane		Avg RF			0.714	0.704	0.671	0.634	0.587			0.662	0.00	8	0-30	7.906		PASS
Butane	C	Avg RF		1.545	1.459	1.409	1.322	1.260	1.083			1.346	0.00	12	0-30	12.149		PASS
Methanol		Avg RF			0.250	0.238	0.234	0.233	0.201			0.231	0.00	8	0-30	7.792		PASS
2,2,4-Trimethyl Pentane	C	Avg RF	2.035	2.050	1.896	1.849	1.806	1.735	1.609			1.854	0.00	9	0-30	8.510		PASS
Isobutane	C	Avg RF		1.733	1.640	1.555	1.454	1.327	1.033			1.457	0.00	17	0-30	17.271		PASS
1,1,1,2-Tetrafluoroethane	C	Avg RF	0.832	0.749	0.780	0.777	0.770	0.741	0.694			0.763	0.00	6	0-30	5.543		PASS
1,3,5-Trimethylbenzene	C	Avg RF	1.442	1.601	1.434	1.397	1.375	1.424	1.325			1.428	0.00	6	0-30	6.032		PASS
1,1,2,2-Tetrachloroethane	C	Avg RF	0.962	1.019	0.928	0.907	0.880	0.912	0.828			0.919	0.00	7	0-30	6.583		PASS
1,2,4-Trimethylbenzene	C	Avg RF		1.597	1.433	1.410	1.366	1.390	1.272			1.411	0.00	8	0-30	7.553		PASS
1,2,4-Trichlorobenzene	C	Avg RF		0.666	0.841	0.946	0.972	1.045				0.894	0.00	16	0-30	16.426		PASS
Vinyl Acetate	C	Avg RF		3.398	3.450	3.477	3.478	3.573	3.443			3.470	0.00	2	0-30	1.680		PASS

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor
LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA TO-15

ICAL WORK ORDER: 099-10-024-22470-1156
ICAL BATCH ID: 180213IC
INSTRUMENT: GC/MS OOO

ANALYZED BY: 953
ICAL D/T ANALYZED: 2018-02-13 16:03
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
Vinyl Chloride	C	Avg RF	0.949	0.951	0.900	0.887	0.875	0.917	0.878			0.908	0.00	4	0-30	3.501		PASS
1,1-Difluoroethane	C	Avg RF		1.543	1.499	1.489	1.497	1.494	1.570			1.515	0.00	2	0-30	2.189		PASS
Isopropanol	C	Avg RF		2.396	2.332	2.361	1.854	2.323	2.278			2.257	0.00	9	0-30	8.927		PASS

Data Files:

LEVEL #	D/T ANALYZED	DATA FILE
1	2018-02-13 16:03	Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb07.d\13feb07.rr
2	2018-02-13 15:17	Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb06.d\13feb06.rr
3	2018-02-13 14:26	Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb05.d\13feb05.rr
4	2018-02-13 13:43	Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb04.d\13feb04.rr
5	2018-02-13 12:34	Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb03.d\13feb03.rr
6	2018-02-13 18:37	Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb10.d\13feb10.rr
7	2018-02-13 16:59	Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb08.d\13feb08.rr

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor
LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

ICV WORK ORDER: **099-10-024-22470-1156**
INITIAL BATCH ID: 180213IC
INSTRUMENT: GC/MS OOO

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb11.d\13feb11.rr

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
ICV: 2018-02-13 19:54
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Acetone	C	Avg Resp	0.00	0.450	0.464			-3	0-30	PASS
Benzene	C	Avg Resp	0.00	0.864	0.905			-5	0-30	PASS
Benzyl Chloride	C	Avg Resp	0.00	1.219	1.356			-11	0-30	PASS
Bromodichloromethane	C	Avg Resp	0.00	0.691	0.720			-4	0-30	PASS
Bromoform	C	Avg Resp	0.00	0.848	0.899			-6	0-30	PASS
Bromomethane	C	Avg Resp	0.00	0.750	0.778			-4	0-30	PASS
1,3-Butadiene	C	Avg Resp	0.00	0.742	0.764			-3	0-30	PASS
2-Butanone	C	Avg Resp	0.00	2.603	2.776			-7	0-30	PASS
Carbon Disulfide	C	Avg Resp	0.00	2.575	2.660			-3	0-30	PASS
Carbon Tetrachloride	C	Avg Resp	0.00	0.737	0.756			-3	0-30	PASS
Chlorobenzene	C	Avg Resp	0.00	0.952	1.004			-5	0-30	PASS
Chloroethane	C	Avg Resp	0.00	0.394	0.408			-4	0-30	PASS
Chloroform	C	Avg Resp	0.00	2.123	2.153			-1	0-30	PASS
Chloromethane	C	Avg Resp	0.00	0.922	1.003			-9	0-30	PASS
Cyclohexane	C	Avg Resp	0.00	0.595	0.614			-3	0-30	PASS
Dibromochloromethane	C	Avg Resp	0.00	0.802	0.839			-5	0-30	PASS
Dichlorodifluoromethane	C	Avg Resp	0.00	2.392	2.356			2	0-30	PASS
Diisopropyl Ether (DIPE)	C	Avg Resp	0.00	4.982	4.818			3	0-30	PASS
1,1-Dichloroethane	C	Avg Resp	0.00	2.120	2.179			-3	0-30	PASS
1,1-Dichloroethene	C	Avg Resp	0.00	2.037	2.066			-1	0-30	PASS
1,2-Dibromoethane	C	Avg Resp	0.00	0.678	0.721			-6	0-30	PASS
Dichlorotetrafluoroethane	C	Avg Resp	0.00	2.082	2.208			-6	0-30	PASS
1,2-Dichlorobenzene	C	Avg Resp	0.00	0.994	1.070			-8	0-30	PASS
1,2-Dichloroethane	C	Avg Resp	0.00	1.651	1.691			-2	0-30	PASS
1,2-Dichloropropane	C	Avg Resp	0.00	0.392	0.407			-4	0-30	PASS
1,3-Dichlorobenzene	C	Avg Resp	0.00	1.016	1.084			-7	0-30	PASS
1,4-Dichlorobenzene	C	Avg Resp	0.00	0.998	1.116			-12	0-30	PASS
1,4-Dioxane		Avg Resp	0.00	0.190	0.210			-11	0-30	PASS
c-1,3-Dichloropropene	C	Avg Resp	0.00	0.518	0.570			-10	0-30	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

ICV WORK ORDER: **099-10-024-22470-1156**
INITIAL BATCH ID: 180213IC
INSTRUMENT: GC/MS OOO

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb11.d\13feb11.rr

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
ICV: 2018-02-13 19:54
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
c-1,2-Dichloroethene	C	Avg Resp	0.00	1.025	1.082			-6	0-30	PASS
t-1,2-Dichloroethene	C	Avg Resp	0.00	0.959	1.013			-6	0-30	PASS
t-1,3-Dichloropropene	C	Avg Resp	0.00	0.488	0.551			-13	0-30	PASS
Ethanol	C	Avg Resp	0.00	0.397	0.396			0	0-30	PASS
Ethyl Acetate		Avg Resp	0.00	0.345	0.376			-9	0-30	PASS
Ethyl-t-Butyl Ether (ETBE)	C	Avg Resp	0.00	3.990	4.030			-1	0-30	PASS
Ethylbenzene	C	Avg Resp	0.00	1.521	1.650			-8	0-30	PASS
4-Ethyltoluene	C	Avg Resp	0.00	1.591	1.753			-10	0-30	PASS
Heptane	C	Avg Resp	0.00	0.071	0.074			-4	0-30	PASS
Hexachloro-1,3-Butadiene	C	Avg Resp	0.00	0.922	1.003			-9	0-30	PASS
Hexane	C	Avg Resp	0.00	1.783	1.845			-3	0-30	PASS
2-Hexanone	C	Avg Resp	0.00	0.452	0.558			-23	0-30	PASS
Methyl-t-Butyl Ether (MTBE)	C	Avg Resp	0.00	2.624	2.801			-7	0-30	PASS
Methylene Chloride	C	Avg Resp	0.00	0.834	0.843			-1	0-30	PASS
4-Methyl-2-Pentanone	C	Avg Resp	0.00	0.338	0.373			-10	0-30	PASS
Naphthalene	C	Avg Resp	0.00	1.774	2.191			-24	0-30	PASS
o-Xylene	C	Avg Resp	0.00	1.195	1.237			-4	0-30	PASS
p/m-Xylene	C	Avg Resp	0.00	1.246	1.304			-5	0-30	PASS
Propene		Avg Resp	0.00	1.320	1.385			-5	0-30	PASS
Styrene	C	Avg Resp	0.00	0.873	0.951			-9	0-30	PASS
Tert-Amyl-Methyl Ether (TAME)	C	Avg Resp	0.00	0.840	0.869			-3	0-30	PASS
Tert-Butyl Alcohol (TBA)	C	Avg Resp	0.00	2.142	1.983			7	0-30	PASS
Tetrachloroethene	C	Avg Resp	0.00	0.650	0.671			-3	0-30	PASS
Tetrahydrofuran	C	Avg Resp	0.00	1.458	1.539			-6	0-30	PASS
Toluene	C	Avg Resp	0.00	1.121	1.188			-6	0-30	PASS
Trichloroethene	C	Avg Resp	0.00	0.401	0.419			-4	0-30	PASS
Trichlorofluoromethane	C	Avg Resp	0.00	2.343	2.593			-11	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	C	Avg Resp	0.00	1.961	2.013			-3	0-30	PASS
1,1,1-Trichloroethane	C	Avg Resp	0.00	2.333	2.412			-3	0-30	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

ICV WORK ORDER: **099-10-024-22470-1156**
INITIAL BATCH ID: 180213IC
INSTRUMENT: GC/MS OOO

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb11.d\13feb11.rr

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
ICV: 2018-02-13 19:54
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
1,1,2-Trichloroethane	C	Avg Resp	0.00	0.326	0.346			-6	0-30	PASS
N-Decane		Avg Resp	0.00	1.154	1.154			0	0-30	PASS
N-Octane	S	Avg Resp	0.00	0.416	0.431			-4	0-30	PASS
N-Nonane	S	Avg Resp	0.00	0.952	0.974			-2	0-30	PASS
alpha-Methylstyrene		Avg Resp	0.00	0.749	0.804			-7	0-30	PASS
tert-Butylbenzene	C	Avg Resp	0.00	1.558	1.596			-2	0-30	PASS
Isopropylbenzene	C	Avg Resp	0.00	1.729	1.772			-2	0-30	PASS
Ethyl Methacrylate		Avg Resp	0.00	0.544	0.567			-4	0-30	PASS
p-Isopropyltoluene		Avg Resp	0.00	1.802	1.863			-3	0-30	PASS
sec-Butylbenzene	C	Avg Resp	0.00	2.050	2.087			-2	0-30	PASS
n-Butylbenzene	C	Avg Resp	0.00	1.724	1.778			-3	0-30	PASS
n-Propylbenzene	C	Avg Resp	0.00	2.048	2.119			-3	0-30	PASS
Propionitrile		Avg Resp	0.00	1.023	1.065			-4	0-30	PASS
1,2,3-Trichlorobenzene		Avg Resp	0.00	0.963	0.989			-3	0-30	PASS
2-Chlorotoluene	C	Avg Resp	0.00	1.262	1.300			-3	0-30	PASS
1,2-Dibromo-3-Chloropropane		Avg Resp	0.00	0.575	0.650			-13	0-30	PASS
Allyl Chloride		Avg Resp	0.00	1.807	1.747			3	0-30	PASS
1,2,3-Trichloropropane		Avg Resp	0.00	0.699	0.723			-3	0-30	PASS
Acrolein	C	Avg Resp	0.00	0.421	0.427			-1	0-30	PASS
Acrylonitrile	C	Avg Resp	0.00	1.117	1.122			0	0-30	PASS
Methyl Methacrylate	C	Avg Resp	0.00	0.273	0.301			-10	0-30	PASS
Propane		Avg Resp	0.00	0.662	0.683			-3	0-30	PASS
Butane	C	Avg Resp	0.00	1.346	1.353			-1	0-30	PASS
Methanol		Avg Resp	0.00	0.231	0.245			-6	0-30	PASS
2,2,4-Trimethyl Pentane	C	Avg Resp	0.00	1.854	1.807			3	0-30	PASS
Isobutane	C	Avg Resp	0.00	1.457	1.510			-4	0-30	PASS
1,1,1,2-Tetrafluoroethane	C	Avg Resp	0.00	0.763	0.769			-1	0-30	PASS
1,3,5-Trimethylbenzene	C	Avg Resp	0.00	1.428	1.537			-8	0-30	PASS
1,1,2,2-Tetrachloroethane	C	Avg Resp	0.00	0.919	0.953			-4	0-30	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

ICV WORK ORDER: **099-10-024-22470-1156**
INITIAL BATCH ID: 180213IC
INSTRUMENT: GC/MS OOO

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb11.d\13feb11.rr

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
ICV: 2018-02-13 19:54
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
1,2,4-Trimethylbenzene	C	Avg Resp	0.00	1.411	1.512			-7	0-30	PASS
1,2,4-Trichlorobenzene	C	Avg Resp	0.00	0.894	1.079			-21	0-30	PASS
Vinyl Acetate	C	Avg Resp	0.00	3.470	3.642			-5	0-30	PASS
Vinyl Chloride	C	Avg Resp	0.00	0.908	0.950			-5	0-30	PASS
1,1-Difluoroethane	C	Avg Resp	0.00	1.515	1.420			6	0-30	PASS
Isopropanol	C	Avg Resp	0.00	2.257	2.438			-8	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 31-JAN-2018 11:53
End Cal Date : 13-FEB-2018 18:37
Calibration Date: 14-Feb-2018 13:21 jxs7
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method : /chem/AIR/GCMS_000.i/180213.b/to15.m
Instrument : GCMS_000.i
Curve Type : Average

Level	Acq Time	Data File
1	13-FEB-2018 16:03	/chem/AIR/GCMS_000.i/180213.b/13feb07.d
2	13-FEB-2018 15:17	/chem/AIR/GCMS_000.i/180213.b/13feb06.d
3	13-FEB-2018 14:26	/chem/AIR/GCMS_000.i/180213.b/13feb05.d
4	13-FEB-2018 13:43	/chem/AIR/GCMS_000.i/180213.b/13feb04.d
5	13-FEB-2018 12:34	/chem/AIR/GCMS_000.i/180213.b/13feb03.d
6	13-FEB-2018 18:37	/chem/AIR/GCMS_000.i/180213.b/13feb10.d
7	13-FEB-2018 16:59	/chem/AIR/GCMS_000.i/180213.b/13feb08.d

Compound	C1	C2	C3	C4	C5	C6	C7	Avg R^2	RSD
34) I 1 Bromochloromethane									
1) T 1 1,1,1,2-Tetrafluoroethane	0.832	0.749	0.780	0.777	0.770	0.741	0.694	0.763	6
2) T 1 1,1-Difluoroethane		1.543	1.499	1.489	1.497	1.494	1.570	1.515	2
3) T 1 Propene			1.365	1.371	1.242	1.311	1.310	1.320	4
4) T 1 Propane			0.714	0.704	0.671	0.634	0.587	0.662	8
5) T 1 Dichlorodifluoromethane	2.696	2.604	2.334	2.441	2.389	2.239	2.042	2.392	9
6) T 1 Chloromethane	0.973	0.939	0.908	0.905	0.905	0.939	0.888	0.922	3
7) T 1 Dichlorotetrafluoroethane	2.246	2.176	2.070	2.046	2.024	2.094	1.920	2.082	5
8) T 1 Isobutane		1.733	1.640	1.555	1.454	1.327	1.033	1.457	17
9) T 1 Methanol			0.250	0.238	0.234	0.233	0.201	0.231	8
10) T 1 Vinyl Chloride	0.949	0.951	0.900	0.887	0.875	0.917	0.878	0.908	4
11) T 1 1,3-Butadiene		0.795	0.748	0.735	0.722	0.748	0.706	0.742	4
12) T 1 Butane		1.545	1.459	1.409	1.322	1.260	1.083	1.346	12
13) T 1 Bromomethane	0.805	0.776	0.729	0.719	0.714	0.765	0.741	0.750	4
14) T 1 Chloroethane	0.407	0.406	0.387	0.379	0.378	0.407	0.391	0.394	3
15) T 1 Ethanol		0.439	0.416	0.400	0.384	0.390	0.354	0.397	7
16) T 1 Acrolein		0.445	0.412	0.406	0.409	0.430	0.422	0.421	4
17) T 1 Acetone		0.486	0.437	0.434	0.436	0.460	0.446	0.450	4
18) T 1 Trichlorofluoromethane	2.448	2.372	2.309	2.454	2.244	2.295	2.281	2.343	4
19) T 1 Isopropanol		2.396	2.332	2.361	1.854	2.323	2.278	2.257	9
20) T 1 Acrylonitrile	1.077	1.124	1.124	1.125	1.124	1.130	1.116	1.117	2
21) T 1 1,1-Dichloroethene	2.200	2.124	2.025	1.987	1.994	2.034	1.893	2.037	5
23) T 1 Methylene Chloride		0.869	0.826	0.814	0.837	0.857	0.798	0.834	3
22) T 1 Tert-Butyl Alcohol (TBA)	2.255	2.371	2.329	2.220	2.057	1.929	1.830	2.142	10
24) T 1 Allyl Chloride		1.896	1.866	1.828	1.807	1.760	1.686	1.807	4
25) T 1 1,1,2-Trichloro-1,2,2-Trifluor		2.160	1.986	1.946	1.897	1.953	1.824	1.961	6
26) T 1 Carbon Disulfide	2.698	2.711	2.618	2.564	2.487	2.584	2.365	2.575	5
27) T 1 Propionitrile		0.960	1.003	1.020	1.026	1.067	1.060	1.023	4
28) T 1 t-1,2-Dichloroethene	0.957	0.985	0.949	0.946	0.935	1.001	0.942	0.959	3
29) T 1 1,1-Dichloroethane	2.246	2.223	2.096	2.054	2.053	2.121	2.049	2.120	4
30) T 1 Methyl-t-Butyl Ether (MTBE)		2.710	2.602	2.573	2.586	2.714	2.559	2.624	3
31) T 1 Vinyl Acetate		3.398	3.450	3.477	3.478	3.573	3.443	3.470	2
32) T 1 2-Butanone		2.484	2.535	2.596	2.669	2.674	2.662	2.603	3

Return to Contents

33)	T	1	c-1,2-Dichloroethene	0.983	1.045	1.018	1.015	1.010	1.082	1.024	1.025	3
37)	T	1	Hexane		2.014	1.874	1.822	1.764	1.726	1.498	1.783	10
36)	T	1	Diisopropyl Ether (DIPE)		5.450	5.175	5.054	4.832	4.397		4.982	8
35)	T	1	Ethyl Acetate			0.355	0.357	0.353	0.350	0.312	0.345	5
38)	T	1	Chloroform	2.233	2.257	2.103	2.077	2.042	2.120	2.027	2.123	4
39)	T	1	Tetrahydrofuran		1.348	1.422	1.464	1.465	1.538	1.509	1.458	5
40)	T	1	Ethyl-t-Butyl Ether (ETBE)		4.158	4.041	3.981	3.961	4.036	3.761	3.990	3
42)	T	1	1,2-Dichloroethane	1.630	1.683	1.609	1.612	1.628	1.696	1.697	1.651	2
43)	T	1	1,1,1-Trichloroethane	2.406	2.377	2.285	2.246	2.280	2.388	2.351	2.333	3
47)	I	2	1,4-Difluorobenzene									
44)	T	2	Benzene	0.858	0.882	0.860	0.853	0.853	0.896	0.846	0.864	2
45)	T	2	Carbon Tetrachloride	0.749	0.755	0.728	0.724	0.729	0.742	0.730	0.737	2
46)	T	2	Cyclohexane	0.583	0.614	0.603	0.597	0.594	0.601	0.570	0.595	2
48)	T	2	Tert-Amyl-Methyl Ether (TAME)		0.836	0.832	0.837	0.834	0.874	0.825	0.840	2
49)	T	2	1,2-Dichloropropane	0.396	0.407	0.389	0.386	0.384	0.400	0.381	0.392	2
50)	T	2	Bromodichloromethane	0.663	0.693	0.682	0.685	0.694	0.722	0.700	0.691	3
52)	T	2	Trichloroethene	0.394	0.409	0.405	0.402	0.398	0.413	0.389	0.401	2
53)	T	2	2,2,4-Trimethyl Pentane	2.035	2.050	1.896	1.849	1.806	1.735	1.609	1.854	9
51)	T	2	1,4-Dioxane			0.184	0.193	0.188	0.201	0.185	0.190	4
54)	T	2	Methyl Methacrylate		0.235	0.263	0.274	0.278	0.298	0.287	0.273	8
55)	T	2	Heptane		0.074	0.074	0.071	0.069	0.073	0.067	0.071	4
56)	T	2	c-1,3-Dichloropropene	0.413	0.492	0.523	0.525	0.537	0.577	0.554	0.518	10
57)	T	2	4-Methyl-2-Pentanone		0.313	0.330	0.345	0.343	0.358	0.341	0.338	5
58)	T	2	t-1,3-Dichloropropene	0.351	0.448	0.499	0.505	0.516	0.555	0.541	0.488	14
59)	T	2	1,1,2-Trichloroethane	0.307	0.335	0.328	0.325	0.322	0.339	0.325	0.326	3
68)	I	3	Chlorobenzene-d5									
61)	T	3	Toluene	1.159	1.185	1.125	1.113	1.085	1.141	1.041	1.121	4
62)	T	3	2-Hexanone		0.397	0.419	0.457	0.468	0.504	0.467	0.452	8
63)	T	3	Ethyl Methacrylate		0.529	0.556	0.556	0.543	0.567	0.516	0.544	3
64)	T	3	Dibromochloromethane	0.796	0.843	0.824	0.801	0.788	0.814	0.751	0.802	4
65)	T	3	1,2-Dibromoethane	0.639	0.690	0.692	0.681	0.673	0.712	0.660	0.678	4
66)	T	3	N-Octane		0.450	0.427	0.421	0.417	0.410	0.371	0.416	6
67)	T	3	Tetrachloroethene	0.699	0.701	0.661	0.646	0.629	0.637	0.579	0.650	7
69)	T	3	Chlorobenzene	0.998	1.011	0.947	0.933	0.917	0.963	0.891	0.952	5
70)	T	3	Ethylbenzene	1.465	1.594	1.533	1.525	1.506	1.575	1.449	1.521	3
71)	T	3	p/m-Xylene	1.307	1.378	1.245	1.230	1.211	1.235	1.116	1.246	7
72)	T	3	Bromoform	0.800	0.859	0.872	0.877	0.863	0.868	0.795	0.848	4
73)	T	3	Styrene		0.835	0.849	0.876	0.872	0.936	0.870	0.873	4
74)	T	3	1,1,2,2-Tetrachloroethane	0.962	1.019	0.928	0.907	0.880	0.912	0.828	0.919	7
75)	T	3	o-Xylene	1.255	1.341	1.199	1.164	1.147	1.170	1.089	1.195	7
76)	T	3	1,2,3-Trichloropropane		0.745	0.711	0.700	0.681	0.700	0.654	0.699	4
77)	T	3	N-Nonane		1.080	0.982	0.960	0.936	0.928	0.823	0.952	9
79)	T	3	Isopropylbenzene	1.794	1.880	1.719	1.725	1.691	1.712	1.585	1.729	5
80)	T	3	2-Chlorotoluene	1.202	1.318	1.267	1.269	1.258	1.298	1.220	1.262	3
81)	T	3	n-Propylbenzene	2.038	2.251	2.085	2.072	2.025	2.028	1.839	2.048	6
82)	T	3	4-Ethyltoluene	1.531	1.673	1.614	1.610	1.576	1.620	1.511	1.591	4
83)	T	3	1,3,5-Trimethylbenzene	1.442	1.601	1.434	1.397	1.375	1.424	1.325	1.428	6
84)	T	3	alpha-Methylstyrene		0.737	0.755	0.765	0.742	0.774	0.721	0.749	3
86)	T	3	1,2,4-Trimethylbenzene		1.597	1.433	1.410	1.366	1.390	1.272	1.411	8
85)	T	3	tert-Butylbenzene		1.765	1.591	1.564	1.519	1.519	1.390	1.558	8
87)	T	3	Benzyl Chloride		1.108	1.145	1.196	1.276	1.334	1.254	1.219	7
88)	T	3	1,3-Dichlorobenzene	1.016	1.121	1.023	1.021	0.977	1.015	0.939	1.016	5
90)	T	3	N-Decane		1.405	1.193	1.180	1.119	1.081	0.945	1.154	13
89)	T	3	1,4-Dichlorobenzene	0.798	1.086	1.047	1.038	0.993	1.054	0.969	0.998	10
91)	T	3	sec-Butylbenzene		2.387	2.093	2.052	1.964	1.983	1.821	2.050	9
92)	T	3	p-Isopropyltoluene	1.763	2.012	1.821	1.806	1.776	1.785	1.654	1.802	6
93)	T	3	1,2-Dichlorobenzene	0.952	1.087	0.997	0.993	0.972	1.008	0.949	0.994	5
94)	T	3	n-Butylbenzene		1.772	1.701	1.766	1.733	1.748	1.623	1.724	3
95)	T	3	1,2-Dibromo-3-Chloropropane	0.413	0.532	0.583	0.624	0.617	0.643	0.612	0.575	14

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96)	T	3	1,2,4-Trichlorobenzene		0.666	0.841	0.946	0.972	1.045		0.894	16
97)	T	3	Naphthalene		1.172	1.698	1.983	1.961	2.055		1.774	20
98)	T	3	1,2,3-Trichlorobenzene		0.832	0.960	0.991	0.983	1.046		0.963	8
99)	T	3	Hexachloro-1,3-Butadiene		1.029	0.882	0.928	0.887	0.886		0.922	7

---SURROGATES---

41)	S	1	1,2-Dichloroethane-d4	1.384	1.369	1.358	1.351	1.376	1.347	1.391	1.368	1
60)	S	2	Toluene-d8	0.986	0.992	0.999	1.001	1.013	1.016	1.025	1.004	1
78)	S	3	1,4-Bromofluorobenzene	0.719	0.715	0.713	0.709	0.704	0.707	0.705	0.710	1

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Data File: /chem/AIR/GCMS_000.i/180213.b/13feb11.d
Report Date: 02/14/2018 13:22

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: ICV/LCS 25PPBV A020218B
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180213.b/to15.m

Injection Date and Time: 13-FEB-2018 19:54
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,1,1,2-Tetrafluoroethane	0.763	0.769	0.01	-1	30	Averaged
1,1-Difluoroethane	1.515	1.420	0.01	6	30	Averaged
Propene	1.320	1.385	0.01	-5	30	Averaged
Propane	0.662	0.683	0.01	-3	30	Averaged
Dichlorodifluoromethane	2.392	2.356	0.01	2	30	Averaged
Chloromethane	0.922	1.003	0.01	-9	30	Averaged
Dichlorotetrafluoroethane	2.082	2.208	0.01	-6	30	Averaged
Isobutane	1.457	1.510	0.01	-4	30	Averaged
Methanol	0.231	0.245	0.01	-6	30	Averaged
Vinyl Chloride	0.908	0.950	0.01	-5	30	Averaged
1,3-Butadiene	0.742	0.764	0.01	-3	30	Averaged
Butane	1.346	1.353	0.01	-1	30	Averaged
Bromomethane	0.750	0.778	0.01	-4	30	Averaged
Chloroethane	0.394	0.408	0.01	-4	30	Averaged
Ethanol	0.397	0.396	0.01	0	30	Averaged
Acrolein	0.421	0.427	0.01	-1	30	Averaged
Acetone	0.450	0.464	0.01	-3	30	Averaged
Trichlorofluoromethane	2.343	2.593	0.01	-11	30	Averaged
Isopropanol	2.257	2.438	0.01	-8	30	Averaged
Acrylonitrile	1.117	1.122	0.01	0	30	Averaged
1,1-Dichloroethene	2.037	2.066	0.01	-1	30	Averaged
Methylene Chloride	0.834	0.843	0.01	-1	30	Averaged
Tert-Butyl Alcohol (TBA)	2.142	1.983	0.01	7	30	Averaged
Allyl Chloride	1.807	1.747	0.01	3	30	Averaged
1,1,2-Trichloro-1,2,2-Trifluor	1.961	2.013	0.01	-3	30	Averaged
Carbon Disulfide	2.575	2.660	0.01	-3	30	Averaged
Propionitrile	1.023	1.065	0.01	-4	30	Averaged
t-1,2-Dichloroethene	0.959	1.013	0.01	-6	30	Averaged
1,1-Dichloroethane	2.120	2.179	0.01	-3	30	Averaged
Methyl-t-Butyl Ether (MTBE)	2.624	2.801	0.01	-7	30	Averaged
Vinyl Acetate	3.470	3.642	0.01	-5	30	Averaged
2-Butanone	2.603	2.776	0.01	-7	30	Averaged
c-1,2-Dichloroethene	1.025	1.082	0.01	-6	30	Averaged
Hexane	1.783	1.845	0.01	-3	30	Averaged
Diisopropyl Ether (DIPE)	4.982	4.818	0.01	3	30	Averaged
Ethyl Acetate	0.345	0.376	0.01	-9	30	Averaged
Chloroform	2.123	2.153	0.01	-1	30	Averaged
Tetrahydrofuran	1.458	1.539	0.01	-6	30	Averaged
Ethyl-t-Butyl Ether (ETBE)	3.990	4.030	0.01	-1	30	Averaged
1,2-Dichloroethane	1.651	1.691	0.01	-2	30	Averaged
1,1,1-Trichloroethane	2.333	2.412	0.01	-3	30	Averaged
Benzene	0.864	0.905	0.01	-5	30	Averaged
Carbon Tetrachloride	0.737	0.756	0.01	-3	30	Averaged
Cyclohexane	0.595	0.614	0.01	-3	30	Averaged
Tert-Amyl-Methyl Ether (TAME)	0.840	0.869	0.01	-3	30	Averaged
1,2-Dichloropropane	0.392	0.407	0.01	-4	30	Averaged
Bromodichloromethane	0.691	0.720	0.01	-4	30	Averaged
Trichloroethene	0.401	0.419	0.01	-4	30	Averaged

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Data File: /chem/AIR/GCMS_000.i/180213.b/13feb11.d
Report Date: 02/14/2018 13:22

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: ICV/LCS 25PPBV A020218B
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180213.b/to15.m

Injection Date and Time: 13-FEB-2018 19:54
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,2,4-Trimethyl Pentane	1.854	1.807	0.01	3	30	Averaged
1,4-Dioxane	0.190	0.210	0.01	-11	30	Averaged
Methyl Methacrylate	0.273	0.301	0.01	-10	30	Averaged
Heptane	0.071	0.074	0.01	-4	30	Averaged
c-1,3-Dichloropropene	0.518	0.570	0.01	-10	30	Averaged
4-Methyl-2-Pentanone	0.338	0.373	0.01	-10	30	Averaged
t-1,3-Dichloropropene	0.488	0.551	0.01	-13	30	Averaged
1,1,2-Trichloroethane	0.326	0.346	0.01	-6	30	Averaged
Toluene	1.121	1.188	0.01	-6	30	Averaged
2-Hexanone	0.452	0.558	0.01	-23	30	Averaged
Ethyl Methacrylate	0.544	0.567	0.01	-4	30	Averaged
Dibromochloromethane	0.802	0.839	0.01	-5	30	Averaged
1,2-Dibromoethane	0.678	0.721	0.01	-6	30	Averaged
N-Octane	0.416	0.431	0.01	-4	30	Averaged
Tetrachloroethene	0.650	0.671	0.01	-3	30	Averaged
Chlorobenzene	0.952	1.004	0.01	-5	30	Averaged
Ethylbenzene	1.521	1.650	0.01	-8	30	Averaged
p/m-Xylene	1.246	1.304	0.01	-5	30	Averaged
Bromoform	0.848	0.899	0.01	-6	30	Averaged
Styrene	0.873	0.951	0.01	-9	30	Averaged
1,1,2,2-Tetrachloroethane	0.919	0.953	0.01	-4	30	Averaged
o-Xylene	1.195	1.237	0.01	-4	30	Averaged
1,2,3-Trichloropropane	0.699	0.723	0.01	-3	30	Averaged
N-Nonane	0.952	0.974	0.01	-2	30	Averaged
Isopropylbenzene	1.729	1.772	0.01	-2	30	Averaged
2-Chlorotoluene	1.262	1.300	0.01	-3	30	Averaged
n-Propylbenzene	2.048	2.119	0.01	-3	30	Averaged
4-Ethyltoluene	1.591	1.753	0.01	-10	30	Averaged
1,3,5-Trimethylbenzene	1.428	1.537	0.01	-8	30	Averaged
alpha-Methylstyrene	0.749	0.804	0.01	-7	30	Averaged
1,2,4-Trimethylbenzene	1.411	1.512	0.01	-7	30	Averaged
tert-Butylbenzene	1.558	1.596	0.01	-2	30	Averaged
Benzyl Chloride	1.219	1.356	0.01	-11	30	Averaged
1,3-Dichlorobenzene	1.016	1.084	0.01	-7	30	Averaged
N-Decane	1.154	1.154	0.01	0	30	Averaged
1,4-Dichlorobenzene	0.998	1.116	0.01	-12	30	Averaged
sec-Butylbenzene	2.050	2.087	0.01	-2	30	Averaged
p-Isopropyltoluene	1.802	1.863	0.01	-3	30	Averaged
1,2-Dichlorobenzene	0.994	1.070	0.01	-8	30	Averaged
n-Butylbenzene	1.724	1.778	0.01	-3	30	Averaged
1,2-Dibromo-3-Chloropropane	0.575	0.650	0.01	-13	30	Averaged
1,2,4-Trichlorobenzene	0.894	1.079	0.01	-21	30	Averaged
Naphthalene	1.774	2.191	0.01	-24	30	Averaged
1,2,3-Trichlorobenzene	0.963	0.989	0.01	-3	30	Averaged
Hexachloro-1,3-Butadiene	0.922	1.003	0.01	-9	30	Averaged

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Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb11.d
Report Date: 02/14/2018 13:22

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_OOO.i
Sample Name: ICV/LCS 25PPBV A020218B
Sublist used: all.sub
Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m

Injection Date and Time: 13-FEB-2018 19:54
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,2-Dichloroethane-d4	1.368	1.335	0.01	2	30	Averaged
Toluene-d8	1.004	1.008	0.01	0	30	Averaged
1,4-Bromofluorobenzene	0.710	0.713	0.01	0	30	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb07.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 16:03 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 0.50PPBV A020718C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	738788	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	2523780	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.542	117	2216252	25.000	0.01
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.878	65	1022149	25.285	0.00
SpikedAmount 25.000	Recovery =	0.000				
60)$Toluene-d8	(2)	14.281	98	2488142	24.541	0.00
SpikedAmount 25.000	Recovery =	0.000				
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1592555	25.295	0.01
SpikedAmount 25.000	Recovery =	0.000				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.251	69	12290	0.545	96
2) 1,1-Difluoroethane	(1)	3.310	51	23685	0.529	95
3) Propene	(1)	3.375	41	21519	0.552	95
4) Propane	(1)	3.393	29	23950	1.224	95
5) Dichlorodifluoromethane	(1)	3.434	85	39829	0.563	99
6) Chloromethane	(1)	3.557	50	14380	0.528	98
7) Dichlorotetrafluoroethane	(1)	3.640	85	33186	0.539	100
8) Isobutane	(1)	3.657	43	54457	1.265	98
9) Methanol	(1)	3.681	31	12992	1.901	81
10) Vinyl Chloride	(1)	3.734	62	14021	0.522	96
11) 1,3-Butadiene	(1)	3.846	54	11770	0.537	93
12) Butane	(1)	3.887	43	47032	1.182	97
13) Bromomethane	(1)	4.057	94	11894	0.537	94
14) Chloroethane	(1)	4.204	64	6015	0.517	96
15) Ethanol	(1)	4.293	45	26357	2.244	97
16) Acrolein	(1)	4.593	56	6465	0.520	98
17) Acetone	(1)	4.705	58	7296	0.549	93
18) Trichlorofluoromethane	(1)	4.857	101	36168	0.522	99
19) Isopropanol	(1)	4.916	45	35038	0.525	94
20) Acrylonitrile	(1)	5.122	53	15916	0.482	98
21) 1,1-Dichloroethene	(1)	5.452	61	32503	0.540	90
23) Methylene Chloride	(1)	5.567	84	13159	0.534	96
22) Tert-Butyl Alcohol (TBA)	(1)	5.487	59	66634	1.053	95
24) Allyl Chloride	(1)	5.692	41	27567	0.516	97
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.851	101	31995	0.552	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb07.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 16:03 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 0.50PPBV A020718C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	39859	0.524	96
27) Propionitrile	(1)	6.287	54	12170	0.403	75
28) t-1,2-Dichloroethene	(1)	6.548	96	14140	0.499	96
29) 1,1-Dichloroethane	(1)	6.758	63	33193	0.530	94
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.848	73	38418	0.495	94
31) Vinyl Acetate	(1)	6.967	43	48385	0.472	77
32) 2-Butanone	(1)	7.251	43	36265	0.471	80
33) c-1,2-Dichloroethene	(1)	7.733	96	14525	0.479	95
37) Hexane	(1)	8.033	57	29232	0.555	99
36) Diisopropyl Ether (DIPE)	(1)	8.033	45	77805	0.529	96
35) Ethyl Acetate	(1)	8.067	61	3488	0.342	73
38) Chloroform	(1)	8.090	83	32991	0.526	96
39) Tetrahydrofuran	(1)	8.629	42	22534	0.506	79
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	59137	0.502	98
42) 1,2-Dichloroethane	(1)	9.026	62	24086	0.494	93
43) 1,1,1-Trichloroethane	(1)	9.366	97	35545	0.516	98
44) Benzene	(2)	9.989	78	43299	0.496	99
45) Carbon Tetrachloride	(2)	10.194	117	37794	0.508	98
46) Cyclohexane	(2)	10.381	56	29414	0.490	96
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	39902	0.471	96
49) 1,2-Dichloropropane	(2)	11.163	63	20008	0.506	97
50) Bromodichloromethane	(2)	11.435	83	33463	0.479	98
52) Trichloroethene	(2)	11.526	95	19875	0.491	99
53) 2,2,4-Trimethyl Pentane	(2)	11.645	57	102721	0.549	99
51) 1,4-Dioxane	(2)	11.571	88	6318	0.329	1
54) Methyl Methacrylate	(2)	11.923	69	8117	0.295	88
55) Heptane	(2)	12.070	100	3357	0.466	85
56) c-1,3-Dichloropropene	(2)	12.875	75	20863	0.399	95
57) 4-Methyl-2-Pentanone	(2)	12.983	58	12359	0.362	82
58) t-1,3-Dichloropropene	(2)	13.754	75	17722	0.360	91
59) 1,1,2-Trichloroethane	(2)	13.970	83	15520	0.471	99
61) Toluene	(3)	14.452	91	51370	0.517	99
62) 2-Hexanone	(3)	15.030	58	8417	0.210	52
63) Ethyl Methacrylate	(3)	15.064	69	17428	0.361	77
64) Dibromochloromethane	(3)	15.109	129	35277	0.496	99
65) 1,2-Dibromoethane	(3)	15.534	107	28317	0.471	99
66) N-Octane	(3)	16.334	57	18144	0.492	90

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_000.i/180213.b/13feb07.d Instrument ID: GCMS_000.i
Injection date and time: 13-FEB-2018 16:03 Analyst ID: 953

Method used: /chem/AIR/GCMS_000.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 0.50PPBV A020718C Misc Info: 1@A02 09 18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.396	166	31002	0.538	99
69) Chlorobenzene	(3)	17.621	112	44232	0.524	96
70) Ethylbenzene	(3)	18.403	91	64953	0.482	95
71) p/m-Xylene	(3)	18.772	91	115889	1.049	97
72) Bromoform	(3)	18.749	173	35454	0.472	98
73) Styrene	(3)	19.458	104	29507	0.381	96
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	42643	0.523	98
75) o-Xylene	(3)	19.656	91	55608	0.525	97
76) 1,2,3-Trichloropropane	(3)	19.883	75	30994	0.500	96
77) N-Nonane	(3)	20.325	57	42978	0.509	94
79) Isopropylbenzene	(3)	20.909	105	79509	0.519	97
80) 2-Chlorotoluene	(3)	21.868	91	53261	0.476	96
81) n-Propylbenzene	(3)	22.032	91	90327	0.497	95
82) 4-Ethyltoluene	(3)	22.384	105	67848	0.481	97
83) 1,3,5-Trimethylbenzene	(3)	22.576	105	63913	0.505	99
84) alpha-Methylstyrene	(3)	22.928	118	25835	0.389	99
86) 1,2,4-Trimethylbenzene	(3)	23.512	105	61930	0.495	100
85) tert-Butylbenzene	(3)	23.483	119	71526	0.518	100
87) Benzyl Chloride	(3)	23.767	91	35297	0.327	87
88) 1,3-Dichlorobenzene	(3)	23.767	146	45019	0.500	97
90) N-Decane	(3)	24.011	57	50761	0.496	96
89) 1,4-Dichlorobenzene	(3)	23.948	146	35366	0.400	87
91) sec-Butylbenzene	(3)	24.164	105	98508	0.542	97
92) p-Isopropyltoluene	(3)	24.612	119	78140	0.489	97
93) 1,2-Dichlorobenzene	(3)	24.759	146	42206	0.479	95
94) n-Butylbenzene	(3)	25.712	91	56039	0.367	99
95) 1,2-Dibromo-3-Chloropropane	(3)	25.904	157	18324	0.360	96
96) 1,2,4-Trichlorobenzene	(3)	29.425	180	15148	0.191	72
97) Naphthalene	(3)	29.641	128	12987	0.083	63
98) 1,2,3-Trichlorobenzene	(3)	30.242	180	19672	0.231	83
99) Hexachloro-1,3-Butadiene	(3)	30.542	225	42571	0.521	99

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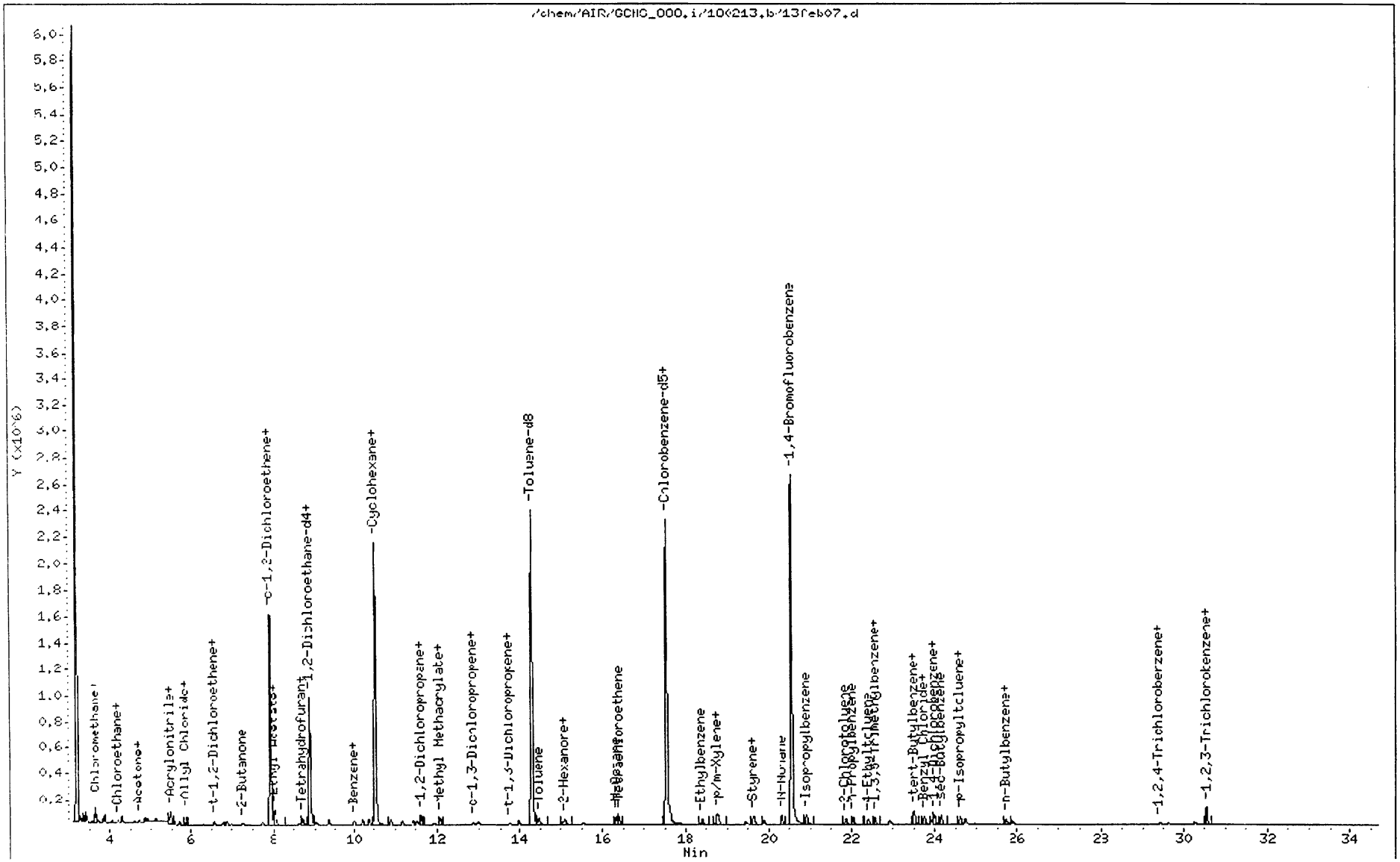
Data File: /chem/AIR/GCMS_000.i/180213.b/13feb07.d
Date : 13-FEB-2018 16:03
Client ID:
Sample Info: ICAL 0.50PPBV A020718C

Instrument: GCMS_000.i
Operator: 953
Column phase:
Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb06.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 15:17 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:15 jxs7

Sample Name: ICAL 1.25PPBV A020718C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	747915	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	2571614	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.542	117	2288782	25.000	0.01
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.878	65	1023999	25.021	0.00
SpikedAmount 25.000	Recovery =	0.000				
60)$Toluene-d8	(2)	14.281	98	2551669	24.700	0.00
SpikedAmount 25.000	Recovery =	0.000				
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1637026	25.177	0.01
SpikedAmount 25.000	Recovery =	0.000				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.251	69	28002	1.226	97
2) 1,1-Difluoroethane	(1)	3.310	51	57713	1.273	97
3) Propene	(1)	3.375	41	53564	1.357	97
4) Propane	(1)	3.393	29	57650	2.911	96
5) Dichlorodifluoromethane	(1)	3.434	85	97381	1.361	100
6) Chloromethane	(1)	3.557	50	35125	1.273	100
7) Dichlorotetrafluoroethane	(1)	3.640	85	81359	1.306	100
8) Isobutane	(1)	3.657	43	129637	2.974	99
9) Methanol	(1)	3.681	31	30877	4.463	96
10) Vinyl Chloride	(1)	3.734	62	35574	1.309	99
11) 1,3-Butadiene	(1)	3.846	54	29737	1.339	96
12) Butane	(1)	3.893	43	115582	2.870	98
13) Bromomethane	(1)	4.063	94	29006	1.293	99
14) Chloroethane	(1)	4.204	64	15198	1.291	97
15) Ethanol	(1)	4.293	45	65697	5.526	99
16) Acrolein	(1)	4.587	56	16654	1.323	97
17) Acetone	(1)	4.705	58	18168	1.350	96
18) Trichlorofluoromethane	(1)	4.863	101	88693	1.265	99
19) Isopropanol	(1)	4.916	45	89592	1.327	95
20) Acrylonitrile	(1)	5.122	53	42022	1.257	99
21) 1,1-Dichloroethene	(1)	5.458	61	79445	1.304	100
23) Methylene Chloride	(1)	5.567	84	32483	1.303	96
22) Tert-Butyl Alcohol (TBA)	(1)	5.481	59	177349	2.768	96
24) Allyl Chloride	(1)	5.692	41	70898	1.311	99
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.851	101	80775	1.377	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb06.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 15:17 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:15 jxs7

Sample Name: ICAL 1.25PPBV A020718C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	101363	1.316	97
27) Propionitrile	(1)	6.276	54	35914	1.174	92
28) t-1,2-Dichloroethene	(1)	6.548	96	36825	1.283	98
29) 1,1-Dichloroethane	(1)	6.758	63	83137	1.311	98
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.848	73	101344	1.291	96
31) Vinyl Acetate	(1)	6.962	43	127083	1.224	93
32) 2-Butanone	(1)	7.234	43	92903	1.193	94
33) c-1,2-Dichloroethene	(1)	7.733	96	39080	1.274	98
37) Hexane	(1)	8.039	57	75317	1.412	99
36) Diisopropyl Ether (DIPE)	(1)	8.033	45	203799	1.367	98
35) Ethyl Acetate	(1)	8.050	61	12218	1.183	88
38) Chloroform	(1)	8.084	83	84386	1.329	97
39) Tetrahydrofuran	(1)	8.612	42	50408M	1.156	98
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	155485	1.303	99
42) 1,2-Dichloroethane	(1)	9.020	62	62926	1.274	97
43) 1,1,1-Trichloroethane	(1)	9.366	97	88879	1.273	95
44) Benzene	(2)	9.984	78	113394	1.276	100
45) Carbon Tetrachloride	(2)	10.194	117	97135	1.282	99
46) Cyclohexane	(2)	10.381	56	78970	1.291	97
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	107430	1.244	97
49) 1,2-Dichloropropane	(2)	11.157	63	52337	1.298	98
50) Bromodichloromethane	(2)	11.430	83	89161	1.254	99
52) Trichloroethene	(2)	11.526	95	52606	1.274	99
53) 2,2,4-Trimethyl Pentane	(2)	11.639	57	263588	1.382	99
51) 1,4-Dioxane	(2)	11.543	88	22414	1.146	60
54) Methyl Methacrylate	(2)	11.912	69	30216	1.078	96
55) Heptane	(2)	12.076	100	9560	1.303	94
56) c-1,3-Dichloropropene	(2)	12.870	75	63318	1.189	96
57) 4-Methyl-2-Pentanone	(2)	12.966	58	40257	1.157	91
58) t-1,3-Dichloropropene	(2)	13.743	75	57659	1.149	98
59) 1,1,2-Trichloroethane	(2)	13.964	83	43099	1.285	99
61) Toluene	(3)	14.446	91	135634	1.321	99
62) 2-Hexanone	(3)	14.990	58	45441	1.098	99
63) Ethyl Methacrylate	(3)	15.047	69	60527	1.214	93
64) Dibromochloromethane	(3)	15.098	129	96477	1.313	99
65) 1,2-Dibromoethane	(3)	15.523	107	78907	1.271	99
66) N-Octane	(3)	16.328	57	51519	1.352	95

M = Compound was manually integrated.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_000.i/180213.b/13feb06.d Instrument ID: GCMS_000.i
Injection date and time: 13-FEB-2018 15:17 Analyst ID: 953

Method used: /chem/AIR/GCMS_000.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:15 jxs7

Sample Name: ICAL 1.25PPBV A020718C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.396	166	80200	1.347	99
69) Chlorobenzene	(3)	17.621	112	115745	1.329	98
70) Ethylbenzene	(3)	18.398	91	182366	1.310	97
71) p/m-Xylene	(3)	18.738	91	315385	2.765	99
72) Bromoform	(3)	18.749	173	98314	1.267	98
73) Styrene	(3)	19.452	104	95568	1.196	99
74) 1,1,2,2-Tetrachloroethane	(3)	19.611	83	116582	1.385	99
75) o-Xylene	(3)	19.651	91	153414	1.403	97
76) 1,2,3-Trichloropropane	(3)	19.883	75	85300	1.333	99
77) N-Nonane	(3)	20.325	57	123632	1.419	97
79) Isopropylbenzene	(3)	20.909	105	215201	1.359	99
80) 2-Chlorotoluene	(3)	21.856	91	150815	1.306	99
81) n-Propylbenzene	(3)	22.026	91	257583	1.374	97
82) 4-Ethyltoluene	(3)	22.372	105	191501	1.315	99
83) 1,3,5-Trimethylbenzene	(3)	22.571	105	183181	1.401	99
84) alpha-Methylstyrene	(3)	22.917	118	84378	1.231	100
86) 1,2,4-Trimethylbenzene	(3)	23.500	105	182708	1.414	99
85) tert-Butylbenzene	(3)	23.483	119	201998	1.416	99
87) Benzyl Chloride	(3)	23.756	91	126782	1.136	94
88) 1,3-Dichlorobenzene	(3)	23.761	146	128247	1.379	100
90) N-Decane	(3)	24.005	57	160801	1.522	98
89) 1,4-Dichlorobenzene	(3)	23.937	146	124229	1.360	94
91) sec-Butylbenzene	(3)	24.164	105	273204	1.456	98
92) p-Isopropyltoluene	(3)	24.612	119	230265	1.395	99
93) 1,2-Dichlorobenzene	(3)	24.754	146	124404	1.367	98
94) n-Butylbenzene	(3)	25.695	91	202791	1.285	98
95) 1,2-Dibromo-3-Chloropropane	(3)	25.887	157	60860	1.156	99
96) 1,2,4-Trichlorobenzene	(3)	29.408	180	76240	0.931	92
97) Naphthalene	(3)	29.618	128	134151	0.826	97
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	95245	1.081	95
99) Hexachloro-1,3-Butadiene	(3)	30.542	225	117740	1.394	99

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Data File: /chem/AIR/GCMS_000.i/180213.b/13feb06.d

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Date : 13-FEB-2018 15:17

Client ID:

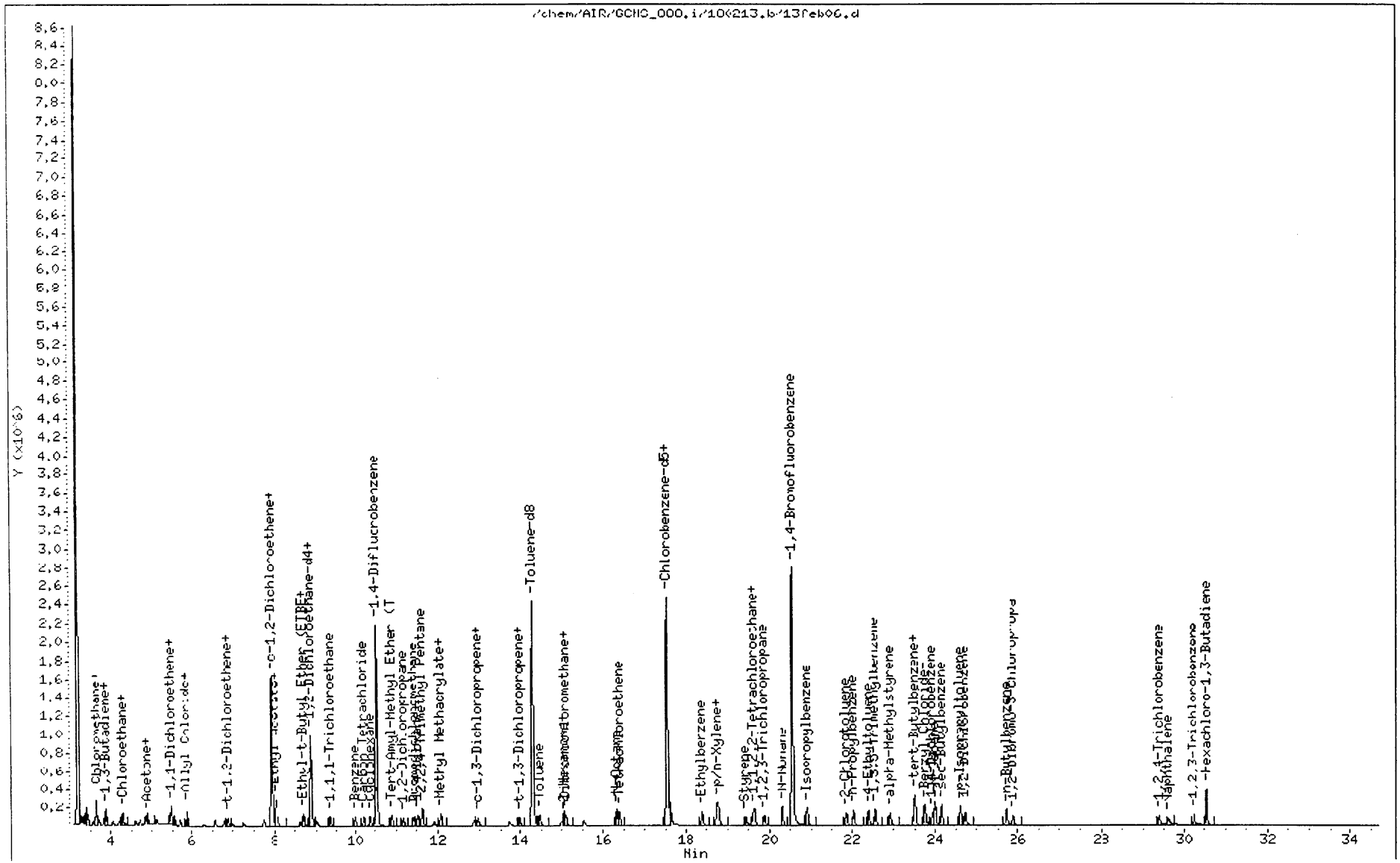
Instrument: GCMS_000.i

Sample Info: ICAL 1.25PPBV A020718C

Operator: 953

Column phase:

Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb05.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 14:26 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 6.25PPBV A021318C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34) *Bromochloromethane	(1)	7.920	130	741570	25.000	0.00
47) *1,4-Difluorobenzene	(2)	10.528	114	2546897	25.000	0.00
68) *Chlorobenzene-d5	(3)	17.542	117	2288885	25.000	0.01
System Monitoring Compounds						
41) $1,2-Dichloroethane-d4	(1)	8.878	65	1006853	24.813	0.00
SpikedAmount 25.000	Recovery =		0.000			
60) $Toluene-d8	(2)	14.282	98	2543347	24.858	0.00
SpikedAmount 25.000	Recovery =		0.000			
78) $1,4-Bromofluorobenzene	(3)	20.558	95	1631061	25.084	0.01
SpikedAmount 25.000	Recovery =		0.000			
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.251	69	144612	6.388	99
2) 1,1-Difluoroethane	(1)	3.310	51	277823	6.181	98
3) Propene	(1)	3.375	41	253036	6.463	99
4) Propane	(1)	3.393	29	264679	13.480	97
5) Dichlorodifluoromethane	(1)	3.434	85	432719	6.098	99
6) Chloromethane	(1)	3.557	50	168336	6.153	100
7) Dichlorotetrafluoroethane	(1)	3.640	85	383684	6.212	100
8) Isobutane	(1)	3.663	43	608175	14.072	99
9) Methanol	(1)	3.681	31	139001	20.263	99
10) Vinyl Chloride	(1)	3.734	62	166900	6.194	99
11) 1,3-Butadiene	(1)	3.846	54	138663	6.298	96
12) Butane	(1)	3.893	43	540857	13.544	99
13) Bromomethane	(1)	4.063	94	135127	6.076	100
14) Chloroethane	(1)	4.205	64	71712	6.142	100
15) Ethanol	(1)	4.287	45	308746	26.190	100
16) Acrolein	(1)	4.587	56	76340	6.118	99
17) Acetone	(1)	4.699	58	80983	6.071	96
18) Trichlorofluoromethane	(1)	4.863	101	428149	6.160	100
19) Isopropanol	(1)	4.911	45	432356	6.457	97
20) Acrylonitrile	(1)	5.116	53	208391	6.288	100
21) 1,1-Dichloroethene	(1)	5.458	61	375343	6.213	99
23) Methylene Chloride	(1)	5.567	84	153210	6.197	96
22) Tert-Butyl Alcohol (TBA)	(1)	5.481	59	863548	13.594	97
24) Allyl Chloride	(1)	5.692	41	345971	6.454	99
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.856	101	368150	6.329	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb05.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 14:26 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 6.25PPBV A021318C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	485431	6.355	98
27) Propionitrile	(1)	6.259	54	185897	6.128	99
28) t-1,2-Dichloroethene	(1)	6.548	96	176006	6.186	98
29) 1,1-Dichloroethane	(1)	6.763	63	388509	6.177	99
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.848	73	482359	6.198	98
31) Vinyl Acetate	(1)	6.950	43	639657	6.215	96
32) 2-Butanone	(1)	7.217	43	469942	6.085	98
33) c-1,2-Dichloroethene	(1)	7.733	96	188658	6.203	99
37) Hexane	(1)	8.033	57	347483	6.570	98
36) Diisopropyl Ether (DIPE)	(1)	8.033	45	959394	6.492	98
35) Ethyl Acetate	(1)	8.045	61	65759	6.419	96
38) Chloroform	(1)	8.090	83	389884	6.193	99
39) Tetrahydrofuran	(1)	8.589	42	263698	5.901	99
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	749126	6.330	99
42) 1,2-Dichloroethane	(1)	9.020	62	298293	6.092	99
43) 1,1,1-Trichloroethane	(1)	9.366	97	423562	6.120	99
44) Benzene	(2)	9.984	78	547563	6.221	99
45) Carbon Tetrachloride	(2)	10.194	117	463819	6.179	99
46) Cyclohexane	(2)	10.381	56	384190	6.342	99
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.885	73	530047	6.196	97
49) 1,2-Dichloropropane	(2)	11.157	63	247762	6.206	99
50) Bromodichloromethane	(2)	11.435	83	434042	6.163	100
52) Trichloroethene	(2)	11.520	95	258060	6.311	99
53) 2,2,4-Trimethyl Pentane	(2)	11.645	57	1207524	6.392	100
51) 1,4-Dioxane	(2)	11.515	88	117388	6.063	79
54) Methyl Methacrylate	(2)	11.900	69	167485	6.032	97
55) Heptane	(2)	12.076	100	46921	6.458	98
56) c-1,3-Dichloropropene	(2)	12.864	75	333271	6.320	99
57) 4-Methyl-2-Pentanone	(2)	12.960	58	209919	6.090	97
58) t-1,3-Dichloropropene	(2)	13.726	75	317441	6.389	99
59) 1,1,2-Trichloroethane	(2)	13.964	83	209001	6.290	99
61) Toluene	(3)	14.446	91	643955	6.273	100
62) 2-Hexanone	(3)	14.968	58	239544M	5.782	88
63) Ethyl Methacrylate	(3)	15.047	69	318121	6.382	97
64) Dibromochloromethane	(3)	15.098	129	471351	6.417	100
65) 1,2-Dibromoethane	(3)	15.518	107	396042	6.378	100
66) N-Octane	(3)	16.328	57	244334	6.413	98

M = Compound was manually integrated.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb05.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 14:26 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 6.25PPBV A021318C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.396	166	378122	6.351	100
69) Chlorobenzene	(3)	17.621	112	541941	6.221	99
70) Ethylbenzene	(3)	18.398	91	877226	6.299	100
71) p/m-Xylene	(3)	18.738	91	1424551	12.488	99
72) Bromoform	(3)	18.744	173	499150	6.431	99
73) Styrene	(3)	19.441	104	485771	6.078	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.611	83	531208	6.311	99
75) o-Xylene	(3)	19.651	91	686053	6.272	99
76) 1,2,3-Trichloropropane	(3)	19.878	75	407035	6.363	99
77) N-Nonane	(3)	20.331	57	562109	6.452	98
79) Isopropylbenzene	(3)	20.909	105	983621	6.212	100
80) 2-Chlorotoluene	(3)	21.856	91	725106	6.277	100
81) n-Propylbenzene	(3)	22.021	91	1193300	6.363	99
82) 4-Ethyltoluene	(3)	22.372	105	923722	6.342	99
83) 1,3,5-Trimethylbenzene	(3)	22.571	105	820670	6.276	100
84) alpha-Methylstyrene	(3)	22.911	118	431755	6.296	99
86) 1,2,4-Trimethylbenzene	(3)	23.501	105	820130	6.348	99
85) tert-Butylbenzene	(3)	23.484	119	910367	6.382	99
87) Benzyl Chloride	(3)	23.744	91	655330	5.872	99
88) 1,3-Dichlorobenzene	(3)	23.756	146	585664	6.297	100
90) N-Decane	(3)	24.005	57	682848	6.463	99
89) 1,4-Dichlorobenzene	(3)	23.931	146	598984	6.556	98
91) sec-Butylbenzene	(3)	24.164	105	1197888	6.382	100
92) p-Isopropyltoluene	(3)	24.606	119	1041734	6.313	100
93) 1,2-Dichlorobenzene	(3)	24.748	146	570282	6.266	99
94) n-Butylbenzene	(3)	25.695	91	973440	6.168	99
95) 1,2-Dibromo-3-Chloropropane	(3)	25.888	157	333695	6.340	100
96) 1,2,4-Trichlorobenzene	(3)	29.403	180	481494	5.881	98
97) Naphthalene	(3)	29.607	128	971769	5.983	98
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	549311	6.233	98
99) Hexachloro-1,3-Butadiene	(3)	30.542	225	504743	5.977	99

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Data File: /chem/AIR/GCMS_000.i/180213.b/13feb05.d

Date : 13-FEB-2018 14:26

Client ID:

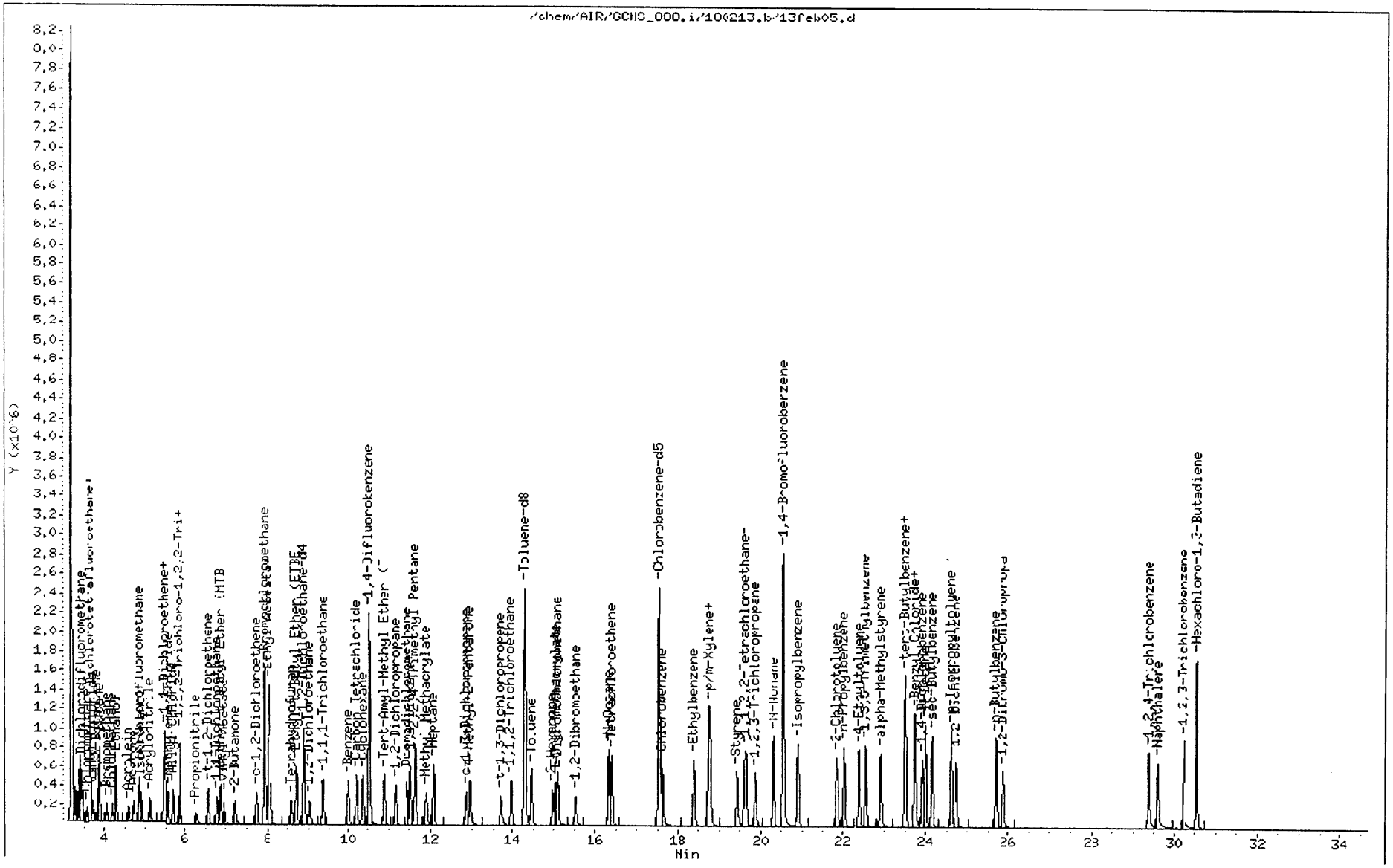
Sample Info: ICAL 6.25PPBV A021318C

Column phase:

Instrument: GCMS_LUU.i

Operator: 953

Column diameter: 0.00



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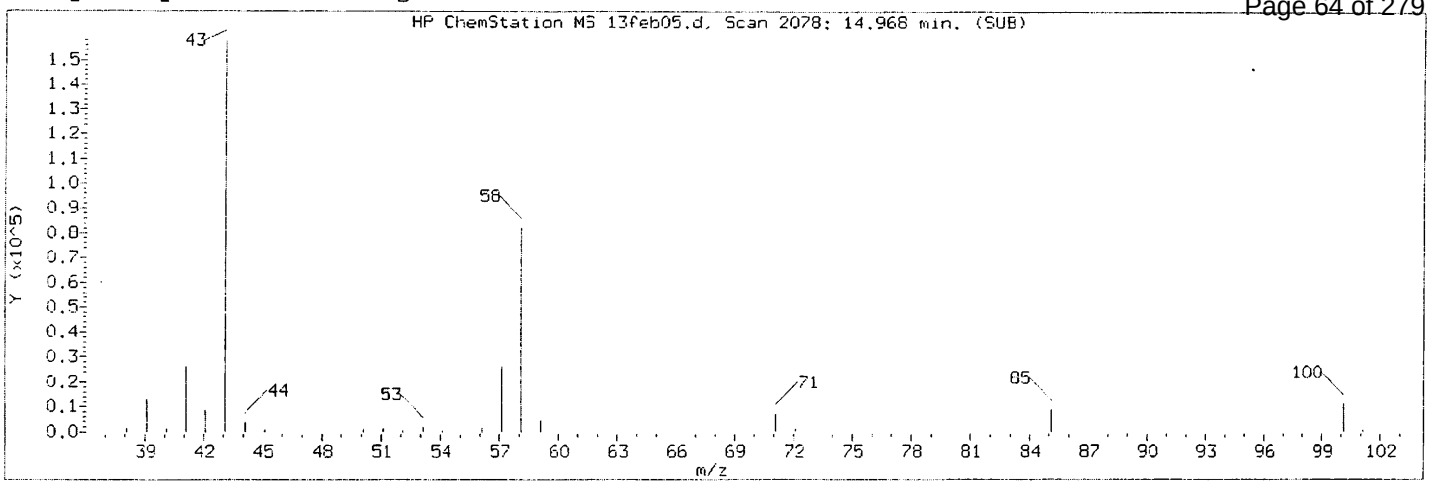
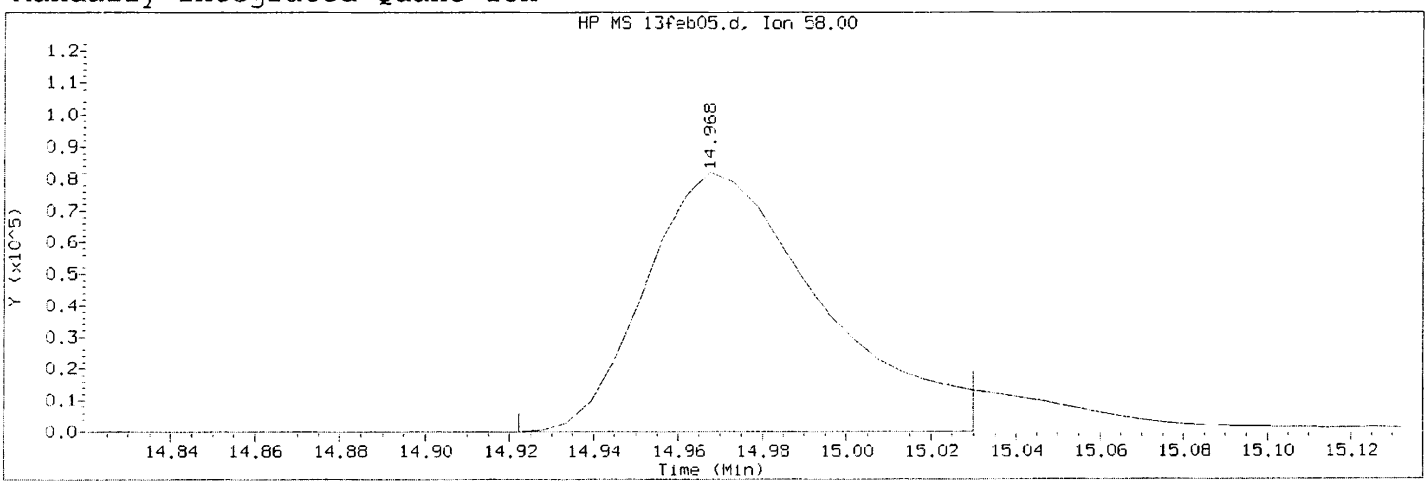
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb05.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 14:26 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 6.25PPBV A021318C

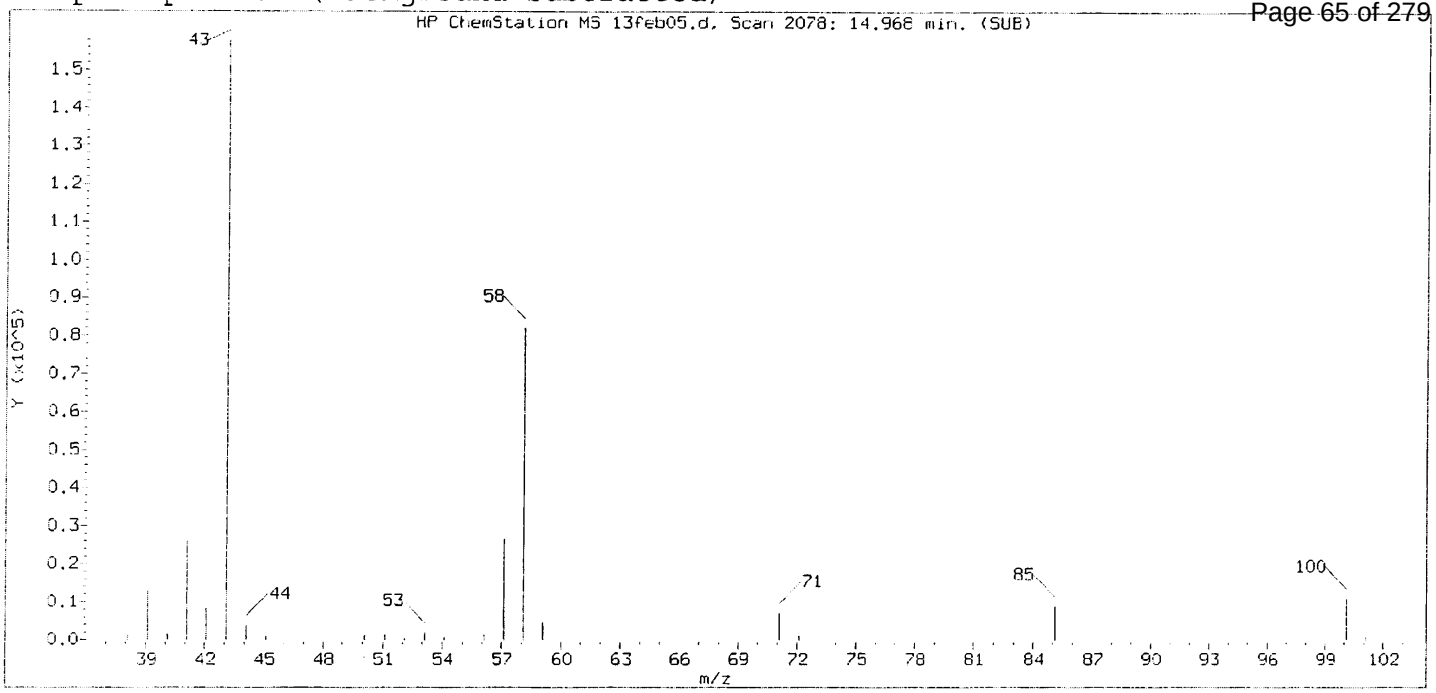
Compound Number	: 62	
Compound Name	: 2-Hexanone	
Scan Number	: 2078	
Retention Time (minutes)	: 14.968	
Quant Ion	: 58.00	
Area (flag)	: 239544M	
On-Column Amount (ppbv)	: 5.7824	
Integration start scan	: 2069	Integration stop scan: 2088
Y at integration start	: 0	Y at integration end: 0

Reason for manual integration: improper integration

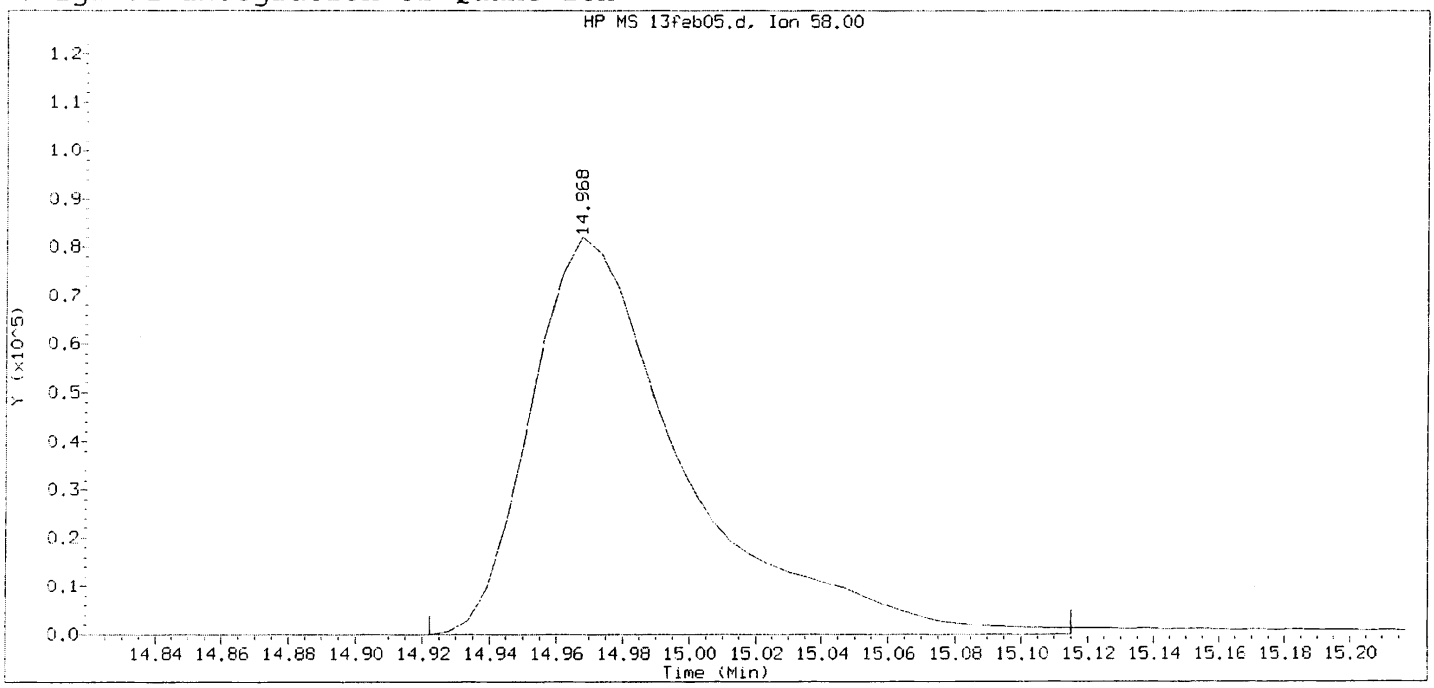
Analyst responsible for change: Digitally signed by Gabriel Guillen on 02/14/2018 at 13:20. Target 3.5 esignature user ID: jxs7

GC/MS audit/management approval: 326 2/16/18

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb05.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 14:26 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:10
Date, time and analyst ID of latest file update: 14-Feb-2018 13:10 jxs7

Sample Name: ICAL 6.25PPBV A021318C

Compound Number	: 62		
Compound Name	: 2-Hexanone		
Scan Number	: 2078		
Retention Time (minutes)	: 14.968		
Quant Ion	: 58.00		
Area	: 263363		
On-column Amount (ppbv)	: 6.1173		
Integration start scan	: 2069	Integration stop scan:	2103
Y at integration start	: 0	Y at integration end:	0

Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb04.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 13:43 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 12.5PPBV A021318C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	724762	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	2481223	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.542	117	2270789	25.000	0.01
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.884	65	978996	24.686	-0.01
SpikedAmount 25.000	Recovery =	0.000				
60)$Toluene-d8	(2)	14.282	98	2482500	24.905	0.00
SpikedAmount 25.000	Recovery =	0.000				
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1610168	24.960	0.01
SpikedAmount 25.000	Recovery =	0.000				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.257	69	281677	12.731	100
2) 1,1-Difluoroethane	(1)	3.316	51	539618	12.285	98
3) Propene	(1)	3.375	41	496980	12.988	99
4) Propane	(1)	3.393	29	510110	26.583	99
5) Dichlorodifluoromethane	(1)	3.434	85	884648	12.756	99
6) Chloromethane	(1)	3.563	50	327808	12.259	100
7) Dichlorotetrafluoroethane	(1)	3.646	85	741402	12.283	100
8) Isobutane	(1)	3.663	43	1126996	26.681	99
9) Methanol	(1)	3.687	31	258804	38.602	98
10) Vinyl Chloride	(1)	3.740	62	321554	12.211	100
11) 1,3-Butadiene	(1)	3.852	54	266410	12.380	98
12) Butane	(1)	3.893	43	1021100	26.164	99
13) Bromomethane	(1)	4.069	94	260503	11.985	100
14) Chloroethane	(1)	4.211	64	137333	12.034	100
15) Ethanol	(1)	4.293	45	580284	50.365	100
16) Acrolein	(1)	4.587	56	146972	12.053	99
17) Acetone	(1)	4.705	58	157280	12.064	97
18) Trichlorofluoromethane	(1)	4.869	101	889319	13.091	100
19) Isopropanol	(1)	4.917	45	855572	13.075	99
20) Acrylonitrile	(1)	5.117	53	407640	12.585	100
21) 1,1-Dichloroethene	(1)	5.458	61	720143	12.196	99
23) Methylene Chloride	(1)	5.567	84	294847	12.202	97
22) Tert-Butyl Alcohol (TBA)	(1)	5.487	59	1608924	25.915	99
24) Allyl Chloride	(1)	5.692	41	662265	12.641	99
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.856	101	705091	12.402	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_000.i/180213.b/13feb04.d Instrument ID: GCMS_000.i
Injection date and time: 13-FEB-2018 13:43 Analyst ID: 953

Method used: /chem/AIR/GCMS_000.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 12.5PPBV A021318C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	929132	12.445	98
27) Propionitrile	(1)	6.259	54	369527	12.464	100
28) t-1,2-Dichloroethene	(1)	6.548	96	342706	12.325	99
29) 1,1-Dichloroethane	(1)	6.764	63	744458	12.111	99
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.849	73	932272	12.256	97
31) Vinyl Acetate	(1)	6.951	43	1259859	12.524	98
32) 2-Butanone	(1)	7.211	43	940738	12.464	98
33) c-1,2-Dichloroethene	(1)	7.733	96	367990	12.380	98
37) Hexane	(1)	8.039	57	660279	12.773	99
36) Diisopropyl Ether (DIPE)	(1)	8.034	45	1831641	12.682	97
35) Ethyl Acetate	(1)	8.039	61	129458	12.930	98
38) Chloroform	(1)	8.096	83	752566	12.230	99
39) Tetrahydrofuran	(1)	8.589	42	530633	12.150	99
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	1442798	12.474	99
42) 1,2-Dichloroethane	(1)	9.026	62	584185	12.207	99
43) 1,1,1-Trichloroethane	(1)	9.372	97	814075	12.035	99
44) Benzene	(2)	9.990	78	1058028	12.339	99
45) Carbon Tetrachloride	(2)	10.199	117	898802	12.290	100
46) Cyclohexane	(2)	10.381	56	740441	12.546	99
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.885	73	1038745	12.464	97
49) 1,2-Dichloropropane	(2)	11.158	63	478843	12.312	99
50) Bromodichloromethane	(2)	11.435	83	849914	12.387	100
52) Trichloroethene	(2)	11.520	95	498229	12.508	100
53) 2,2,4-Trimethyl Pentane	(2)	11.645	57	2293716	12.463	100
51) 1,4-Dioxane	(2)	11.515	88	239638	12.704	88
54) Methyl Methacrylate	(2)	11.900	69	340528	12.589	97
55) Heptane	(2)	12.076	100	88049	12.439	97
56) c-1,3-Dichloropropene	(2)	12.864	75	651886	12.690	99
57) 4-Methyl-2-Pentanone	(2)	12.955	58	427685	12.736	97
58) t-1,3-Dichloropropene	(2)	13.726	75	625911	12.931	98
59) 1,1,2-Trichloroethane	(2)	13.970	83	403670	12.470	100
61) Toluene	(3)	14.446	91	1263559	12.406	100
62) 2-Hexanone	(3)	14.968	58	518715M	12.430	90
63) Ethyl Methacrylate	(3)	15.047	69	631095	12.761	98
64) Dibromochloromethane	(3)	15.104	129	909353	12.478	100
65) 1,2-Dibromoethane	(3)	15.518	107	773126	12.550	99
66) N-Octane	(3)	16.328	57	478161	12.651	98

M = Compound was manually integrated.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb04.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 13:43 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 12.5PPBV A021318C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.396	166	733018	12.409	100
69) Chlorobenzene	(3)	17.621	112	1059413	12.258	99
70) Ethylbenzene	(3)	18.398	91	1731816	12.535	99
71) p/m-Xylene	(3)	18.738	91	2793106	24.681	100
72) Bromoform	(3)	18.749	173	995994	12.935	100
73) Styrene	(3)	19.441	104	995055	12.549	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.611	83	1029842	12.333	100
75) o-Xylene	(3)	19.651	91	1321140	12.174	100
76) 1,2,3-Trichloropropane	(3)	19.878	75	794860	12.524	98
77) N-Nonane	(3)	20.331	57	1089996	12.610	99
79) Isopropylbenzene	(3)	20.910	105	1958534	12.468	99
80) 2-Chlorotoluene	(3)	21.856	91	1441080	12.574	100
81) n-Propylbenzene	(3)	22.021	91	2352144	12.642	100
82) 4-Ethyltoluene	(3)	22.372	105	1828089	12.651	99
83) 1,3,5-Trimethylbenzene	(3)	22.571	105	1586159	12.228	99
84) alpha-Methylstyrene	(3)	22.911	118	868261	12.763	100
86) 1,2,4-Trimethylbenzene	(3)	23.506	105	1600633	12.488	99
85) tert-Butylbenzene	(3)	23.489	119	1776258	12.552	100
87) Benzyl Chloride	(3)	23.750	91	1358476	12.270	99
88) 1,3-Dichlorobenzene	(3)	23.762	146	1158975	12.559	100
90) N-Decane	(3)	24.011	57	1339759	12.782	99
89) 1,4-Dichlorobenzene	(3)	23.932	146	1178843	13.006	99
91) sec-Butylbenzene	(3)	24.164	105	2329744	12.511	100
92) p-Isopropyltoluene	(3)	24.612	119	2051067	12.528	100
93) 1,2-Dichlorobenzene	(3)	24.748	146	1127905	12.492	100
94) n-Butylbenzene	(3)	25.695	91	2005058	12.805	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.888	157	708916	13.576	99
96) 1,2,4-Trichlorobenzene	(3)	29.403	180	1074309	13.227	99
97) Naphthalene	(3)	29.607	128	2252054	13.975	98
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	1124872	12.866	100
99) Hexachloro-1,3-Butadiene	(3)	30.543	225	1053775	12.578	99

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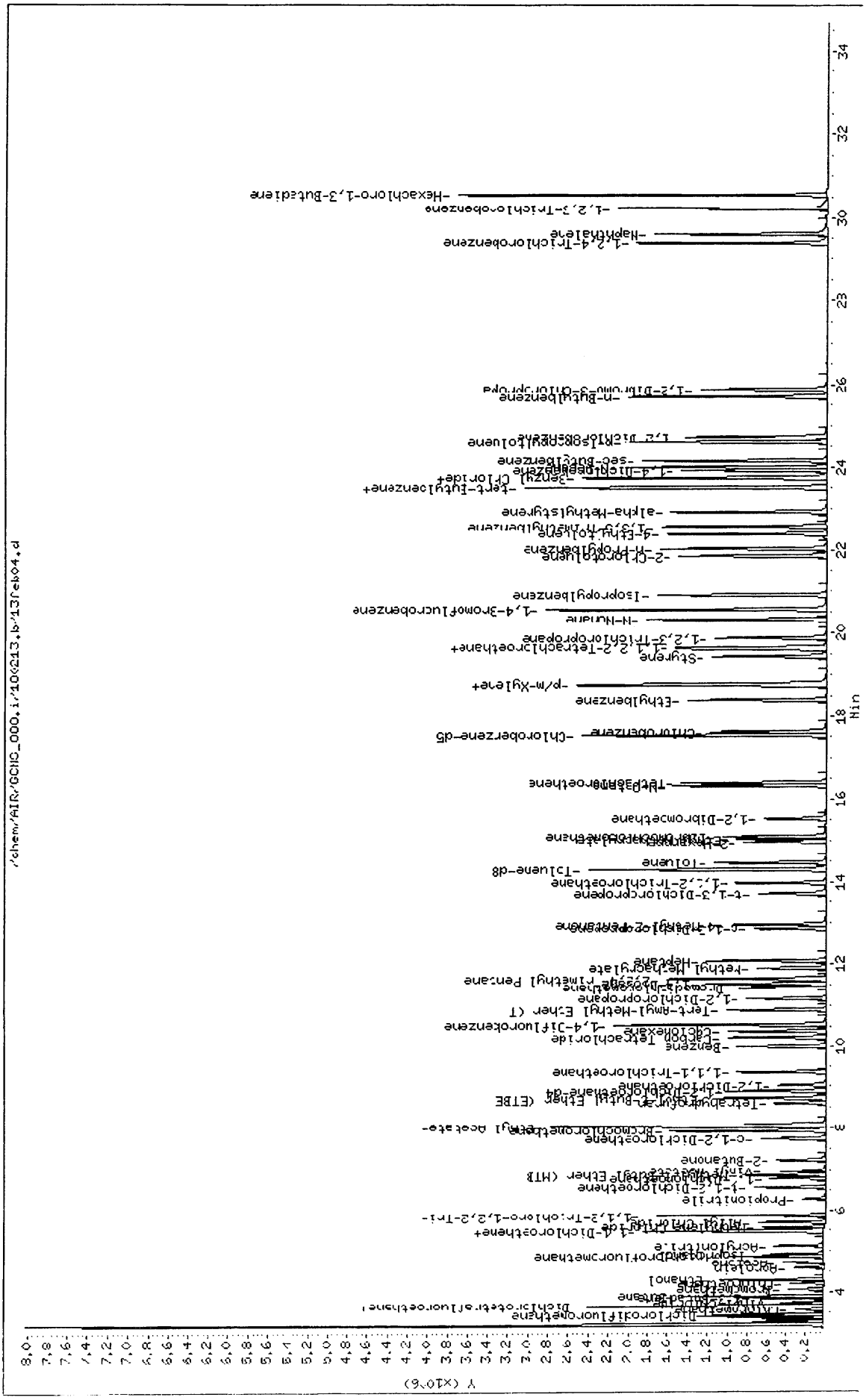
Data File: /chem/AIR/GCMS_000.i/180213.b/13feb04.d
Date : 13-FEB-2018 13:43
Client ID:
Sample Info: ICAL 12.5PPBV A021318C

Instrument: GCMS_UU.i
Operator: 953
Column diameter: 0.00

Column phase:

/chem/AIR/GCMS_000.i/180213.b/13feb04.d



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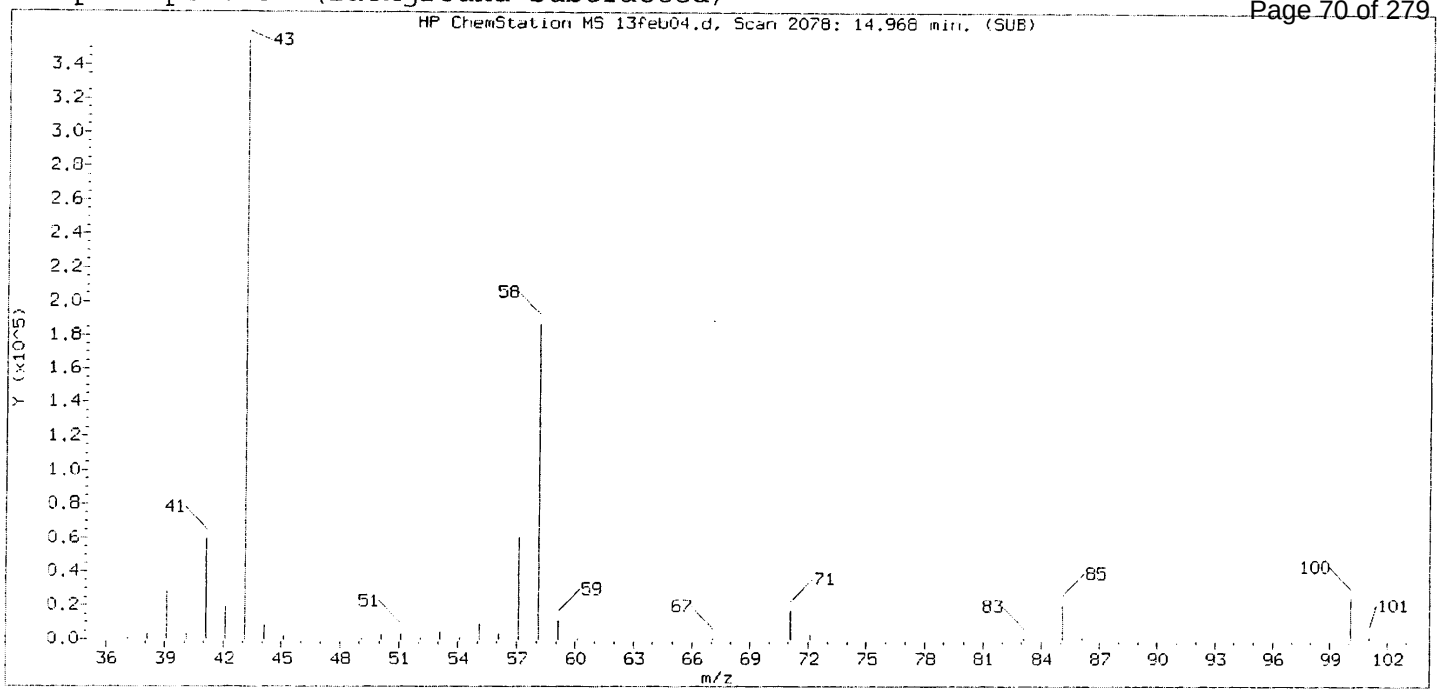
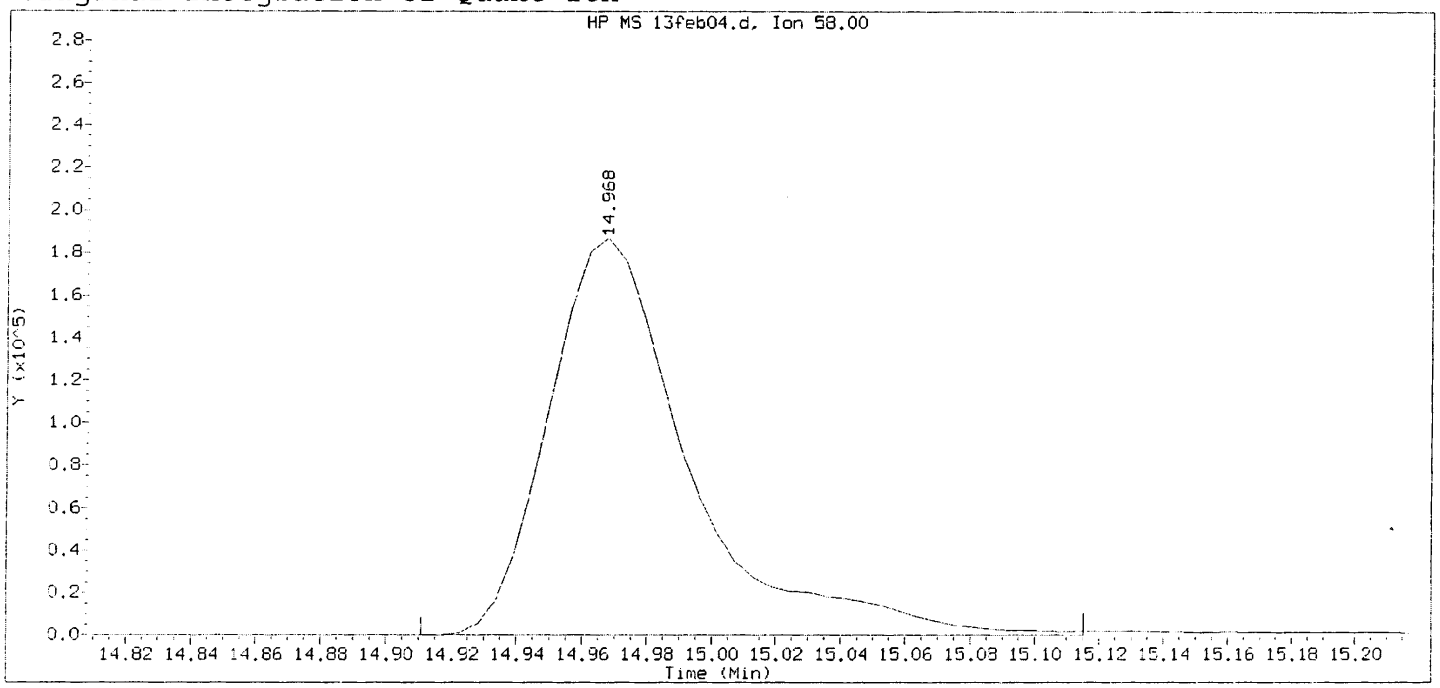
Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb04.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 13:43 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:10
Date, time and analyst ID of latest file update: 14-Feb-2018 13:10 jxs7

Sample Name: ICAL 12.5PPBV A021318C

Compound Number	: 62		
Compound Name	: 2-Hexanone		
Scan Number	: 2078		
Retention Time (minutes)	: 14.968		
Quant Ion	: 58.00		
Area	: 563582		
On-column Amount (ppbv)	: 13.1950		
Integration start scan	: 2067	Integration stop scan:	2103
Y at integration start	: 0	Y at integration end:	0

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_000.i/180213.b/13feb03.d Instrument ID: GCMS_000.i
Injection date and time: 13-FEB-2018 12:34 Analyst ID: 953

Method used: /chem/AIR/GCMS_000.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:22
Date, time and analyst ID of latest file update: 14-Feb-2018 13:22 jxs7

Sample Name: ICAL/CCV 25PPBV A021318C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	693606	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	2386026	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.547	117	2221093	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.878	65	954672	25.154	0.00
SpikedAmount 25.000	Recovery =		0.000			
60)$Toluene-d8	(2)	14.282	98	2416414	25.210	0.00
SpikedAmount 25.000	Recovery =		0.000			
78)$1,4-Bromofluorobenzene	(3)	20.564	95	1562620	24.765	0.00
SpikedAmount 25.000	Recovery =		0.000			
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.252	69	533965	25.217	100
2) 1,1-Difluoroethane	(1)	3.310	51	1038338	24.700	100
3) Propene	(1)	3.369	41	861688	23.531	100
4) Propane	(1)	3.387	29	930756	50.682	100
5) Dichlorodifluoromethane	(1)	3.428	85	1657123	24.969	100
6) Chloromethane	(1)	3.552	50	627805	24.533	100
7) Dichlorotetrafluoroethane	(1)	3.640	85	1404154	24.307	100
8) Isobutane	(1)	3.658	43	2017340	49.904	100
9) Methanol	(1)	3.681	31	487836	76.031	100
10) Vinyl Chloride	(1)	3.734	62	607016	24.086	100
11) 1,3-Butadiene	(1)	3.846	54	500806	24.318	100
12) Butane	(1)	3.887	43	1833790	49.098	100
13) Bromomethane	(1)	4.058	94	495250	23.809	100
14) Chloroethane	(1)	4.199	64	262023	23.992	100
15) Ethanol	(1)	4.287	45	1066486	96.722	100
16) Acrolein	(1)	4.581	56	283809	24.320	100
17) Acetone	(1)	4.693	58	302094	24.212	100
18) Trichlorofluoromethane	(1)	4.858	101	1556366	23.940	100
19) Isopropanol	(1)	4.911	45	1285830	20.532	100
20) Acrylonitrile	(1)	5.111	53	779880	25.159	100
21) 1,1-Dichloroethene	(1)	5.452	61	1383169	24.478	100
23) Methylene Chloride	(1)	5.562	84	580283	25.093	100
22) Tert-Butyl Alcohol (TBA)	(1)	5.481	59	2854081	48.035	100
24) Allyl Chloride	(1)	5.686	41	1253179	24.994	100
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.851	101	1316003	24.188	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb03.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 12:34 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:22
Date, time and analyst ID of latest file update: 14-Feb-2018 13:22 jxs7

Sample Name: ICAL/CCV 25PPBV A021318C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.856	76	1725036	24.144	100
27) Propionitrile	(1)	6.253	54	711722	25.085	100
28) t-1,2-Dichloroethene	(1)	6.542	96	648263	24.360	100
29) 1,1-Dichloroethane	(1)	6.758	63	1424130	24.208	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.843	73	1793643	24.640	100
31) Vinyl Acetate	(1)	6.945	43	2412654	25.061	100
32) 2-Butanone	(1)	7.206	43	1851308	25.631	100
33) c-1,2-Dichloroethene	(1)	7.727	96	700485	24.625	100
37) Hexane	(1)	8.034	57	1223364	24.730	100
36) Diisopropyl Ether (DIPE)	(1)	8.034	45	3351846	24.251	100
35) Ethyl Acetate	(1)	8.039	61	244901	25.559	100
38) Chloroform	(1)	8.090	83	1416074	24.047	100
39) Tetrahydrofuran	(1)	8.578	42	1016374	25.129	100
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	2747689	24.823	100
42) 1,2-Dichloroethane	(1)	9.020	62	1129032	24.653	100
43) 1,1,1-Trichloroethane	(1)	9.366	97	1581560	24.432	100
44) Benzene	(2)	9.984	78	2036168	24.693	100
45) Carbon Tetrachloride	(2)	10.194	117	1740404	24.748	100
46) Cyclohexane	(2)	10.381	56	1417319	24.974	100
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.885	73	1989899	24.830	100
49) 1,2-Dichloropropane	(2)	11.158	63	915922	24.490	100
50) Bromodichloromethane	(2)	11.435	83	1655235	25.087	100
52) Trichloroethene	(2)	11.520	95	949905	24.799	100
53) 2,2,4-Trimethyl Pentane	(2)	11.645	57	4308126	24.342	100
51) 1,4-Dioxane	(2)	11.509	88	447510	24.671	100
54) Methyl Methacrylate	(2)	11.895	69	662436	25.467	100
55) Heptane	(2)	12.076	100	165668	24.339	100
56) c-1,3-Dichloropropene	(2)	12.864	75	1282016	25.952	100
57) 4-Methyl-2-Pentanone	(2)	12.955	58	819569	25.381	100
58) t-1,3-Dichloropropene	(2)	13.720	75	1230080	26.427	100
59) 1,1,2-Trichloroethane	(2)	13.970	83	768832	24.698	100
61) Toluene	(3)	14.446	91	2410309	24.195	100
62) 2-Hexanone	(3)	14.968	58	1040286	25.904	100
63) Ethyl Methacrylate	(3)	15.047	69	1206267	24.937	100
64) Dibromochloromethane	(3)	15.104	129	1750009	24.550	100
65) 1,2-Dibromoethane	(3)	15.523	107	1494984	24.811	100
66) N-Octane	(3)	16.328	57	926447	25.060	100

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb03.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 12:34 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:22
Date, time and analyst ID of latest file update: 14-Feb-2018 13:22 jxs7

Sample Name: ICAL/CCV 25PPBV A021318C Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1397858	24.193	100
69) Chlorobenzene	(3)	17.621	112	2036938	24.096	100
70) Ethylbenzene	(3)	18.398	91	3345647	24.757	100
71) p/m-Xylene	(3)	18.744	91	5378126	48.586	100
72) Bromoform	(3)	18.749	173	1916528	25.446	100
73) Styrene	(3)	19.441	104	1936328	24.966	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	1954095	23.925	100
75) o-Xylene	(3)	19.657	91	2548165	24.005	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1513376	24.379	100
77) N-Nonane	(3)	20.331	57	2078390	24.583	100
79) Isopropylbenzene	(3)	20.910	105	3755897	24.445	100
80) 2-Chlorotoluene	(3)	21.856	91	2793893	24.924	100
81) n-Propylbenzene	(3)	22.027	91	4498485	24.719	100
82) 4-Ethyltoluene	(3)	22.378	105	3500811	24.770	100
83) 1,3,5-Trimethylbenzene	(3)	22.576	105	3053986	24.070	100
84) alpha-Methylstyrene	(3)	22.917	118	1648373	24.773	100
86) 1,2,4-Trimethylbenzene	(3)	23.512	105	3033120	24.193	100
85) tert-Butylbenzene	(3)	23.501	119	3373819	24.375	100
87) Benzyl Chloride	(3)	23.756	91	2833418	26.164	100
88) 1,3-Dichlorobenzene	(3)	23.767	146	2170708	24.050	100
90) N-Decane	(3)	24.017	57	2486312	24.251	100
89) 1,4-Dichlorobenzene	(3)	23.937	146	2206372	24.887	100
91) sec-Butylbenzene	(3)	24.170	105	4361970	23.949	100
92) p-Isopropyltoluene	(3)	24.618	119	3944775	24.634	100
93) 1,2-Dichlorobenzene	(3)	24.754	146	2159578	24.454	100
94) n-Butylbenzene	(3)	25.701	91	3848415	25.128	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.893	157	1370126	26.826	100
96) 1,2,4-Trichlorobenzene	(3)	29.403	180	2158550	27.171	100
97) Naphthalene	(3)	29.613	128	4355881	27.636	100
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	2184062	25.541	100
99) Hexachloro-1,3-Butadiene	(3)	30.543	225	1969298	24.032	100

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Data File: /chem/AIR/GCMS_000.i/180213.b/13feb03.d

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Date : 13-FEB-2018 12:34

Client ID:

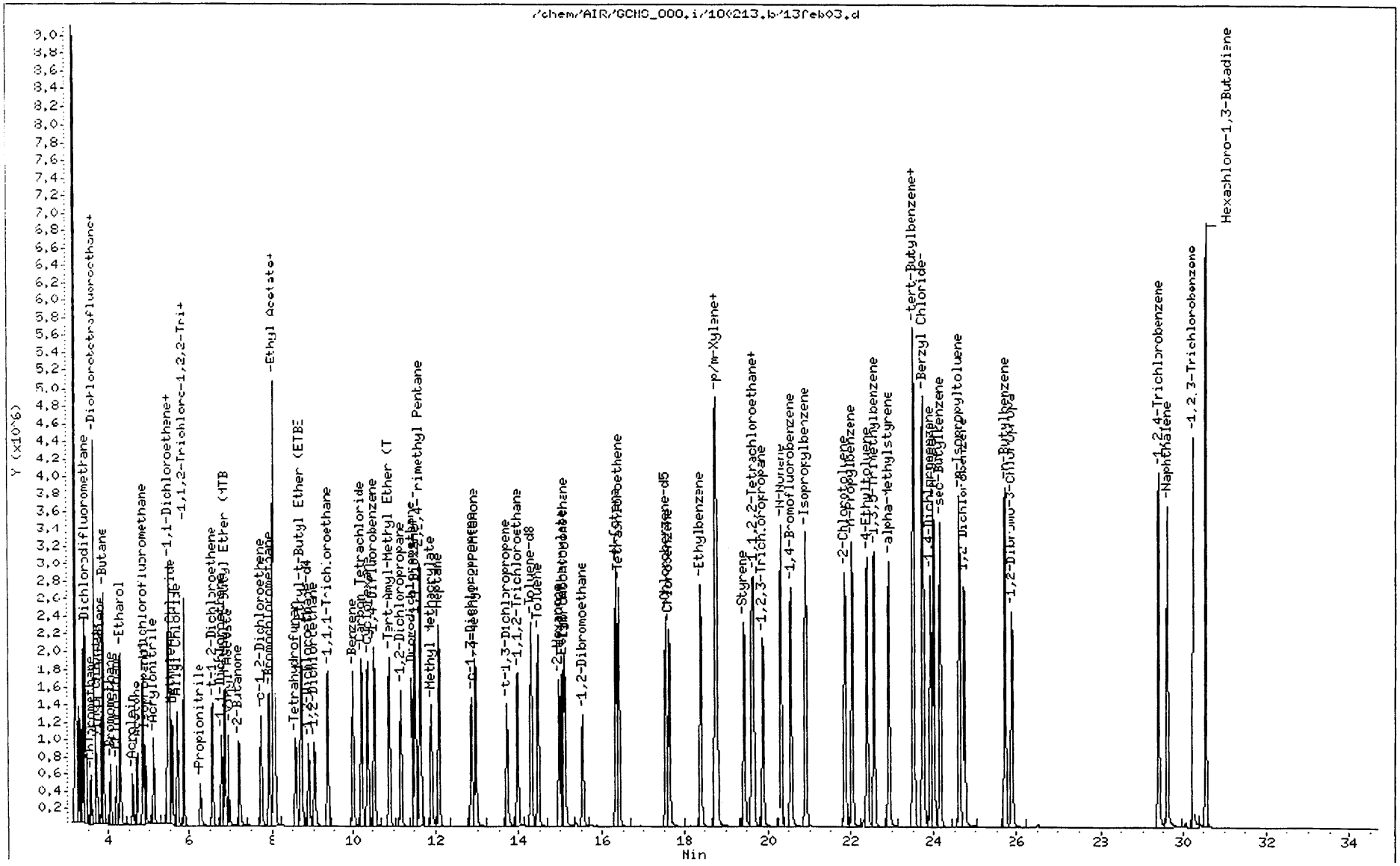
Instrument: GCMS_LUU.i

Sample Info: ICAL/CCV 25PPBV A021318C

Operator: 953

Column phase:

Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_000.i/180213.b/13feb10.d Instrument ID: GCMS_000.i
Injection date and time: 13-FEB-2018 18:37 Analyst ID: 953

Method used: /chem/AIR/GCMS_000.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:13
Date, time and analyst ID of latest file update: 14-Feb-2018 13:13 jxs7

Sample Name: ICAL 50PPBV A020718D Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34) *Bromochloromethane	(1)	7.926	130	704160	25.000	-0.01
47) *1,4-Difluorobenzene	(2)	10.534	114	2456099	25.000	-0.01
68) *Chlorobenzene-d5	(3)	17.547	117	2302354	25.000	0.00
System Monitoring Compounds						
41) $1,2-Dichloroethane-d4	(1)	8.884	65	948575	24.619	-0.01
SpikedAmount 25.000	Recovery =		0.000			
60) $Toluene-d8	(2)	14.287	98	2494348	25.280	-0.01
SpikedAmount 25.000	Recovery =		0.000			
78) $1,4-Bromofluorobenzene	(3)	20.564	95	1627871	24.889	0.00
SpikedAmount 25.000	Recovery =		0.000			
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.252	69	1043467	48.540	99
2) 1,1-Difluoroethane	(1)	3.310	51	2103439	49.287	100
3) Propene	(1)	3.375	41	1846028	49.655	99
4) Propane	(1)	3.393	29	1786742	95.834	97
5) Dichlorodifluoromethane	(1)	3.434	85	3152731	46.792	100
6) Chloromethane	(1)	3.557	50	1321750	50.876	100
7) Dichlorotetrafluoroethane	(1)	3.640	85	2948773	50.280	100
8) Isobutane	(1)	3.658	43	3737328	91.067	99
9) Methanol	(1)	3.681	31	982366	150.811	99
10) Vinyl Chloride	(1)	3.734	62	1291674	50.485	100
11) 1,3-Butadiene	(1)	3.846	54	1053214	50.375	96
12) Butane	(1)	3.887	43	3547814	93.566	99
13) Bromomethane	(1)	4.063	94	1077389	51.018	100
14) Chloroethane	(1)	4.205	64	573122	51.691	100
15) Ethanol	(1)	4.293	45	2195896	196.165	99
16) Acrolein	(1)	4.581	56	605628	51.118	100
17) Acetone	(1)	4.693	58	647579	51.125	99
18) Trichlorofluoromethane	(1)	4.864	101	3232033	48.969	100
19) Isopropanol	(1)	4.922	45	3271085	51.451	99
20) Acrylonitrile	(1)	5.117	53	1591552	50.575	100
21) 1,1-Dichloroethene	(1)	5.452	61	2863973	49.923	100
23) Methylene Chloride	(1)	5.567	84	1207547	51.434	96
22) Tert-Butyl Alcohol (TBA)	(1)	5.493	59	5432461	90.060	99
24) Allyl Chloride	(1)	5.692	41	2479321	48.708	99
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.851	101	2750921	49.803	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb10.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 18:37 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:13
Date, time and analyst ID of latest file update: 14-Feb-2018 13:13 jxs7

Sample Name: ICAL 50PPBV A020718D Misc Info: 1@A02 09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.856	76	3639437	50.174	99
27) Propionitrile	(1)	6.259	54	1502482	52.162	99
28) t-1,2-Dichloroethene	(1)	6.548	96	1409752	52.182	100
29) 1,1-Dichloroethane	(1)	6.763	63	2987588	50.023	99
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.843	73	3821498	51.711	100
31) Vinyl Acetate	(1)	6.951	43	5031945	51.486	100
32) 2-Butanone	(1)	7.211	43	3765951	51.357	99
33) c-1,2-Dichloroethene	(1)	7.733	96	1523683	52.761	100
37) Hexane	(1)	8.039	57	2430649	48.398	99
36) Diisopropyl Ether (DIPE)	(1)	8.039	45	6192509	44.132	99
35) Ethyl Acetate	(1)	8.045	61	492757	50.656	97
38) Chloroform	(1)	8.102	83	2985419	49.937	100
39) Tetrahydrofuran	(1)	8.578	42	2166302	51.055	99
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.720	59	5683489	50.575	100
42) 1,2-Dichloroethane	(1)	9.026	62	2388618	51.374	100
43) 1,1,1-Trichloroethane	(1)	9.372	97	3362897	51.171	100
44) Benzene	(2)	9.990	78	4401064	51.850	100
45) Carbon Tetrachloride	(2)	10.199	117	3642946	50.323	100
46) Cyclohexane	(2)	10.381	56	2953739	50.562	100
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	4292926	52.040	100
49) 1,2-Dichloropropane	(2)	11.163	63	1965149	51.045	100
50) Bromodichloromethane	(2)	11.441	83	3546825	52.223	99
52) Trichloroethene	(2)	11.532	95	2028038	51.434	99
53) 2,2,4-Trimethyl Pentane	(2)	11.656	57	8523767	46.788	100
51) 1,4-Dioxane	(2)	11.515	88	985907	52.801	99
54) Methyl Methacrylate	(2)	11.906	69	1461910	54.599	100
55) Heptane	(2)	12.082	100	358037	51.099	99
56) c-1,3-Dichloropropene	(2)	12.870	75	2835111	55.755	100
57) 4-Methyl-2-Pentanone	(2)	12.966	58	1758365	52.900	99
58) t-1,3-Dichloropropene	(2)	13.726	75	2724056	56.855	100
59) 1,1,2-Trichloroethane	(2)	13.975	83	1666636	52.012	99
61) Toluene	(3)	14.452	91	5252285	50.862	99
62) 2-Hexanone	(3)	14.979	58	2321298	55.762	96
63) Ethyl Methacrylate	(3)	15.058	69	2609777	52.047	97
64) Dibromochloromethane	(3)	15.109	129	3746983	50.710	100
65) 1,2-Dibromoethane	(3)	15.535	107	3280840	52.528	100
66) N-Octane	(3)	16.340	57	1890057	49.320	99

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb10.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 18:37 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:13
Date, time and analyst ID of latest file update: 14-Feb-2018 13:13 jxs7

Sample Name: ICAL 50PPBV A020718D Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.408	166	2934109	48.990	99
69) Chlorobenzene	(3)	17.632	112	4435878	50.621	99
70) Ethylbenzene	(3)	18.404	91	7251754	51.768	100
71) p/m-Xylene	(3)	18.789	91	11370855	99.100	100
72) Bromoform	(3)	18.761	173	3994788	51.168	99
73) Styrene	(3)	19.452	104	4308198	53.587	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.634	83	4198609	49.591	100
75) o-Xylene	(3)	19.668	91	5385444	48.944	99
76) 1,2,3-Trichloropropane	(3)	19.895	75	3223432	50.093	100
77) N-Nonane	(3)	20.343	57	4273567	48.763	100
79) Isopropylbenzene	(3)	20.921	105	7882067	49.490	99
80) 2-Chlorotoluene	(3)	21.862	91	5976700	51.436	99
81) n-Propylbenzene	(3)	22.032	91	9340210	49.513	99
82) 4-Ethyltoluene	(3)	22.384	105	7461626	50.931	100
83) 1,3,5-Trimethylbenzene	(3)	22.588	105	6554928	49.839	100
84) alpha-Methylstyrene	(3)	22.928	118	3564000	51.671	100
86) 1,2,4-Trimethylbenzene	(3)	23.529	105	6400838	49.252	99
85) tert-Butylbenzene	(3)	23.506	119	6992681	48.737	99
87) Benzyl Chloride	(3)	23.773	91	6142507	54.718	100
88) 1,3-Dichlorobenzene	(3)	23.778	146	4672218	49.937	99
90) N-Decane	(3)	24.028	57	4978445	46.844	99
89) 1,4-Dichlorobenzene	(3)	23.949	146	4853459	52.812	99
91) sec-Butylbenzene	(3)	24.181	105	9131531	48.365	99
92) p-Isopropyltoluene	(3)	24.629	119	8217623	49.505	99
93) 1,2-Dichlorobenzene	(3)	24.765	146	4640772	50.695	99
94) n-Butylbenzene	(3)	25.712	91	8048920	50.700	99
95) 1,2-Dibromo-3-Chloropropane	(3)	25.910	157	2960844	55.925	99
96) 1,2,4-Trichlorobenzene	(3)	29.414	180	4812782	58.444	99
97) Naphthalene	(3)	29.624	128	9464189	57.926	100
98) 1,2,3-Trichlorobenzene	(3)	30.231	180	4817797	54.351	99
99) Hexachloro-1,3-Butadiene	(3)	30.554	225	4080224	48.035	100

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Data File: /chem/AIR/GCMS_000.i/180213.b/13feb10.d

Date : 13-FEB-2018 18:37

Client ID:

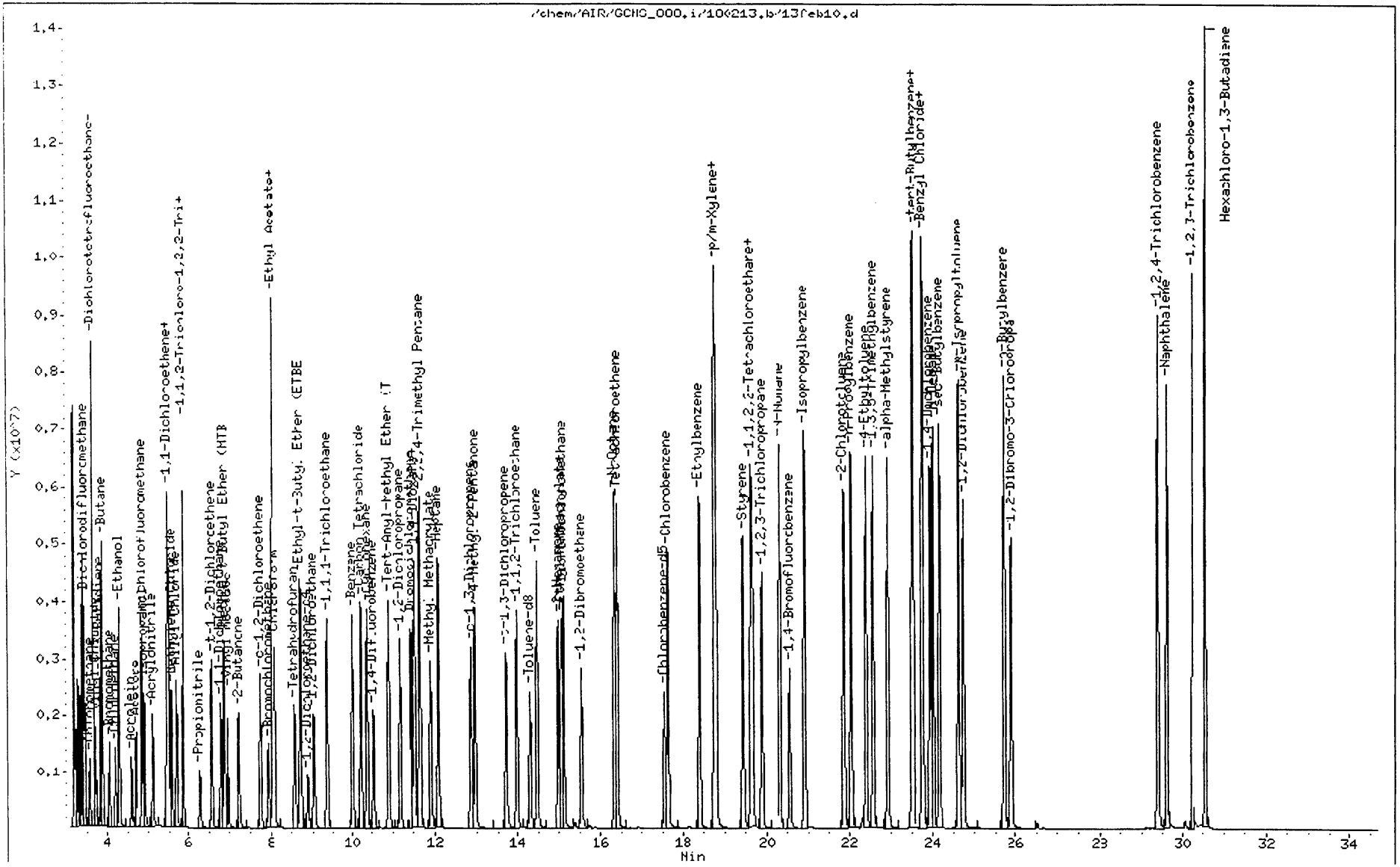
Sample Info: ICAL 50PPBV A020718D

Column phase:

Instrument: GCMS_000.i

Operator: 953

Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb08.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 16:59 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 100PPBV A020718D Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.926	130	647997	25.000	-0.01
47)*1,4-Difluorobenzene	(2)	10.540	114	2229205	25.000	-0.01
68)*Chlorobenzene-d5	(3)	17.553	117	2159695	25.000	-0.01
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.890	65	901433	25.423	-0.01
SpikedAmount 25.000	Recovery =		0.000			
60)$Toluene-d8	(2)	14.293	98	2284157	25.506	-0.01
SpikedAmount 25.000	Recovery =		0.000			
78)$1,4-Bromofluorobenzene	(3)	20.569	95	1523299	24.829	-0.01
SpikedAmount 25.000	Recovery =		0.000			
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.252	69	1798518	90.914	99
2) 1,1-Difluoroethane	(1)	3.310	51	4068253	103.588	99
3) Propene	(1)	3.375	41	3395667	99.255	98
4) Propane	(1)	3.393	29	3041322	177.263	91
5) Dichlorodifluoromethane	(1)	3.428	85	5293514	85.374	99
6) Chloromethane	(1)	3.557	50	2301210	96.254	99
7) Dichlorotetrafluoroethane	(1)	3.640	85	4975776	92.197	99
8) Isobutane	(1)	3.657	43	5352727	141.733	96
9) Methanol	(1)	3.681	31	1565956	261.238	97
10) Vinyl Chloride	(1)	3.734	62	2276984	96.708	100
11) 1,3-Butadiene	(1)	3.846	54	1828753	95.049	98
12) Butane	(1)	3.887	43	5613065	160.863	97
13) Bromomethane	(1)	4.058	94	1920331	98.815	100
14) Chloroethane	(1)	4.199	64	1014661	99.447	100
15) Ethanol	(1)	4.299	45	3675358	356.786	99
16) Acrolein	(1)	4.581	56	1093460	100.293	100
17) Acetone	(1)	4.693	58	1156569	99.222	99
18) Trichlorofluoromethane	(1)	4.858	101	5911972	97.338	100
19) Isopropanol	(1)	4.928	45	5904047	100.913	99
20) Acrylonitrile	(1)	5.117	53	2893949	99.932	100
21) 1,1-Dichloroethene	(1)	5.452	61	4907544	92.960	98
23) Methylene Chloride	(1)	5.567	84	2069480	95.788	95
22) Tert-Butyl Alcohol (TBA)	(1)	5.510	59	9485842	170.888	98
24) Allyl Chloride	(1)	5.686	41	4370474	93.304	97
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.851	101	4728177	93.019	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb08.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 16:59 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 100PPBV A020718D Misc Info: 1@A02-09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.856	76	6130322	91.839	100
27) Propionitrile	(1)	6.270	54	2747603	103.657	98
28) t-1,2-Dichloroethene	(1)	6.548	96	2440930	98.181	98
29) 1,1-Dichloroethane	(1)	6.763	63	5310114	96.616	99
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.849	73	6631687	97.514	99
31) Vinyl Acetate	(1)	6.956	43	8923782	99.219	99
32) 2-Butanone	(1)	7.217	43	6900214	102.255	98
33) c-1,2-Dichloroethene	(1)	7.733	96	2654524	99.885	98
37) Hexane	(1)	8.039	57	3883307	84.024	98
36) Diisopropyl Ether (DIPE)	(1)	8.045	45	9470698	73.344	99
35) Ethyl Acetate	(1)	8.056	61	808412	90.308	95
38) Chloroform	(1)	8.113	83	5254089	95.502	100
39) Tetrahydrofuran	(1)	8.583	42	3910905	100.161	98
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.720	59	9749075	94.273	100
42) 1,2-Dichloroethane	(1)	9.031	62	4399149	102.817	98
43) 1,1,1-Trichloroethane	(1)	9.377	97	6093677	100.761	100
44) Benzene	(2)	9.995	78	7544088	97.925	97
45) Carbon Tetrachloride	(2)	10.205	117	6507440	99.042	100
46) Cyclohexane	(2)	10.386	56	5082040	95.848	99
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.897	73	7355498	98.240	99
49) 1,2-Dichloropropane	(2)	11.175	63	3393669	97.124	98
50) Bromodichloromethane	(2)	11.452	83	6244328	101.298	99
52) Trichloroethene	(2)	11.537	95	3465664	96.841	97
53) 2,2,4-Trimethyl Pentane	(2)	11.662	57	14348891	86.780	98
51) 1,4-Dioxane	(2)	11.526	88	1645278	97.082	98
54) Methyl Methacrylate	(2)	11.912	69	2563513	105.485	98
55) Heptane	(2)	12.093	100	593689	93.356	98
56) c-1,3-Dichloropropene	(2)	12.875	75	4940045	107.038	97
57) 4-Methyl-2-Pentanone	(2)	12.983	58	3041235	100.807	98
58) t-1,3-Dichloropropene	(2)	13.737	75	4825272	110.961	98
59) 1,1,2-Trichloroethane	(2)	13.987	83	2901009	99.748	100
61) Toluene	(3)	14.463	91	8992202	92.830	98
62) 2-Hexanone	(3)	15.002	58	4035130	103.478	98
63) Ethyl Methacrylate	(3)	15.075	69	4460305	94.827	96
64) Dibromochloromethane	(3)	15.121	129	6489071	93.621	99
65) 1,2-Dibromoethane	(3)	15.552	107	5705276	97.379	100
66) N-Octane	(3)	16.351	57	3203566	89.117	99

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_000.i/180213.b/13feb08.d Instrument ID: GCMS_000.i
Injection date and time: 13-FEB-2018 16:59 Analyst ID: 953

Method used: /chem/AIR/GCMS_000.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 100PPBV A020718D Misc Info: 1@A02 09-18 953
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.419	166	5003363	89.058	98
69) Chlorobenzene	(3)	17.638	112	7694406	93.607	96
70) Ethylbenzene	(3)	18.415	91	12518786	95.270	100
71) p/m-Xylene	(3)	18.806	91	19282376	179.151	99
72) Bromoform	(3)	18.772	173	6870575	93.816	99
73) Styrene	(3)	19.464	104	7516238	99.665	98
74) 1,1,2,2-Tetrachloroethane	(3)	19.651	83	7149250	90.019	100
75) o-Xylene	(3)	19.691	91	9408508	91.154	99
76) 1,2,3-Trichloropropane	(3)	19.912	75	5651705	93.630	99
77) N-Nonane	(3)	20.354	57	7112293	86.514	98
79) Isopropylbenzene	(3)	20.932	105	13690501	91.638	98
80) 2-Chlorotoluene	(3)	21.879	91	10541875	96.717	99
81) n-Propylbenzene	(3)	22.049	91	15886916	89.781	99
82) 4-Ethyltoluene	(3)	22.395	105	13050494	94.963	99
83) 1,3,5-Trimethylbenzene	(3)	22.599	105	11443055	92.751	99
84) alpha-Methylstyrene	(3)	22.939	118	6228792	96.271	100
86) 1,2,4-Trimethylbenzene	(3)	23.552	105	10986827	90.124	98
85) tert-Butylbenzene	(3)	23.523	119	12003906	89.191	97
87) Benzyl Chloride	(3)	23.795	91	10837310	102.916	100
88) 1,3-Dichlorobenzene	(3)	23.801	146	8111641	92.425	99
90) N-Decane	(3)	24.045	57	8163085	81.884	97
89) 1,4-Dichlorobenzene	(3)	23.971	146	8374316	97.143	98
91) sec-Butylbenzene	(3)	24.198	105	15731591	88.827	97
92) p-Isopropyltoluene	(3)	24.646	119	14292596	91.790	97
93) 1,2-Dichlorobenzene	(3)	24.788	146	8195716	95.442	99
94) n-Butylbenzene	(3)	25.735	91	14022174	94.161	99
95) 1,2-Dibromo-3-Chloropropane	(3)	25.933	157	5283161	106.380	97
96) 1,2,4-Trichlorobenzene	(3)	29.426	180	8677744	112.339	99
97) Naphthalene	(3)	29.635	128	16463120	107.420	98
98) 1,2,3-Trichlorobenzene	(3)	30.248	180	8564379	103.000	99
99) Hexachloro-1,3-Butadiene	(3)	30.559	225	6897821	86.569	99

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Data File: /chem/AIR/GCMS_000.i/180213.b/13feb08.d

Date : 13-FEB-2018 16:59

Client ID:

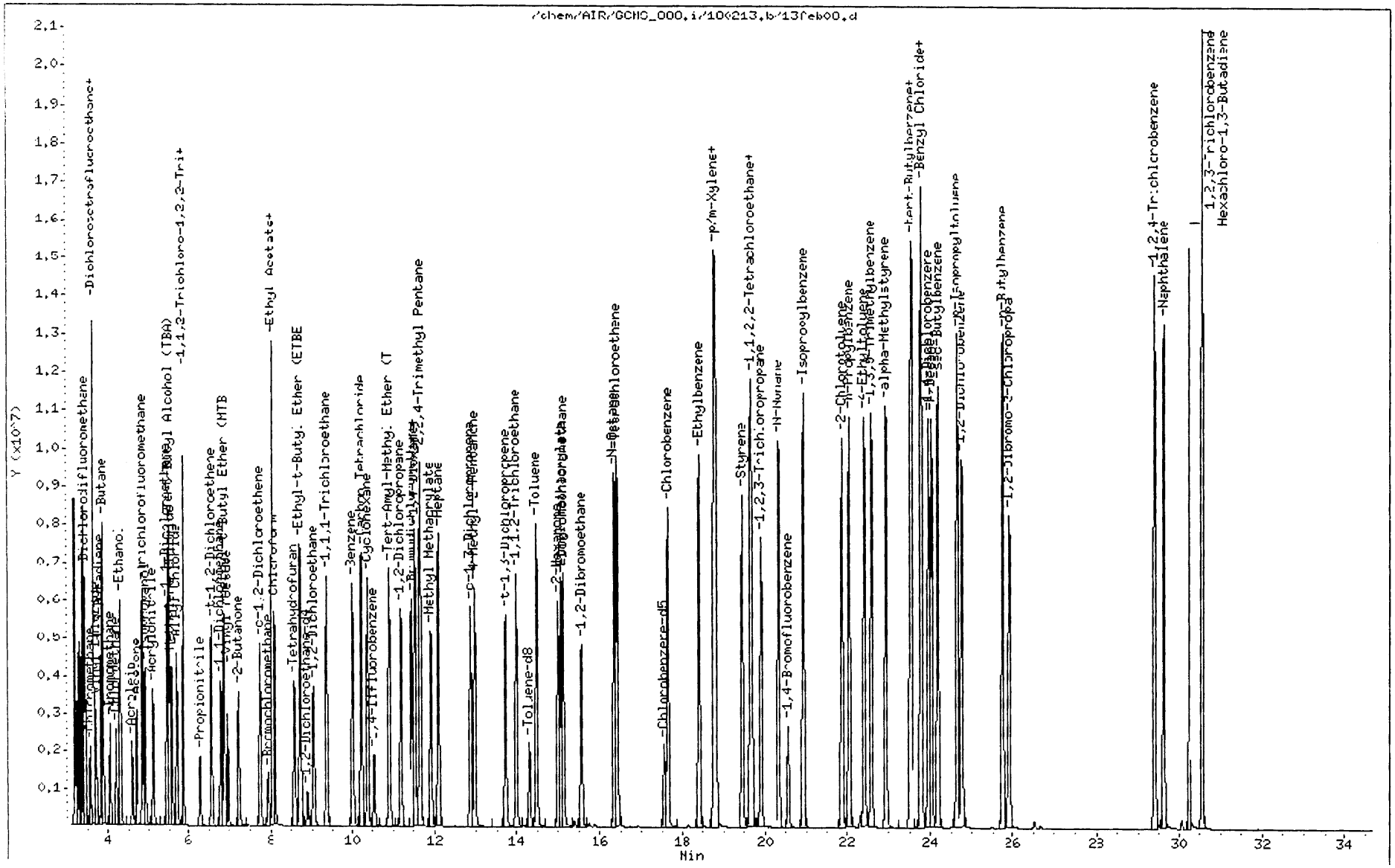
Sample Info: ICAL 100PPBV A020718D

Column phase:

Instrument: GCMS_000.i

Operator: 953

Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_000.i/180213.b/13feb11.d Instrument ID: GCMS_000.i
Injection date and time: 13-FEB-2018 19:54 Analyst ID: 953

Method used: /chem/AIR/GCMS_000.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:22
Date, time and analyst ID of latest file update: 14-Feb-2018 13:22 jxs7

Sample Name: ICV/LCS 25PPBV A020218B Misc Info: 1@A02-09-18 460
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.926	130	716913	25.000	-0.01
47)*1,4-Difluorobenzene	(2)	10.534	114	2493438	25.000	-0.01
68)*Chlorobenzene-d5	(3)	17.547	117	2289394	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.890	65	957078	24.397	-0.01
SpikedAmount 25.000	Recovery =	0.000				
60)$Toluene-d8	(2)	14.287	98	2513385	25.092	-0.01
SpikedAmount 25.000	Recovery =	0.000				
78)$1,4-Bromofluorobenzene	(3)	20.564	95	1633381	25.115	0.00
SpikedAmount 25.000	Recovery =	0.000				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.257	69	551126	25.181	100
2) 1,1-Difluoroethane	(1)	3.316	51	1018233	23.434	100
3) Propene	(1)	3.375	41	992964	26.234	100
4) Propane	(1)	3.399	29	979137	51.583	100
5) Dichlorodifluoromethane	(1)	3.440	85	1689382	24.627	100
6) Chloromethane	(1)	3.563	50	718873	27.178	100
7) Dichlorotetrafluoroethane	(1)	3.646	85	1582640	26.506	100
8) Isobutane	(1)	3.663	43	2165383	51.825	100
9) Methanol	(1)	3.687	31	527109	79.481	100
10) Vinyl Chloride	(1)	3.740	62	680906	26.140	100
11) 1,3-Butadiene	(1)	3.852	54	547731	25.732	100
12) Butane	(1)	3.899	43	1939808	50.248	100
13) Bromomethane	(1)	4.069	94	558070	25.956	100
14) Chloroethane	(1)	4.210	64	292314	25.896	100
15) Ethanol	(1)	4.299	45	1134258	99.524	100
16) Acrolein	(1)	4.593	56	306349	25.398	100
17) Acetone	(1)	4.705	58	332464	25.780	100
18) Trichlorofluoromethane	(1)	4.869	101	1858800	27.662	100
19) Isopropanol	(1)	4.922	45	1747602	26.999	100
20) Acrylonitrile	(1)	5.122	53	804165	25.099	100
21) 1,1-Dichloroethene	(1)	5.458	61	1480836	25.354	100
23) Methylene Chloride	(1)	5.573	84	604071	25.272	100
22) Tert-Butyl Alcohol (TBA)	(1)	5.493	59	2843969	46.309	100
24) Allyl Chloride	(1)	5.697	41	1252142	24.162	100
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.862	101	1443178	25.663	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb11.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 19:54 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:22
Date, time and analyst ID of latest file update: 14-Feb-2018 13:22 jxs7

Sample Name: ICV/LCS 25PPBV A020218B Misc Info: 1@A02-09 18 460
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.868	76	1907242	25.826	100
27) Propionitrile	(1)	6.259	54	763322	26.029	100
28) t-1,2-Dichloroethene	(1)	6.554	96	725885	26.391	100
29) 1,1-Dichloroethane	(1)	6.769	63	1561971	25.688	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.848	73	2008181	26.690	100
31) Vinyl Acetate	(1)	6.956	43	2611066	26.241	100
32) 2-Butanone	(1)	7.217	43	1989985	26.655	100
33) c-1,2-Dichloroethene	(1)	7.733	96	775757	26.384	100
37) Hexane	(1)	8.039	57	1322469	25.864	100
36) Diisopropyl Ether (DIPE)	(1)	8.039	45	3454247	24.179	100
35) Ethyl Acetate	(1)	8.045	61	269846	27.247	100
38) Chloroform	(1)	8.101	83	1543254	25.355	100
39) Tetrahydrofuran	(1)	8.583	42	1103408	26.394	100
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.719	59	2889280	25.253	100
42) 1,2-Dichloroethane	(1)	9.026	62	1212111	25.606	100
43) 1,1,1-Trichloroethane	(1)	9.371	97	1729216	25.844	100
44) Benzene	(2)	9.989	78	2256311	26.184	100
45) Carbon Tetrachloride	(2)	10.199	117	1884332	25.640	100
46) Cyclohexane	(2)	10.381	56	1530201	25.802	100
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	2168000	25.887	100
49) 1,2-Dichloropropane	(2)	11.163	63	1013894	25.942	100
50) Bromodichloromethane	(2)	11.441	83	1794600	26.028	100
52) Trichloroethene	(2)	11.526	95	1044045	26.082	100
53) 2,2,4-Trimethyl Pentane	(2)	11.651	57	4506569	24.367	100
51) 1,4-Dioxane	(2)	11.515	88	524187	27.653	100
54) Methyl Methacrylate	(2)	11.900	69	749784	27.583	100
55) Heptane	(2)	12.082	100	185694	26.106	100
56) c-1,3-Dichloropropene	(2)	12.864	75	1421184	27.530	100
57) 4-Methyl-2-Pentanone	(2)	12.960	58	930836	27.584	100
58) t-1,3-Dichloropropene	(2)	13.726	75	1373509	28.238	100
59) 1,1,2-Trichloroethane	(2)	13.970	83	863556	26.546	100
61) Toluene	(3)	14.452	91	2719795	26.487	100
62) 2-Hexanone	(3)	14.973	58	1278532	30.887	100
63) Ethyl Methacrylate	(3)	15.053	69	1298309	26.039	100
64) Dibromochloromethane	(3)	15.104	129	1920629	26.140	100
65) 1,2-Dibromoethane	(3)	15.529	107	1651714	26.595	100
66) N-Octane	(3)	16.334	57	985965	25.874	100

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb11.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 19:54 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:22
Date, time and analyst ID of latest file update: 14-Feb-2018 13:22 jxs7

Sample Name: ICV/LCS 25PPBV A020218B Misc Info: 1@A02-09-18 460
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1537026	25.808	100
69) Chlorobenzene	(3)	17.627	112	2297634	26.369	100
70) Ethylbenzene	(3)	18.398	91	3777914	27.122	100
71) p/m-Xylene	(3)	18.744	91	5968829	52.314	100
72) Bromoform	(3)	18.749	173	2057860	26.508	100
73) Styrene	(3)	19.447	104	2177345	27.236	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	2182762	25.927	100
75) o-Xylene	(3)	19.662	91	2831314	25.877	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1655162	25.867	100
77) N-Nonane	(3)	20.337	57	2229633	25.585	100
79) Isopropylbenzene	(3)	20.915	105	4056388	25.613	100
80) 2-Chlorotoluene	(3)	21.856	91	2976720	25.763	100
81) n-Propylbenzene	(3)	22.026	91	4850703	25.859	100
82) 4-Ethyltoluene	(3)	22.378	105	4012211	27.541	100
83) 1,3,5-Trimethylbenzene	(3)	22.576	105	3519054	26.908	100
84) alpha-Methylstyrene	(3)	22.917	118	1839631	26.822	100
86) 1,2,4-Trimethylbenzene	(3)	23.512	105	3462240	26.792	100
85) tert-Butylbenzene	(3)	23.495	119	3653445	25.608	100
87) Benzyl Chloride	(3)	23.756	91	3104590	27.812	100
88) 1,3-Dichlorobenzene	(3)	23.767	146	2481547	26.673	100
90) N-Decane	(3)	24.016	57	2642291	25.003	100
89) 1,4-Dichlorobenzene	(3)	23.943	146	2555951	27.970	100
91) sec-Butylbenzene	(3)	24.170	105	4777950	25.450	100
92) p-Isopropyltoluene	(3)	24.617	119	4264091	25.834	100
93) 1,2-Dichlorobenzene	(3)	24.759	146	2449060	26.904	100
94) n-Butylbenzene	(3)	25.700	91	4070108	25.783	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.893	157	1487433	28.254	100
96) 1,2,4-Trichlorobenzene	(3)	29.408	180	2470434	30.170	100
97) Naphthalene	(3)	29.613	128	5016650	30.879	100
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	2264276	25.689	100
99) Hexachloro-1,3-Butadiene	(3)	30.548	225	2296863	27.193	100

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Data File: /chem/AIR/GCMS_000.i/180213.b/13feb11.d

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Date : 13-FEB-2018 19:54

Client ID:

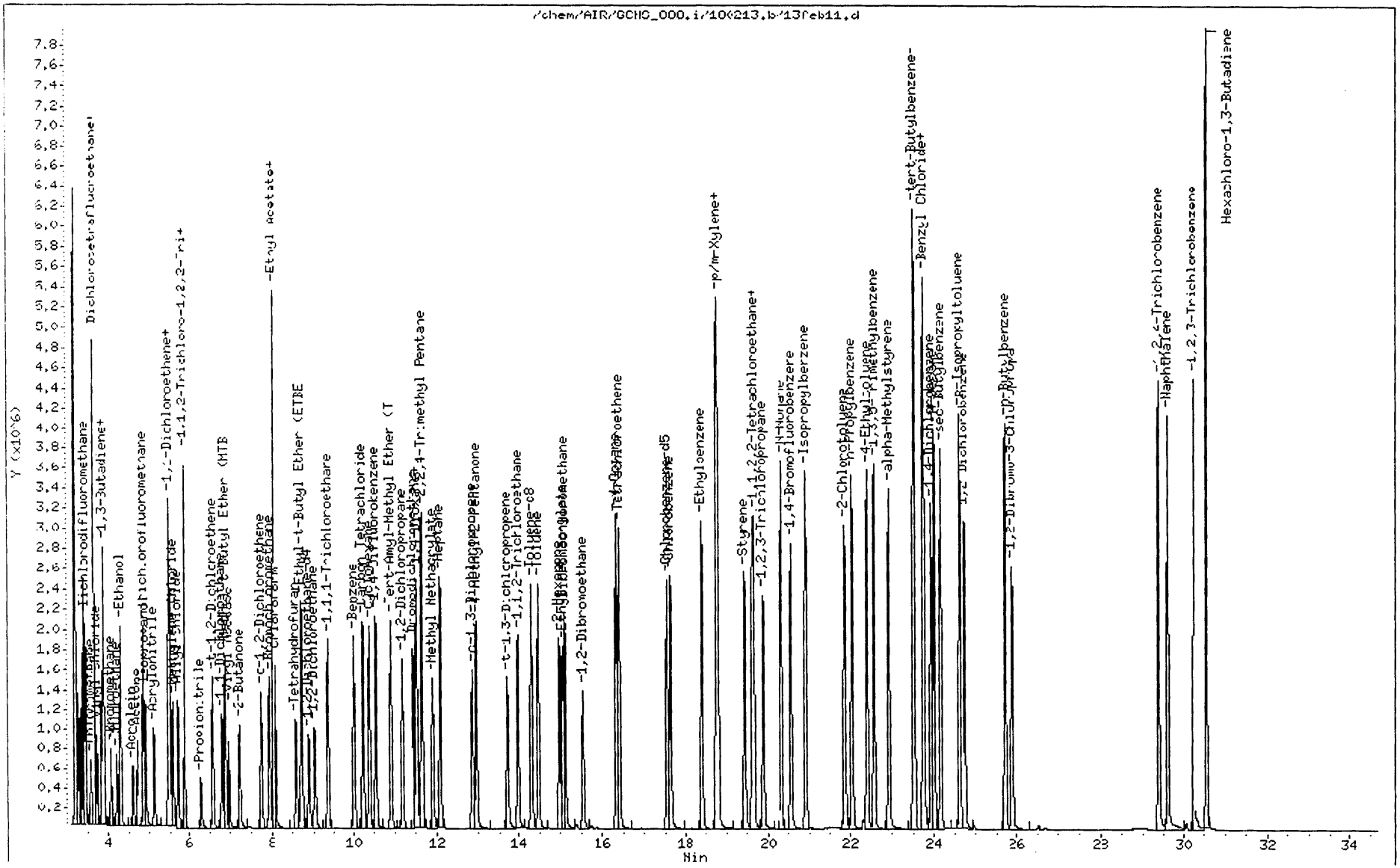
Instrument: GCMS_000.i

Sample Info: ICV/LCS 25PPBV A020218B

Operator: 953

Column phase:

Column diameter: 0.00



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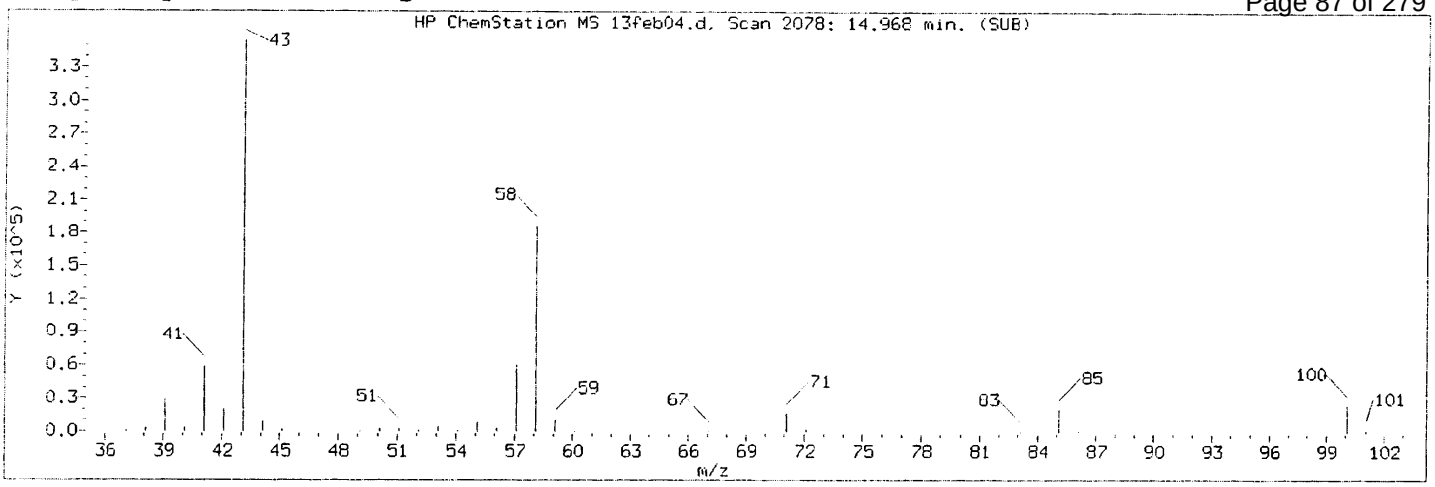
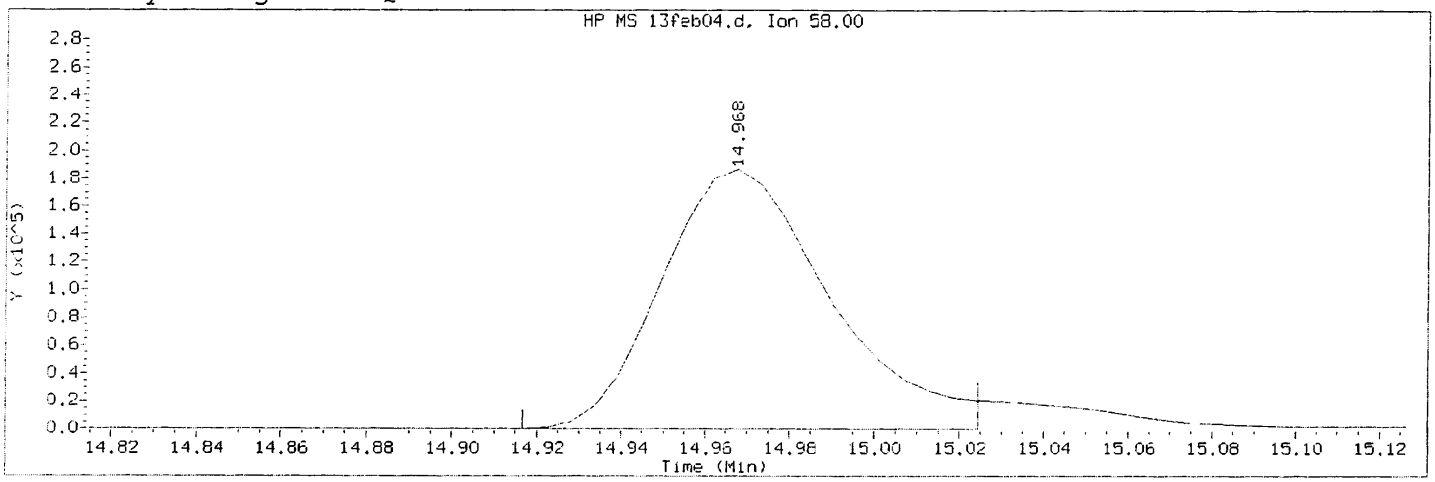
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180213.b/13feb04.d Instrument ID: GCMS_OOO.i
Injection date and time: 13-FEB-2018 13:43 Analyst ID: 953

Method used: /chem/AIR/GCMS_OOO.i/180213.b/to15.m Sublist used: all
Calibration date and time: 14-FEB-2018 13:12
Date, time and analyst ID of latest file update: 14-Feb-2018 13:12 jxs7

Sample Name: ICAL 12.5PPBV A021318C

Compound Number : 62
Compound Name : 2-Hexanone
Scan Number : 2078
Retention Time (minutes): 14.968
Quant Ion : 58.00
Area (flag) : 518715M
On-Column Amount (ppbv) : 12.4305
Integration start scan : 2068 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Gabriel Guillen on 02/14/2018 at 13:20. Target 3.5 esignature user ID: jxs7

GC/MS audit/management approval: 326 2/16/18

EPA METHOD TO-15

SAMPLE DATA

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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: **18-03-0118**
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-03 00:16
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar16.d\02mar16.rr

 # 1 **CLIENT SAMPLE NUMBER:** **WAS00047**

LCS/MB BATCH: 180302L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
1,2,4-Trichlorobenzene	0.000	1.00	ND	2.0	
Acetone	6590	1.00	6590	2.0	E
Benzene	0.582	1.00	0.582	0.50	
Benzyl Chloride	0.000	1.00	ND	1.5	
Bromodichloromethane	0.000	1.00	ND	0.50	
Bromoform	0.000	1.00	ND	0.50	
Bromomethane	0.000	1.00	ND	0.50	
2-Butanone	19.1	1.00	19.1	1.5	
n-Butylbenzene	0.000	1.00	ND	0.50	
sec-Butylbenzene	0.000	1.00	ND	0.50	
tert-Butylbenzene	0.000	1.00	ND	0.50	
Carbon Disulfide	0.000	1.00	ND	2.0	
Carbon Tetrachloride	0.0742	1.00	ND	0.50	
Chlorobenzene	0.000	1.00	ND	0.50	
Chloroethane	0.000	1.00	ND	0.50	
Chloroform	0.000	1.00	ND	0.50	
Chloromethane	0.914	1.00	0.914	0.50	
Dibromochloromethane	0.000	1.00	ND	0.50	
1,2-Dibromoethane	0.000	1.00	ND	0.50	
1,2-Dichlorobenzene	0.000	1.00	ND	0.50	
1,3-Dichlorobenzene	0.000	1.00	ND	0.50	
1,4-Dichlorobenzene	0.000	1.00	ND	0.50	
Dichlorodifluoromethane	0.545	1.00	0.545	0.50	
1,1-Dichloroethane	0.000	1.00	ND	0.50	
1,2-Dichloroethane	0.000	1.00	ND	0.50	
1,1-Dichloroethene	0.209	1.00	0.209	0.50	J
c-1,2-Dichloroethene	0.000	1.00	ND	0.50	
t-1,2-Dichloroethene	0.000	1.00	ND	0.50	
1,2-Dichloropropane	0.000	1.00	ND	0.50	
c-1,3-Dichloropropene	0.000	1.00	ND	0.50	
t-1,3-Dichloropropene	0.000	1.00	ND	1.0	
Dichlorotetrafluoroethane	0.000	1.00	ND	2.0	
1,1-Difluoroethane	1.00	1.00	ND	2.0	
Ethylbenzene	0.150	1.00	ND	0.50	
4-Ethyltoluene	0.0752	1.00	ND	0.50	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	1.5	
2-Hexanone	0.000	1.00	ND	1.5	
Isopropanol	12.1	1.00	12.1	5.0	
Methyl-t-Butyl Ether (MTBE)	0.000	1.00	ND	2.0	

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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: **18-03-0118**
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-03 00:16
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar16.d\02mar16.rr

 # 1 **CLIENT SAMPLE NUMBER: WAS00047**

LCS/MB BATCH: 180302L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Methylene Chloride	3.69	1.00	3.69	5.0	J
4-Methyl-2-Pentanone	0.000	1.00	ND	1.5	
Styrene	0.221	1.00	ND	1.5	
1,1,2,2-Tetrachloroethane	0.000	1.00	ND	1.0	
Tetrachloroethene	167	1.00	167	0.50	E
Toluene	3.65	1.00	3.65	0.50	
1,1,1-Trichloroethane	0.457	1.00	0.457	0.50	J
1,1,2-Trichloroethane	0.000	1.00	ND	0.50	
Trichloroethene	43.7	1.00	43.7	0.50	
Trichlorofluoromethane	0.000	1.00	ND	1.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.265	1.00	ND	1.5	
1,2,4-Trimethylbenzene	0.182	1.00	ND	1.5	
1,3,5-Trimethylbenzene	0.0630	1.00	ND	0.50	
Vinyl Acetate	0.000	1.00	ND	2.0	
Vinyl Chloride	0.339	1.00	0.339	0.50	J
o-Xylene	0.211	1.00	ND	0.50	
p/m-Xylene	0.558	1.00	ND	2.0	

Sample Analyzed 3 Times
1 dilution analysis ___ surrogate conf'n
Supervisor 7 94

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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER:	**18-03-0118**	ANALYZED BY:	953
INSTRUMENT:	GC/MS OOO	D/T ANALYZED:	2018-03-03 21:35
EXTRACTION :	N/A	REVIEWED BY:	
D/T EXTRACTED:		D/T REVIEWED:	

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar13.d\03mar13.rr

 # 1 **CLIENT SAMPLE NUMBER: WAS00047** **Rerun Analyses**

LCS/MB BATCH:	180303L01	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
UNITS:	ppb (v/v)	ADJUSTMENT RATIO TO PF:	1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Acetone	3250	10.9	35400	22	DE
Tetrachloroethene	18.9	10.9	206	5.4	D

RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER:	**18-03-0118**	ANALYZED BY:	953
INSTRUMENT:	GC/MS OOO	D/T ANALYZED:	2018-03-05 15:17
EXTRACTION :	N/A	REVIEWED BY:	
D/T EXTRACTED:		D/T REVIEWED:	

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar07.d\05mar07.rr

 # 1 **CLIENT SAMPLE NUMBER: WAS00047** **Rerun Analyses**

LCS/MB BATCH:	180305L01	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
UNITS:	ppb (v/v)	ADJUSTMENT RATIO TO PF:	1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Acetone	50.9	8720	443000	17000	D

Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	8.011	130	583736	25.000	-0.09
47)*1,4-Difluorobenzene	(2)	10.585	114	2088906	25.000	-0.06
68)*Chlorobenzene-d5	(3)	17.564	117	1830702	25.000	-0.02
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.958	65	843493	26.408	-0.08
SpikedAmount 25.000	Recovery = 105.630					
60)$Toluene-d8	(2)	14.327	98	2020536	24.078	-0.05
SpikedAmount 25.000	Recovery = 96.311					
78)$1,4-Bromofluorobenzene	(3)	20.569	95	1405614	27.028	-0.01
SpikedAmount 25.000	Recovery = 108.110					
Target Compounds						QValue
2) 1,1-Difluoroethane	(1)	3.293	51	35473	1.003	95
5) Dichlorodifluoromethane	(1)	3.416	85	30462	0.545	97
6) Chloromethane	(1)	3.546	50	19674	0.914	96
7) Dichlorotetrafluoroethane	(1)	0.000		0	N.D.	
10) Vinyl Chloride	(1)	3.722	62	7195	0.339	96
13) Bromomethane	(1)	0.000		0	N.D.	
14) Chloroethane	(1)	0.000		0	N.D.	
15) Ethanol	(1)	0.000		0D	N.D.	
17) Acetone	(1)	5.199	58	69166532M	6587.033	86
18) Trichlorofluoromethane	(1)	0.000		0D	N.D.	
19) Isopropanol	(1)	5.017	45	635755	12.063	1
21) 1,1-Dichloroethene	(1)	5.405	61	9926	0.209	90
23) Methylene Chloride	(1)	5.732	84	71791	3.689	100
22) Tert-Butyl Alcohol (TBA)	(1)	5.669	59	74797	1.496	1
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.805	101	12130	0.265	97
26) Carbon Disulfide	(1)	0.000		0	N.D.	
28) t-1,2-Dichloroethene	(1)	0.000		0	N.D.	
29) 1,1-Dichloroethane	(1)	0.000		0	N.D.	
30) Methyl-t-Butyl Ether (MTBE)	(1)	0.000		0	N.D.	
31) Vinyl Acetate	(1)	0.000		0	N.D.	
32) 2-Butanone	(1)	7.314	43	1160408	19.089	98
33) c-1,2-Dichloroethene	(1)	0.000		0	N.D.	
36) Diisopropyl Ether (DIPE)	(1)	0.000		0D	N.D.	
38) Chloroform	(1)	0.000		0	N.D.	
40) Ethyl-t-Butyl Ether (ETBE)	(1)	0.000		0	N.D.	

M = Compound was manually integrated.
D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
42) 1,2-Dichloroethane	(1)	0.000		0	N.D.	
43) 1,1,1-Trichloroethane	(1)	9.423	97	24882	0.457	98
44) Benzene	(2)	10.052	78	42004	0.582	99
45) Carbon Tetrachloride	(2)	10.228	117	4567	0.074	72
48) Tert-Amyl-Methyl Ether (TAME)	(2)	0.000		0	N.D.	
49) 1,2-Dichloropropane	(2)	0.000		0	N.D.	
50) Bromodichloromethane	(2)	0.000		0D	N.D.	
52) Trichloroethene	(2)	11.572	95	1465181	43.691	99
56) c-1,3-Dichloropropene	(2)	0.000		0	N.D.	
57) 4-Methyl-2-Pentanone	(2)	0.000		0D	N.D.	
58) t-1,3-Dichloropropene	(2)	0.000		0	N.D.	
59) 1,1,2-Trichloroethane	(2)	0.000		0	N.D.	
61) Toluene	(3)	14.491	91	299518	3.648	99
62) 2-Hexanone	(3)	0.000		0	N.D.	
64) Dibromochloromethane	(3)	0.000		0	N.D.	
65) 1,2-Dibromoethane	(3)	0.000		0	N.D.	
67) Tetrachloroethene	(3)	16.448	166	7955763	167.057	97
69) Chlorobenzene	(3)	0.000		0	N.D.	
70) Ethylbenzene	(3)	18.438	91	16670	0.150	85
71) p/m-Xylene	(3)	18.766	91	50947	0.558	99
72) Bromoform	(3)	0.000		0	N.D.	
73) Styrene	(3)	19.481	104	14152	0.221	89
74) 1,1,2,2-Tetrachloroethane	(3)	0.000		0	N.D.	
75) o-Xylene	(3)	19.679	91	18484	0.211	93
82) 4-Ethyltoluene	(3)	22.406	105	8761	0.075	87
83) 1,3,5-Trimethylbenzene	(3)	22.599	105	6587	0.063	76
86) 1,2,4-Trimethylbenzene	(3)	23.523	105	18763	0.182	75
85) tert-Butylbenzene	(3)	0.000		0	N.D.	
87) Benzyl Chloride	(3)	0.000		0	N.D.	
88) 1,3-Dichlorobenzene	(3)	0.000		0	N.D.	
89) 1,4-Dichlorobenzene	(3)	0.000		0	N.D.	
91) sec-Butylbenzene	(3)	0.000		0	N.D.	
93) 1,2-Dichlorobenzene	(3)	0.000		0	N.D.	
94) n-Butylbenzene	(3)	0.000		0D	N.D.	
96) 1,2,4-Trichlorobenzene	(3)	0.000		0	N.D.	
97) Naphthalene	(3)	0.000		0	N.D.	
99) Hexachloro-1,3-Butadiene	(3)	0.000		0	N.D.	

D = Compound was deleted.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue

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Data File: /chem/AIR/GCMS_000.i/180302.b/02mar16.d

Date : 03-MAR-2018 00:16

Client ID:

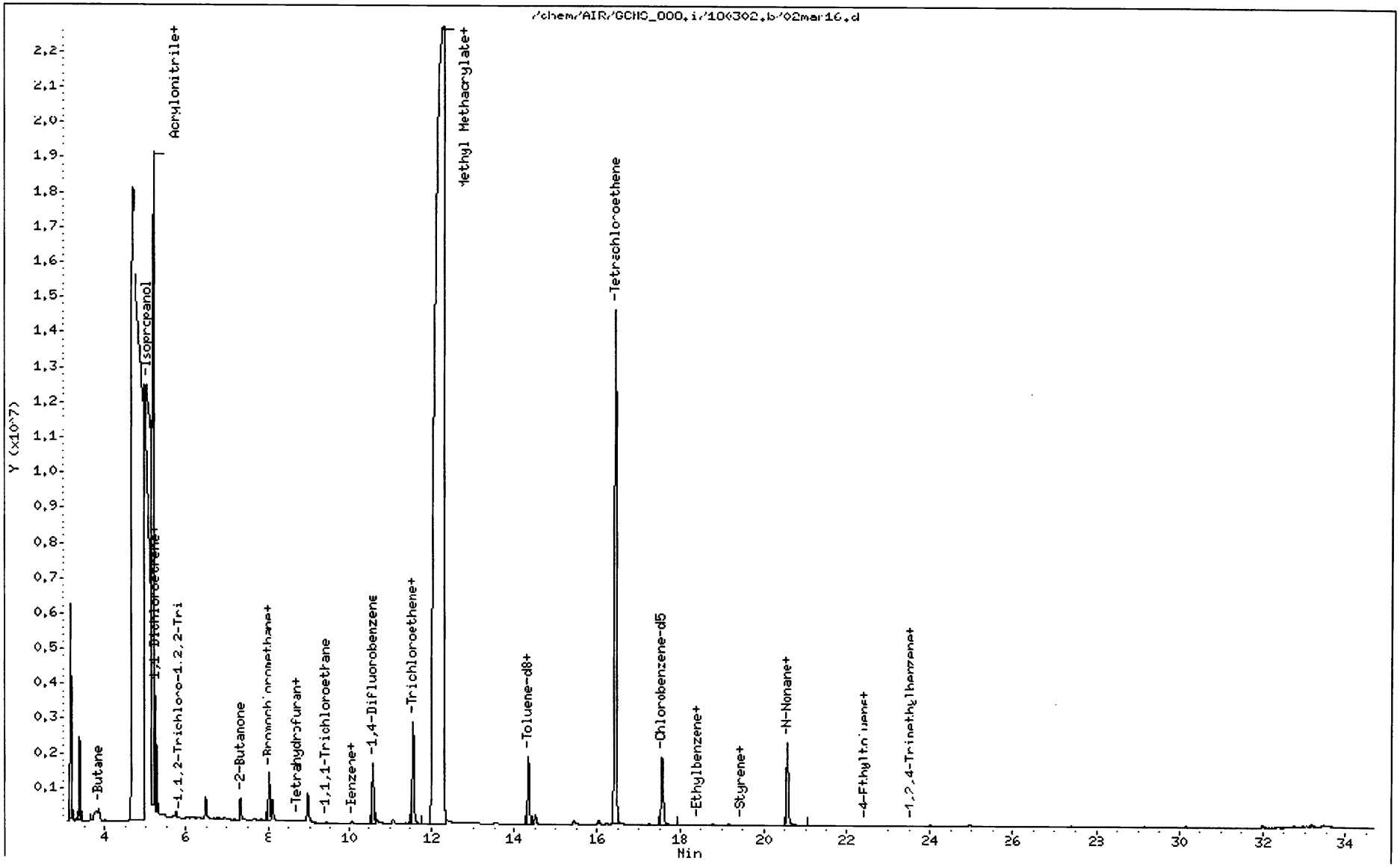
Sample Info: 18-03-0118-1A 400ML

Column phase:

Instrument: GCMS_000.i

Operator: JXS7

Column diameter: 0.00



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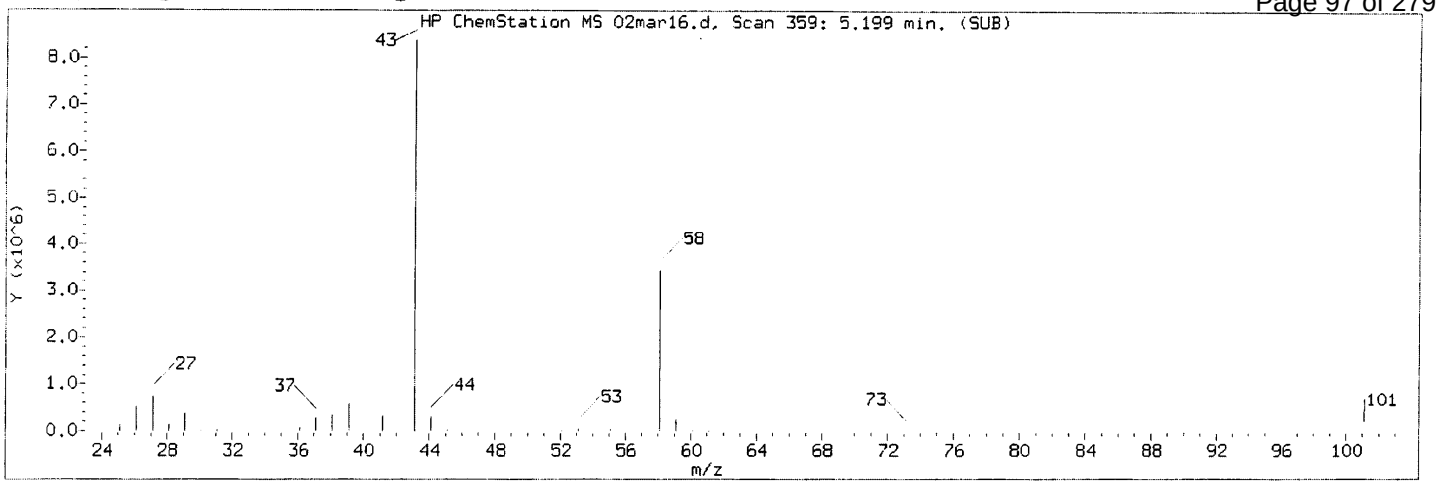
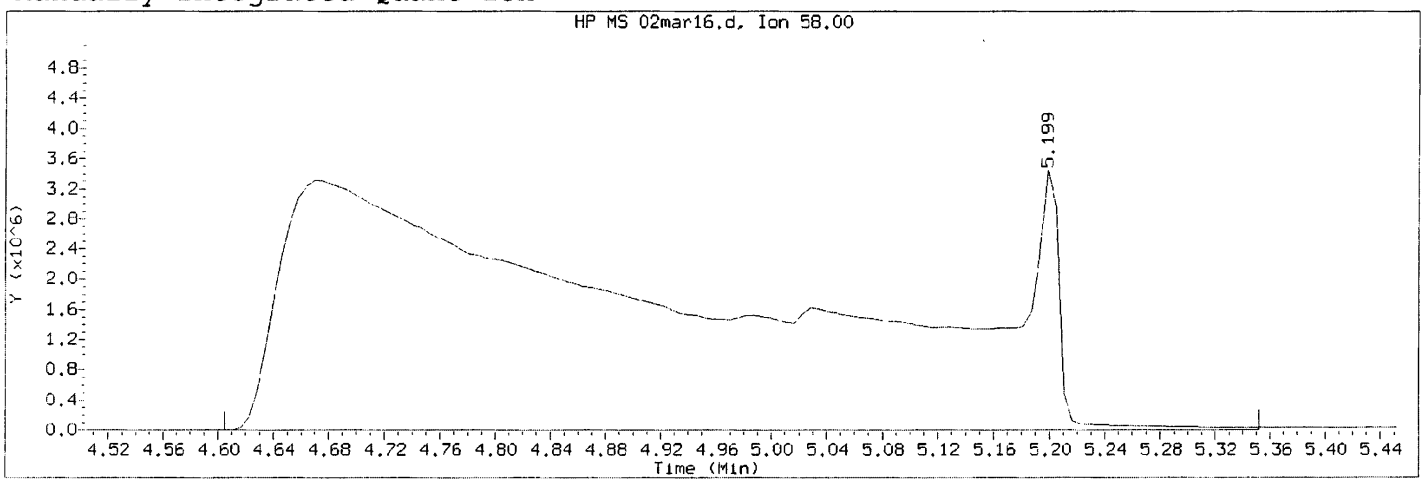
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

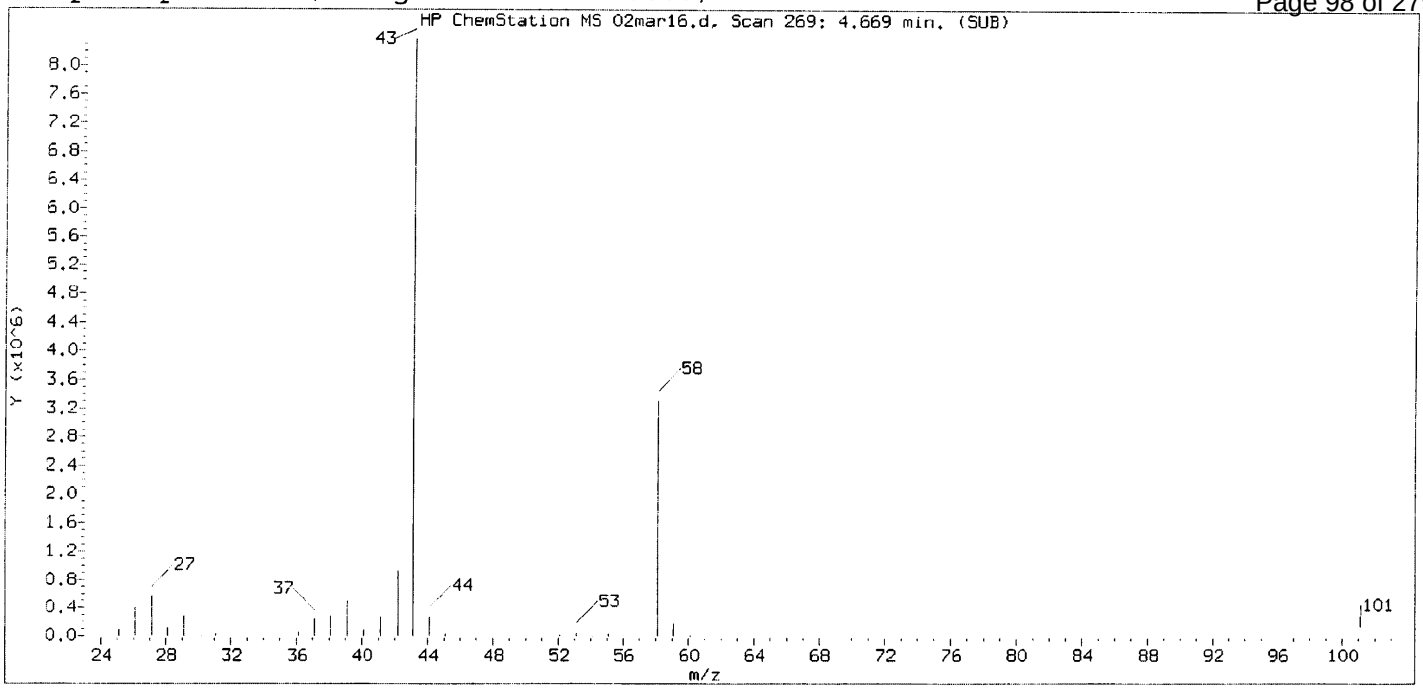
Compound Number : 17
Compound Name : Acetone
Scan Number : 359
Retention Time (minutes): 5.199
Quant Ion : 58.00
Area (flag) : 69166532M
On-Column Amount (ppbv) : 6587.0331
Integration start scan : 257 Integration stop scan: 384
Y at integration start : 2 Y at integration end: 2

Reason for manual integration: improper integration

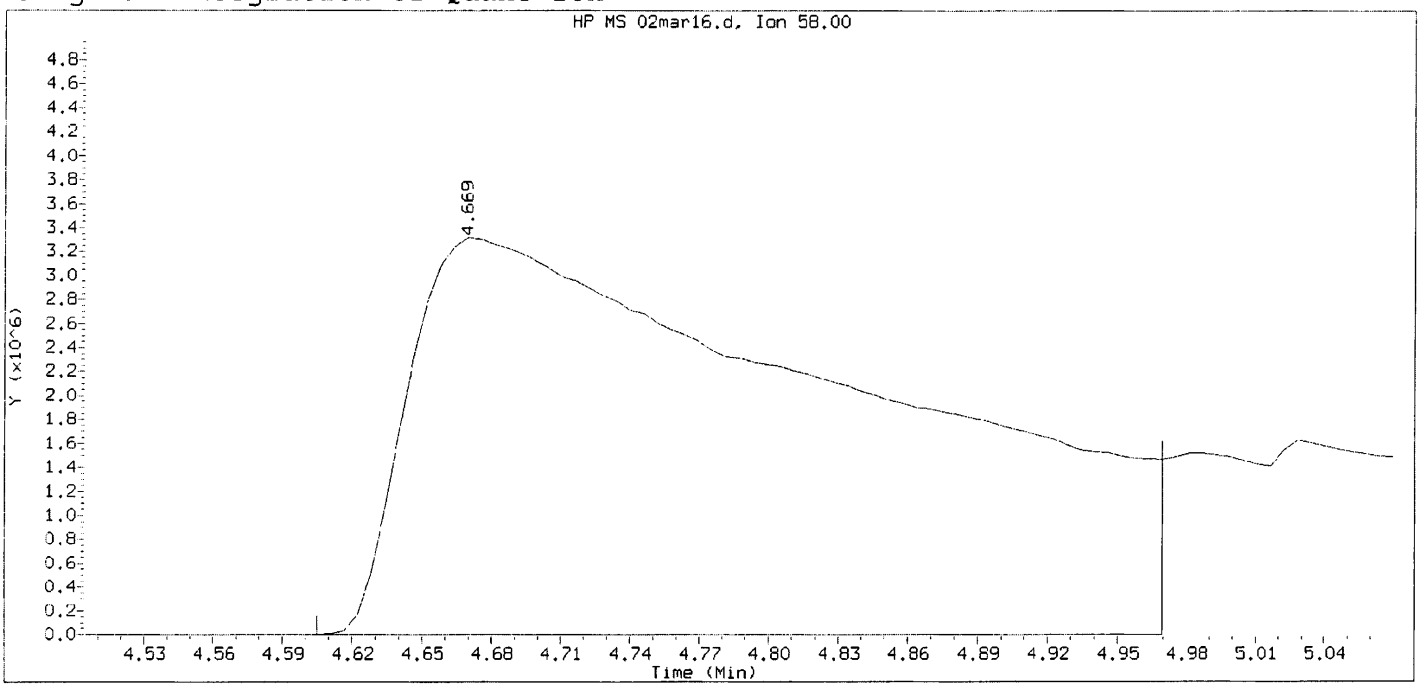
Analyst responsible for change: Digitally signed by Gabriel Guillen on 03/05/2018 at 11:27. Target 3.5 esignature user ID: jxs7

GC/MS audit/management approval: 794

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 03-Mar-2018 01:10 Unknown

Sample Name: 18-03-0118-1A 400ML

Compound Number : 17
Compound Name : Acetone
Scan Number : 269
Retention Time (minutes): 4.669
Quant Ion : 58.00
Area : 46413396
On-column Amount (ppbv) : 4420.1451
Integration start scan : 257 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 0

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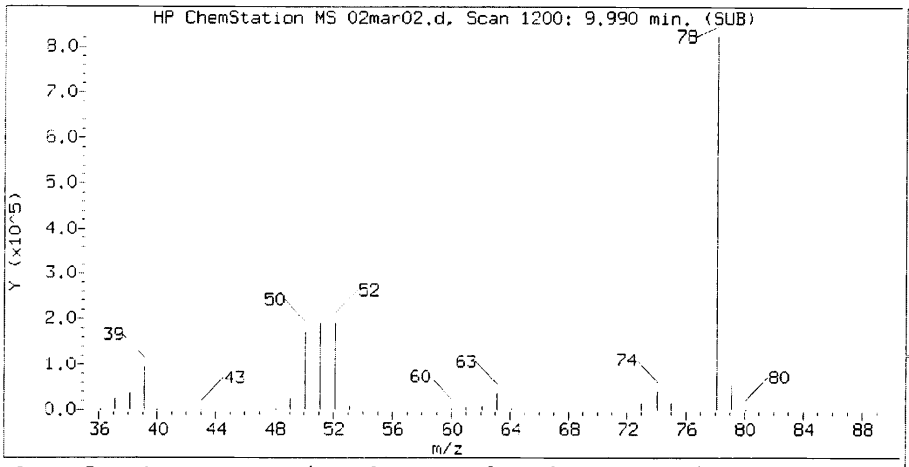
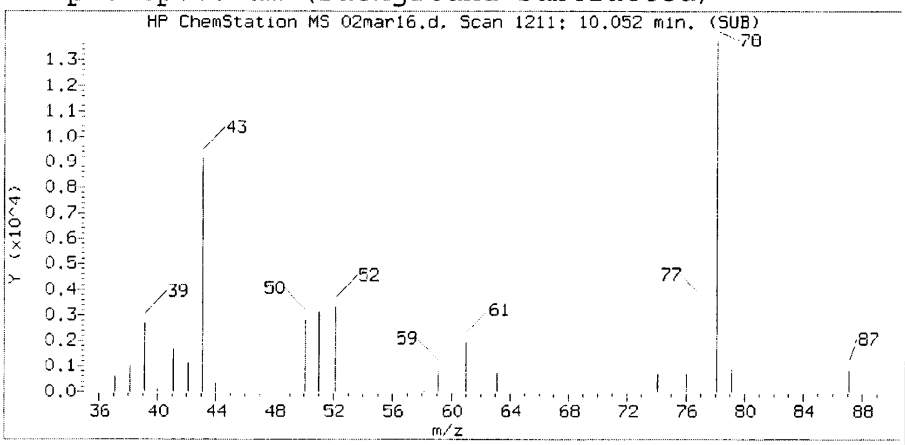
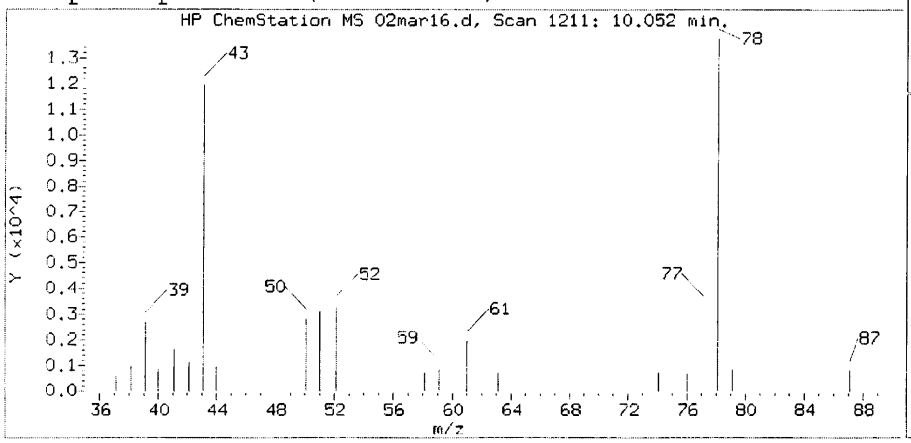
Reference Standard Spectrum for Benzene

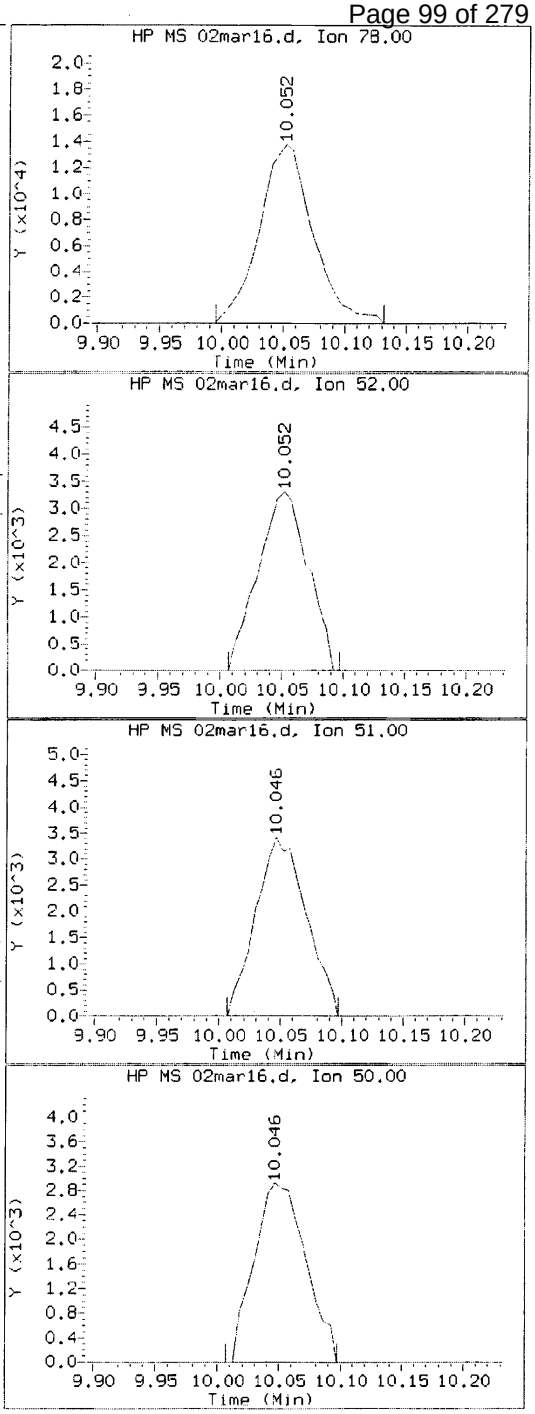


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number : 44
Compound Name : Benzene
Scan Number : 1211
Retention Time (minutes): 10.052
Relative Retention Time :-0.00132
Quant Ion : 78.00
Area (flag) : 42004
On-Column Amount (ppbv) : 0.5818

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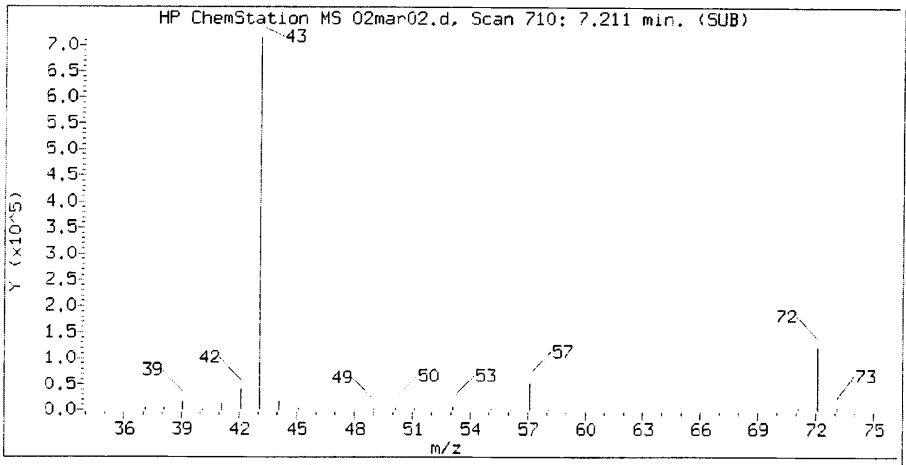
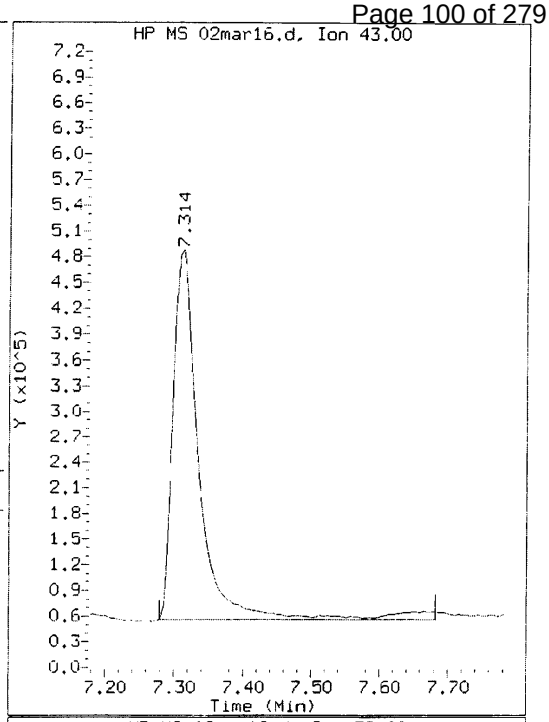
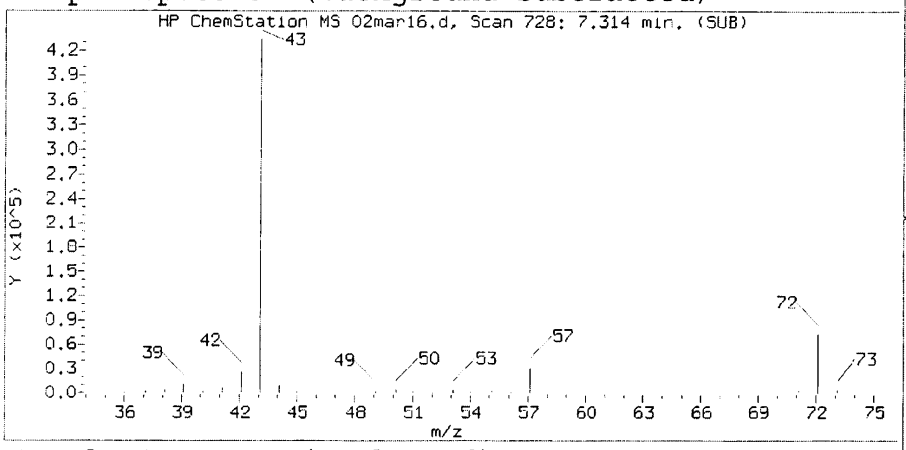
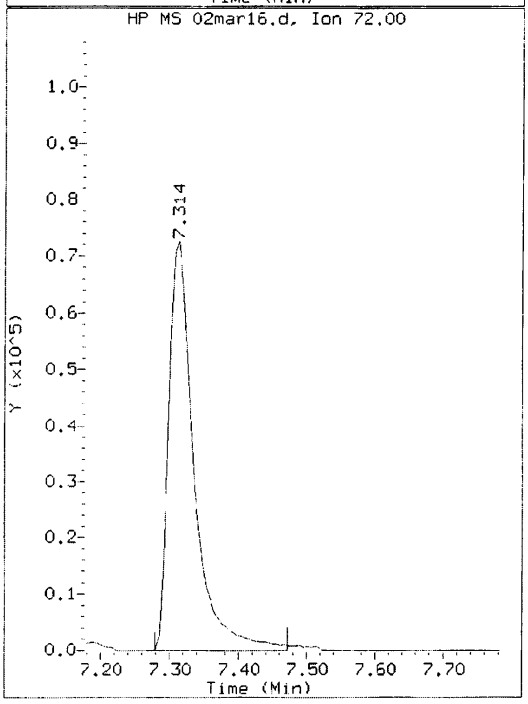
Reference Standard Spectrum for 2-Butanone



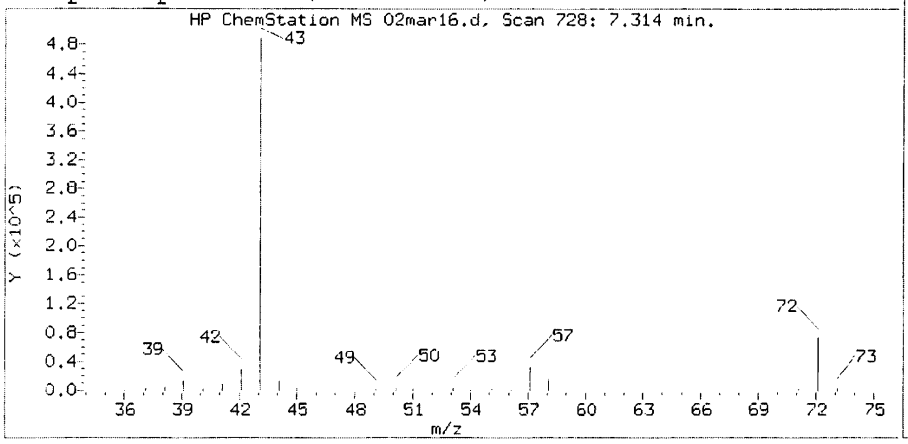


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number : 32
Compound Name : 2-Butanone
Scan Number : 728
Retention Time (minutes): 7.314
Relative Retention Time :-0.00308
Quant Ion : 43.00
Area (flag) : 1160408
On-Column Amount (ppbv) : 19.0894

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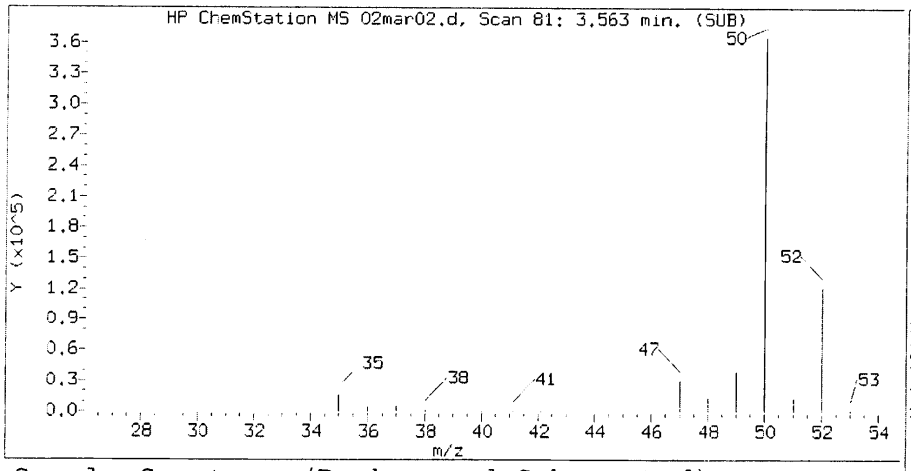
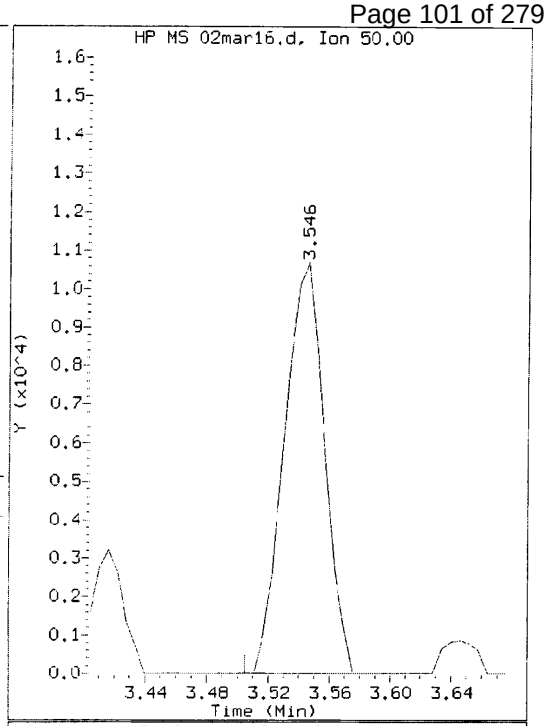
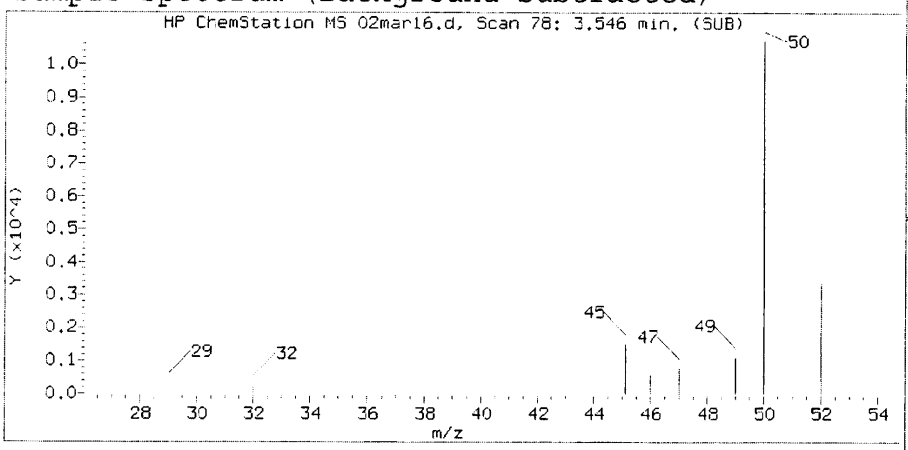
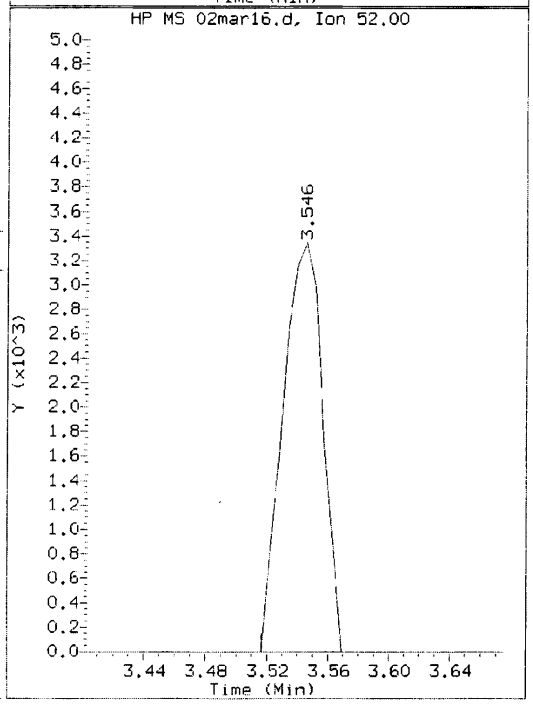
Reference Standard Spectrum for Chloromethane



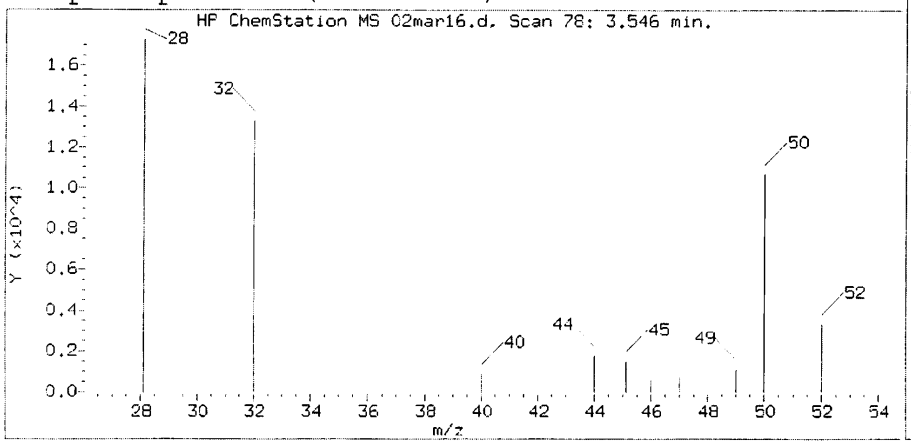


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number	:	6
Compound Name	:	Chloromethane
Scan Number	:	78
Retention Time (minutes)	:	3.546
Relative Retention Time	:	0.00697
Quant Ion	:	50.00
Area (flag)	:	19674
On-Column Amount (ppbv)	:	0.9135

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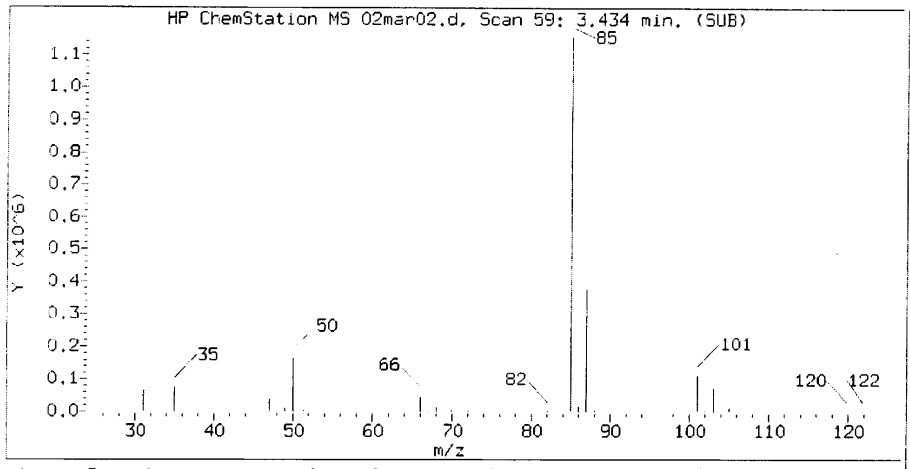
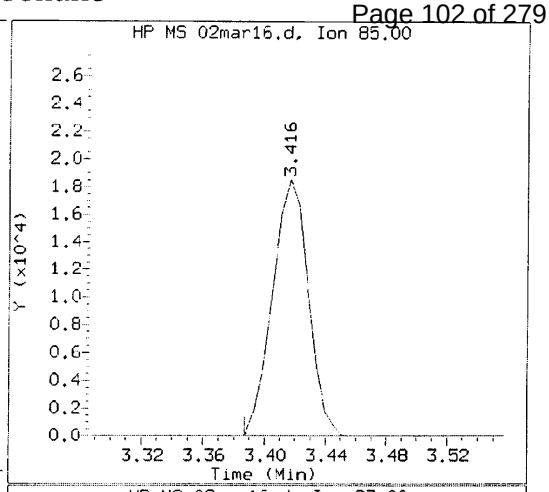
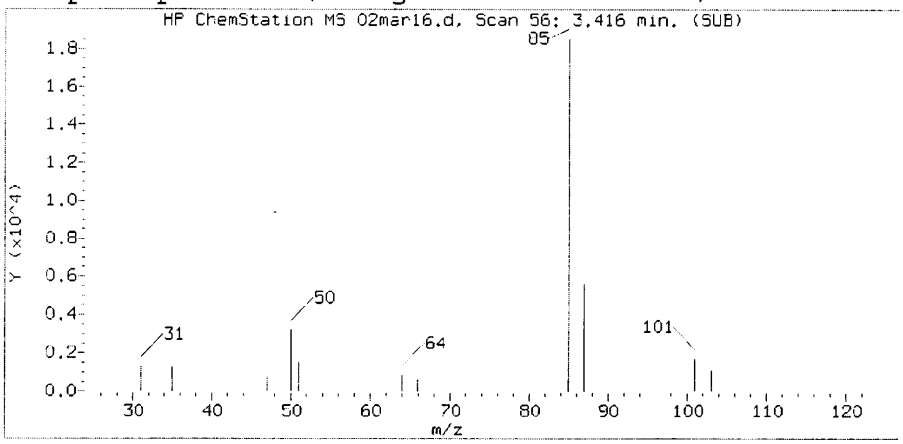
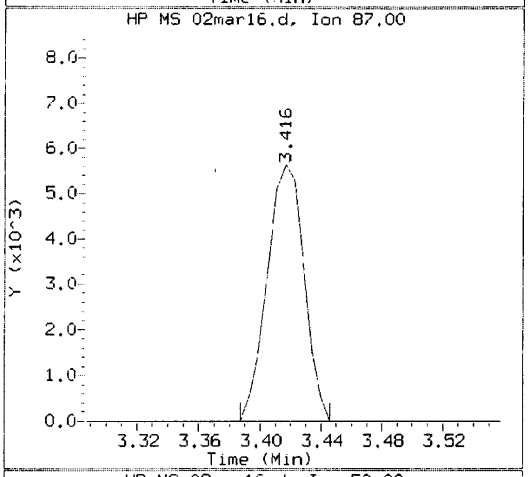
Reference Standard Spectrum for Dichlorodifluoromethane



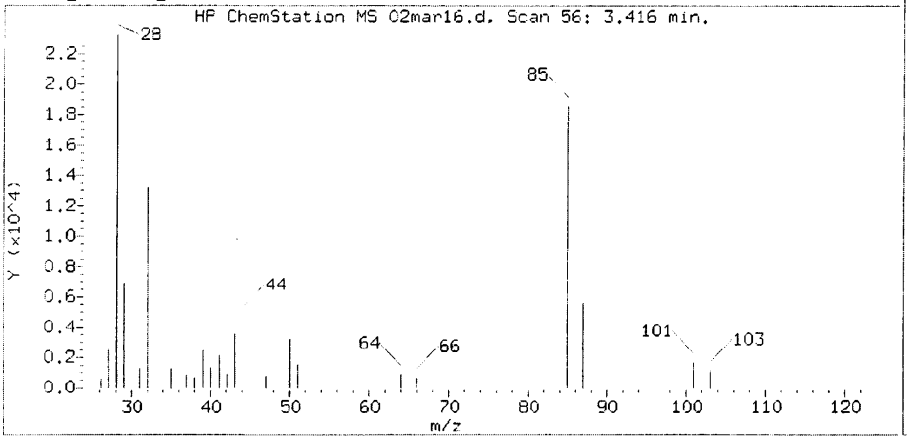


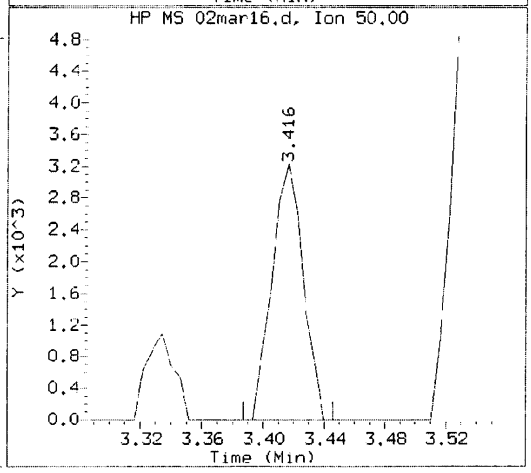
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number	: 5
Compound Name	: Dichlorodifluoromethane
Scan Number	: 56
Retention Time (minutes)	: 3.416
Relative Retention Time	: 0.00680
Quant Ion	: 85.00
Area (flag)	: 30462
On-Column Amount (ppbv)	: 0.5454

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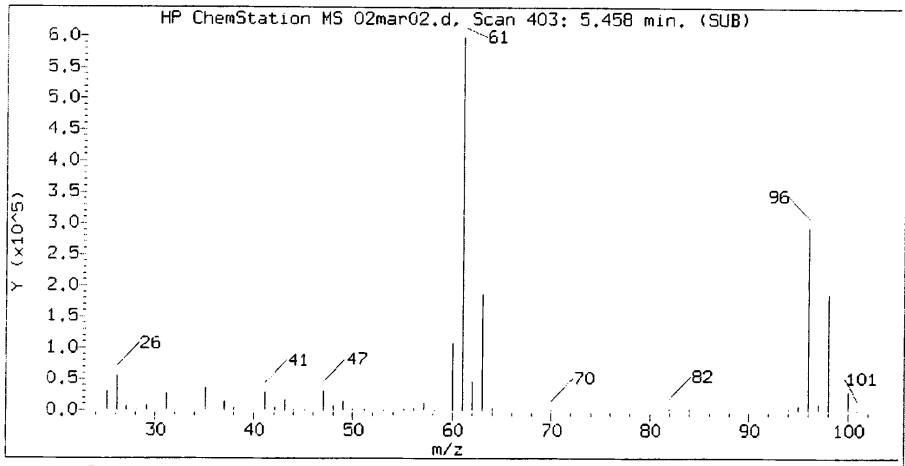
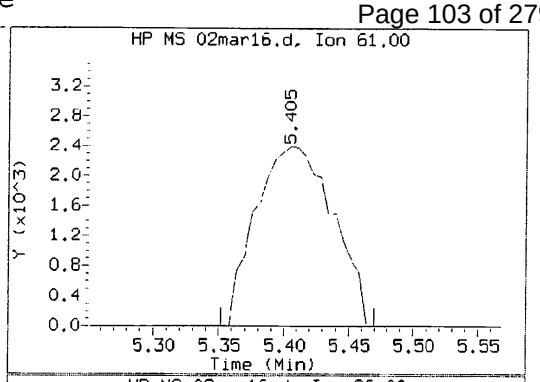
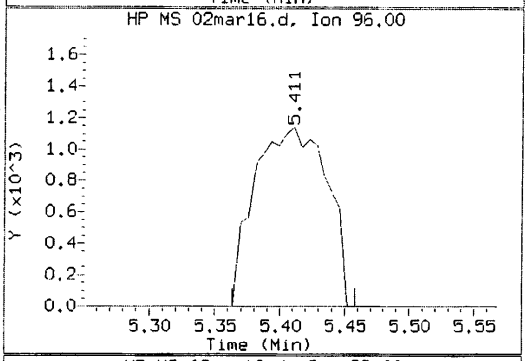
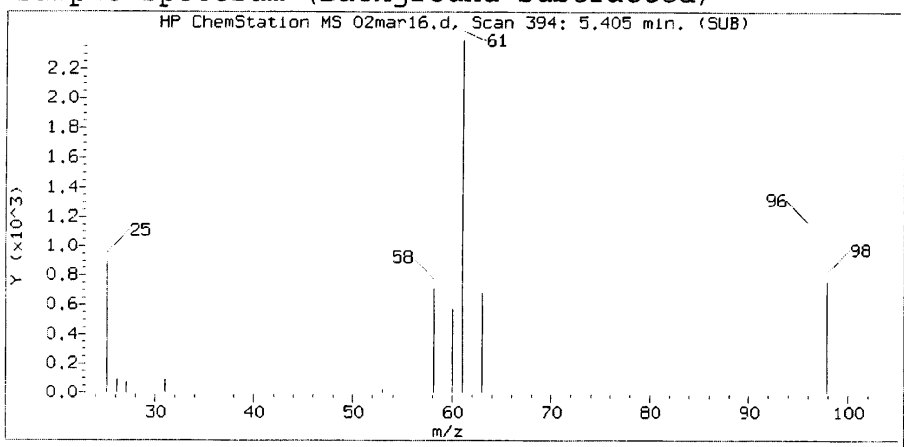
Reference Standard Spectrum for 1,1-Dichloroethene

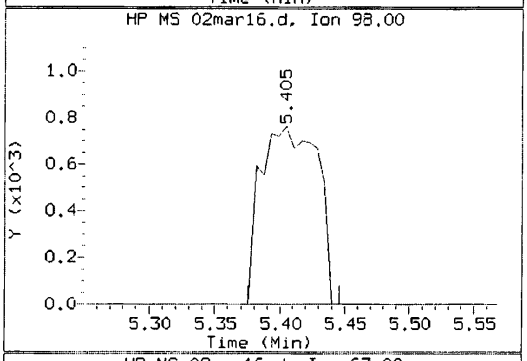




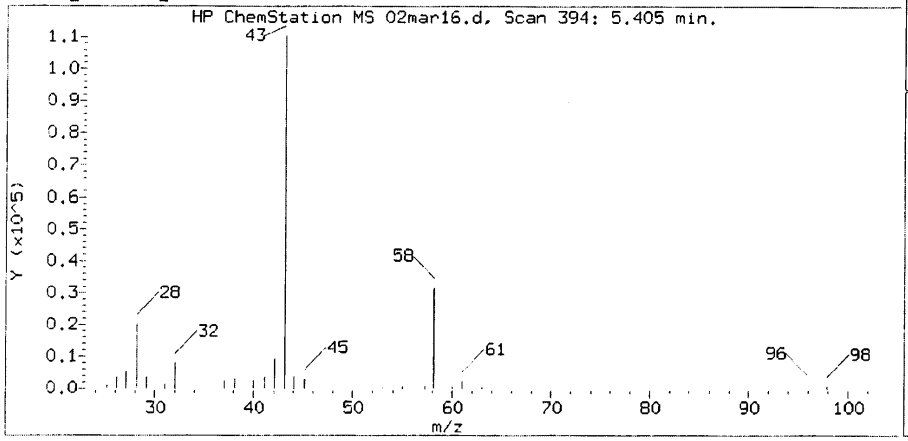


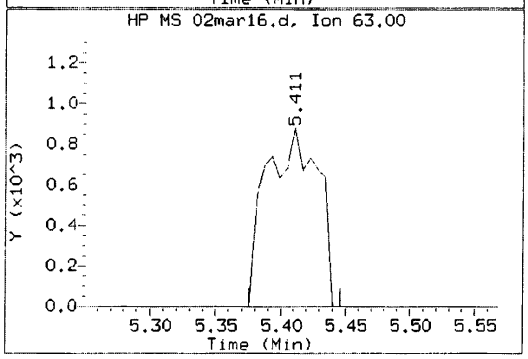
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number	: 21
Compound Name	: 1,1-Dichloroethene
Scan Number	: 394
Retention Time (minutes)	: 5.405
Relative Retention Time	: 0.01392
Quant Ion	: 61.00
Area (flag)	: 9926
On-Column Amount (ppbv)	: 0.2087

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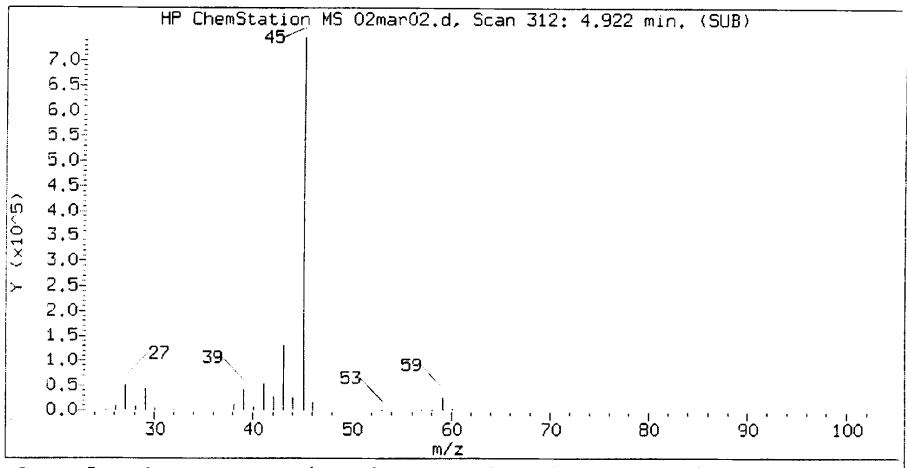
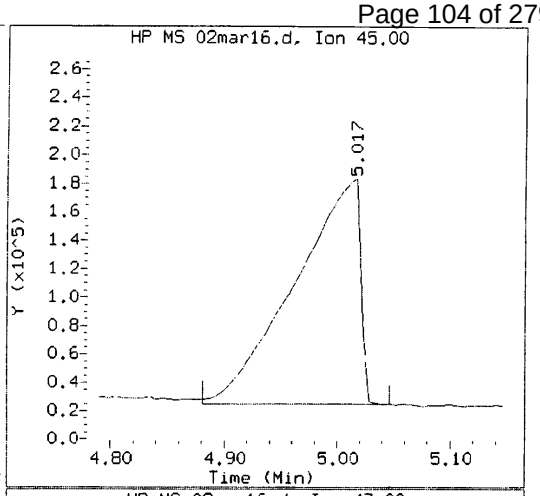
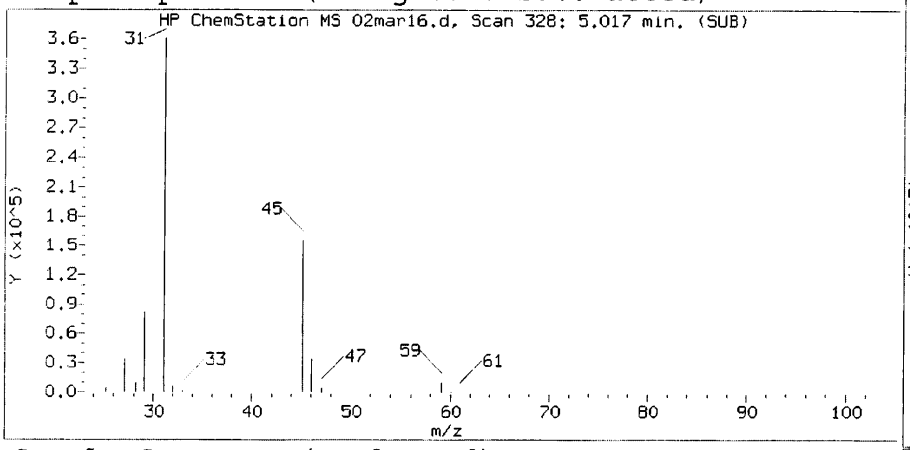
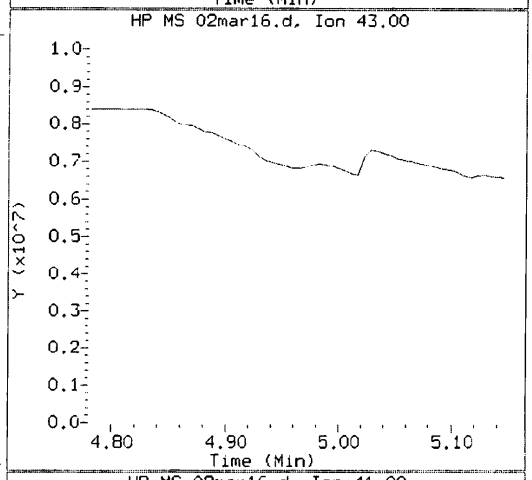
Reference Standard Spectrum for Isopropanol



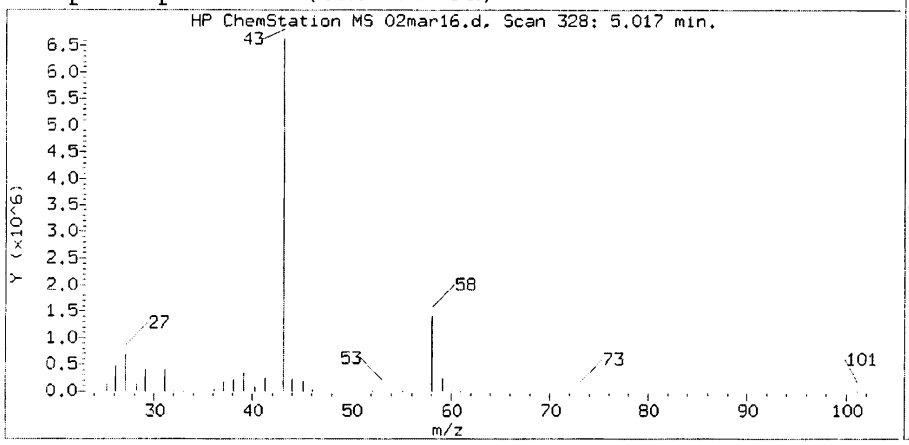


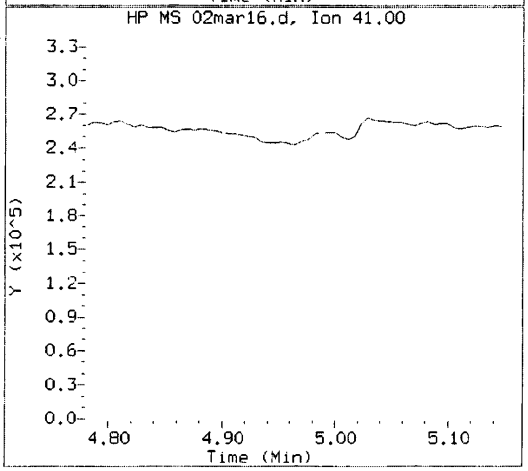
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number	: 19
Compound Name	: Isopropanol
Scan Number	: 328
Retention Time (minutes)	: 5.017
Relative Retention Time	:-0.00516
Quant Ion	: 45.00
Area (flag)	: 635755
On-Column Amount (ppbv)	: 12.0627

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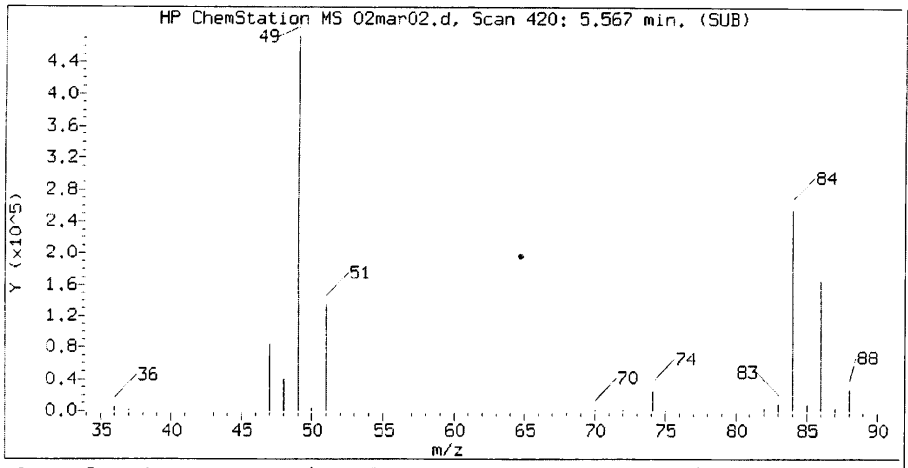
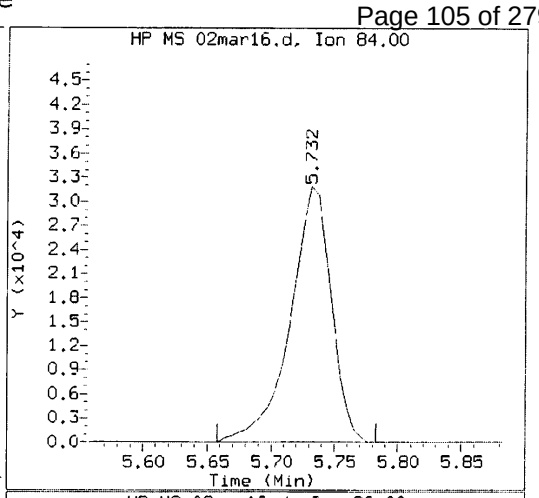
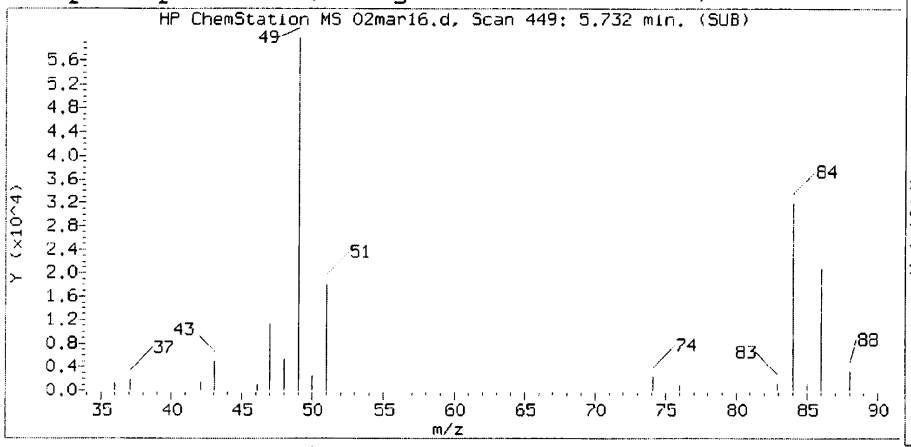
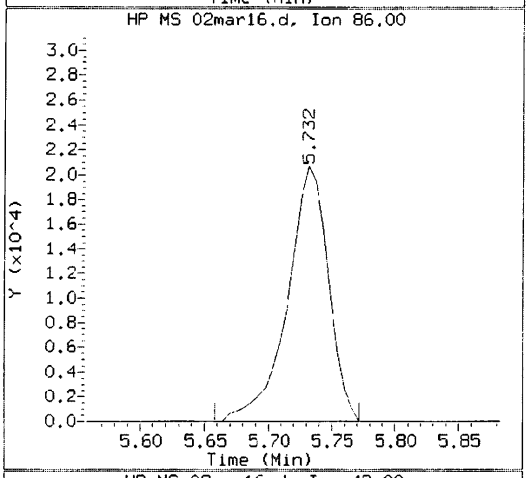
Reference Standard Spectrum for Methylene Chloride



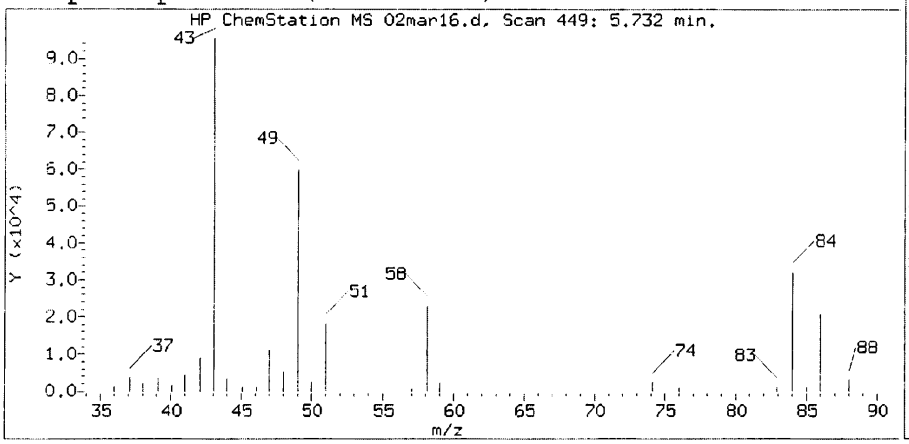


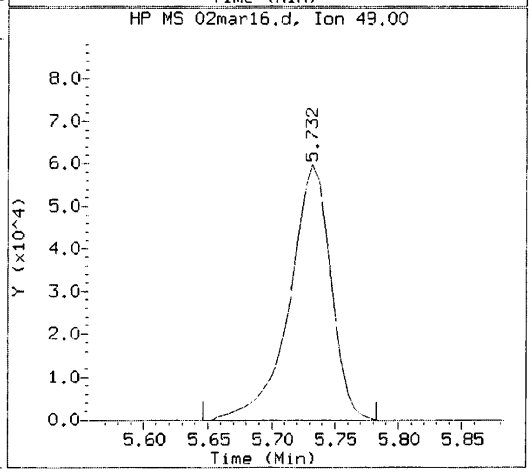
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number	: 23
Compound Name	: Methylene Chloride
Scan Number	: 449
Retention Time (minutes)	: 5.732
Relative Retention Time	:-0.01307
Quant Ion	: 84.00
Area (flag)	: 71791
On-Column Amount (ppbv)	: 3.6887

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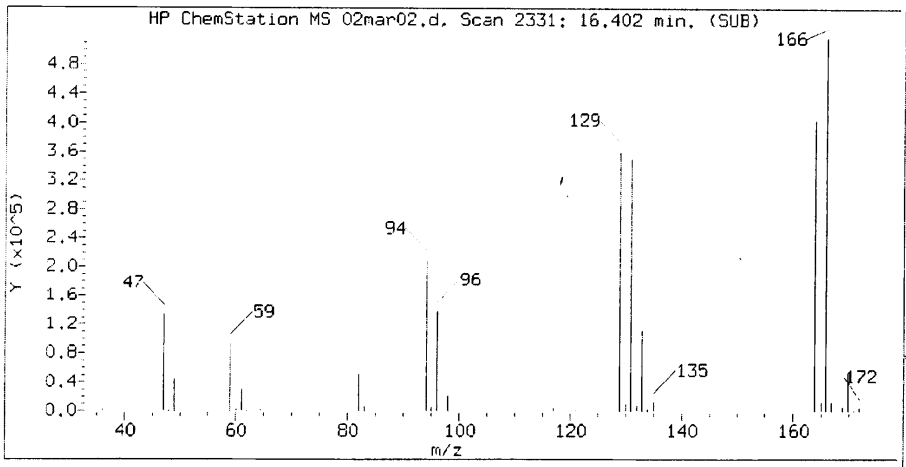
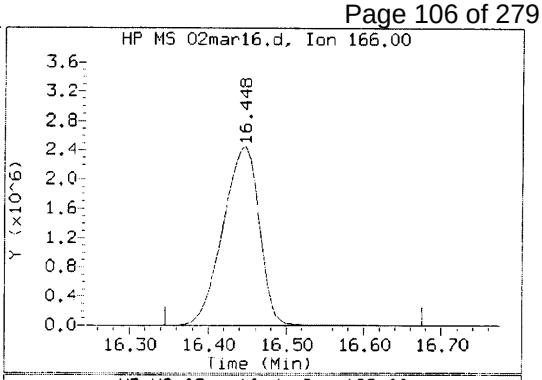
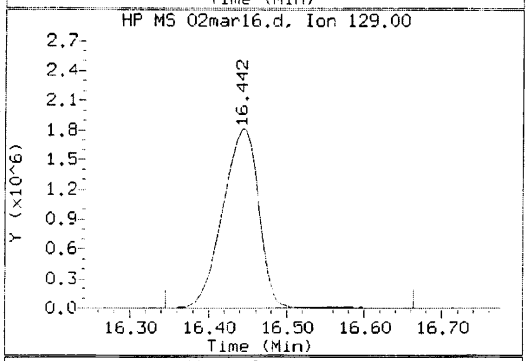
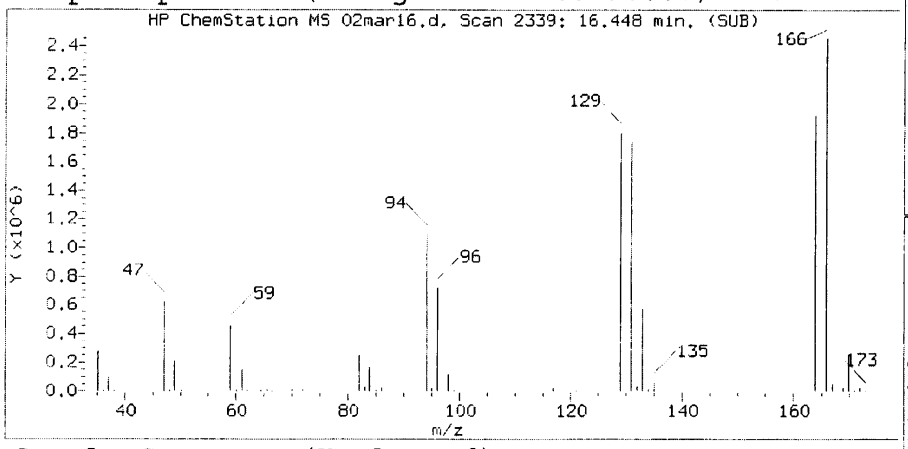
Reference Standard Spectrum for Tetrachloroethene

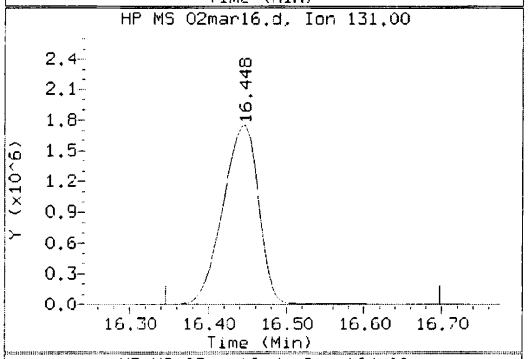




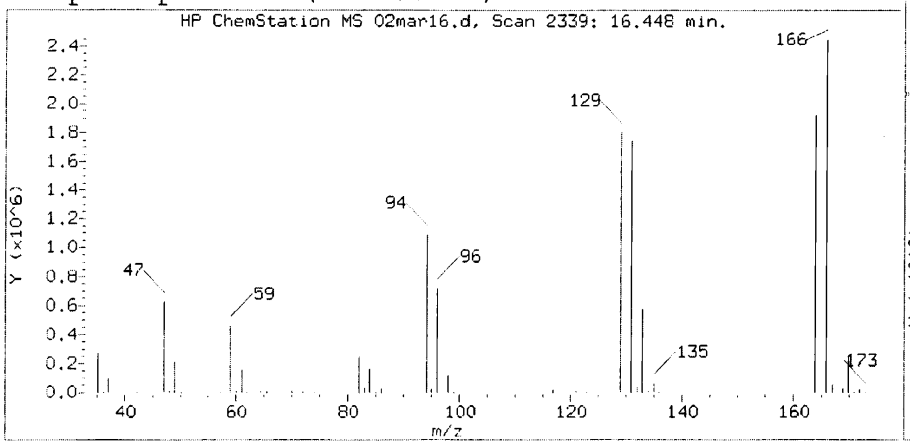


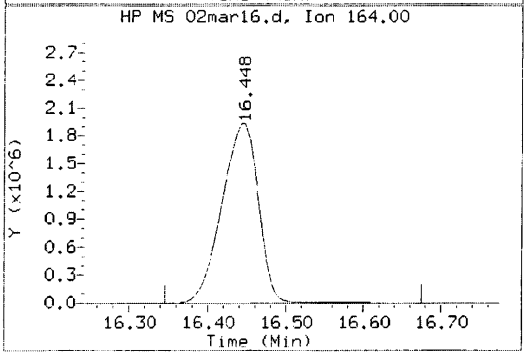
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number	: 67
Compound Name	: Tetrachloroethene
Scan Number	: 2339
Retention Time (minutes)	: 16.448
Relative Retention Time	:-0.00168
Quant Ion	: 166.00
Area (flag)	: 7955763
On-Column Amount (ppbv)	: 167.0572

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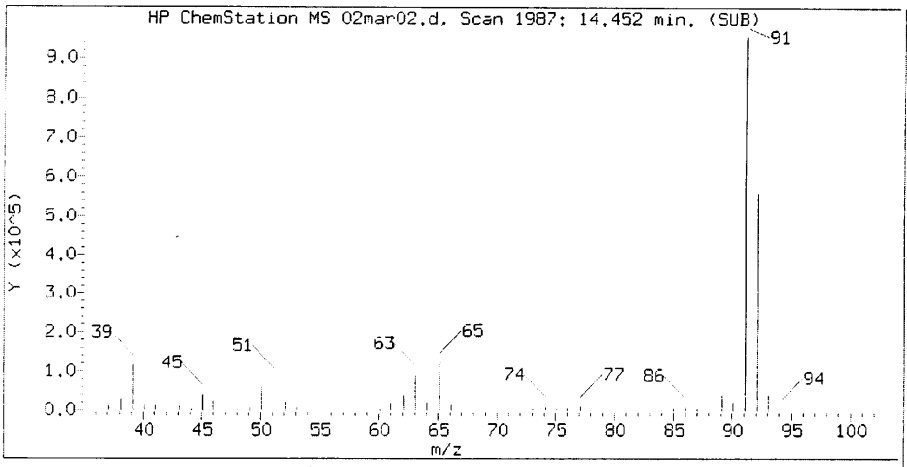
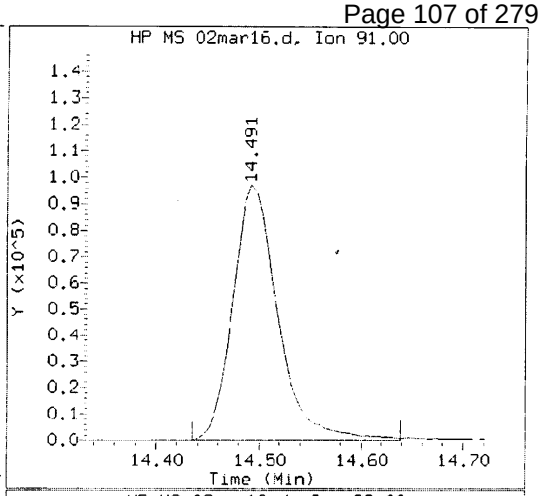
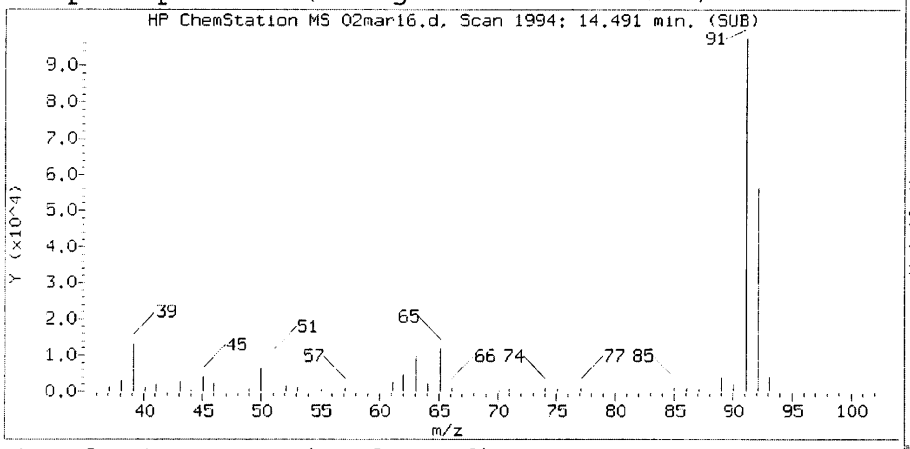
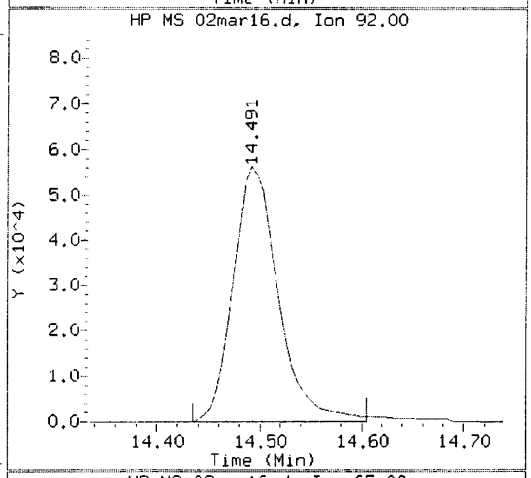
Reference Standard Spectrum for Toluene



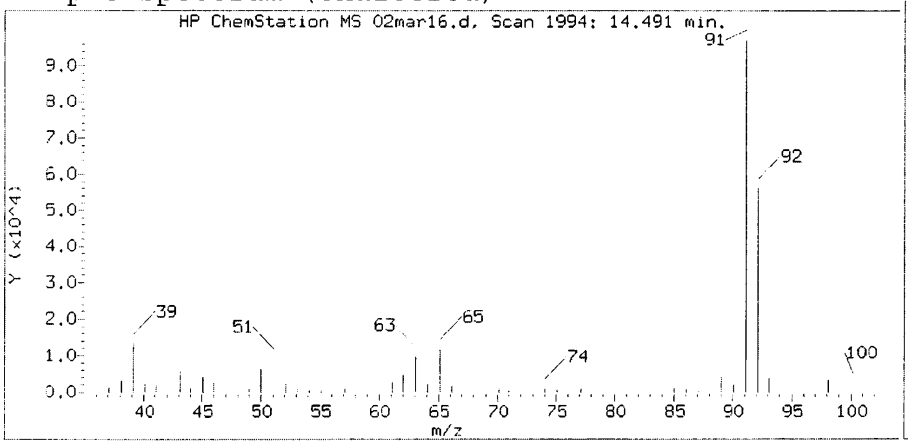


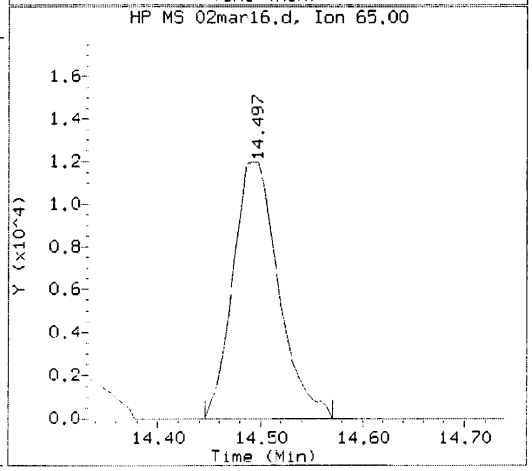
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





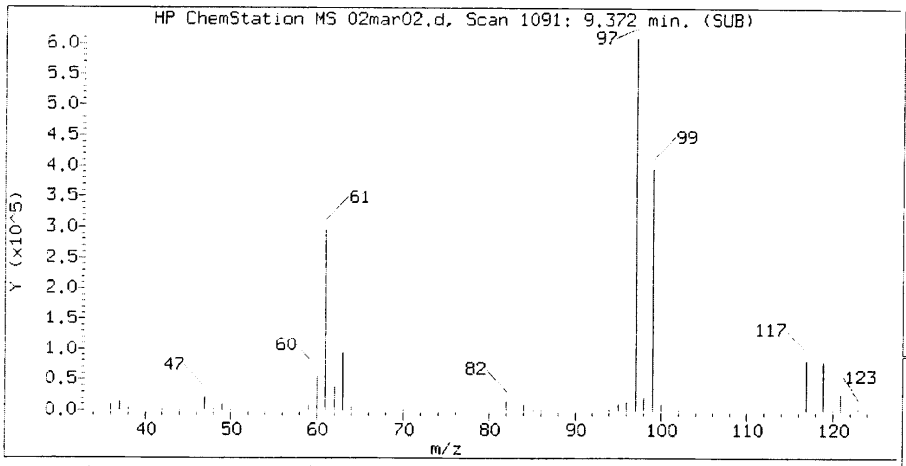
Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

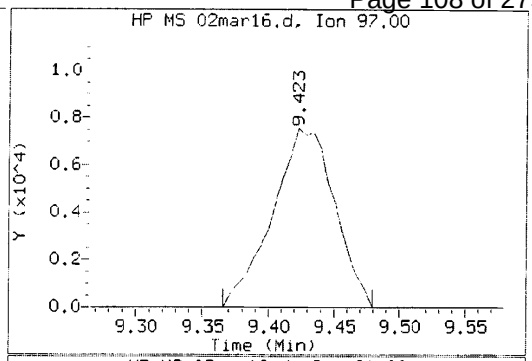
Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

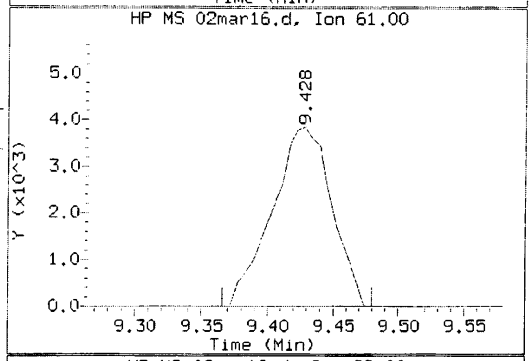
Sample Name: 18-03-0118-1A 400ML

Compound Number : 61
Compound Name : Toluene
Scan Number : 1994
Retention Time (minutes): 14.491
Relative Retention Time :-0.00146
Quant Ion : 91.00
Area (flag) : 299518
On-Column Amount (ppbv) : 3.6477

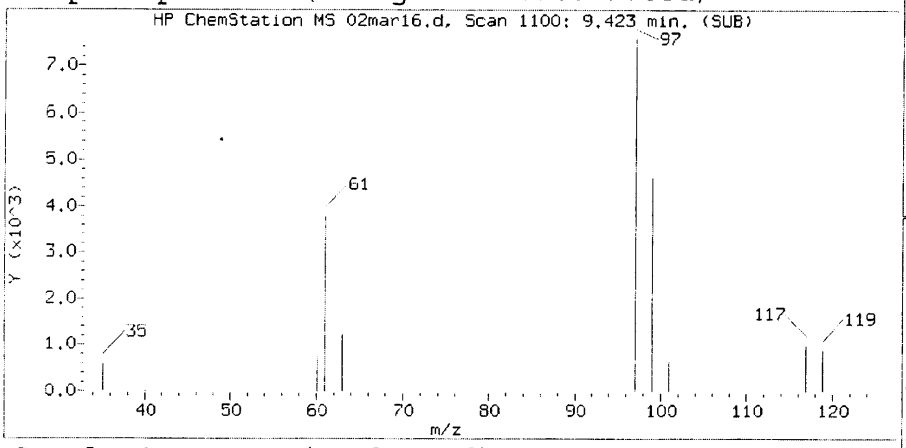
Reference Standard Spectrum for 1,1,1-Trichloroethane

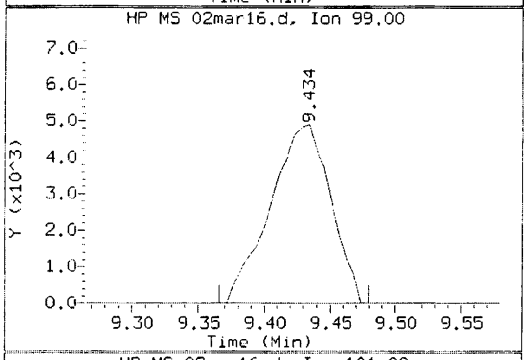




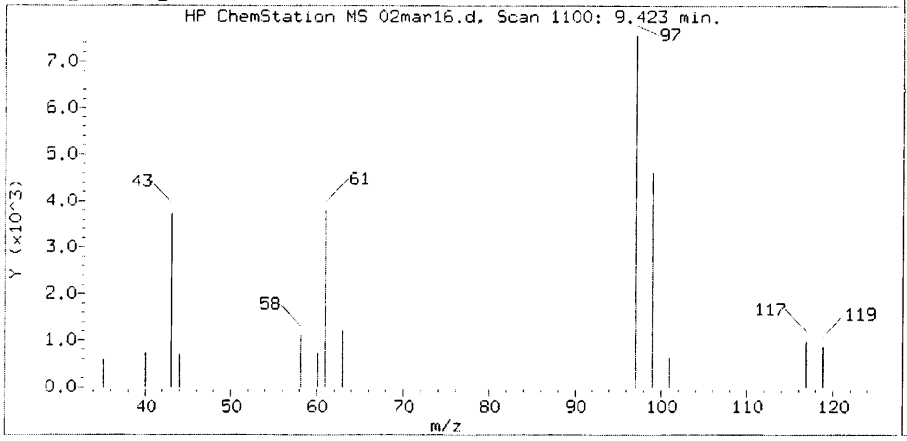


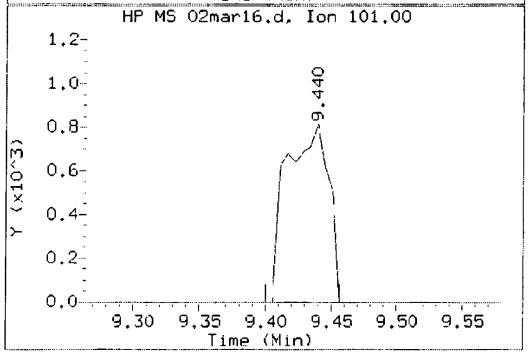
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number : 43
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1100
Retention Time (minutes): 9.423
Relative Retention Time : 0.00619
Quant Ion : 97.00
Area (flag) : 24882
On-Column Amount (ppbv) : 0.4567

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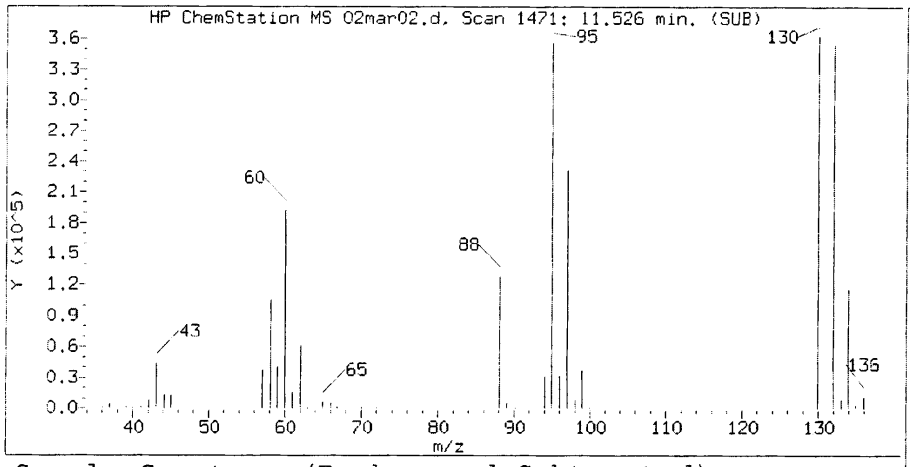
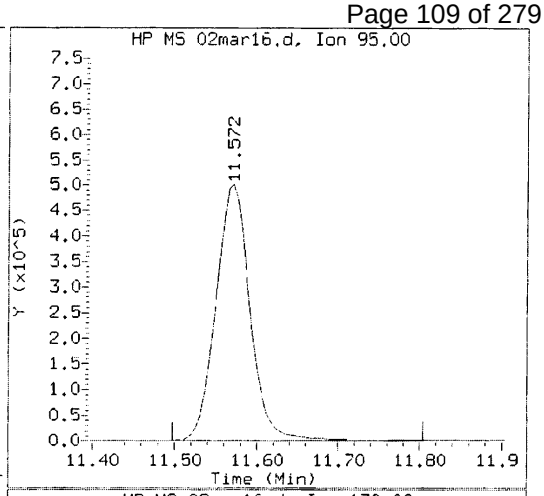
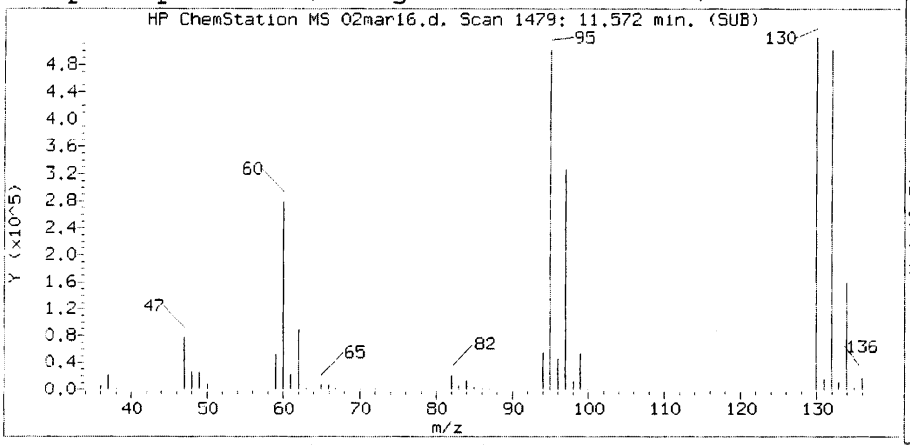
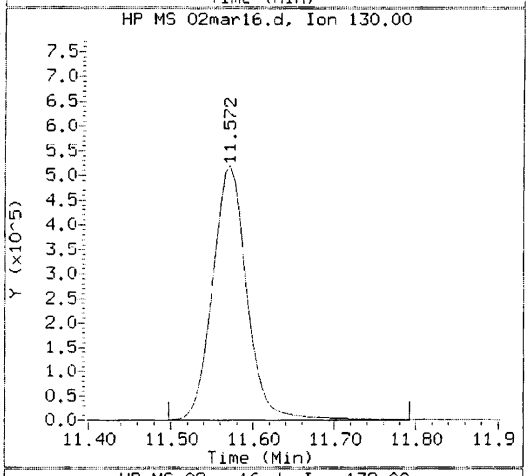
Reference Standard Spectrum for Trichloroethene



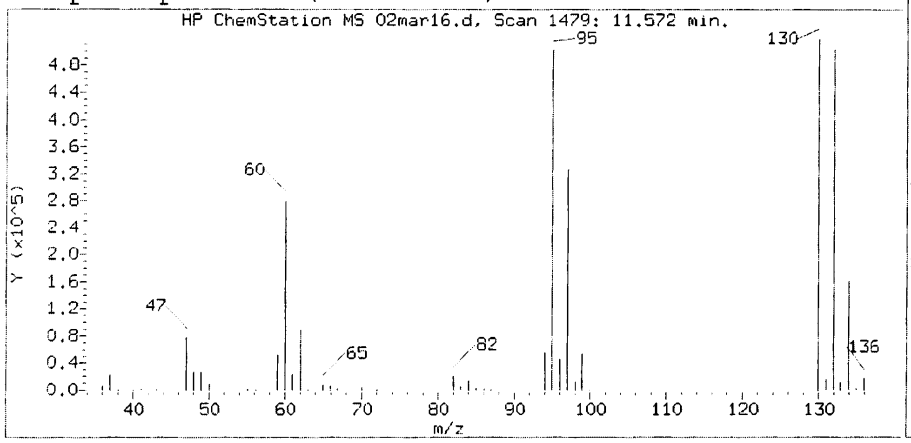


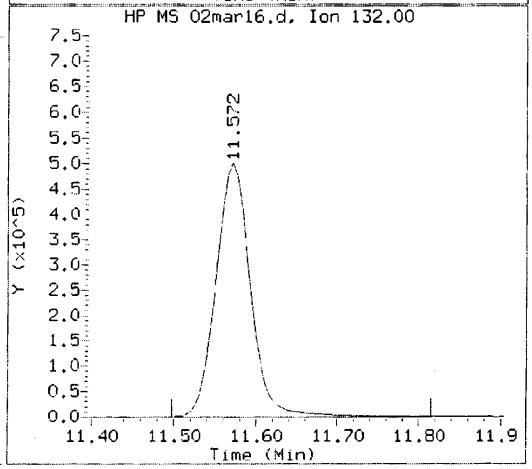
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number	: 52
Compound Name	: Trichloroethene
Scan Number	: 1479
Retention Time (minutes)	: 11.572
Relative Retention Time	: 0.00099
Quant Ion	: 95.00
Area (flag)	: 1465181
On-Column Amount (ppbv)	: 43.6913

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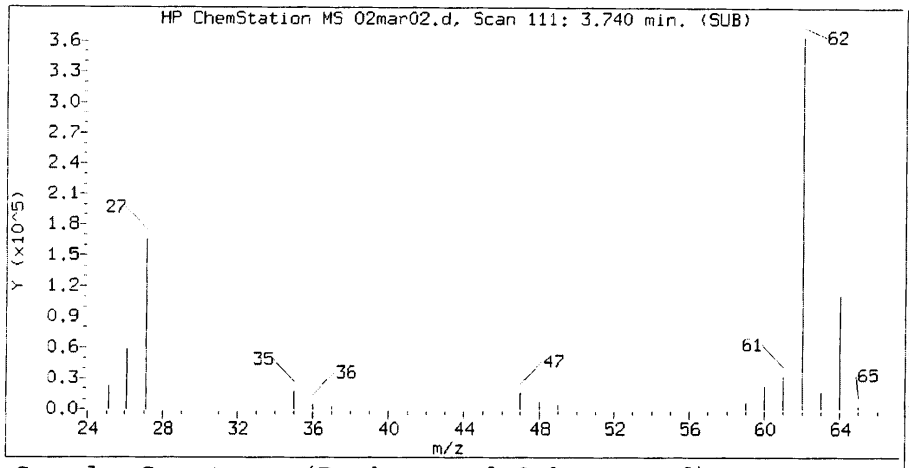
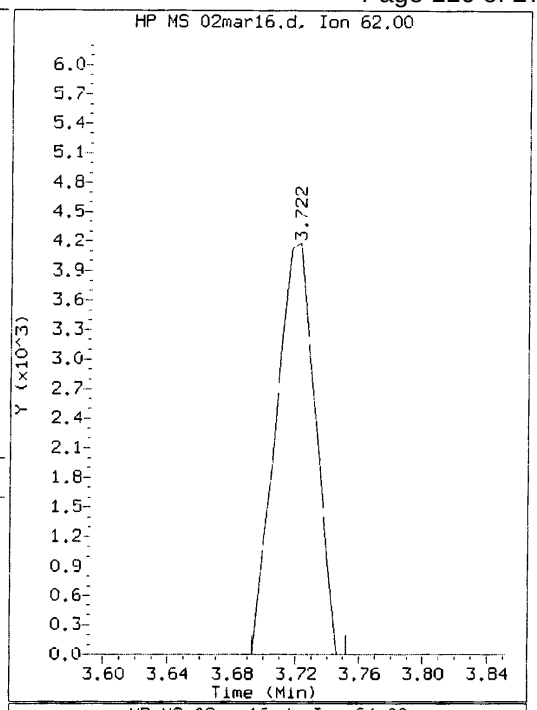
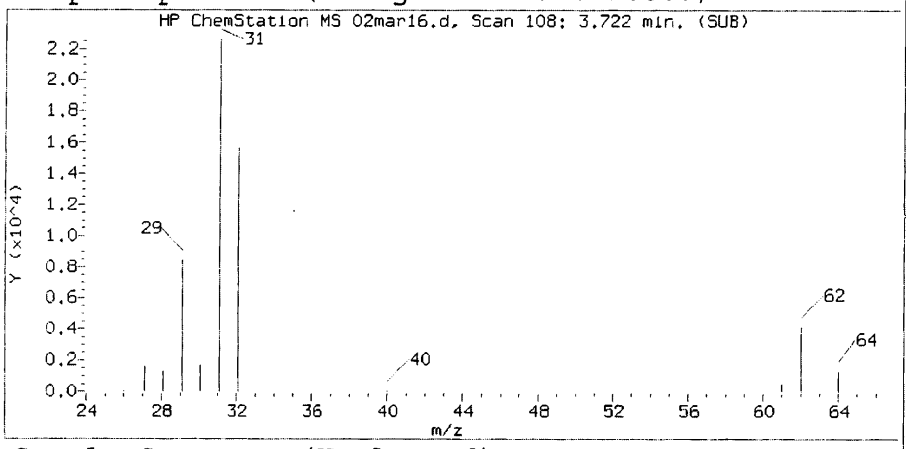
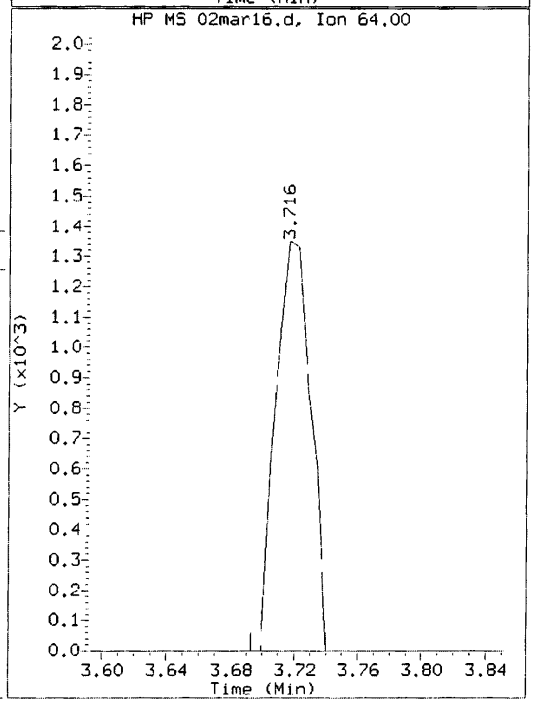
Reference Standard Spectrum for Vinyl Chloride



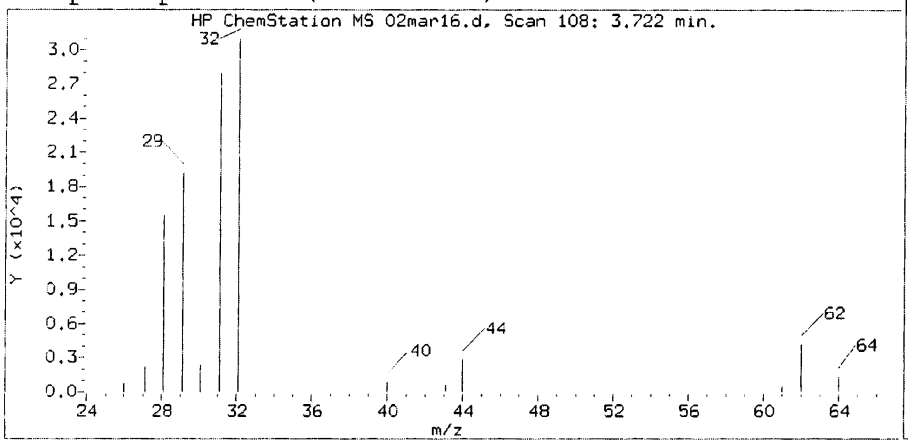


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar16.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 00:16 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 400ML

Compound Number	: 10
Compound Name	: Vinyl Chloride
Scan Number	: 108
Retention Time (minutes)	: 3.722
Relative Retention Time	: 0.00721
Quant Ion	: 62.00
Area (flag)	: 7195
On-Column Amount (ppbv)	: 0.3392

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar13.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 21:35 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 2.18X 80ML Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.937	130	521768	25.000	-0.02
47)*1,4-Difluorobenzene	(2)	10.540	114	1792265	25.000	-0.01
68)*Chlorobenzene-d5	(3)	17.547	117	1507019	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.895	65	788769	27.627	-0.02
SpikedAmount 25.000	Recovery = 110.508					
60)$Toluene-d8	(2)	14.287	98	1605390	22.297	-0.01
SpikedAmount 25.000	Recovery = 89.188					
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1191097	27.822	0.01
SpikedAmount 25.000	Recovery = 111.288					
Target Compounds						QValue
2) 1,1-Difluoroethane	(1)	3.299	51	2982	0.094	72
5) Dichlorodifluoromethane	(1)	3.428	85	2853	0.057	61
6) Chloromethane	(1)	0.000		0	N.D.	
7) Dichlorotetrafluoroethane	(1)	0.000		0	N.D.	
10) Vinyl Chloride	(1)	0.000		0	N.D.	
13) Bromomethane	(1)	0.000		0	N.D.	
14) Chloroethane	(1)	0.000		0	N.D.	
15) Ethanol	(1)	4.346	45	2198118	265.006	100
17) Acetone	(1)	4.699	58	30495400M	3249.131	71
18) Trichlorofluoromethane	(1)	4.799	101	13945	0.285	32
19) Isopropanol	(1)	4.946	45	145353	3.085	1
21) 1,1-Dichloroethene	(1)	0.000		0	N.D.	
23) Methylene Chloride	(1)	5.590	84	5530	0.318	93
22) Tert-Butyl Alcohol (TBA)	(1)	5.516	59	5224	0.117	55
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	0.000		0	N.D.	
26) Carbon Disulfide	(1)	0.000		0	N.D.	
28) t-1,2-Dichloroethene	(1)	0.000		0	N.D.	
29) 1,1-Dichloroethane	(1)	0.000		0	N.D.	
30) Methyl-t-Butyl Ether (MTBE)	(1)	0.000		0	N.D.	
31) Vinyl Acetate	(1)	0.000		0	N.D.	
32) 2-Butanone	(1)	7.245	43	94576	1.741	94
33) c-1,2-Dichloroethene	(1)	0.000		0	N.D.	
36) Diisopropyl Ether (DIPE)	(1)	8.068	45	13154	0.127	1
38) Chloroform	(1)	0.000		0	N.D.	
40) Ethyl-t-Butyl Ether (ETBE)	(1)	0.000		0	N.D.	

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar13.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 21:35 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 2.18X 80ML Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
42) 1,2-Dichloroethane	(1)	0.000		0	N.D.	
43) 1,1,1-Trichloroethane	(1)	0.000		0	N.D.	
44) Benzene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Tert-Amyl-Methyl Ether (TAME)	(2)	0.000		0	N.D.	
49) 1,2-Dichloropropane	(2)	0.000		0	N.D.	
50) Bromodichloromethane	(2)	0.000		0	N.D.	
52) Trichloroethene	(2)	11.532	95	112147	3.898	98
56) c-1,3-Dichloropropene	(2)	0.000		0	N.D.	
57) 4-Methyl-2-Pentanone	(2)	0.000		0	N.D.	
58) t-1,3-Dichloropropene	(2)	0.000		0	N.D.	
59) 1,1,2-Trichloroethane	(2)	0.000		0	N.D.	
61) Toluene	(3)	14.452	91	20778	0.307	97
62) 2-Hexanone	(3)	0.000		0	N.D.	
64) Dibromochloromethane	(3)	0.000		0	N.D.	
65) 1,2-Dibromoethane	(3)	0.000		0	N.D.	
67) Tetrachloroethene	(3)	16.402	166	741155	18.906	100
69) Chlorobenzene	(3)	0.000		0	N.D.	
70) Ethylbenzene	(3)	0.000		0	N.D.	
71) p/m-Xylene	(3)	0.000		0	N.D.	
72) Bromoform	(3)	0.000		0	N.D.	
73) Styrene	(3)	0.000		0	N.D.	
74) 1,1,2,2-Tetrachloroethane	(3)	0.000		0	N.D.	
75) o-Xylene	(3)	0.000		0	N.D.	
82) 4-Ethyltoluene	(3)	0.000		0	N.D.	
83) 1,3,5-Trimethylbenzene	(3)	0.000		0	N.D.	
86) 1,2,4-Trimethylbenzene	(3)	0.000		0	N.D.	
85) tert-Butylbenzene	(3)	0.000		0	N.D.	
87) Benzyl Chloride	(3)	0.000		0	N.D.	
88) 1,3-Dichlorobenzene	(3)	0.000		0	N.D.	
89) 1,4-Dichlorobenzene	(3)	0.000		0	N.D.	
91) sec-Butylbenzene	(3)	0.000		0	N.D.	
93) 1,2-Dichlorobenzene	(3)	0.000		0	N.D.	
94) n-Butylbenzene	(3)	0.000		0	N.D.	
96) 1,2,4-Trichlorobenzene	(3)	0.000		0	N.D.	
97) Naphthalene	(3)	0.000		0	N.D.	
99) Hexachloro-1,3-Butadiene	(3)	0.000		0	N.D.	

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar13.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 21:35 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 2.18X 80ML Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar13.d

Date : 03-MAR-2018 21:35

Client ID:

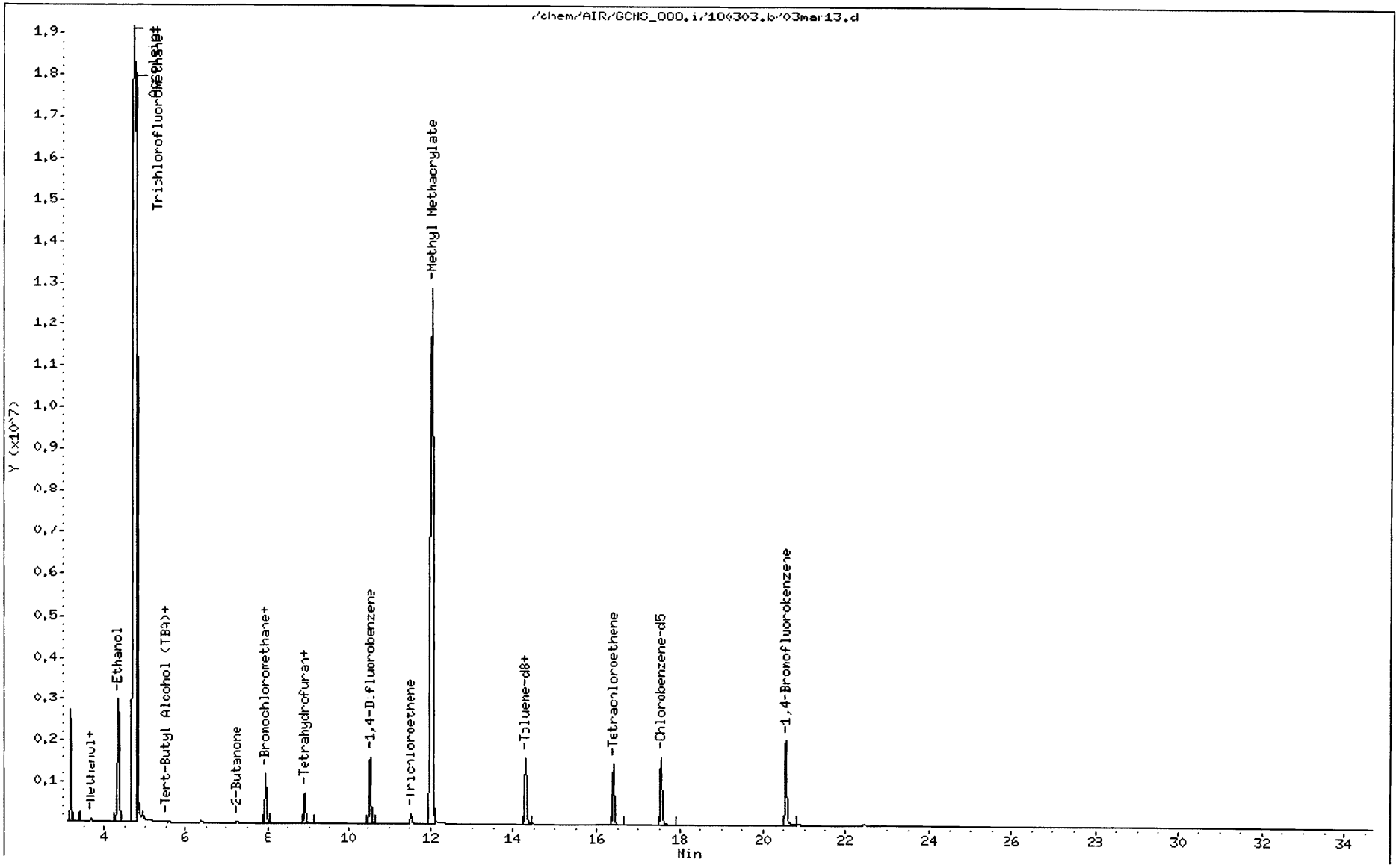
Sample Info: 18-03-0118-1A 2.18X 80ML

Column phase:

Instrument: GCMS_000.i

Operator: UPY2

Column diameter: 0.00



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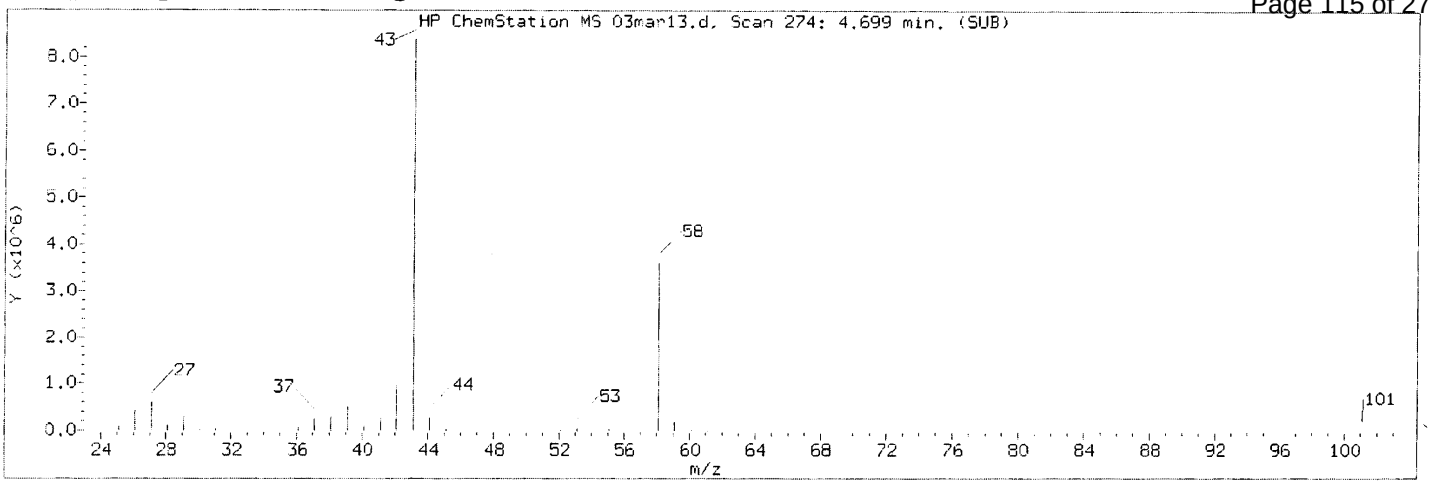
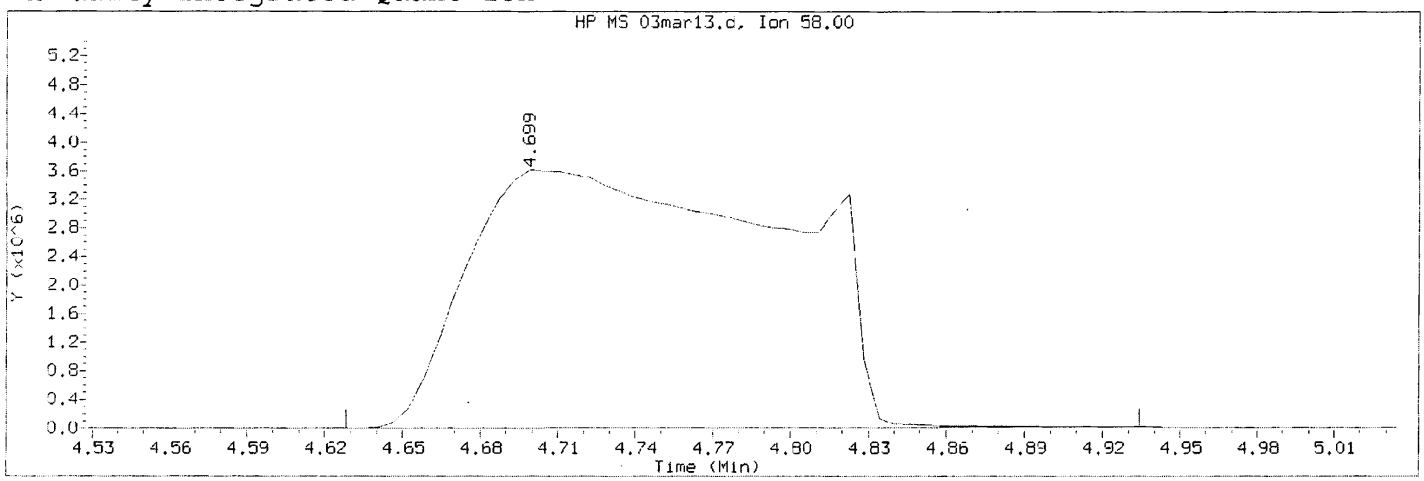
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar13.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 21:35 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used:FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 2.18X 80ML

Compound Number : 17
Compound Name : Acetone
Scan Number : 274
Retention Time (minutes): 4.699
Quant Ion : 58.00
Area (flag) : 30495400M
On-Column Amount (ppbv) : 3249.1309
Integration start scan : 261 Integration stop scan: 313
Y at integration start : 0 Y at integration end: 14134

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Gabriel Guillen on 03/05/2018 at 11:27. Target 3.5 esignature user ID: jxs7

GC/MS audit/management approval: 7944

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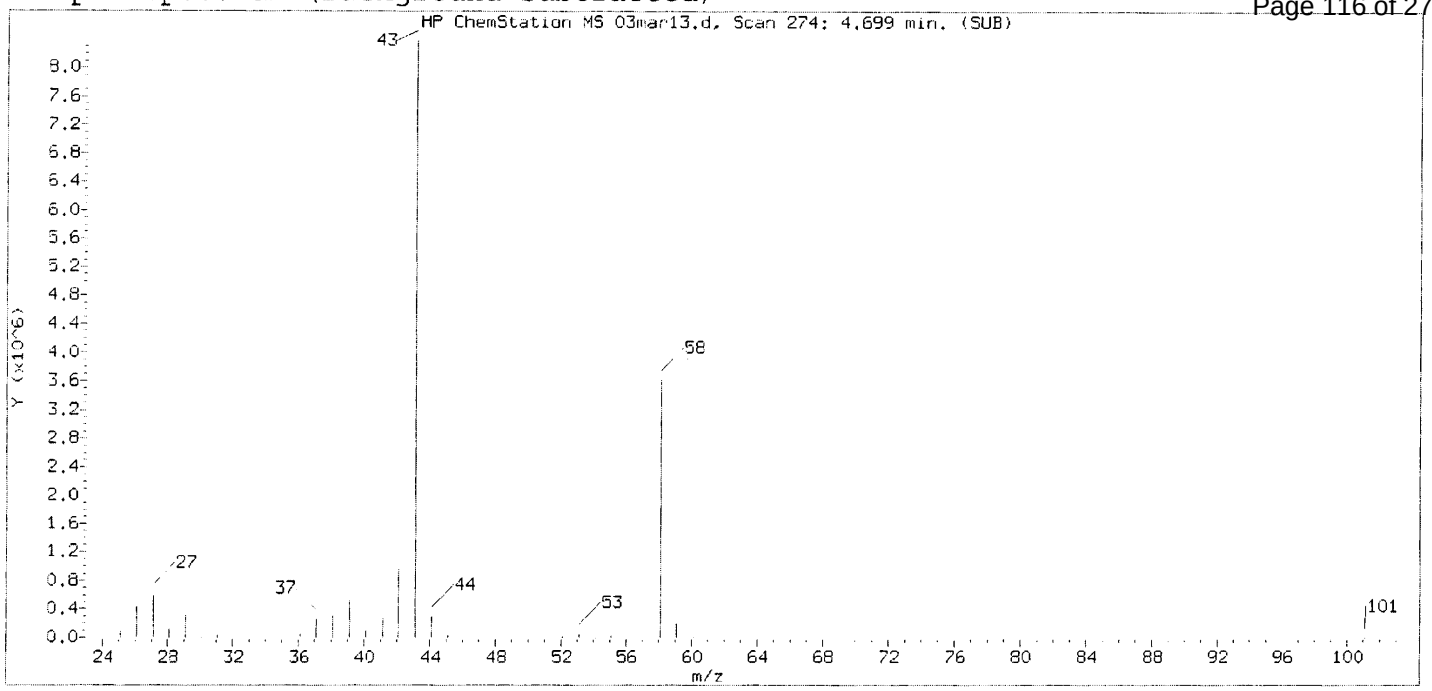
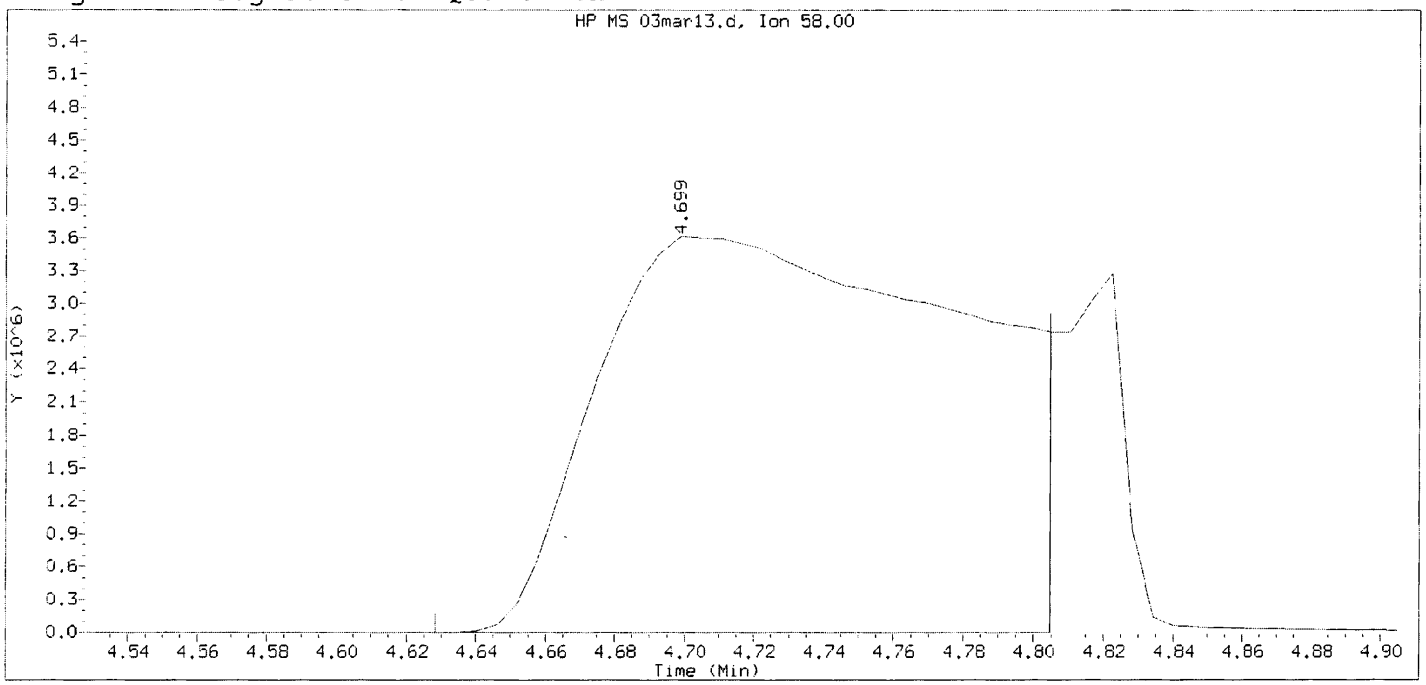
Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar13.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 21:35 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 22:29 Unknown

Sample Name: 18-03-0118-1A 2.18X 80ML

Compound Number : 17
Compound Name : Acetone
Scan Number : 274
Retention Time (minutes): 4.699
Quant Ion : 58.00
Area : 26878414
On-column Amount (ppbv) : 2863.7566
Integration start scan : 261 Integration stop scan: 291
Y at integration start : 0 Y at integration end: 0

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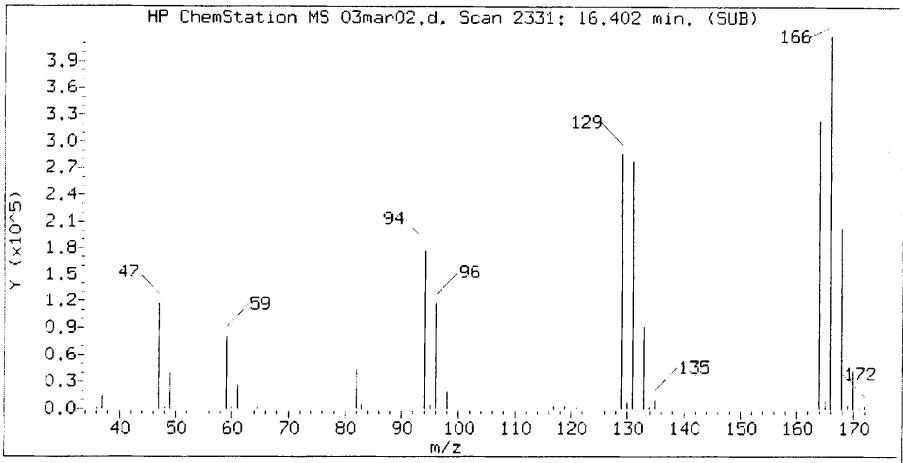
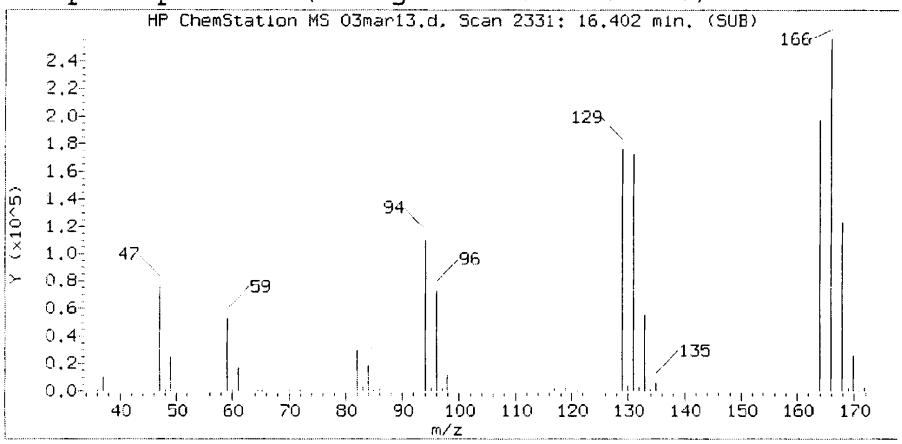
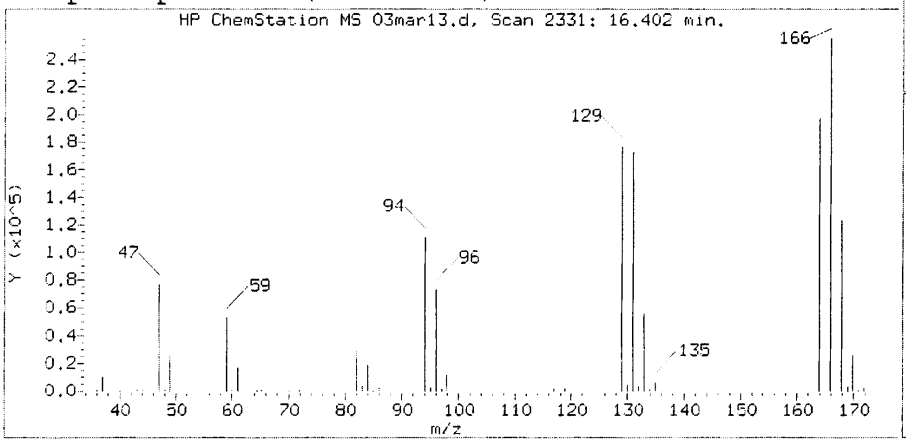
Reference Standard Spectrum for Tetrachloroethene

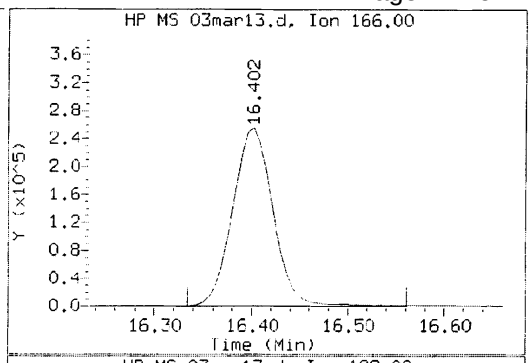


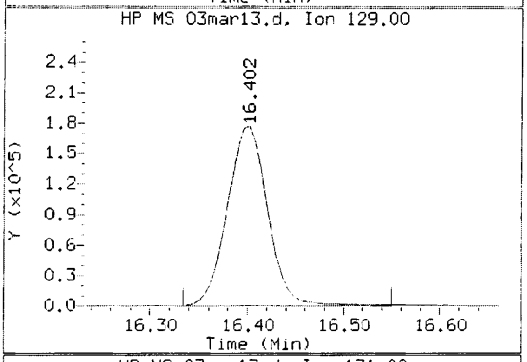
Sample Spectrum (Background Subtracted)

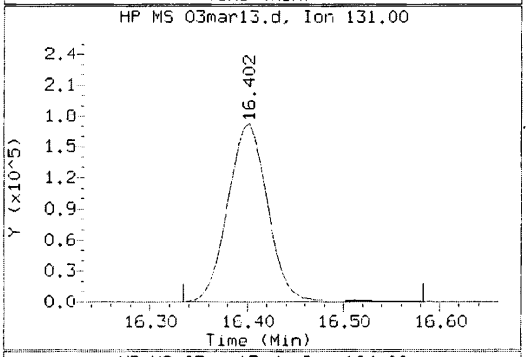


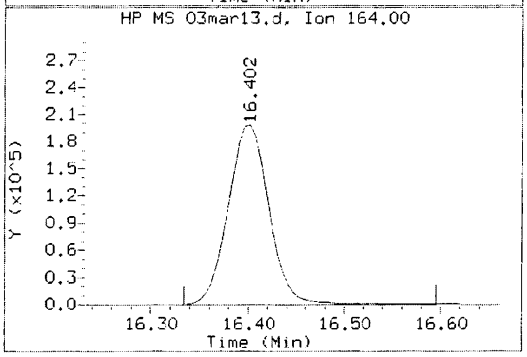
Sample Spectrum (Unaltered)











Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar13.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 21:35 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 11:04 jxs7

Sample Name: 18-03-0118-1A 2.18X 80ML

Compound Number : 67
Compound Name : Tetrachloroethene
Scan Number : 2331
Retention Time (minutes): 16.402
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 741155
On-Column Amount (ppbv) : 18.9056

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar07.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 15:17 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 13-Mar-2018 16:18 jxs7

Sample Name: 18-03-0118-1A 2.18X100X 10ML Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.915	130	753551	25.000	0.01
47)*1,4-Difluorobenzene	(2)	10.523	114	2513167	25.000	0.01
68)*Chlorobenzene-d5	(3)	17.542	117	2131218	25.000	0.01
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.878	65	1008305	24.454	0.00
SpikedAmount 25.000	Recovery =	97.814				
60)$Toluene-d8	(2)	14.282	98	2424349	24.013	0.00
SpikedAmount 25.000	Recovery =	96.051				
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1450577	23.959	0.01
SpikedAmount 25.000	Recovery =	95.837				
Target Compounds						QValue
2) 1,1-Difluoroethane	(1)	0.000		0	N.D.	
5) Dichlorodifluoromethane	(1)	0.000		0	N.D.	
6) Chloromethane	(1)	0.000		0	N.D.	
7) Dichlorotetrafluoroethane	(1)	0.000		0	N.D.	
10) Vinyl Chloride	(1)	0.000		0	N.D.	
13) Bromomethane	(1)	0.000		0	N.D.	
14) Chloroethane	(1)	0.000		0	N.D.	
15) Ethanol	(1)	4.287	45	8131	0.679	72
17) Acetone	(1)	4.693	58	689410	50.860	93
18) Trichlorofluoromethane	(1)	0.000		0	N.D.	
19) Isopropanol	(1)	4.928	45	21496	0.316	1
21) 1,1-Dichloroethene	(1)	0.000		0	N.D.	
23) Methylene Chloride	(1)	0.000		0	N.D.	
22) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	0.000		0	N.D.	
26) Carbon Disulfide	(1)	0.000		0	N.D.	
28) t-1,2-Dichloroethene	(1)	0.000		0	N.D.	
29) 1,1-Dichloroethane	(1)	0.000		0	N.D.	
30) Methyl-t-Butyl Ether (MTBE)	(1)	0.000		0	N.D.	
31) Vinyl Acetate	(1)	6.985	43	37581	0.359	62
32) 2-Butanone	(1)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(1)	7.915	96	1650	0.053	16
36) Diisopropyl Ether (DIPE)	(1)	0.000		0	N.D.	
38) Chloroform	(1)	0.000		0	N.D.	
40) Ethyl-t-Butyl Ether (ETBE)	(1)	0.000		0	N.D.	

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar07.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 15:17 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 13-Mar-2018 16:18 jxs7

Sample Name: 18-03-0118-1A 2.18X100X 10ML Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
42) 1,2-Dichloroethane	(1)	0.000		0	N.D.	
43) 1,1,1-Trichloroethane	(1)	0.000		0	N.D.	
44) Benzene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Tert-Amyl-Methyl Ether (TAME)	(2)	0.000		0	N.D.	
49) 1,2-Dichloropropane	(2)	0.000		0	N.D.	
50) Bromodichloromethane	(2)	0.000		0	N.D.	
52) Trichloroethene	(2)	0.000		0	N.D.	
56) c-1,3-Dichloropropene	(2)	0.000		0	N.D.	
57) 4-Methyl-2-Pentanone	(2)	0.000		0	N.D.	
58) t-1,3-Dichloropropene	(2)	0.000		0	N.D.	
59) 1,1,2-Trichloroethane	(2)	0.000		0	N.D.	
61) Toluene	(3)	0.000		0	N.D.	
62) 2-Hexanone	(3)	0.000		0	N.D.	
64) Dibromochloromethane	(3)	0.000		0	N.D.	
65) 1,2-Dibromoethane	(3)	0.000		0	N.D.	
67) Tetrachloroethene	(3)	0.000		0	N.D.	
69) Chlorobenzene	(3)	0.000		0	N.D.	
70) Ethylbenzene	(3)	0.000		0	N.D.	
71) p/m-Xylene	(3)	0.000		0	N.D.	
72) Bromoform	(3)	0.000		0	N.D.	
73) Styrene	(3)	0.000		0	N.D.	
74) 1,1,2,2-Tetrachloroethane	(3)	0.000		0	N.D.	
75) o-Xylene	(3)	0.000		0	N.D.	
82) 4-Ethyltoluene	(3)	0.000		0	N.D.	
83) 1,3,5-Trimethylbenzene	(3)	0.000		0	N.D.	
86) 1,2,4-Trimethylbenzene	(3)	0.000		0	N.D.	
85) tert-Butylbenzene	(3)	0.000		0	N.D.	
87) Benzyl Chloride	(3)	0.000		0	N.D.	
88) 1,3-Dichlorobenzene	(3)	0.000		0	N.D.	
89) 1,4-Dichlorobenzene	(3)	0.000		0	N.D.	
91) sec-Butylbenzene	(3)	0.000		0	N.D.	
93) 1,2-Dichlorobenzene	(3)	0.000		0	N.D.	
94) n-Butylbenzene	(3)	0.000		0	N.D.	
96) 1,2,4-Trichlorobenzene	(3)	0.000		0	N.D.	
97) Naphthalene	(3)	0.000		0	N.D.	
99) Hexachloro-1,3-Butadiene	(3)	0.000		0	N.D.	

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar07.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 15:17 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 13-Mar-2018 16:18 jxs7

Sample Name: 18-03-0118-1A 2.18X100X 10ML Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue

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Data File: /chem/AIR/GCMS_000.i/180305.b/05mar07.d

Date : 05-MAR-2018 15:17

Client ID:

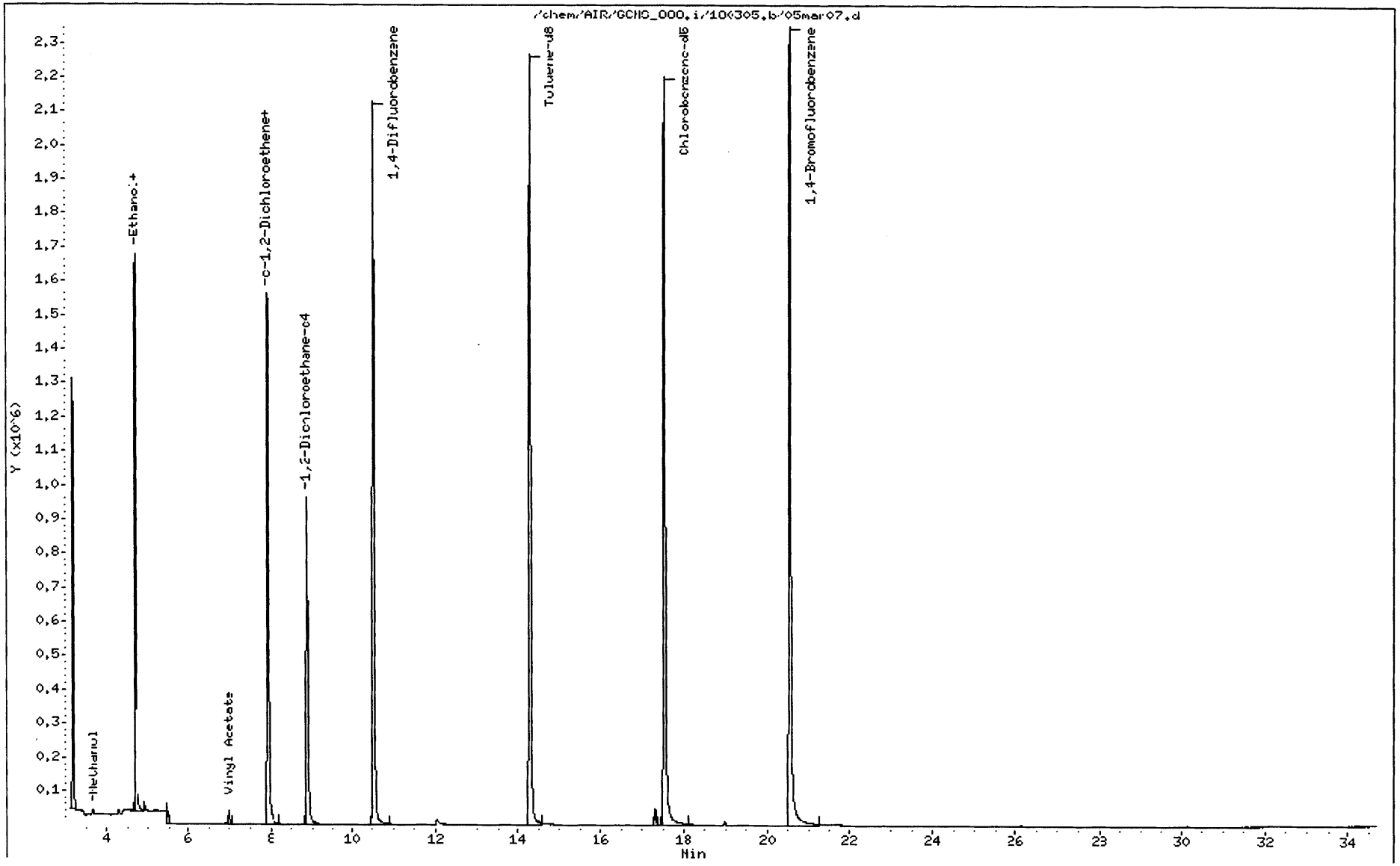
Sample Info: 18-03-0118-1A 2.18X100X 10ML

Column phase:

Instrument: GCMS_000.i

Operator: JXS7

Column diameter: 0.00



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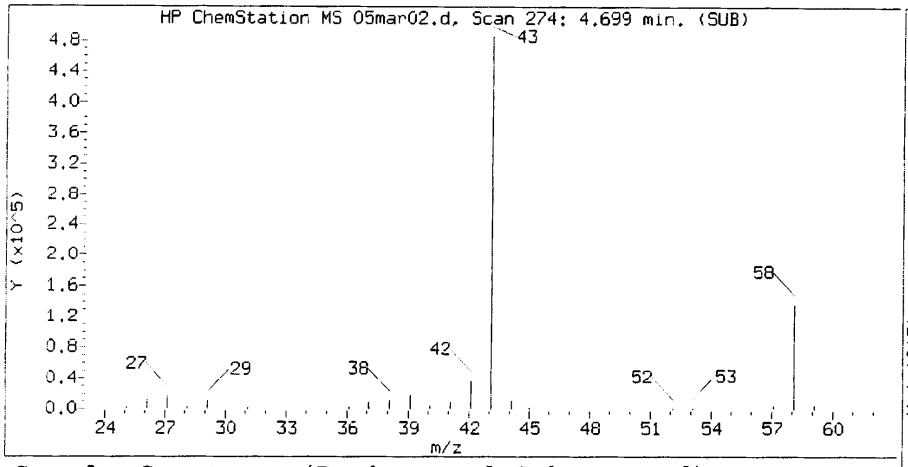
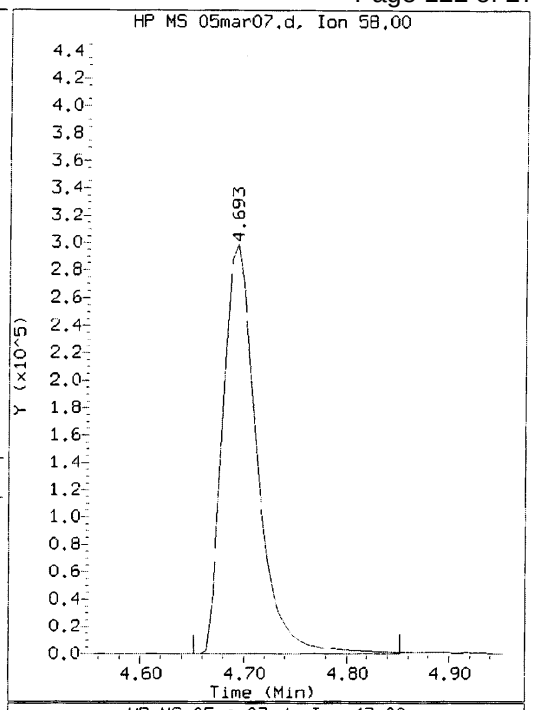
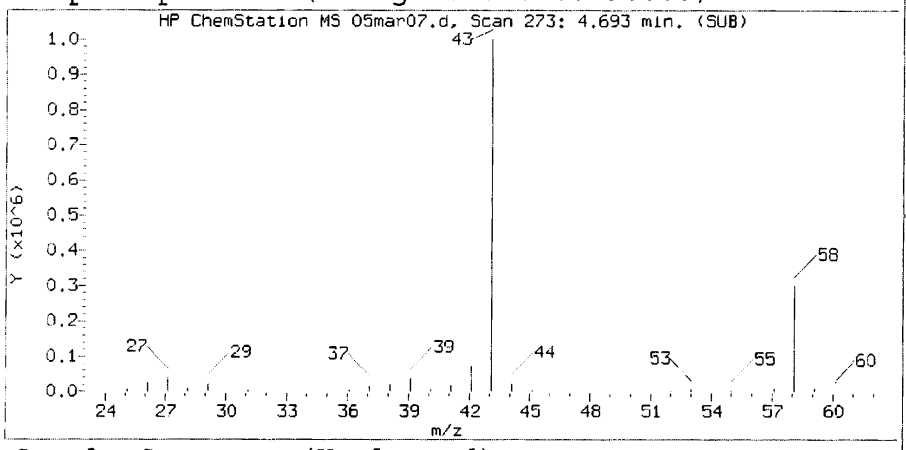
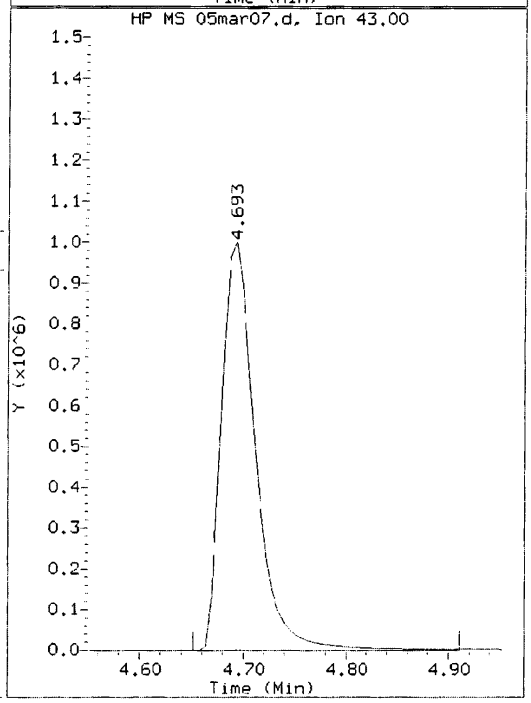
Reference Standard Spectrum for Acetone



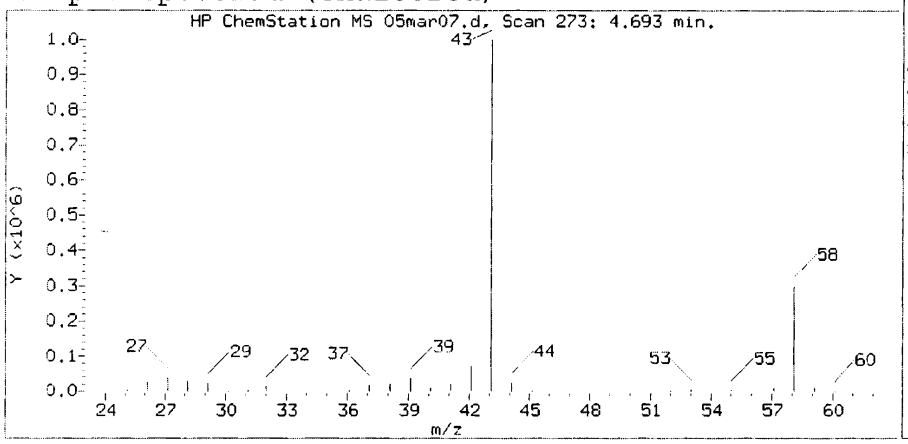


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar07.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 15:17 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 13-Mar-2018 16:18 jxs7

Sample Name: 18-03-0118-1A 2.18X100X 10ML

Compound Number : 17
Compound Name : Acetone
Scan Number : 273
Retention Time (minutes): 4.693
Relative Retention Time :-0.00012
Quant Ion : 58.00
Area (flag) : 689410
On-Column Amount (ppbv) : 50.8599

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar14.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 22:20 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 10:46 jxs7

Ref

Sample Name: 18-03-0118-1A 100X 100ML Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	553354	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	1849119	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.542	117	1628625	25.000	0.01
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.878	65	833402	27.524	0.00
SpikedAmount 25.000	Recovery = 110.097					
60)$Toluene-d8	(2)	14.282	98	1781795	23.986	0.00
SpikedAmount 25.000	Recovery = 95.945					
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1206050	26.068	0.01
SpikedAmount 25.000	Recovery = 104.271					
Target Compounds						QValue
2) 1,1-Difluoroethane	(1)	0.000		0	N.D.	
5) Dichlorodifluoromethane	(1)	0.000		0	N.D.	
6) Chloromethane	(1)	0.000		0	N.D.	
7) Dichlorotetrafluoroethane	(1)	0.000		0	N.D.	
10) Vinyl Chloride	(1)	0.000		0	N.D.	
13) Bromomethane	(1)	0.000		0	N.D.	
14) Chloroethane	(1)	0.000		0	N.D.	
15) Ethanol	(1)	4.287	45	72076	8.194	78
17) Acetone	(1)	4.687	58	4079500	409.840	94
18) Trichlorofluoromethane	(1)	0.000		0	N.D.	
19) Isopropanol	(1)	4.911	45	59845	1.198	1
21) 1,1-Dichloroethene	(1)	0.000		0	N.D.	
23) Methylene Chloride	(1)	0.000		0	N.D.	
22) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	0.000		0	N.D.	
26) Carbon Disulfide	(1)	0.000		0	N.D.	
28) t-1,2-Dichloroethene	(1)	0.000		0	N.D.	
29) 1,1-Dichloroethane	(1)	0.000		0	N.D.	
30) Methyl-t-Butyl Ether (MTBE)	(1)	0.000		0	N.D.	
31) Vinyl Acetate	(1)	6.979	43	49129	0.640	64
32) 2-Butanone	(1)	7.285	43	8090	0.140	50
33) c-1,2-Dichloroethene	(1)	0.000		0	N.D.	
36) Diisopropyl Ether (DIPE)	(1)	0.000		0	N.D.	
38) Chloroform	(1)	0.000		0	N.D.	
40) Ethyl-t-Butyl Ether (ETBE)	(1)	0.000		0	N.D.	

E

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_000.i/180303.b/03mar14.d Instrument ID: GCMS_000.i
Injection date and time: 03-MAR-2018 22:20 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_000.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 10:46 jxs7

Sample Name: 18-03-0118-1A 100X 100ML Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
42) 1,2-Dichloroethane	(1)	0.000		0	N.D.	
43) 1,1,1-Trichloroethane	(1)	0.000		0	N.D.	
44) Benzene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Tert-Amyl-Methyl Ether (TAME)	(2)	0.000		0	N.D.	
49) 1,2-Dichloropropane	(2)	0.000		0	N.D.	
50) Bromodichloromethane	(2)	0.000		0	N.D.	
52) Trichloroethene	(2)	11.537	95	1878	0.063	94
56) c-1,3-Dichloropropene	(2)	0.000		0	N.D.	
57) 4-Methyl-2-Pentanone	(2)	0.000		0	N.D.	
58) t-1,3-Dichloropropene	(2)	0.000		0	N.D.	
59) 1,1,2-Trichloroethane	(2)	0.000		0	N.D.	
61) Toluene	(3)	0.000		0	N.D.	
62) 2-Hexanone	(3)	0.000		0	N.D.	
64) Dibromochloromethane	(3)	0.000		0	N.D.	
65) 1,2-Dibromoethane	(3)	0.000		0	N.D.	
67) Tetrachloroethene	(3)	16.402	166	16909	0.399	99
69) Chlorobenzene	(3)	0.000		0	N.D.	
70) Ethylbenzene	(3)	0.000		0	N.D.	
71) p/m-Xylene	(3)	0.000		0	N.D.	
72) Bromoform	(3)	0.000		0	N.D.	
73) Styrene	(3)	0.000		0	N.D.	
74) 1,1,2,2-Tetrachloroethane	(3)	0.000		0	N.D.	
75) o-Xylene	(3)	0.000		0	N.D.	
82) 4-Ethyltoluene	(3)	0.000		0	N.D.	
83) 1,3,5-Trimethylbenzene	(3)	0.000		0	N.D.	
86) 1,2,4-Trimethylbenzene	(3)	0.000		0	N.D.	
85) tert-Butylbenzene	(3)	0.000		0	N.D.	
87) Benzyl Chloride	(3)	0.000		0	N.D.	
88) 1,3-Dichlorobenzene	(3)	0.000		0	N.D.	
89) 1,4-Dichlorobenzene	(3)	0.000		0	N.D.	
91) sec-Butylbenzene	(3)	0.000		0	N.D.	
93) 1,2-Dichlorobenzene	(3)	0.000		0	N.D.	
94) n-Butylbenzene	(3)	0.000		0	N.D.	
96) 1,2,4-Trichlorobenzene	(3)	0.000		0	N.D.	
97) Naphthalene	(3)	0.000		0	N.D.	
99) Hexachloro-1,3-Butadiene	(3)	0.000		0	N.D.	

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar14.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 22:20 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 10:46 jxs7

Sample Name: 18-03-0118-1A 100X 100ML Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar14.d

Page 1

Date : 03-MAR-2018 22:20

Client ID:

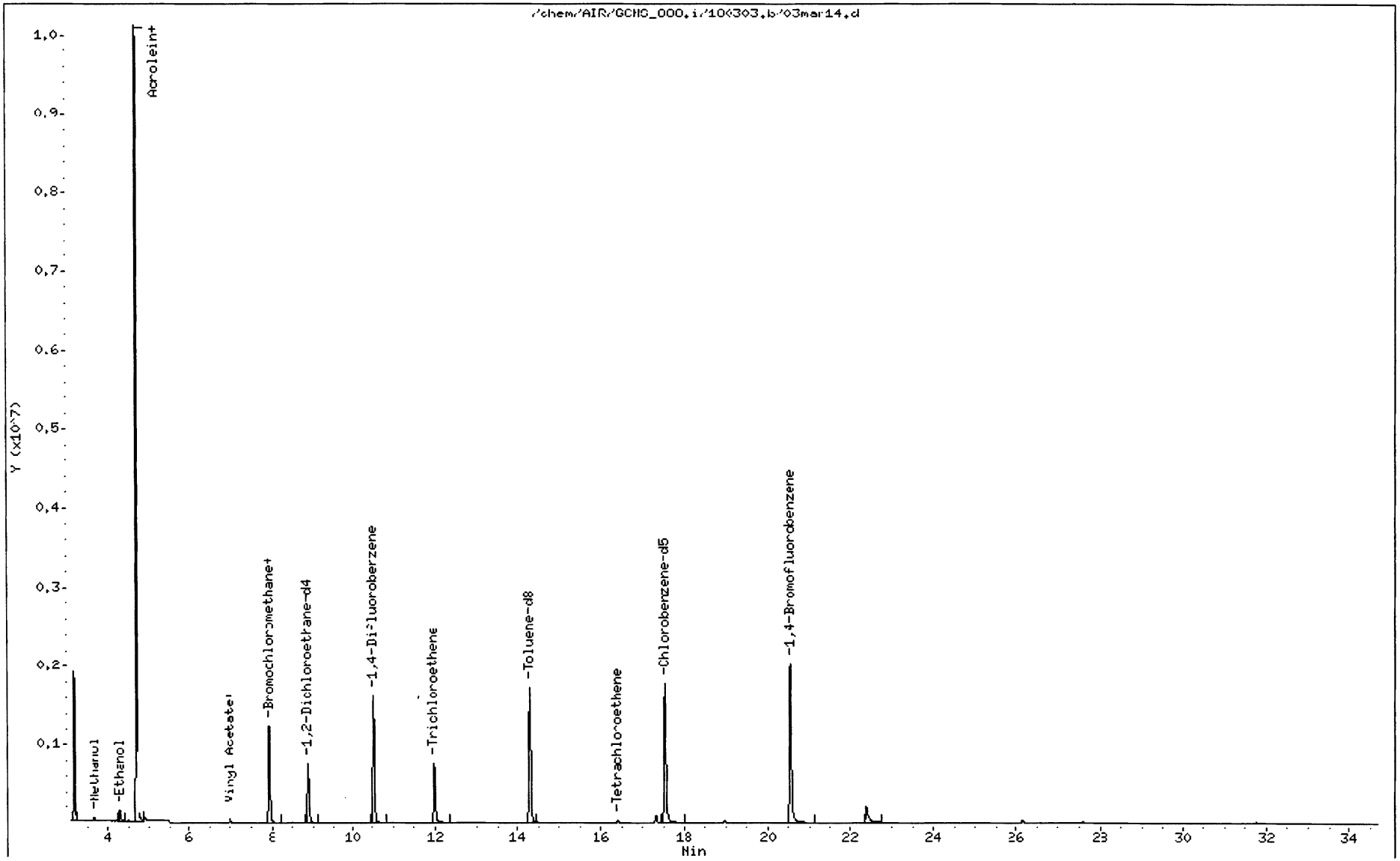
Instrument: GCMS_000.i

Sample Info: 18-03-0118-1A 100X 100ML

Operator: UPY2

Column phase:

Column diameter: 0.00



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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: 18-03-0118
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-03 01:08
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar17.d\02mar17.rr

 # 2 **CLIENT SAMPLE NUMBER: WAS00048**

LCS/MB BATCH: 180302L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
1,2,4-Trichlorobenzene	0.000	1.00	ND	2.0	
Acetone	1700	1.00	1700	2.0	E
Benzene	0.433	1.00	0.433	0.50	J
Benzyl Chloride	0.000	1.00	ND	1.5	
Bromodichloromethane	0.000	1.00	ND	0.50	
Bromoform	0.000	1.00	ND	0.50	
Bromomethane	0.000	1.00	ND	0.50	
2-Butanone	2.06	1.00	2.06	1.5	
n-Butylbenzene	0.000	1.00	ND	0.50	
sec-Butylbenzene	0.000	1.00	ND	0.50	
tert-Butylbenzene	0.000	1.00	ND	0.50	
Carbon Disulfide	0.000	1.00	ND	2.0	
Carbon Tetrachloride	0.0692	1.00	ND	0.50	
Chlorobenzene	0.000	1.00	ND	0.50	
Chloroethane	0.000	1.00	ND	0.50	
Chloroform	0.000	1.00	ND	0.50	
Chloromethane	0.534	1.00	0.534	0.50	
Dibromochloromethane	0.000	1.00	ND	0.50	
1,2-Dibromoethane	0.000	1.00	ND	0.50	
1,2-Dichlorobenzene	0.000	1.00	ND	0.50	
1,3-Dichlorobenzene	0.000	1.00	ND	0.50	
1,4-Dichlorobenzene	0.000	1.00	ND	0.50	
Dichlorodifluoromethane	0.447	1.00	0.447	0.50	J
1,1-Dichloroethane	0.000	1.00	ND	0.50	
1,2-Dichloroethane	0.000	1.00	ND	0.50	
1,1-Dichloroethene	0.000	1.00	ND	0.50	
c-1,2-Dichloroethene	0.000	1.00	ND	0.50	
t-1,2-Dichloroethene	0.000	1.00	ND	0.50	
1,2-Dichloropropane	0.000	1.00	ND	0.50	
c-1,3-Dichloropropene	0.000	1.00	ND	0.50	
t-1,3-Dichloropropene	0.000	1.00	ND	1.0	
Dichlorotetrafluoroethane	0.000	1.00	ND	2.0	
1,1-Difluoroethane	2.07	1.00	2.07	2.0	
Ethylbenzene	0.168	1.00	ND	0.50	
4-Ethyltoluene	0.0592	1.00	ND	0.50	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	1.5	
2-Hexanone	0.000	1.00	ND	1.5	
Isopropanol	3.58	1.00	3.58	5.0	J
Methyl-t-Butyl Ether (MTBE)	0.000	1.00	ND	2.0	

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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: **18-03-0118**
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-03 01:08
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar17.d\02mar17.rr

 # 2 **CLIENT SAMPLE NUMBER: WAS00048**

LCS/MB BATCH: 180302L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Methylene Chloride	0.828	1.00	ND	5.0	
4-Methyl-2-Pentanone	0.000	1.00	ND	1.5	
Styrene	0.360	1.00	ND	1.5	
1,1,2,2-Tetrachloroethane	0.000	1.00	ND	1.0	
Tetrachloroethene	0.394	1.00	0.394	0.50	J
Toluene	5.93	1.00	5.93	0.50	
1,1,1-Trichloroethane	0.000	1.00	ND	0.50	
1,1,2-Trichloroethane	0.000	1.00	ND	0.50	
Trichloroethene	0.000	1.00	ND	0.50	
Trichlorofluoromethane	0.240	1.00	ND	1.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.0649	1.00	ND	1.5	
1,2,4-Trimethylbenzene	0.151	1.00	ND	1.5	
1,3,5-Trimethylbenzene	0.0534	1.00	ND	0.50	
Vinyl Acetate	0.000	1.00	ND	2.0	
Vinyl Chloride	0.000	1.00	ND	0.50	
o-Xylene	0.228	1.00	ND	0.50	
p/m-Xylene	0.626	1.00	ND	2.0	

Sample Analyzed 2 Times
1 dilution analysis ___ surrogate conf'n
Supervisor 794

RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER:	**18-03-0118**	ANALYZED BY:	953
INSTRUMENT:	GC/MS OOO	D/T ANALYZED:	2018-03-03 23:09
EXTRACTION :	N/A	REVIEWED BY:	
D/T EXTRACTED:		D/T REVIEWED:	

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar15.d\03mar15.rr

 # 2 **CLIENT SAMPLE NUMBER: WAS00048** **Rerun Analyses**

LCS/MB BATCH:	180303L01	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
UNITS:	ppb (v/v)	ADJUSTMENT RATIO TO PF:	1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Acetone	67.1	100	6710	200	D

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.932	130	671583	25.000	-0.01
47)*1,4-Difluorobenzene	(2)	10.534	114	2366266	25.000	-0.01
68)*Chlorobenzene-d5	(3)	17.547	117	2124180	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.890	65	952570	25.922	-0.01
SpikedAmount 25.000	Recovery = 103.686					
60)$Toluene-d8	(2)	14.287	98	2303165	24.229	-0.01
SpikedAmount 25.000	Recovery = 96.915					
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1555840	25.783	0.01
SpikedAmount 25.000	Recovery = 103.132					
Target Compounds						QValue
2) 1,1-Difluoroethane	(1)	3.305	51	84339	2.072	99
5) Dichlorodifluoromethane	(1)	3.428	85	28731	0.447	99
6) Chloromethane	(1)	3.552	50	13241	0.534	96
7) Dichlorotetrafluoroethane	(1)	0.000		0	N.D.	
10) Vinyl Chloride	(1)	0.000		0	N.D.	
13) Bromomethane	(1)	0.000		0	N.D.	
14) Chloroethane	(1)	0.000		0	N.D.	
15) Ethanol	(1)	4.305	45	1163929	109.021	1
17) Acetone	(1)	4.711	58	20567726M	1702.538	71
18) Trichlorofluoromethane	(1)	4.840	101	15083	0.240	96
19) Isopropanol	(1)	4.922	45	216979	3.578	1
21) 1,1-Dichloroethene	(1)	0.000		0	N.D.	
23) Methylene Chloride	(1)	5.573	84	18540	0.828	99
22) Tert-Butyl Alcohol (TBA)	(1)	5.511	59	6613	0.115	1
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.845	101	3420	0.065	97
26) Carbon Disulfide	(1)	0.000		0	N.D.	
28) t-1,2-Dichloroethene	(1)	0.000		0	N.D.	
29) 1,1-Dichloroethane	(1)	0.000		0	N.D.	
30) Methyl-t-Butyl Ether (MTBE)	(1)	0.000		0	N.D.	
31) Vinyl Acetate	(1)	0.000		0D	N.D.	
32) 2-Butanone	(1)	7.240	43	143937	2.058	97
33) c-1,2-Dichloroethene	(1)	0.000		0	N.D.	
36) Diisopropyl Ether (DIPE)	(1)	0.000		0	N.D.	
38) Chloroform	(1)	0.000		0	N.D.	
40) Ethyl-t-Butyl Ether (ETBE)	(1)	0.000		0	N.D.	

M = Compound was manually integrated.
D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
42) 1,2-Dichloroethane	(1)	0.000		0	N.D.	
43) 1,1,1-Trichloroethane	(1)	0.000		0	N.D.	
44) Benzene	(2)	9.995	78	35374	0.433	98
45) Carbon Tetrachloride	(2)	10.199	117	4829	0.069	71
48) Tert-Amyl-Methyl Ether (TAME)	(2)	0.000		0	N.D.	
49) 1,2-Dichloropropane	(2)	0.000		0	N.D.	
50) Bromodichloromethane	(2)	0.000		0	N.D.	
52) Trichloroethene	(2)	0.000		0	N.D.	
56) c-1,3-Dichloropropene	(2)	0.000		0	N.D.	
57) 4-Methyl-2-Pentanone	(2)	0.000		0	N.D.	
58) t-1,3-Dichloropropene	(2)	0.000		0	N.D.	
59) 1,1,2-Trichloroethane	(2)	0.000		0	N.D.	
61) Toluene	(3)	14.452	91	565427	5.935	99
62) 2-Hexanone	(3)	0.000		0	N.D.	
64) Dibromochloromethane	(3)	0.000		0	N.D.	
65) 1,2-Dibromoethane	(3)	0.000		0	N.D.	
67) Tetrachloroethene	(3)	16.408	166	21777	0.394	98
69) Chlorobenzene	(3)	0.000		0	N.D.	
70) Ethylbenzene	(3)	18.409	91	21782	0.169	90
71) p/m-Xylene	(3)	18.744	91	66327	0.627	100
72) Bromoform	(3)	0.000		0	N.D.	
73) Styrene	(3)	19.464	104	26703	0.360	96
74) 1,1,2,2-Tetrachloroethane	(3)	0.000		0	N.D.	
75) o-Xylene	(3)	19.651	91	23153	0.228	95
82) 4-Ethyltoluene	(3)	22.401	105	8000	0.059	81
83) 1,3,5-Trimethylbenzene	(3)	22.582	105	6483	0.053	74
86) 1,2,4-Trimethylbenzene	(3)	23.512	105	18098	0.151	74
85) tert-Butylbenzene	(3)	0.000		0	N.D.	
87) Benzyl Chloride	(3)	0.000		0	N.D.	
88) 1,3-Dichlorobenzene	(3)	0.000		0	N.D.	
89) 1,4-Dichlorobenzene	(3)	0.000		0	N.D.	
91) sec-Butylbenzene	(3)	0.000		0	N.D.	
93) 1,2-Dichlorobenzene	(3)	0.000		0	N.D.	
94) n-Butylbenzene	(3)	0.000		0	N.D.	
96) 1,2,4-Trichlorobenzene	(3)	0.000		0	N.D.	
97) Naphthalene	(3)	0.000		0	N.D.	
99) Hexachloro-1,3-Butadiene	(3)	0.000		0	N.D.	

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue

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Data File: /chem/AIR/GCMS_000.i/180302.b/02mar17.d

Date : 03-MAR-2018 01:08

Client ID:

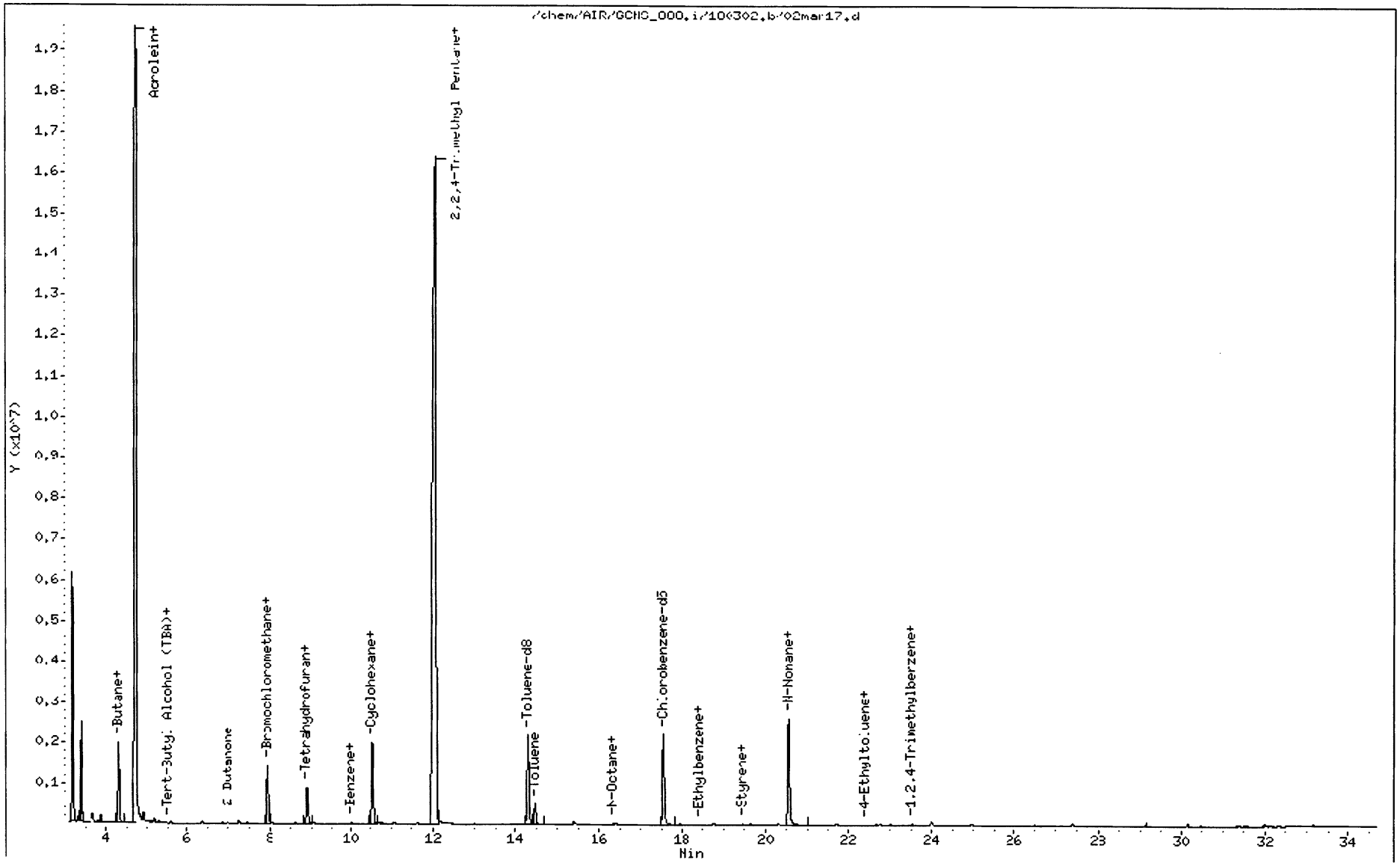
Sample Info: 18-03-0118-2A 400ML

Column phase:

Instrument: GCMS_LUU.i

Operator: JXS7

Column diameter: 0.00



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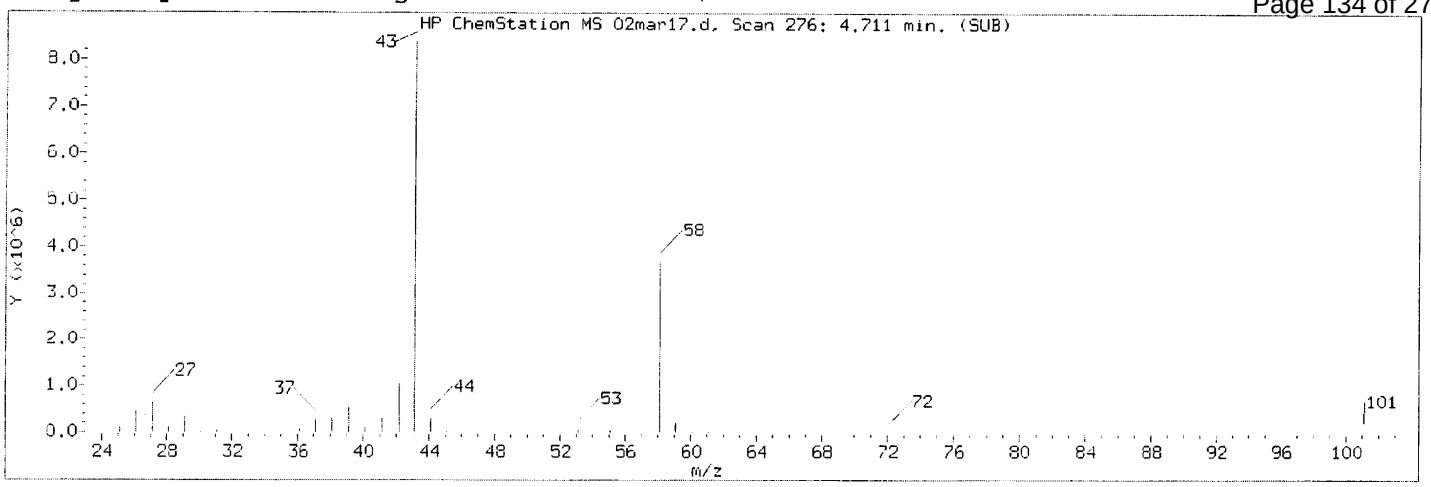
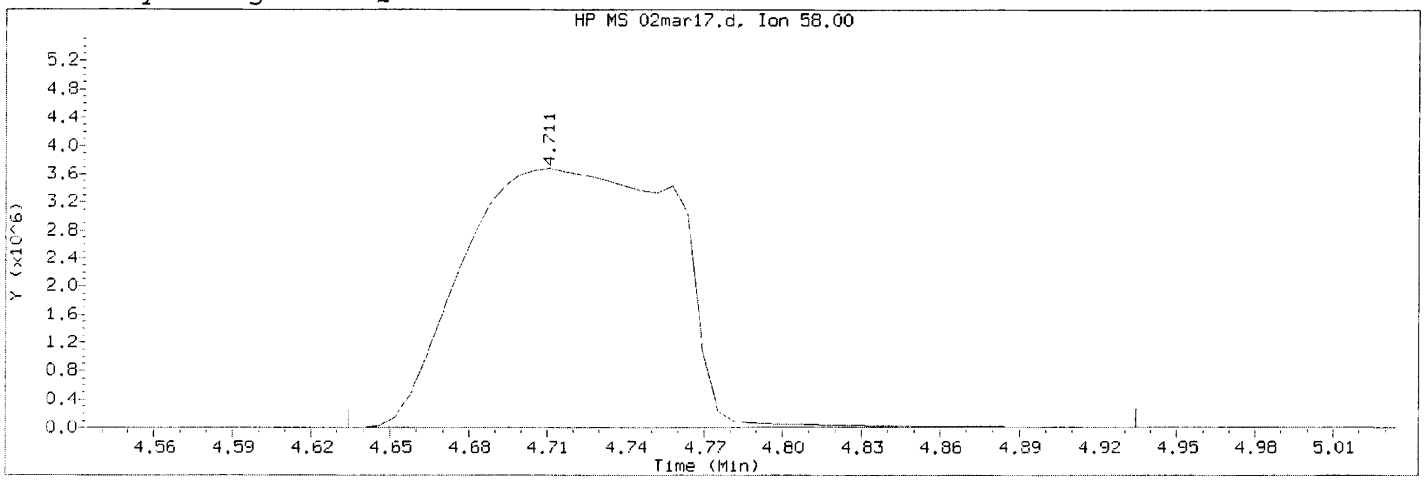
Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used:FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML

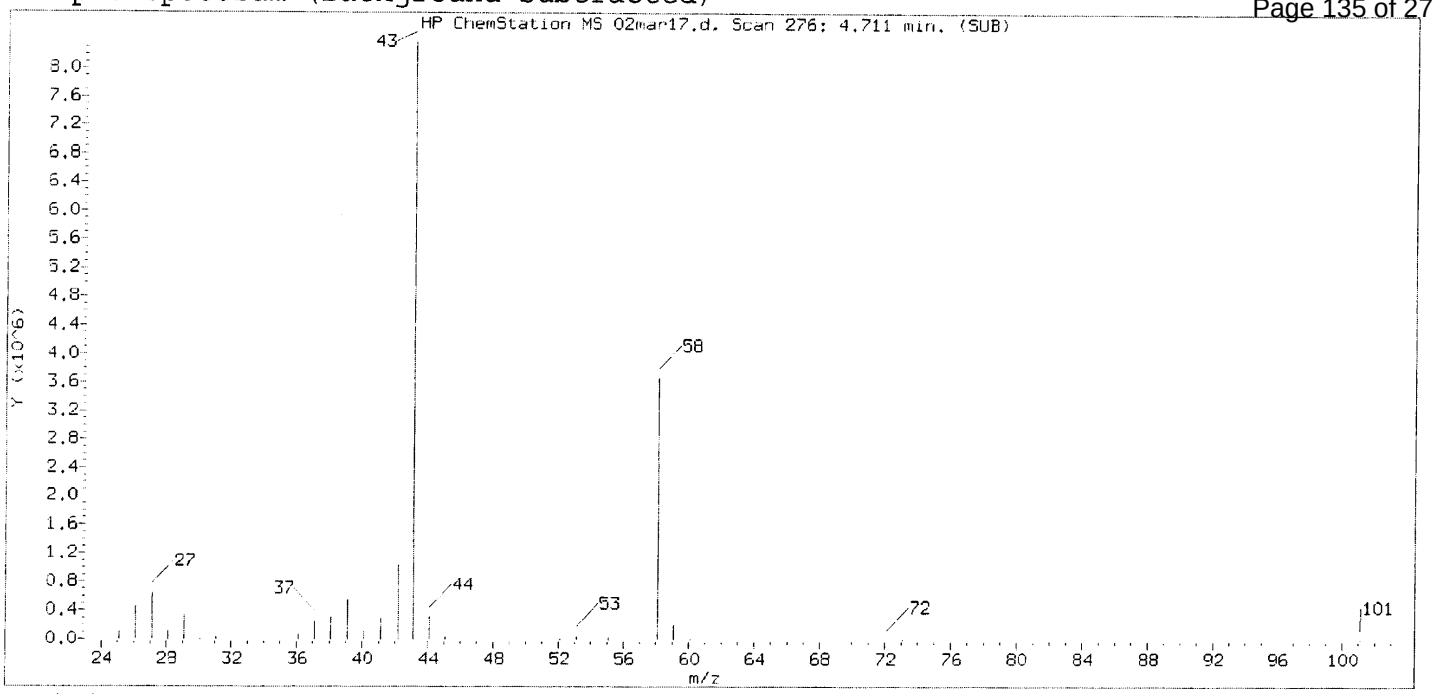
Compound Number : 17
Compound Name : Acetone
Scan Number : 276
Retention Time (minutes): 4.711
Quant Ion : 58.00
Area (flag) : 20567726M
On-Column Amount (ppbv) : 1702.5384
Integration start scan : 262 Integration stop scan: 313
Y at integration start : 0 Y at integration end: 7490

Reason for manual integration: improper integration

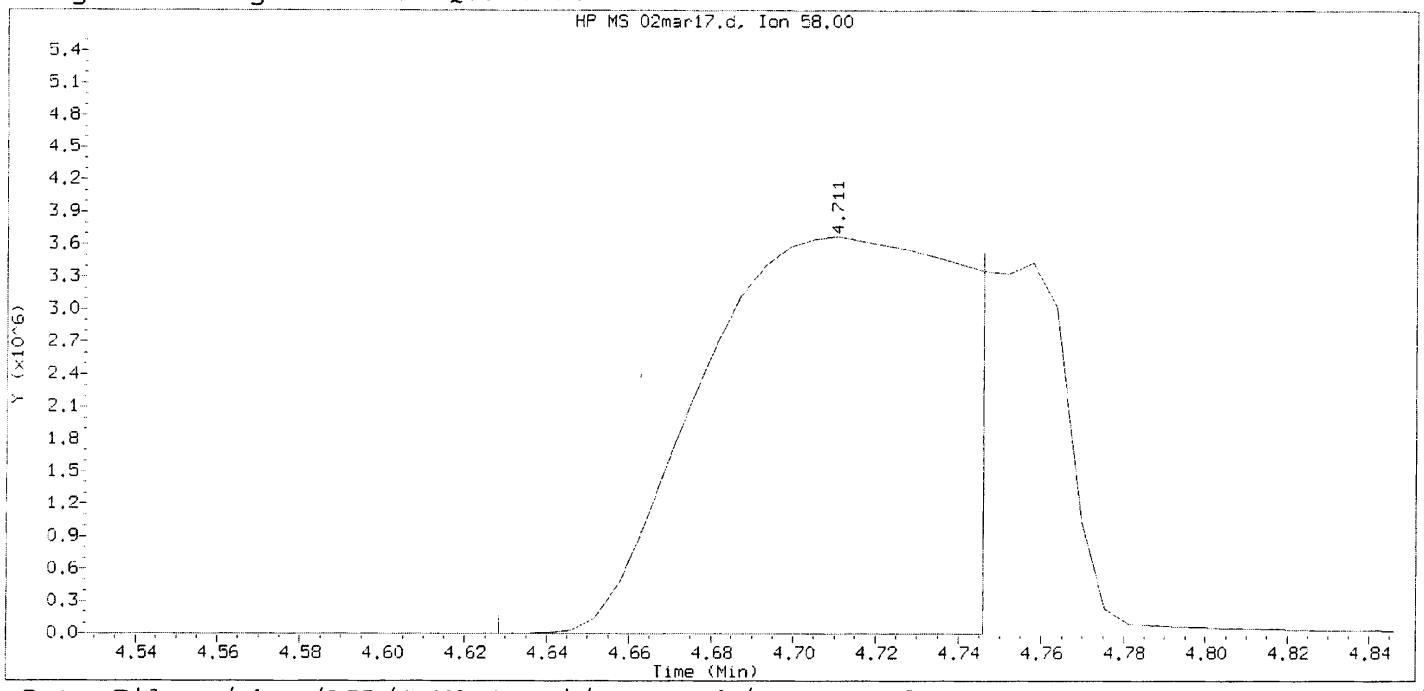
Analyst responsible for change: Digitally signed by Gabriel Guillen on 03/05/2018 at 11:27. Target 3.5 esignature user ID: jxs7

GC/MS audit/management approval: 794

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 03-Mar-2018 02:02 Unknown

Sample Name: 18-03-0118-2A 400ML

Compound Number : 17
Compound Name : Acetone
Scan Number : 276
Retention Time (minutes): 4.711
Quant Ion : 58.00
Area : 16453039
On-column Amount (ppbv) : 1361.9358
Integration start scan : 261 Integration stop scan: 281
Y at integration start : 0 Y at integration end: 0

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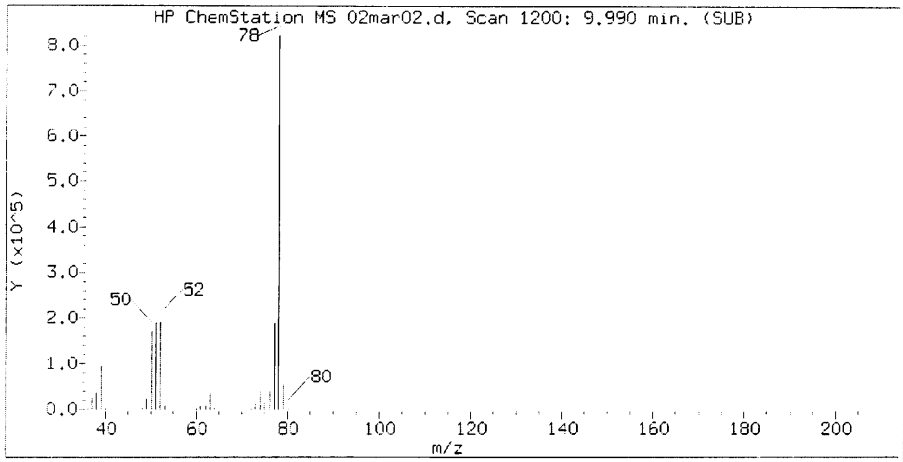
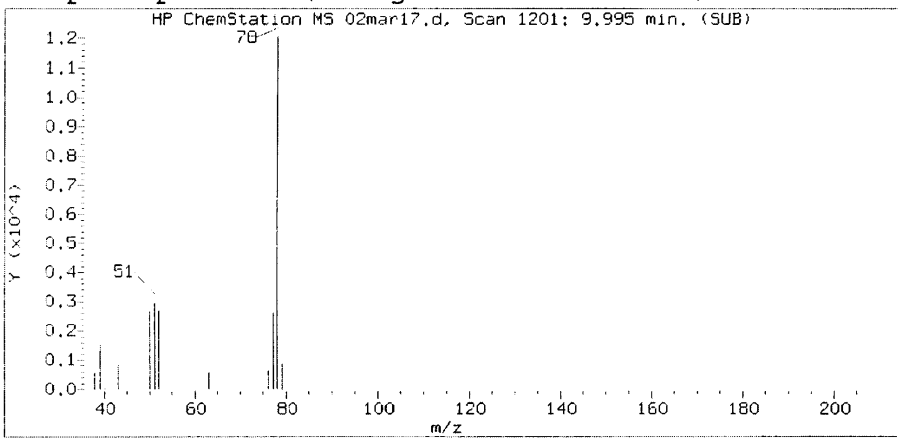
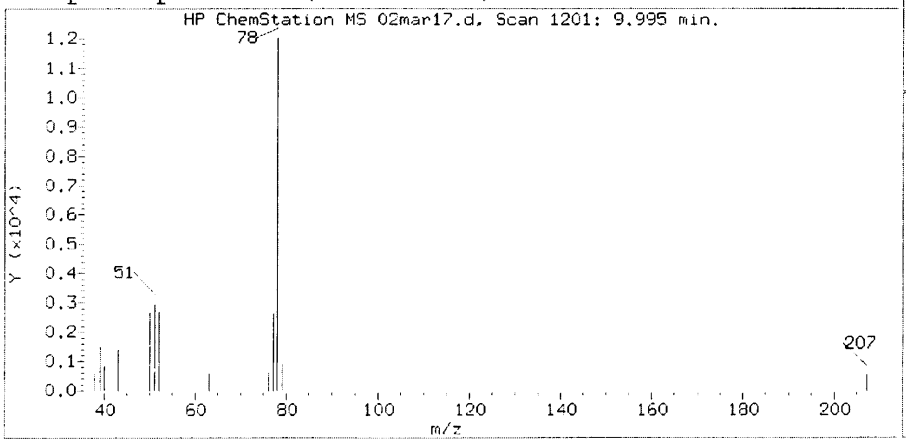
Reference Standard Spectrum for Benzene

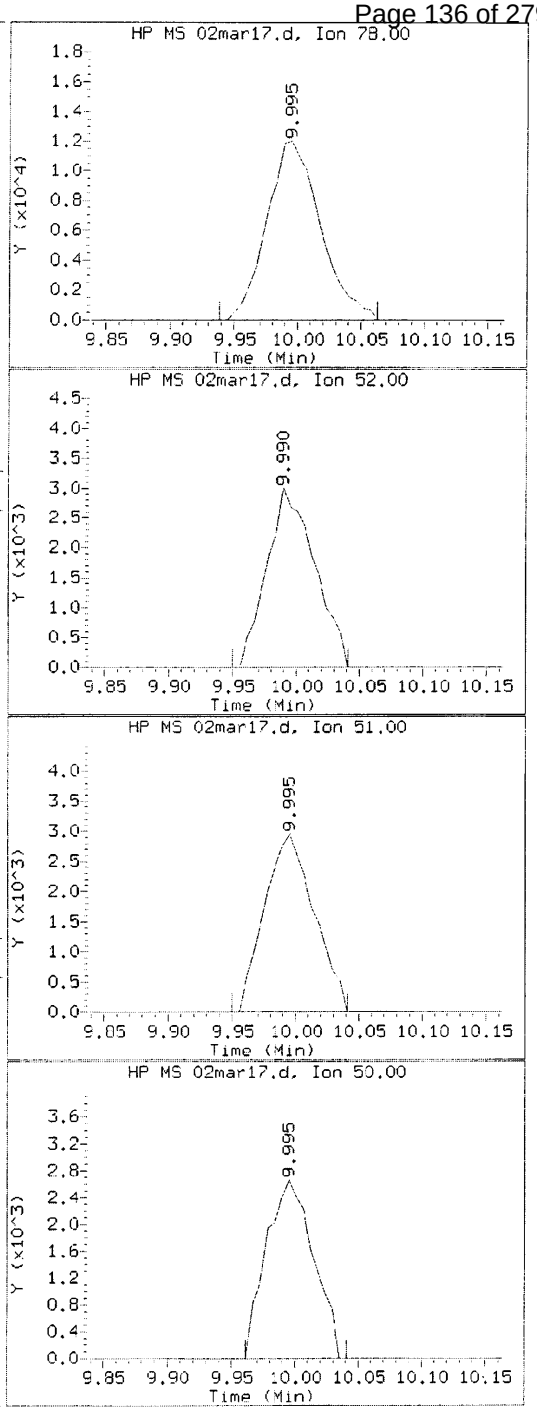


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML

Compound Number : 44
Compound Name : Benzene
Scan Number : 1201
Retention Time (minutes): 9.995
Relative Retention Time :-0.00054
Quant Ion : 78.00
Area (flag) : 35374
On-Column Amount (ppbv) : 0.4326

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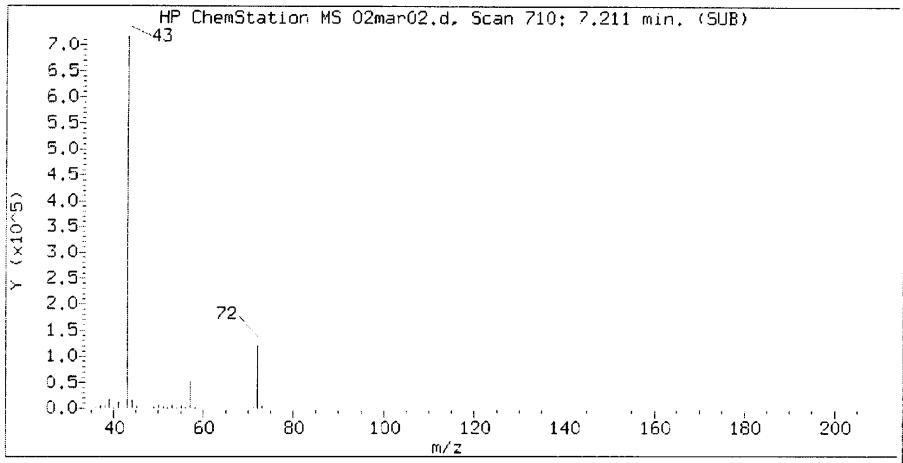
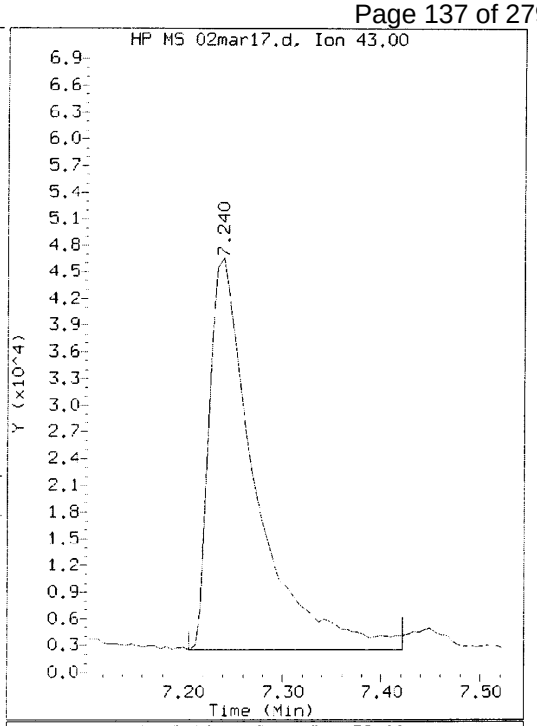
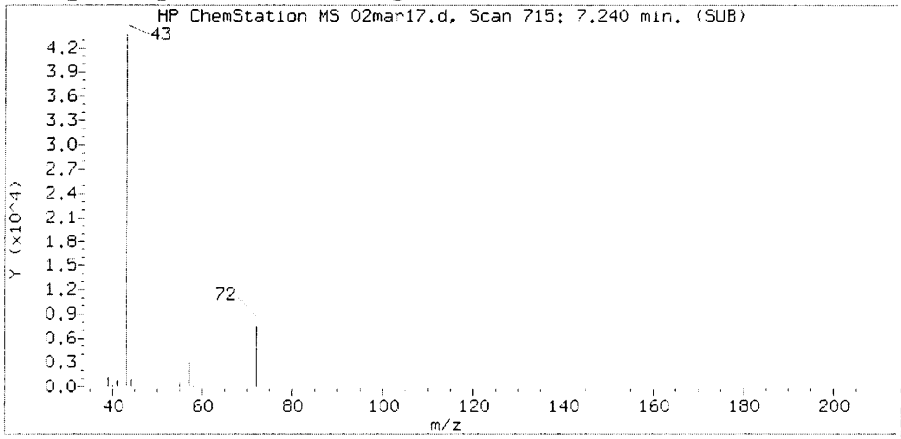
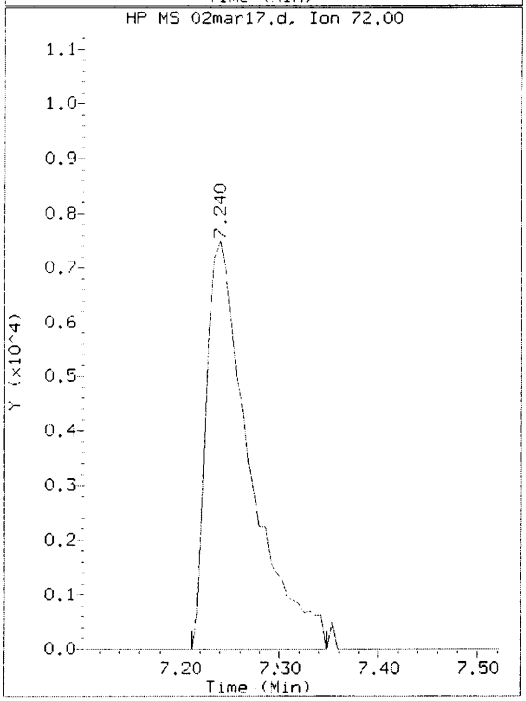
Reference Standard Spectrum for 2-Butanone



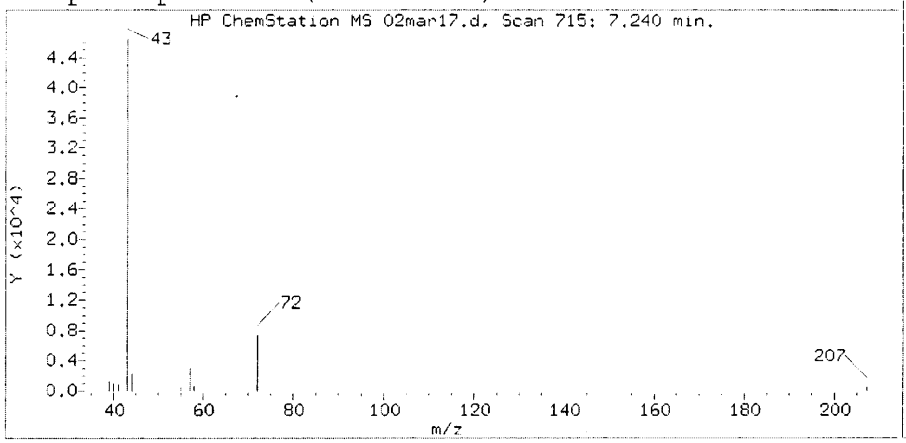


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML

Compound Number : 32
Compound Name : 2-Butanone
Scan Number : 715
Retention Time (minutes): 7.240
Relative Retention Time :-0.00292
Quant Ion : 43.00
Area (flag) : 143937
On-Column Amount (ppbv) : 2.0581

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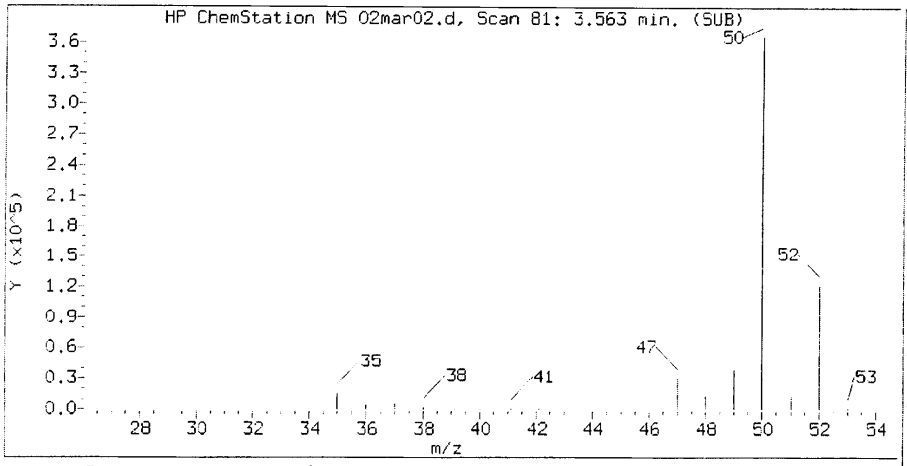
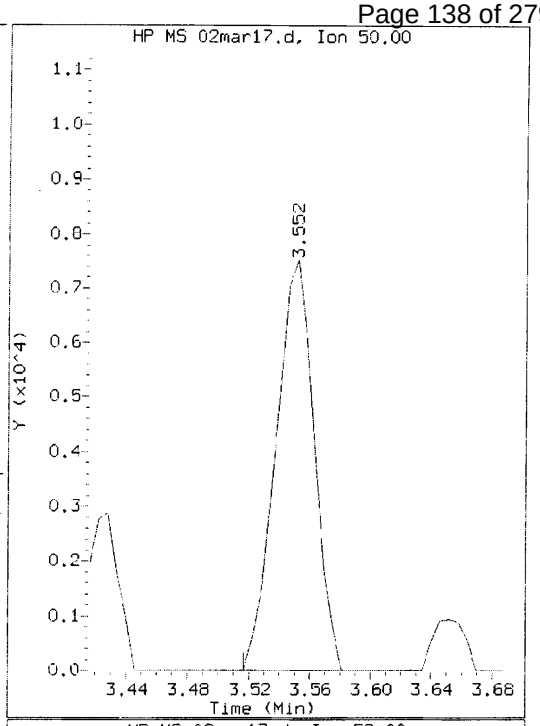
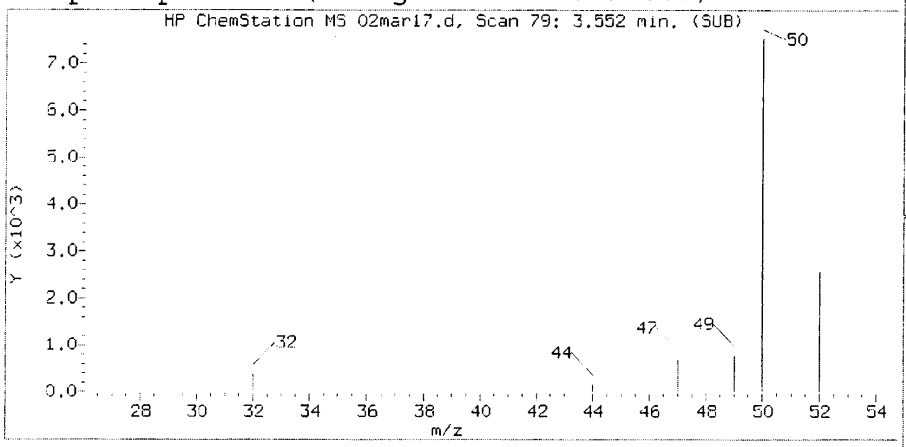
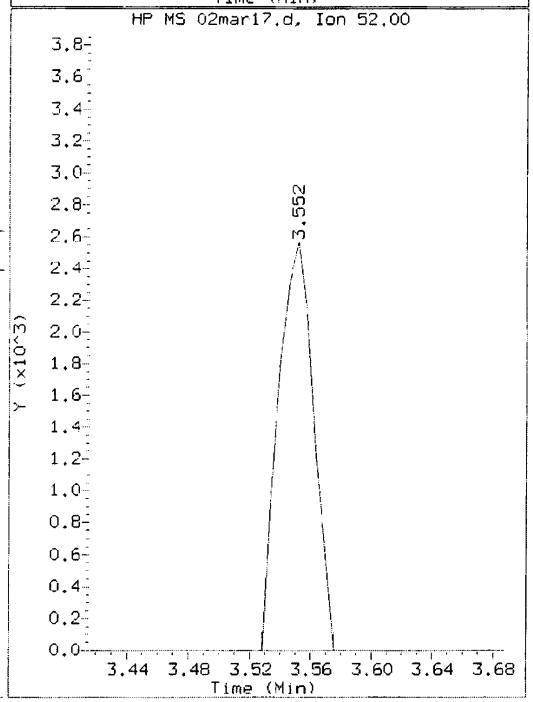
Reference Standard Spectrum for Chloromethane



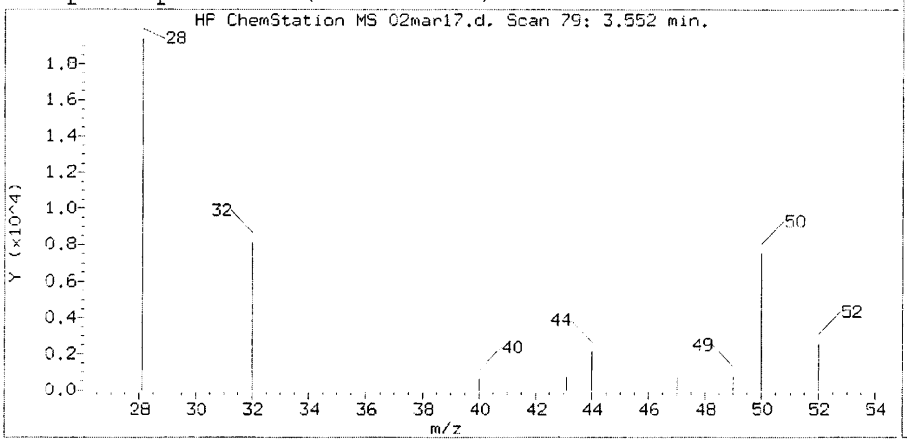


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML

Compound Number	:	6
Compound Name	:	Chloromethane
Scan Number	:	79
Retention Time (minutes)	:	3.552
Relative Retention Time	:	0.00180
Quant Ion	:	50.00
Area (flag)	:	13241
On-Column Amount (ppbv)	:	0.5344

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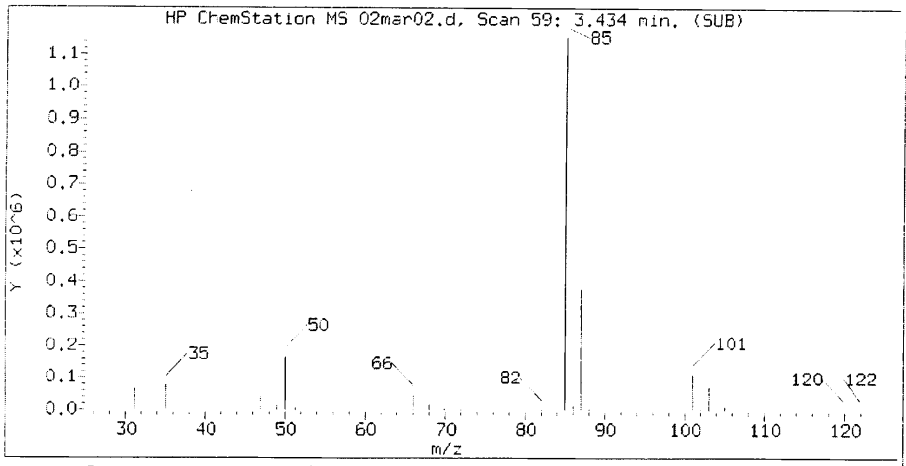
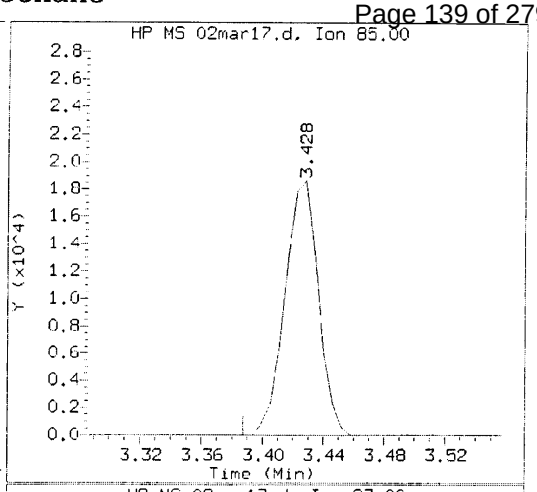
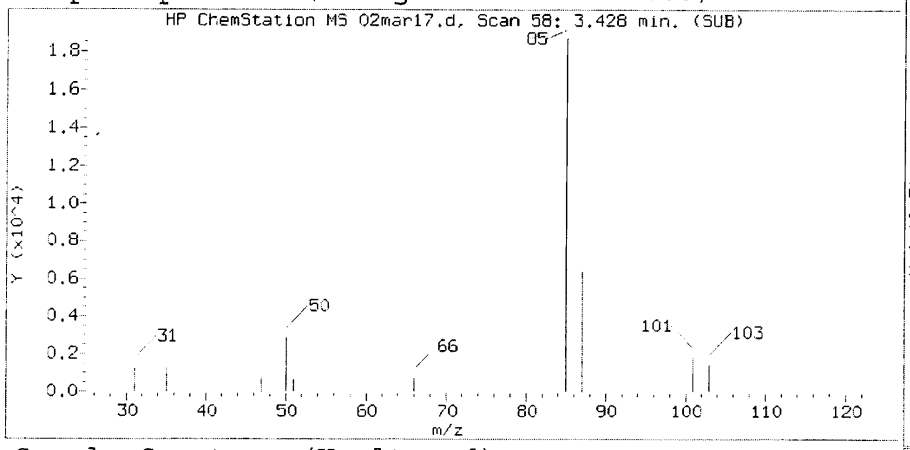
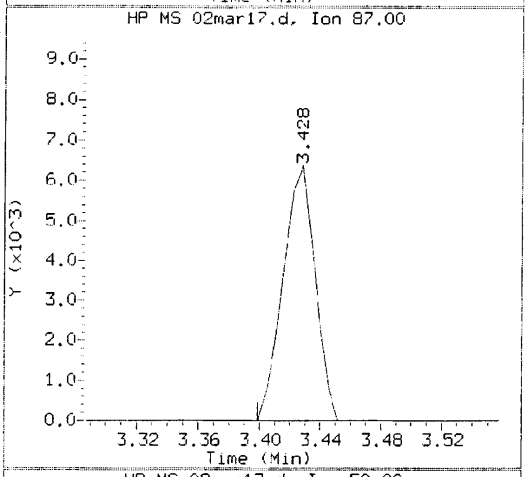
Reference Standard Spectrum for Dichlorodifluoromethane



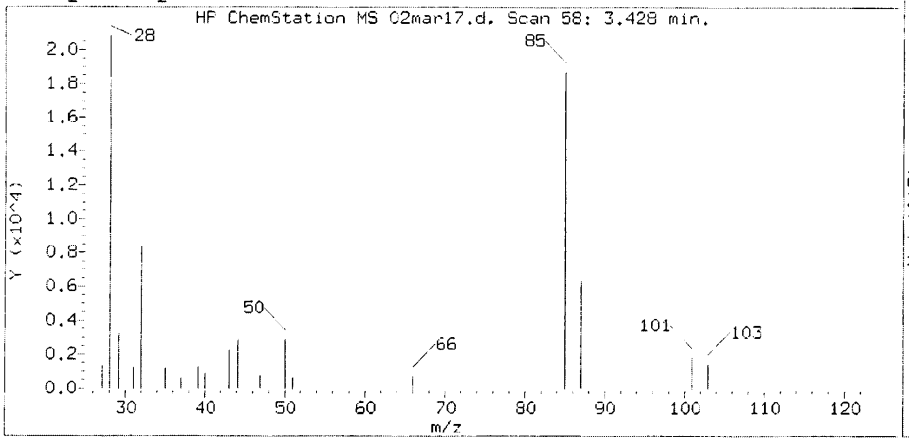


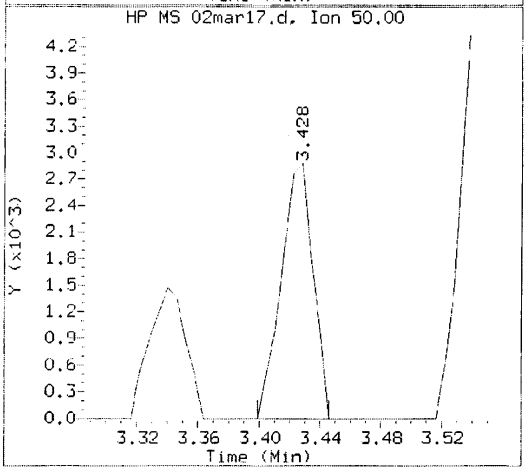
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML

Compound Number : 5
Compound Name : Dichlorodifluoromethane
Scan Number : 58
Retention Time (minutes): 3.428
Relative Retention Time : 0.00104
Quant Ion : 85.00
Area (flag) : 28731
On-Column Amount (ppbv) : 0.4471

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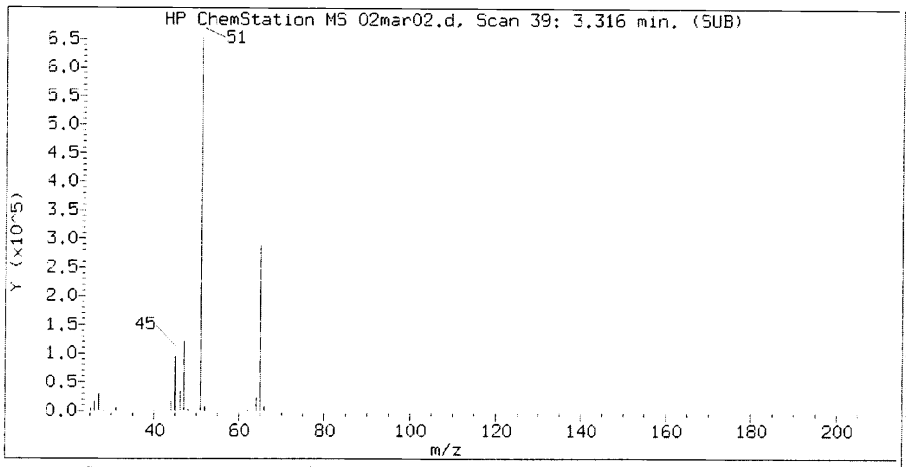
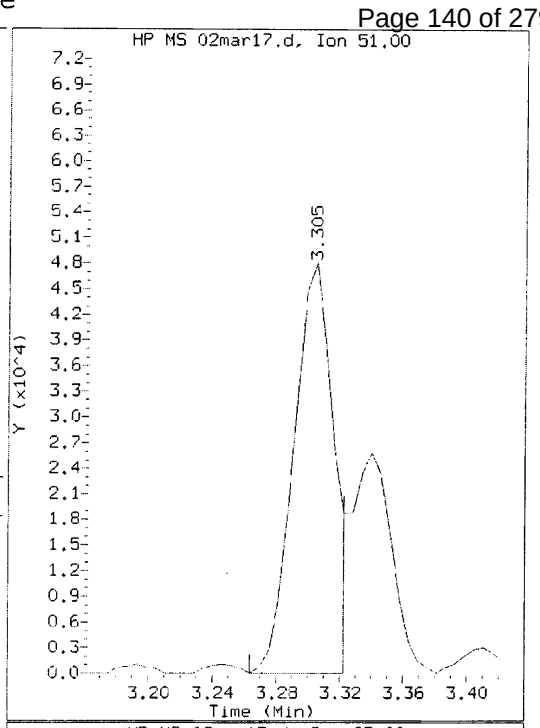
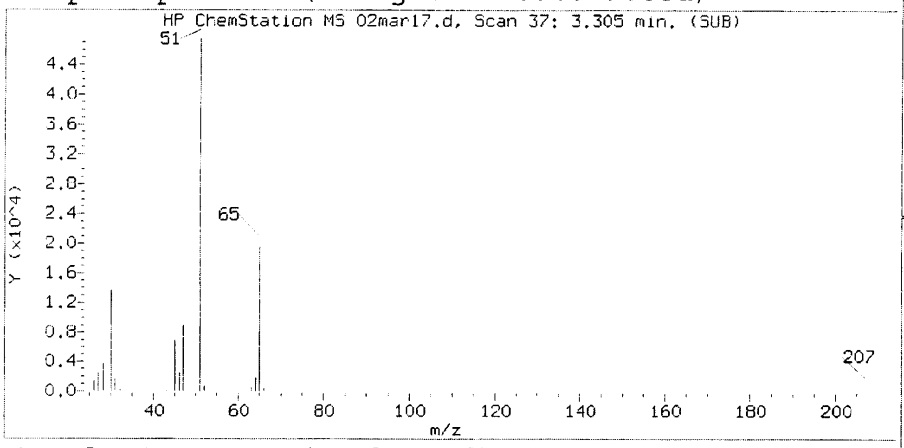
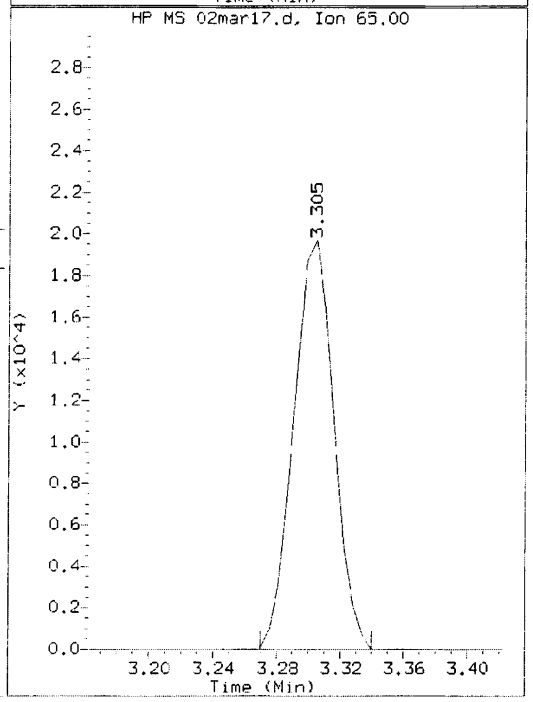
Reference Standard Spectrum for 1,1-Difluoroethane



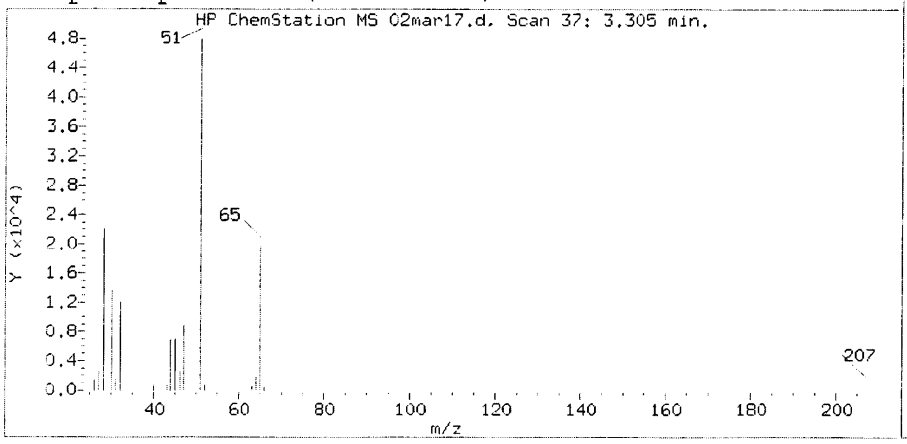


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML

Compound Number : 2
Compound Name : 1,1-Difluoroethane
Scan Number : 37
Retention Time (minutes): 3.305
Relative Retention Time : 0.00177
Quant Ion : 51.00
Area (flag) : 84339
On-Column Amount (ppbv) : 2.0721

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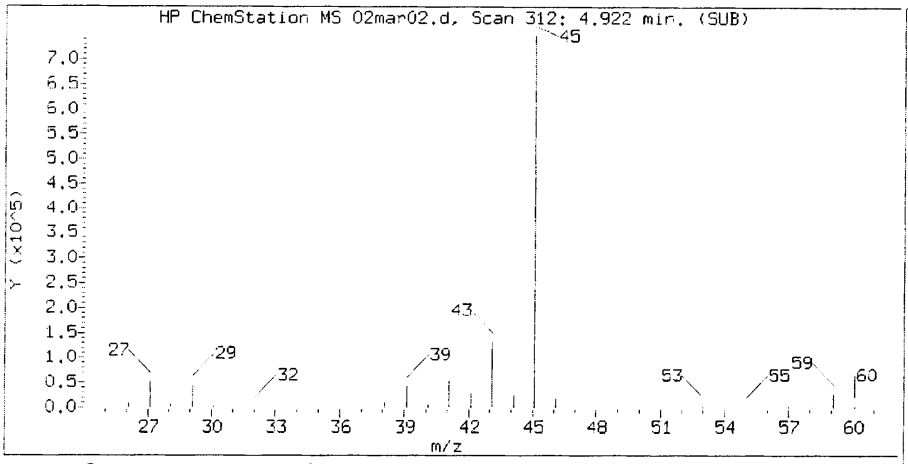
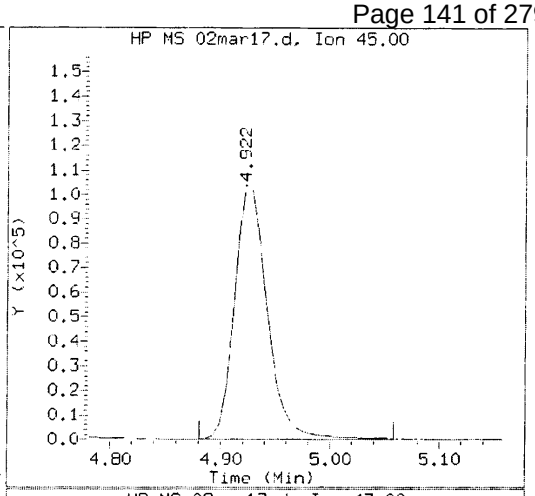
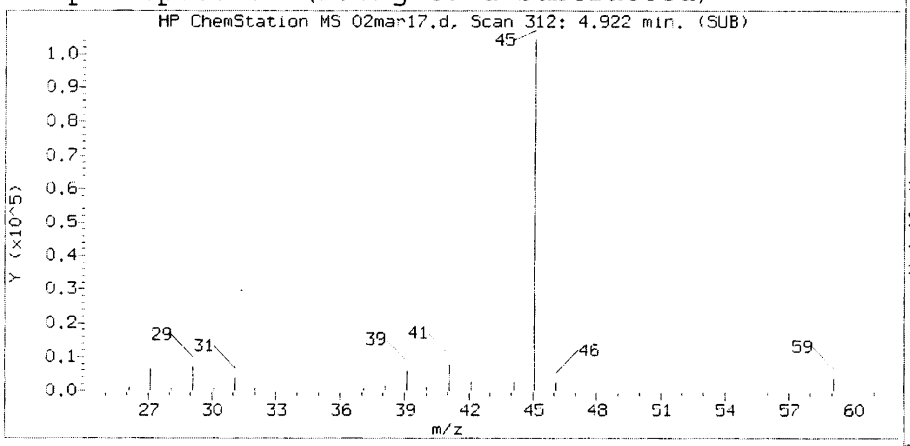
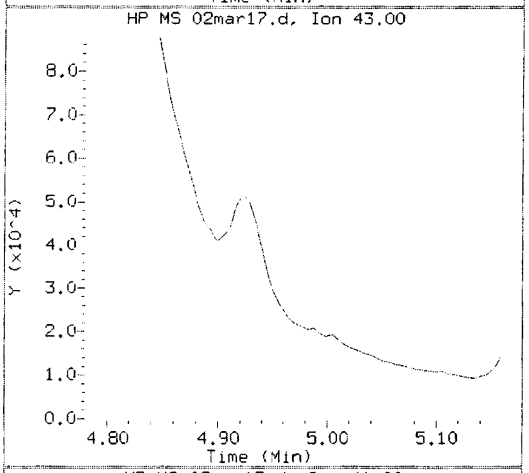
Reference Standard Spectrum for Isopropanol



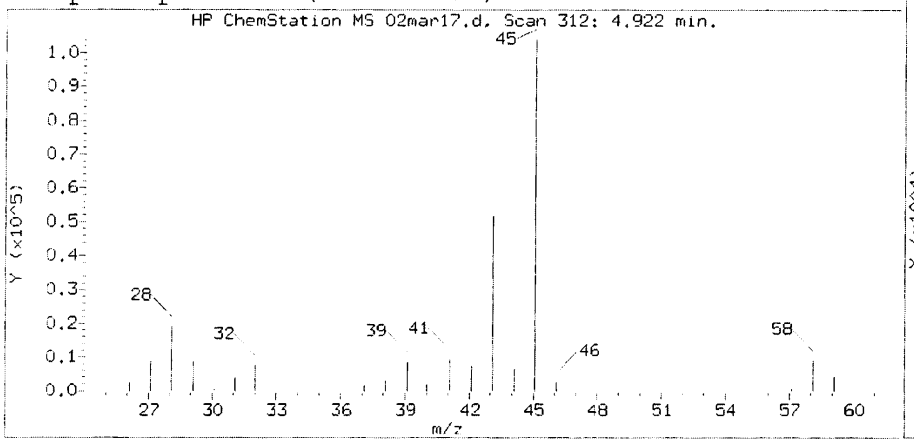


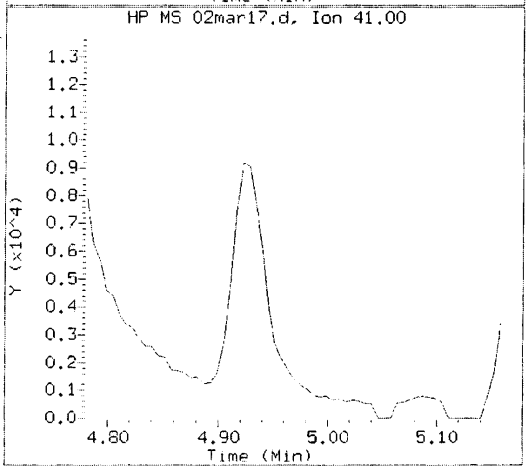
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML

Compound Number	: 19
Compound Name	: Isopropanol
Scan Number	: 312
Retention Time (minutes)	: 4.922
Relative Retention Time	: 0.00044
Quant Ion	: 45.00
Area (flag)	: 216979
On-Column Amount (ppbv)	: 3.5784

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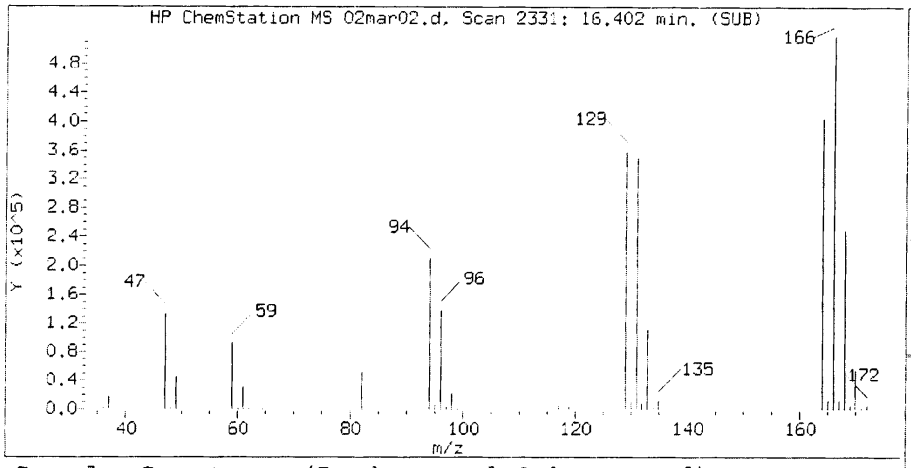
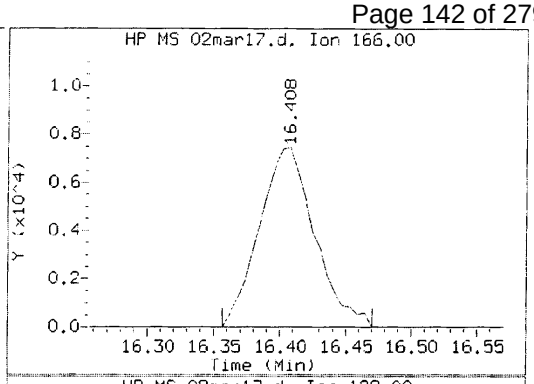
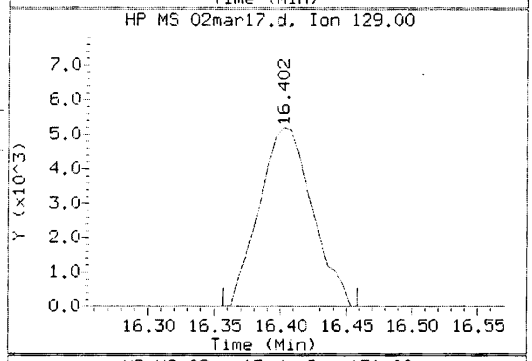
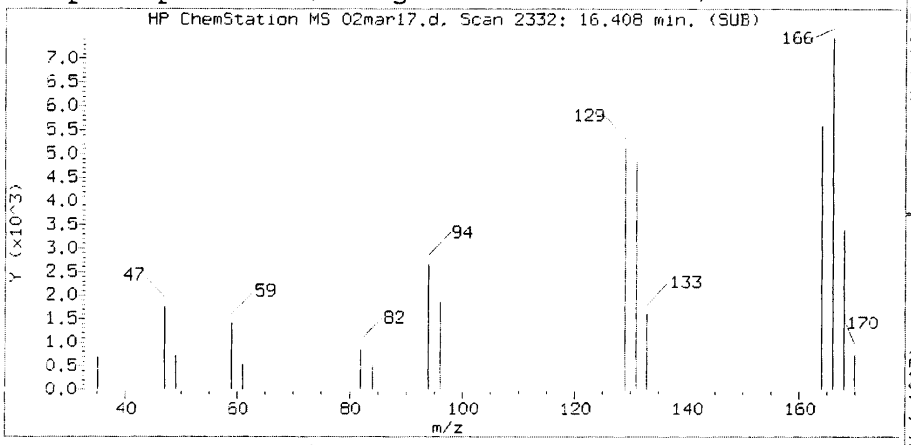
Reference Standard Spectrum for Tetrachloroethene

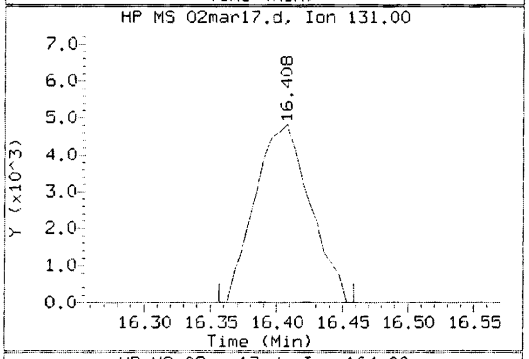




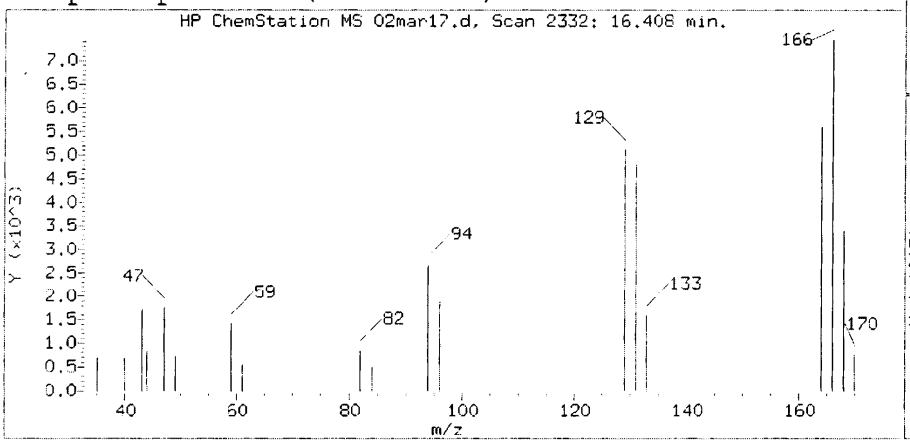


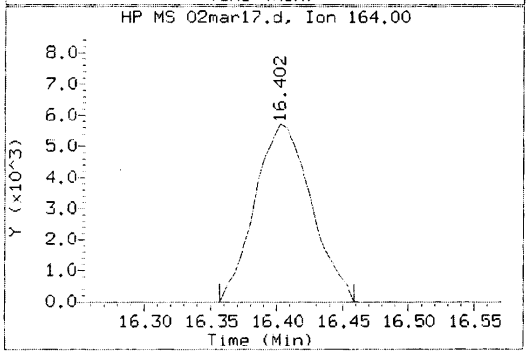
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML

Compound Number : 67
Compound Name : Tetrachloroethene
Scan Number : 2332
Retention Time (minutes): 16.408
Relative Retention Time :-0.00032
Quant Ion : 166.00
Area (flag) : 21777
On-Column Amount (ppbv) : 0.3941

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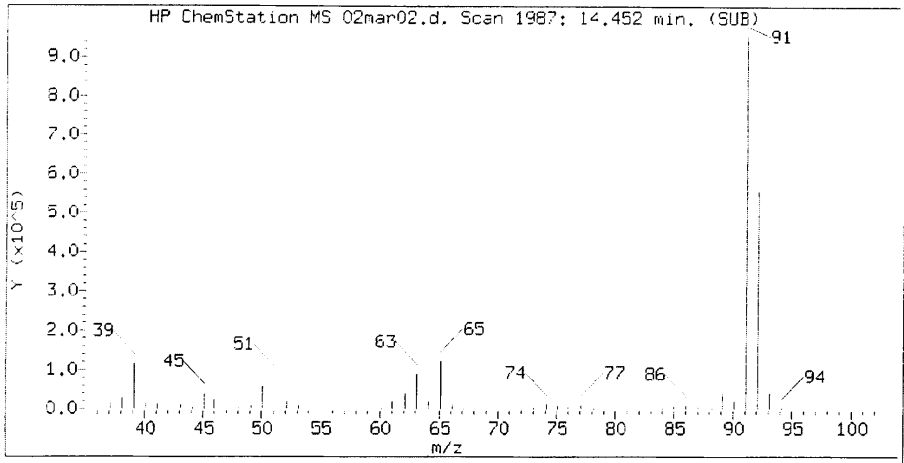
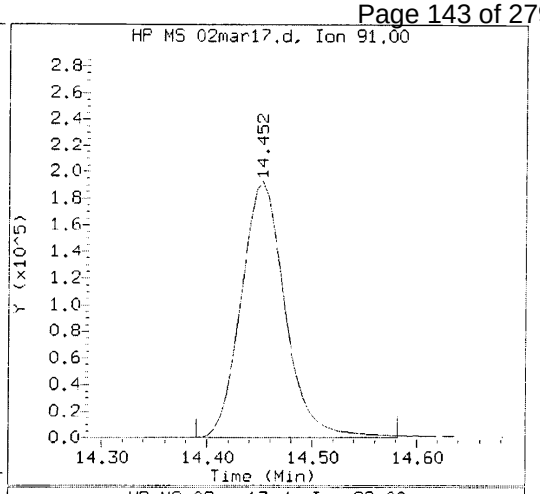
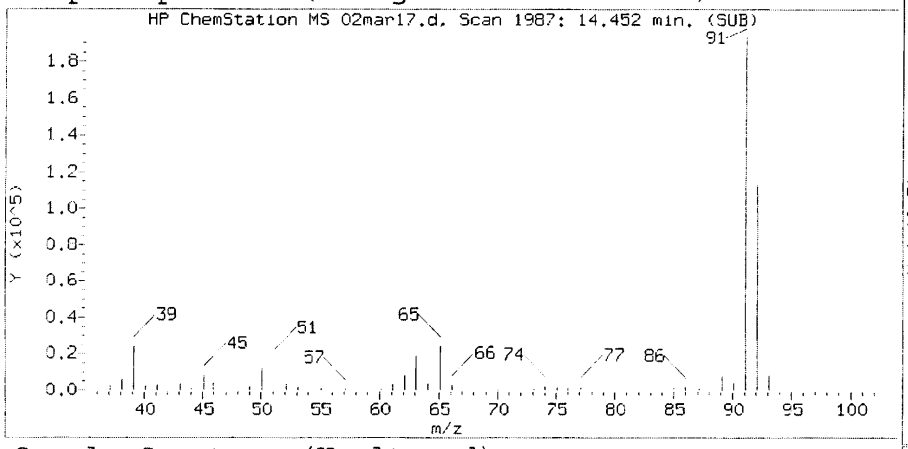
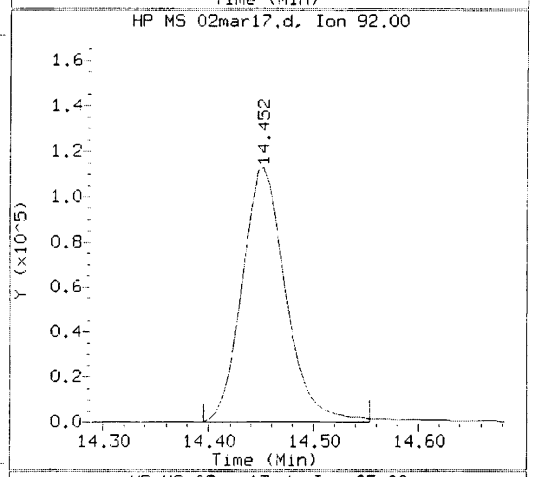
Reference Standard Spectrum for Toluene



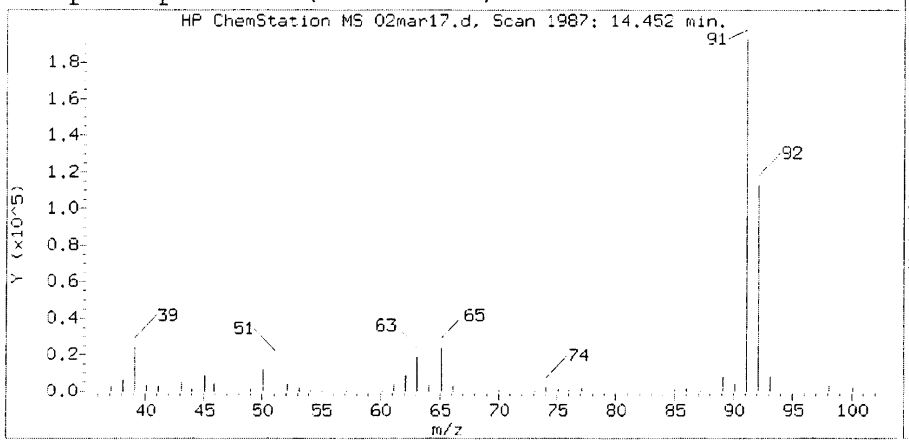


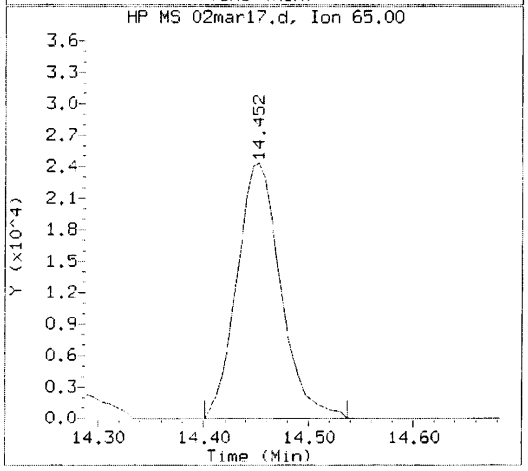
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar17.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 01:08 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 05-Mar-2018 11:06 jxs7

Sample Name: 18-03-0118-2A 400ML

Compound Number : 61
Compound Name : Toluene
Scan Number : 1987
Retention Time (minutes): 14.452
Relative Retention Time :-0.00000
Quant Ion : 91.00
Area (flag) : 565427
On-Column Amount (ppbv) : 5.9347

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar15.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 23:09 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 10:46 jxs7

Sample Name: 18-03-0118-2A 100X 400ML Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	571446	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.522	114	1914671	25.000	0.01
68)*Chlorobenzene-d5	(3)	17.542	117	1675326	25.000	0.01
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.878	65	865570	27.681	0.00
SpikedAmount 25.000	Recovery = 110.726					
60)$Toluene-d8	(2)	14.282	98	1857051	24.143	0.00
SpikedAmount 25.000	Recovery = 96.574					
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1261614	26.509	0.01
SpikedAmount 25.000	Recovery = 106.034					
Target Compounds						QValue
2) 1,1-Difluoroethane	(1)	0.000		0	N.D.	
5) Dichlorodifluoromethane	(1)	0.000		0	N.D.	
6) Chloromethane	(1)	0.000		0	N.D.	
7) Dichlorotetrafluoroethane	(1)	0.000		0	N.D.	
10) Vinyl Chloride	(1)	0.000		0	N.D.	
13) Bromomethane	(1)	0.000		0	N.D.	
14) Chloroethane	(1)	0.000		0	N.D.	
15) Ethanol	(1)	4.287	45	27168	2.991	78
17) Acetone	(1)	4.693	58	689581	67.084	98
18) Trichlorofluoromethane	(1)	0.000		0	N.D.	
19) Isopropanol	(1)	4.911	45	64333	1.247	1
21) 1,1-Dichloroethene	(1)	0.000		0	N.D.	
23) Methylene Chloride	(1)	0.000		0	N.D.	
22) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	0.000		0	N.D.	
26) Carbon Disulfide	(1)	0.000		0	N.D.	
28) t-1,2-Dichloroethene	(1)	0.000		0	N.D.	
29) 1,1-Dichloroethane	(1)	0.000		0	N.D.	
30) Methyl-t-Butyl Ether (MTBE)	(1)	0.000		0	N.D.	
31) Vinyl Acetate	(1)	6.985	43	396606	5.000	75
32) 2-Butanone	(1)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(1)	0.000		0	N.D.	
36) Diisopropyl Ether (DIPE)	(1)	0.000		0	N.D.	
38) Chloroform	(1)	0.000		0	N.D.	
40) Ethyl-t-Butyl Ether (ETBE)	(1)	0.000		0	N.D.	

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_000.i/180303.b/03mar15.d Instrument ID: GCMS_000.i
Injection date and time: 03-MAR-2018 23:09 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_000.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 10:46 jxs7

Sample Name: 18-03-0118-2A 100X 400ML Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
42) 1,2-Dichloroethane	(1)	0.000		0	N.D.	
43) 1,1,1-Trichloroethane	(1)	0.000		0	N.D.	
44) Benzene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Tert-Amyl-Methyl Ether (TAME)	(2)	0.000		0	N.D.	
49) 1,2-Dichloropropane	(2)	0.000		0	N.D.	
50) Bromodichloromethane	(2)	0.000		0	N.D.	
52) Trichloroethene	(2)	0.000		0	N.D.	
56) c-1,3-Dichloropropene	(2)	0.000		0	N.D.	
57) 4-Methyl-2-Pentanone	(2)	0.000		0	N.D.	
58) t-1,3-Dichloropropene	(2)	0.000		0	N.D.	
59) 1,1,2-Trichloroethane	(2)	0.000		0	N.D.	
61) Toluene	(3)	14.457	91	18138	0.241	93
62) 2-Hexanone	(3)	0.000		0	N.D.	
64) Dibromochloromethane	(3)	0.000		0	N.D.	
65) 1,2-Dibromoethane	(3)	0.000		0	N.D.	
67) Tetrachloroethene	(3)	0.000		0	N.D.	
69) Chlorobenzene	(3)	0.000		0	N.D.	
70) Ethylbenzene	(3)	0.000		0	N.D.	
71) p/m-Xylene	(3)	18.755	91	6265	0.075	68
72) Bromoform	(3)	0.000		0	N.D.	
73) Styrene	(3)	0.000		0	N.D.	
74) 1,1,2,2-Tetrachloroethane	(3)	0.000		0	N.D.	
75) o-Xylene	(3)	0.000		0	N.D.	
82) 4-Ethyltoluene	(3)	22.310	105	6619	0.062	80
83) 1,3,5-Trimethylbenzene	(3)	22.582	105	6593	0.069	1
86) 1,2,4-Trimethylbenzene	(3)	23.512	105	13282	0.140	73
85) tert-Butylbenzene	(3)	0.000		0	N.D.	
87) Benzyl Chloride	(3)	0.000		0	N.D.	
88) 1,3-Dichlorobenzene	(3)	0.000		0	N.D.	
89) 1,4-Dichlorobenzene	(3)	0.000		0	N.D.	
91) sec-Butylbenzene	(3)	0.000		0	N.D.	
93) 1,2-Dichlorobenzene	(3)	0.000		0	N.D.	
94) n-Butylbenzene	(3)	0.000		0	N.D.	
96) 1,2,4-Trichlorobenzene	(3)	0.000		0	N.D.	
97) Naphthalene	(3)	0.000		0	N.D.	
99) Hexachloro-1,3-Butadiene	(3)	0.000		0	N.D.	

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar15.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 23:09 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 10:46 jxs7

Sample Name: 18-03-0118-2A 100X 400ML Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar15.d

Page 1

Date : 03-MAR-2018 23:09

Client ID:

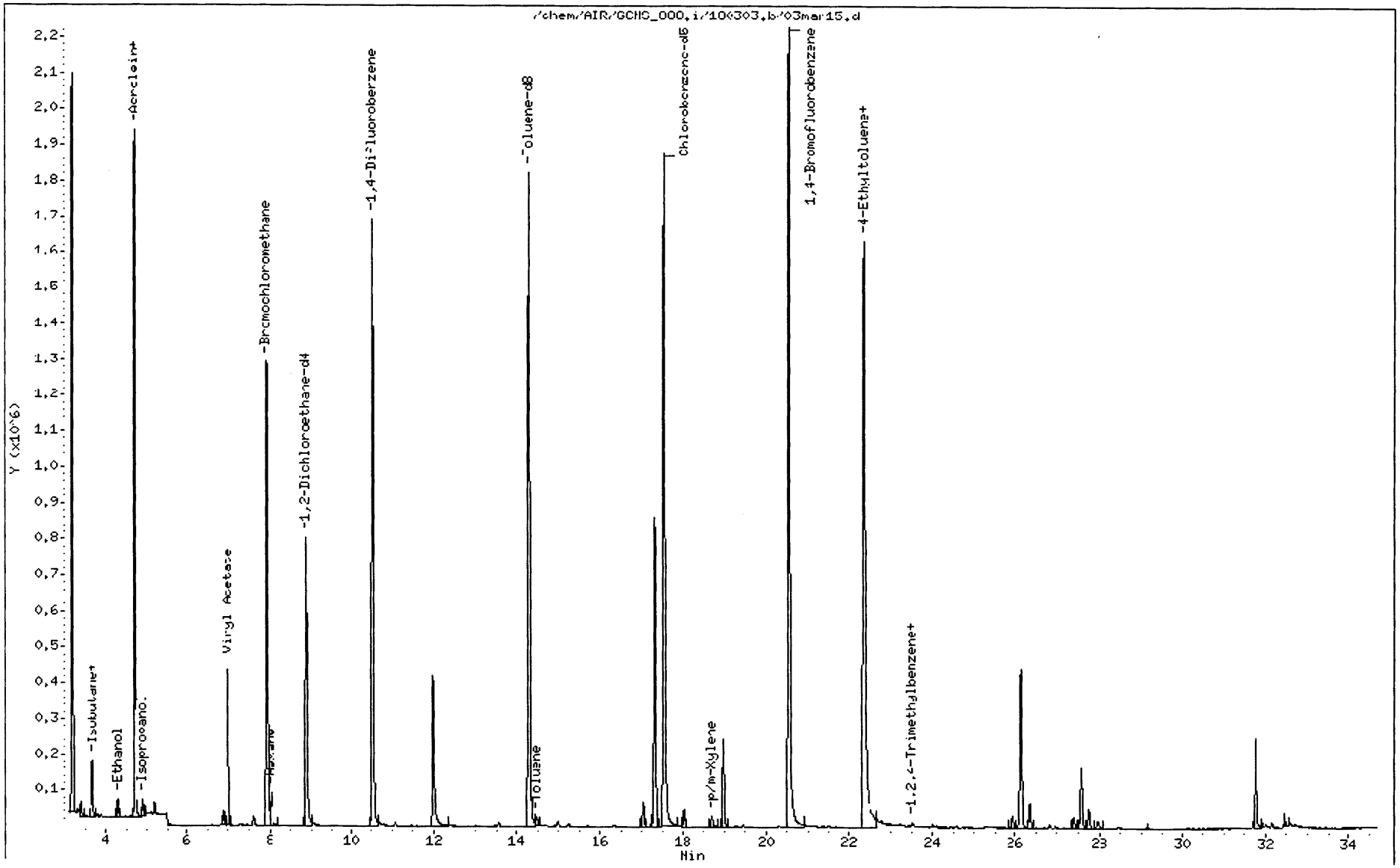
Instrument: GCMS_000.i

Sample Info: 18-03-0118-2A 100X 400ML

Operator: UPY2

Column phase:

Column diameter: 0.00



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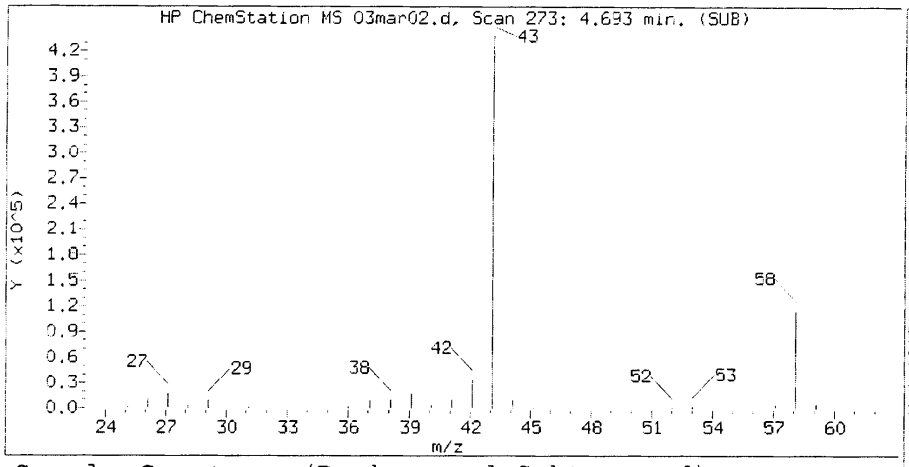
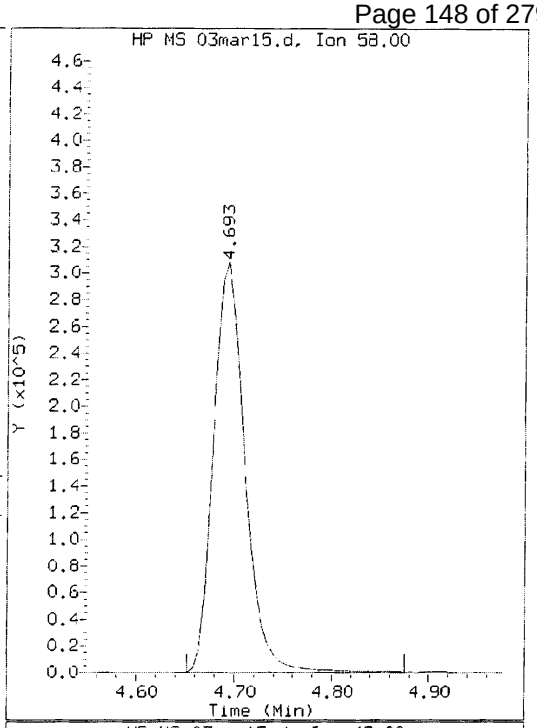
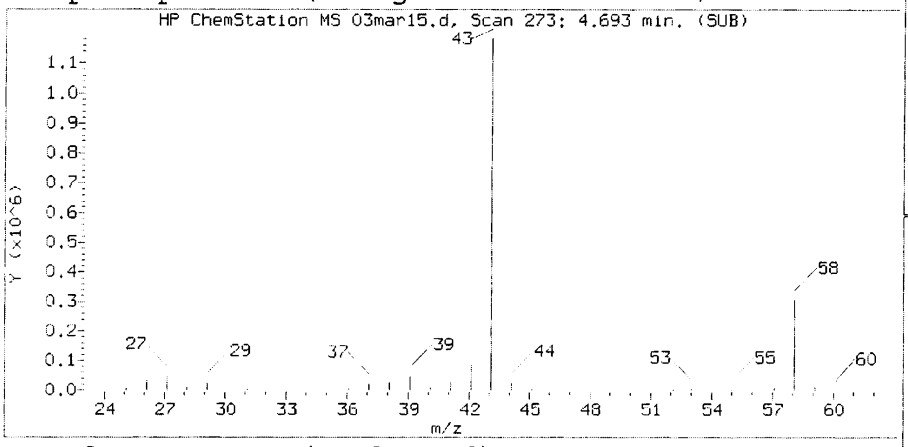
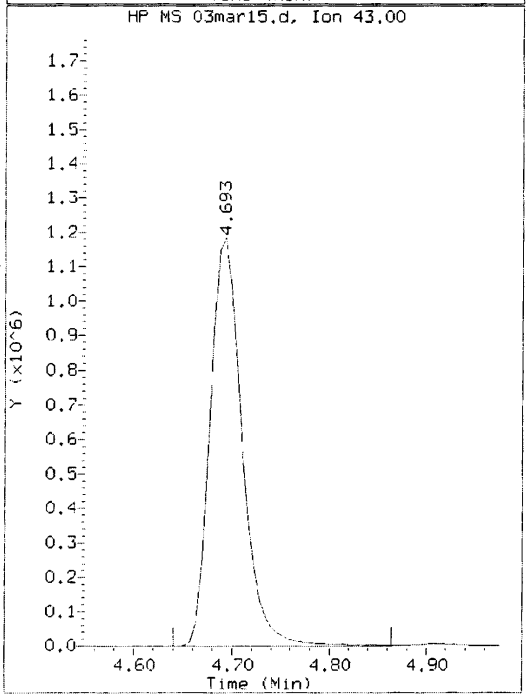
Reference Standard Spectrum for Acetone



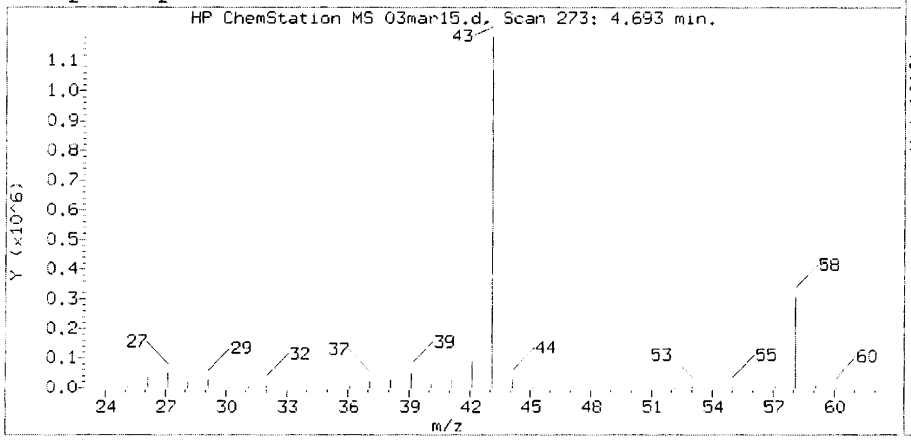


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar15.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 23:09 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: FL-OXY-N-LDC
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 05-Mar-2018 10:46 jxs7

Sample Name: 18-03-0118-2A 100X 400ML

Compound Number	: 17
Compound Name	: Acetone
Scan Number	: 273
Retention Time (minutes)	: 4.693
Relative Retention Time	: 0.00000
Quant Ion	: 58.00
Area (flag)	: 689581
On-Column Amount (ppbv)	: 67.0842

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EPA METHOD TO-15

QUALITY CONTROL

Method Blank
LCS/LCSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA TO-15

MB SAMPLE ID:	**095-01-021-19815**	ANALYZED BY:	953
MB BATCH ID:	180302L01	D/T ANALYZED:	2018-03-02 14:44
INSTRUMENT:	GC/MS OOO	REVIEWED BY:	
EXTRACTION:	N/A	D/T REVIEWED:	
D/T EXTRACTED:		MATRIX:	Air

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar06.d\02mar06.rr

CLIENT WORK ORDER: 18-03-0118

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		WAS00047	2018-03-03 00:16	Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar16.d\02mar16.rr
2		WAS00048	2018-03-03 01:08	Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar17.d\02mar17.rr

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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: 095-01-021
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-02 14:44
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar06.d\02mar06.rr

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 180302L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
1,2,4-Trichlorobenzene	0.000	1.00	ND	2.0	
Acetone	0.000	1.00	ND	2.0	
Benzene	0.000	1.00	ND	0.50	
Benzyl Chloride	0.000	1.00	ND	1.5	
Bromodichloromethane	0.000	1.00	ND	0.50	
Bromoform	0.000	1.00	ND	0.50	
Bromomethane	0.000	1.00	ND	0.50	
2-Butanone	0.000	1.00	ND	1.5	
n-Butylbenzene	0.000	1.00	ND	0.50	
sec-Butylbenzene	0.000	1.00	ND	0.50	
tert-Butylbenzene	0.000	1.00	ND	0.50	
Carbon Disulfide	0.000	1.00	ND	2.0	
Carbon Tetrachloride	0.000	1.00	ND	0.50	
Chlorobenzene	0.000	1.00	ND	0.50	
Chloroethane	0.000	1.00	ND	0.50	
Chloroform	0.000	1.00	ND	0.50	
Chloromethane	0.000	1.00	ND	0.50	
Dibromochloromethane	0.000	1.00	ND	0.50	
1,2-Dibromoethane	0.000	1.00	ND	0.50	
1,2-Dichlorobenzene	0.000	1.00	ND	0.50	
1,3-Dichlorobenzene	0.000	1.00	ND	0.50	
1,4-Dichlorobenzene	0.000	1.00	ND	0.50	
Dichlorodifluoromethane	0.000	1.00	ND	0.50	
1,1-Dichloroethane	0.000	1.00	ND	0.50	
1,2-Dichloroethane	0.000	1.00	ND	0.50	
1,1-Dichloroethene	0.000	1.00	ND	0.50	
c-1,2-Dichloroethene	0.000	1.00	ND	0.50	
t-1,2-Dichloroethene	0.000	1.00	ND	0.50	
1,2-Dichloropropane	0.000	1.00	ND	0.50	
c-1,3-Dichloropropene	0.000	1.00	ND	0.50	
t-1,3-Dichloropropene	0.000	1.00	ND	1.0	
Dichlorotetrafluoroethane	0.000	1.00	ND	2.0	
1,1-Difluoroethane	0.000	1.00	ND	2.0	
Ethylbenzene	0.000	1.00	ND	0.50	
4-Ethyltoluene	0.000	1.00	ND	0.50	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	1.5	
2-Hexanone	0.000	1.00	ND	1.5	
Isopropanol	0.000	1.00	ND	5.0	
Methyl-t-Butyl Ether (MTBE)	0.000	1.00	ND	2.0	

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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: **095-01-021**
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-02 14:44
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar06.d\02mar06.rr

 # MB **CLIENT SAMPLE NUMBER:** **Method Blank**

LCS/MB BATCH: 180302L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Methylene Chloride	0.000	1.00	ND	5.0	
4-Methyl-2-Pentanone	0.000	1.00	ND	1.5	
Styrene	0.000	1.00	ND	1.5	
1,1,2,2-Tetrachloroethane	0.000	1.00	ND	1.0	
Tetrachloroethene	0.000	1.00	ND	0.50	
Toluene	0.000	1.00	ND	0.50	
1,1,1-Trichloroethane	0.000	1.00	ND	0.50	
1,1,2-Trichloroethane	0.000	1.00	ND	0.50	
Trichloroethene	0.000	1.00	ND	0.50	
Trichlorofluoromethane	0.000	1.00	ND	1.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.000	1.00	ND	1.5	
1,2,4-Trimethylbenzene	0.000	1.00	ND	1.5	
1,3,5-Trimethylbenzene	0.000	1.00	ND	0.50	
Vinyl Acetate	0.000	1.00	ND	2.0	
Vinyl Chloride	0.000	1.00	ND	0.50	
o-Xylene	0.000	1.00	ND	0.50	
p/m-Xylene	0.000	1.00	ND	2.0	

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LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19815
LCS/LCSD BATCH: 180302L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-02 11:26
LCSD: 2018-03-02 12:41
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
Acetone	25.00	24.86	99	24.42	98	67-133	56-144	2	0-30	PASS	
Benzene	25.00	25.42	102	25.01	100	70-130	60-140	2	0-30	PASS	
Benzyl Chloride	25.00	27.40	110	27.34	109	38-158	18-178	0	0-30	PASS	
Bromodichloromethane	25.00	25.17	101	24.88	100	70-130	60-140	1	0-30	PASS	
Bromoform	25.00	25.61	102	25.77	103	63-147	49-161	1	0-30	PASS	
Bromomethane	25.00	24.93	100	24.62	98	70-139	58-150	1	0-30	PASS	
1,3-Butadiene	25.00	24.48	98	24.12	96	68-140	56-152	1	0-30	PASS	
2-Butanone	25.00	25.27	101	25.15	101	66-132	55-143	0	0-30	PASS	
Carbon Disulfide	25.00	24.99	100	24.61	98	68-146	55-159	2	0-30	PASS	
Carbon Tetrachloride	25.00	24.95	100	24.56	98	70-136	59-147	2	0-30	PASS	
Chlorobenzene	25.00	25.12	100	25.10	100	70-130	60-140	0	0-30	PASS	
Chloroethane	25.00	24.90	100	24.35	97	65-149	51-163	2	0-30	PASS	
Chloroform	25.00	24.60	98	24.34	97	70-130	60-140	1	0-30	PASS	
Chloromethane	25.00	24.25	97	23.50	94	69-141	57-153	3	0-30	PASS	
Cyclohexane	25.00	24.75	99	24.22	97	70-130	60-140	2	0-30	PASS	
Dibromochloromethane	25.00	25.01	100	25.08	100	70-138	59-149	0	0-30	PASS	
Dichlorodifluoromethane	25.00	25.26	101	24.49	98	67-139	55-151	3	0-30	PASS	
Diisopropyl Ether (DIPE)	25.00	22.60	90	22.31	89	63-130	52-141	1	0-30	PASS	
1,1-Dichloroethane	25.00	24.62	98	24.33	97	70-130	60-140	1	0-30	PASS	
1,1-Dichloroethene	25.00	24.61	98	23.99	96	70-135	59-146	3	0-30	PASS	
1,2-Dibromoethane	25.00	25.60	102	25.47	102	70-133	60-144	0	0-30	PASS	
Dichlorotetrafluoroethane	25.00	25.11	100	25.10	100	51-135	37-149	0	0-30	PASS	
1,2-Dichlorobenzene	25.00	26.42	106	26.35	105	48-138	33-153	0	0-30	PASS	
1,2-Dichloroethane	25.00	24.79	99	24.43	98	70-132	60-142	1	0-30	PASS	
1,2-Dichloropropane	25.00	24.82	99	24.32	97	70-130	60-140	2	0-30	PASS	
1,3-Dichlorobenzene	25.00	25.81	103	25.75	103	56-134	43-147	0	0-30	PASS	
1,4-Dichlorobenzene	25.00	27.36	109	27.19	109	52-136	38-150	1	0-30	PASS	
1,4-Dioxane	25.00	27.09	108	26.89	108	52-136	38-150	1	0-30	PASS	

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19815
LCS/LCSD BATCH: 180302L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-02 11:26
LCSD: 2018-03-02 12:41
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
c-1,3-Dichloropropene	25.00	26.53	106	26.24	105	70-130	60-140	1	0-30	PASS	
c-1,2-Dichloroethene	25.00	25.35	101	25.39	102	70-130	60-140	0	0-30	PASS	
t-1,2-Dichloroethene	25.00	25.60	102	25.11	100	70-130	60-140	2	0-30	PASS	
t-1,3-Dichloropropene	25.00	26.91	108	26.75	107	70-147	57-160	1	0-30	PASS	
Ethanol	100.0	94.26	94	92.43	92	37-139	20-156	2	0-30	PASS	
Ethyl Acetate	25.00	25.73	103	26.22	105	70-133	60-144	2	0-30	PASS	
Ethyl-t-Butyl Ether (ETBE)	25.00	23.67	95	23.47	94	67-130	56-140	1	0-30	PASS	
Ethylbenzene	25.00	25.82	103	25.85	103	70-130	60-140	0	0-30	PASS	
4-Ethyltoluene	25.00	26.37	105	25.97	104	68-130	58-140	2	0-30	PASS	
Heptane	25.00	24.58	98	24.63	99	70-130	60-140	0	0-30	PASS	
Hexachloro-1,3-Butadiene	25.00	28.99	116	29.51	118	44-146	27-163	2	0-30	PASS	
Hexane	25.00	24.70	99	24.39	98	70-130	60-140	1	0-30	PASS	
2-Hexanone	25.00	28.07	112	27.88	112	70-136	59-147	1	0-30	PASS	
Methyl-t-Butyl Ether (MTBE)	25.00	25.32	101	24.96	100	68-130	58-140	1	0-30	PASS	
Methylene Chloride	25.00	25.86	103	24.19	97	69-130	59-140	7	0-30	PASS	
4-Methyl-2-Pentanone	25.00	26.69	107	26.31	105	70-130	60-140	1	0-30	PASS	
Naphthalene	25.00	33.61	134	34.09	136	24-144	4-164	1	0-30	PASS	
o-Xylene	25.00	24.92	100	24.67	99	69-130	59-140	1	0-30	PASS	
p/m-Xylene	50.00	49.87	100	49.87	100	70-132	60-142	0	0-30	PASS	
Propene	25.00	25.24	101	24.87	99	50-164	31-183	1	0-121	PASS	
Styrene	25.00	26.23	105	26.08	104	65-131	54-142	1	0-30	PASS	
Tert-Amyl-Methyl Ether (TAME)	25.00	24.19	97	24.24	97	69-130	59-140	0	0-30	PASS	
Tert-Butyl Alcohol (TBA)	50.00	47.40	95	45.05	90	66-144	53-157	5	0-30	PASS	
Tetrachloroethene	25.00	25.04	100	24.85	99	70-130	60-140	1	0-30	PASS	
Tetrahydrofuran	25.00	25.27	101	24.72	99	64-130	53-141	2	0-30	PASS	
Toluene	25.00	24.85	99	25.17	101	70-130	60-140	1	0-30	PASS	
Trichloroethene	25.00	25.23	101	25.04	100	70-130	60-140	1	0-30	PASS	
Trichlorofluoromethane	25.00	24.32	97	25.60	102	63-141	50-154	5	0-30	PASS	

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19815
LCS/LCSD BATCH: 180302L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-02 11:26
LCSD: 2018-03-02 12:41
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	25.05	100	24.72	99	70-136	59-147	1	0-30	PASS	
1,1,1-Trichloroethane	25.00	24.98	100	24.84	99	70-130	60-140	1	0-30	PASS	
1,1,2-Trichloroethane	25.00	25.17	101	25.00	100	70-130	60-140	1	0-30	PASS	
N-Decane	25.00	23.61	94	23.22	93	50-150	33-167	2	0-30	PASS	
N-Nonane	25.00	24.07	96	23.78	95	50-150	33-167	1	0-30	PASS	
N-Octane	25.00	24.17	97	24.13	97	50-150	33-167	0	0-30	PASS	
sec-Butylbenzene	25.00	24.35	97	24.14	97	50-150	33-167	1	0-30	PASS	
Isopropylbenzene	25.00	24.53	98	24.22	97	70-130	60-140	1	0-30	PASS	
n-Propylbenzene	25.00	24.68	99	24.69	99	68-130	58-140	0	0-30	PASS	
tert-Butylbenzene	25.00	24.76	99	24.46	98	50-150	33-167	1	0-30	PASS	
p-Isopropyltoluene	25.00	24.85	99	24.81	99	50-150	33-167	0	0-30	PASS	
2-Chlorotoluene	25.00	24.87	99	24.69	99	70-130	60-140	1	0-30	PASS	
n-Butylbenzene	25.00	25.03	100	24.89	100	50-150	33-167	1	0-30	PASS	
1,2,3-Trichlorobenzene	25.00	26.01	104	26.07	104	50-150	33-167	0	0-30	PASS	
1,2,3-Trichloropropane	25.00	24.53	98	24.43	98	70-130	60-140	0	0-30	PASS	
Acrolein	25.00	24.44	98	23.89	96	59-143	45-157	2	0-30	PASS	
Acrylonitrile	25.00	24.41	98	23.39	94	61-130	50-142	4	0-30	PASS	
Methyl Methacrylate	25.00	26.81	107	26.30	105	70-130	60-140	2	0-30	PASS	
Propane	50.00	48.07	96	47.55	95	49-157	31-175	1	0-92	PASS	
Butane	50.00	46.48	93	45.35	91	66-138	54-150	2	0-30	PASS	
Methanol	75.00	76.14	102	76.13	102	11-151	0-174	0	0-30	PASS	
2,2,4-Trimethyl Pentane	25.00	23.03	92	22.65	91	70-130	60-140	2	0-30	PASS	
Isobutane	50.00	46.99	94	46.14	92	63-141	50-154	2	0-30	PASS	
1,1,1,2-Tetrafluoroethane	25.00	26.42	106	24.70	99	70-130	60-140	7	0-30	PASS	
1,3,5-Trimethylbenzene	25.00	25.59	102	25.71	103	62-130	51-141	0	0-30	PASS	
1,1,2,2-Tetrachloroethane	25.00	25.09	100	24.91	100	63-130	52-141	1	0-30	PASS	
1,2,4-Trimethylbenzene	25.00	25.69	103	25.54	102	60-132	48-144	1	0-30	PASS	
1,2,4-Trichlorobenzene	25.00	33.25	133	34.03	136	31-151	11-171	2	0-30	PASS	

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19815
LCS/LCSD BATCH: 180302L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-02 11:26
LCSD: 2018-03-02 12:41
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
Vinyl Acetate	25.00	24.92	100	24.42	98	58-130	46-142	2	0-30	PASS	
Vinyl Chloride	25.00	24.62	98	24.39	98	70-134	59-145	1	0-30	PASS	
1,1-Difluoroethane	25.00	22.60	90	22.18	89	70-131	60-141	2	0-30	PASS	
Isopropanol	25.00	21.50	86	25.24	101	57-135	44-148	16	0-30	PASS	

Total number of LCS compounds: 88
Total number of ME compounds: 0
Total number of ME compounds allowed: 4
LCS ME CL validation result: Pass

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	02mar03.rr	Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar03.d\
LCSD	02mar04.rr	Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar04.d\

SURROGATE RECOVERIES
FOR METHOD: EPA TO-15

WORK ORDER: 18-03-0118
BATCH ID:
LCS/MB: 180302L01
MS:
EXTRACTION : N/A

REVIEWED BY:
D/T REVIEWED:

1 CLIENT SAMPLE NUMBER : WAS00047

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar16.d\02mar16.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-03 00:16

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	108	68-134	PASS	
1,2-Dichloroethane-d4	106	67-133	PASS	
Toluene-d8	96	70-130	PASS	

2 CLIENT SAMPLE NUMBER : WAS00048

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar17.d\02mar17.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-03 01:08

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	103	68-134	PASS	
1,2-Dichloroethane-d4	104	67-133	PASS	
Toluene-d8	97	70-130	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar06.d\02mar06.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-02 14:44

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	96	68-134	PASS	
1,2-Dichloroethane-d4	97	67-133	PASS	
Toluene-d8	98	70-130	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA TO-15

WORK ORDER: 18-03-0118
BATCH ID:
LCS/MB: 180302L01
MS:
EXTRACTION : N/A

REVIEWED BY:
D/T REVIEWED:

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar03.d\02mar03.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-02 11:26

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	100	68-134	PASS	
1,2-Dichloroethane-d4	98	67-133	PASS	
Toluene-d8	99	70-130	PASS	

LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar04.d\02mar04.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-02 12:41

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	99	68-134	PASS	
1,2-Dichloroethane-d4	97	67-133	PASS	
Toluene-d8	99	70-130	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar06.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 14:44 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 02-Mar-2018 16:44 jxs7

Sample Name: MB FC LC748 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	883324	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	2996702	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.542	117	2620953	25.000	0.01
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.878	65	1171794	24.243	0.00
SpikedAmount 25.000	Recovery =	96.974				
60)$Toluene-d8	(2)	14.282	98	2955173	24.548	0.00
SpikedAmount 25.000	Recovery =	98.190				
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1788981	24.027	0.01
SpikedAmount 25.000	Recovery =	96.109				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	0.000		0	N.D.	
2) 1,1-Difluoroethane	(1)	0.000		0	N.D.	
3) Propene	(1)	0.000		0	N.D.	
4) Propane	(1)	0.000		0D	N.D.	
5) Dichlorodifluoromethane	(1)	0.000		0	N.D.	
6) Chloromethane	(1)	0.000		0	N.D.	
7) Dichlorotetrafluoroethane	(1)	0.000		0	N.D.	
8) Isobutane	(1)	0.000		0	N.D.	
9) Methanol	(1)	3.687	31	3799	0.465	1
10) Vinyl Chloride	(1)	0.000		0	N.D.	
11) 1,3-Butadiene	(1)	0.000		0	N.D.	
12) Butane	(1)	0.000		0	N.D.	
13) Bromomethane	(1)	0.000		0	N.D.	
14) Chloroethane	(1)	0.000		0	N.D.	
15) Ethanol	(1)	0.000		0	N.D.	
16) Acrolein	(1)	0.000		0	N.D.	
17) Acetone	(1)	0.000		0	N.D.	
18) Trichlorofluoromethane	(1)	0.000		0	N.D.	
19) Isopropanol	(1)	0.000		0	N.D.	
20) Acrylonitrile	(1)	0.000		0	N.D.	
21) 1,1-Dichloroethene	(1)	0.000		0	N.D.	
23) Methylene Chloride	(1)	0.000		0	N.D.	
22) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
24) Allyl Chloride	(1)	0.000		0	N.D.	
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar06.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 14:44 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 02-Mar-2018 16:44 jxs7

Sample Name: MB FC LC748 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	0.000		0	N.D.	
27) Propionitrile	(1)	0.000		0	N.D.	
28) t-1,2-Dichloroethene	(1)	0.000		0	N.D.	
29) 1,1-Dichloroethane	(1)	0.000		0	N.D.	
30) Methyl-t-Butyl Ether (MTBE)	(1)	0.000		0	N.D.	
31) Vinyl Acetate	(1)	0.000		0	N.D.	
32) 2-Butanone	(1)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(1)	0.000		0D	N.D.	
37) Hexane	(1)	0.000		0	N.D.	
36) Diisopropyl Ether (DIPE)	(1)	0.000		0	N.D.	
35) Ethyl Acetate	(1)	0.000		0	N.D.	
38) Chloroform	(1)	0.000		0	N.D.	
39) Tetrahydrofuran	(1)	0.000		0	N.D.	
40) Ethyl-t-Butyl Ether (ETBE)	(1)	0.000		0	N.D.	
42) 1,2-Dichloroethane	(1)	0.000		0	N.D.	
43) 1,1,1-Trichloroethane	(1)	0.000		0	N.D.	
44) Benzene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
46) Cyclohexane	(2)	0.000		0	N.D.	
48) Tert-Amyl-Methyl Ether (TAME)	(2)	0.000		0	N.D.	
49) 1,2-Dichloropropane	(2)	0.000		0	N.D.	
50) Bromodichloromethane	(2)	0.000		0	N.D.	
52) Trichloroethene	(2)	0.000		0	N.D.	
53) 2,2,4-Trimethyl Pentane	(2)	0.000		0	N.D.	
51) 1,4-Dioxane	(2)	0.000		0	N.D.	
54) Methyl Methacrylate	(2)	0.000		0	N.D.	
55) Heptane	(2)	0.000		0	N.D.	
56) c-1,3-Dichloropropene	(2)	0.000		0	N.D.	
57) 4-Methyl-2-Pentanone	(2)	0.000		0	N.D.	
58) t-1,3-Dichloropropene	(2)	0.000		0	N.D.	
59) 1,1,2-Trichloroethane	(2)	0.000		0	N.D.	
61) Toluene	(3)	0.000		0	N.D.	
62) 2-Hexanone	(3)	0.000		0	N.D.	
63) Ethyl Methacrylate	(3)	0.000		0	N.D.	
64) Dibromochloromethane	(3)	0.000		0	N.D.	
65) 1,2-Dibromoethane	(3)	0.000		0	N.D.	
66) N-Octane	(3)	0.000		0	N.D.	

D = Compound was deleted.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar06.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 14:44 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 02-Mar-2018 16:44 jxs7

Sample Name: MB FC LC748 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	0.000		0	N.D.	
69) Chlorobenzene	(3)	0.000		0	N.D.	
70) Ethylbenzene	(3)	0.000		0	N.D.	
71) p/m-Xylene	(3)	0.000		0	N.D.	
72) Bromoform	(3)	0.000		0	N.D.	
73) Styrene	(3)	0.000		0	N.D.	
74) 1,1,2,2-Tetrachloroethane	(3)	0.000		0	N.D.	
75) o-Xylene	(3)	0.000		0	N.D.	
76) 1,2,3-Trichloropropane	(3)	0.000		0	N.D.	
77) N-Nonane	(3)	0.000		0	N.D.	
79) Isopropylbenzene	(3)	0.000		0	N.D.	
80) 2-Chlorotoluene	(3)	0.000		0	N.D.	
81) n-Propylbenzene	(3)	0.000		0	N.D.	
82) 4-Ethyltoluene	(3)	0.000		0	N.D.	
83) 1,3,5-Trimethylbenzene	(3)	0.000		0	N.D.	
84) alpha-Methylstyrene	(3)	0.000		0	N.D.	
86) 1,2,4-Trimethylbenzene	(3)	0.000		0	N.D.	
85) tert-Butylbenzene	(3)	0.000		0	N.D.	
87) Benzyl Chloride	(3)	0.000		0	N.D.	
88) 1,3-Dichlorobenzene	(3)	0.000		0	N.D.	
90) N-Decane	(3)	0.000		0	N.D.	
89) 1,4-Dichlorobenzene	(3)	0.000		0	N.D.	
91) sec-Butylbenzene	(3)	0.000		0	N.D.	
92) p-Isopropyltoluene	(3)	0.000		0	N.D.	
93) 1,2-Dichlorobenzene	(3)	0.000		0	N.D.	
94) n-Butylbenzene	(3)	0.000		0	N.D.	
95) 1,2-Dibromo-3-Chloropropane	(3)	0.000		0	N.D.	
96) 1,2,4-Trichlorobenzene	(3)	0.000		0	N.D.	
97) Naphthalene	(3)	0.000		0	N.D.	
98) 1,2,3-Trichlorobenzene	(3)	0.000		0	N.D.	
99) Hexachloro-1,3-Butadiene	(3)	0.000		0	N.D.	

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Data File: /chem/AIR/GCMS_000.i/180302.b/02mar06.d

Page 1

Date : 02-MAR-2018 14:44

Client ID:

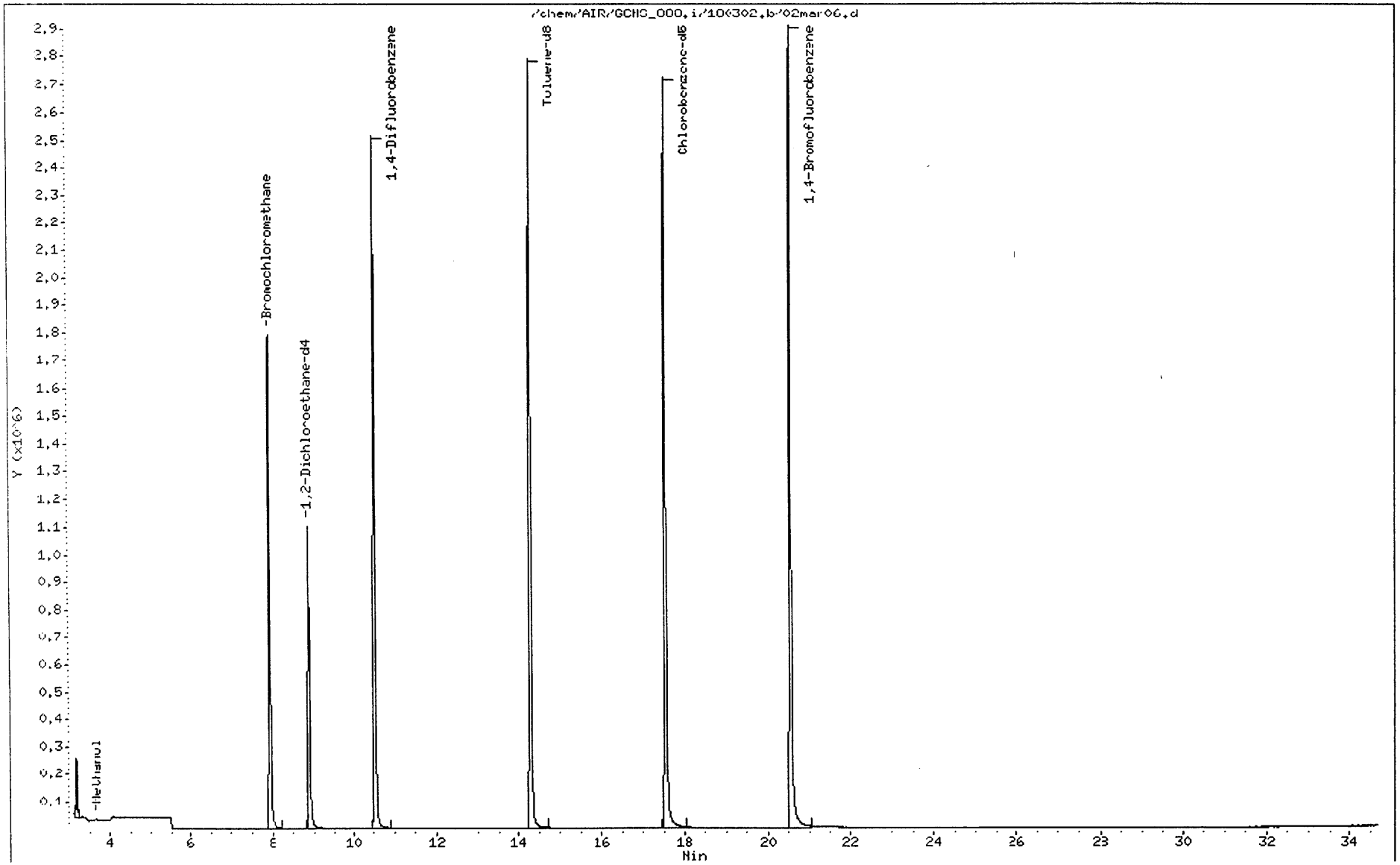
Instrument: GCMS_000.i

Sample Info: MB FC LC748

Operator: JXS7

Column phase:

Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar03.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 11:26 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 15-FEB-2018 14:26
Date, time and analyst ID of latest file update: 02-Mar-2018 12:25 jxs7

Sample Name: LCS 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	789953	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	2741040	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.547	117	2530812	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.884	65	1054782	24.402	-0.01
SpikedAmount 25.000	Recovery =	97.608				
60)$Toluene-d8	(2)	14.282	98	2729445	24.787	0.00
SpikedAmount 25.000	Recovery =	99.149				
78)$1,4-Bromofluorobenzene	(3)	20.564	95	1790038	24.898	0.00
SpikedAmount 25.000	Recovery =	99.591				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.252	69	637100	26.418	99
2) 1,1-Difluoroethane	(1)	3.310	51	1082247	22.605	99
3) Propene	(1)	3.375	41	1052535	25.237	100
4) Propane	(1)	3.393	29	1005497	48.074	97
5) Dichlorodifluoromethane	(1)	3.434	85	1909360	25.260	100
6) Chloromethane	(1)	3.557	50	706769	24.250	99
7) Dichlorotetrafluoroethane	(1)	3.640	85	1652170	25.112	99
8) Isobutane	(1)	3.658	43	2163421	46.991	100
9) Methanol	(1)	3.681	31	556378	76.138	98
10) Vinyl Chloride	(1)	3.734	62	706545	24.616	99
11) 1,3-Butadiene	(1)	3.846	54	574127	24.478	98
12) Butane	(1)	3.893	43	1977119	46.479	100
13) Bromomethane	(1)	4.063	94	590594	24.929	100
14) Chloroethane	(1)	4.205	64	309693	24.899	100
15) Ethanol	(1)	4.287	45	1183711	94.260	100
16) Acrolein	(1)	4.581	56	324816	24.439	99
17) Acetone	(1)	4.693	58	353251	24.860	98
18) Trichlorofluoromethane	(1)	4.864	101	1800465	24.317	100
19) Isopropanol	(1)	4.916	45	1533614	21.502	97
20) Acrylonitrile	(1)	5.117	53	861896	24.414	99
21) 1,1-Dichloroethene	(1)	5.452	61	1583772	24.609	99
23) Methylene Chloride	(1)	5.567	84	681120	25.861	95
22) Tert-Butyl Alcohol (TBA)	(1)	5.487	59	3207385	47.398	98
24) Allyl Chloride	(1)	5.692	41	1295888	22.694	100
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.851	101	1552302	25.051	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar03.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 11:26 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 15-FEB-2018 14:26
Date, time and analyst ID of latest file update: 02-Mar-2018 12:25 jxs7

Sample Name: LCS 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	2033129	24.985	100
27) Propionitrile	(1)	6.253	54	803066	24.852	100
28) t-1,2-Dichloroethene	(1)	6.542	96	775880	25.600	99
29) 1,1-Dichloroethane	(1)	6.763	63	1649724	24.622	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.843	73	2098790	25.315	99
31) Vinyl Acetate	(1)	6.951	43	2732783	24.924	100
32) 2-Butanone	(1)	7.211	43	2078558	25.267	99
33) c-1,2-Dichloroethene	(1)	7.727	96	821172	25.347	100
37) Hexane	(1)	8.034	57	1391864	24.704	99
36) Diisopropyl Ether (DIPE)	(1)	8.034	45	3557611	22.600	98
35) Ethyl Acetate	(1)	8.039	61	280814	25.733	98
38) Chloroform	(1)	8.096	83	1650186	24.605	100
39) Tetrahydrofuran	(1)	8.578	42	1164053	25.270	99
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	2984061	23.670	100
42) 1,2-Dichloroethane	(1)	9.020	62	1293263	24.795	99
43) 1,1,1-Trichloroethane	(1)	9.366	97	1841505	24.978	100
44) Benzene	(2)	9.990	78	2407879	25.419	99
45) Carbon Tetrachloride	(2)	10.199	117	2015474	24.947	100
46) Cyclohexane	(2)	10.381	56	1613371	24.747	100
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	2226929	24.189	100
49) 1,2-Dichloropropane	(2)	11.158	63	1066465	24.822	100
50) Bromodichloromethane	(2)	11.435	83	1908112	25.174	100
52) Trichloroethene	(2)	11.526	95	1110278	25.231	99
53) 2,2,4-Trimethyl Pentane	(2)	11.651	57	4682335	23.030	100
51) 1,4-Dioxane	(2)	11.509	88	564419	27.085	88
54) Methyl Methacrylate	(2)	11.900	69	801227	26.813	99
55) Heptane	(2)	12.076	100	192212	24.581	99
56) c-1,3-Dichloropropene	(2)	12.864	75	1505635	26.531	100
57) 4-Methyl-2-Pentanone	(2)	12.961	58	990004	26.688	99
58) t-1,3-Dichloropropene	(2)	13.726	75	1438854	26.909	99
59) 1,1,2-Trichloroethane	(2)	13.970	83	900178	25.172	99
61) Toluene	(3)	14.446	91	2820460	24.847	100
62) 2-Hexanone	(3)	14.968	58	1284305	28.067	99
63) Ethyl Methacrylate	(3)	15.047	69	1348988	24.474	99
64) Dibromochloromethane	(3)	15.104	129	2031317	25.009	100
65) 1,2-Dibromoethane	(3)	15.523	107	1757374	25.597	100
66) N-Octane	(3)	16.334	57	1018332	24.174	100

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar03.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 11:26 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 15-FEB-2018 14:26
Date, time and analyst ID of latest file update: 02-Mar-2018 12:25 jxs7

Sample Name: LCS 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1648822	25.045	100
69) Chlorobenzene	(3)	17.627	112	2420028	25.124	99
70) Ethylbenzene	(3)	18.398	91	3975993	25.821	100
71) p/m-Xylene	(3)	18.744	91	6290080	49.871	100
72) Bromoform	(3)	18.749	173	2197622	25.608	100
73) Styrene	(3)	19.441	104	2317712	26.226	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	2334890	25.089	100
75) o-Xylene	(3)	19.662	91	3013929	24.918	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1735001	24.528	99
77) N-Nonane	(3)	20.337	57	2318553	24.067	100
79) Isopropylbenzene	(3)	20.910	105	4294585	24.531	100
80) 2-Chlorotoluene	(3)	21.856	91	3176760	24.872	100
81) n-Propylbenzene	(3)	22.027	91	5117664	24.680	100
82) 4-Ethyltoluene	(3)	22.378	105	4246252	26.367	99
83) 1,3,5-Trimethylbenzene	(3)	22.576	105	3699888	25.592	100
84) alpha-Methylstyrene	(3)	22.917	118	1955870	25.797	99
86) 1,2,4-Trimethylbenzene	(3)	23.518	105	3669270	25.685	98
85) tert-Butylbenzene	(3)	23.501	119	3905608	24.764	100
87) Benzyl Chloride	(3)	23.756	91	3380586	27.396	100
88) 1,3-Dichlorobenzene	(3)	23.767	146	2654317	25.809	100
90) N-Decane	(3)	24.017	57	2757634	23.606	100
89) 1,4-Dichlorobenzene	(3)	23.937	146	2763392	27.355	99
91) sec-Butylbenzene	(3)	24.170	105	5053194	24.348	100
92) p-Isopropyltoluene	(3)	24.618	119	4534307	24.850	100
93) 1,2-Dichlorobenzene	(3)	24.759	146	2658865	26.423	100
94) n-Butylbenzene	(3)	25.701	91	4367393	25.027	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.893	157	1599230	27.480	100
96) 1,2,4-Trichlorobenzene	(3)	29.409	180	3009471	33.247	99
97) Naphthalene	(3)	29.618	128	6036110	33.609	100
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	2534618	26.013	99
99) Hexachloro-1,3-Butadiene	(3)	30.548	225	2706628	28.988	99

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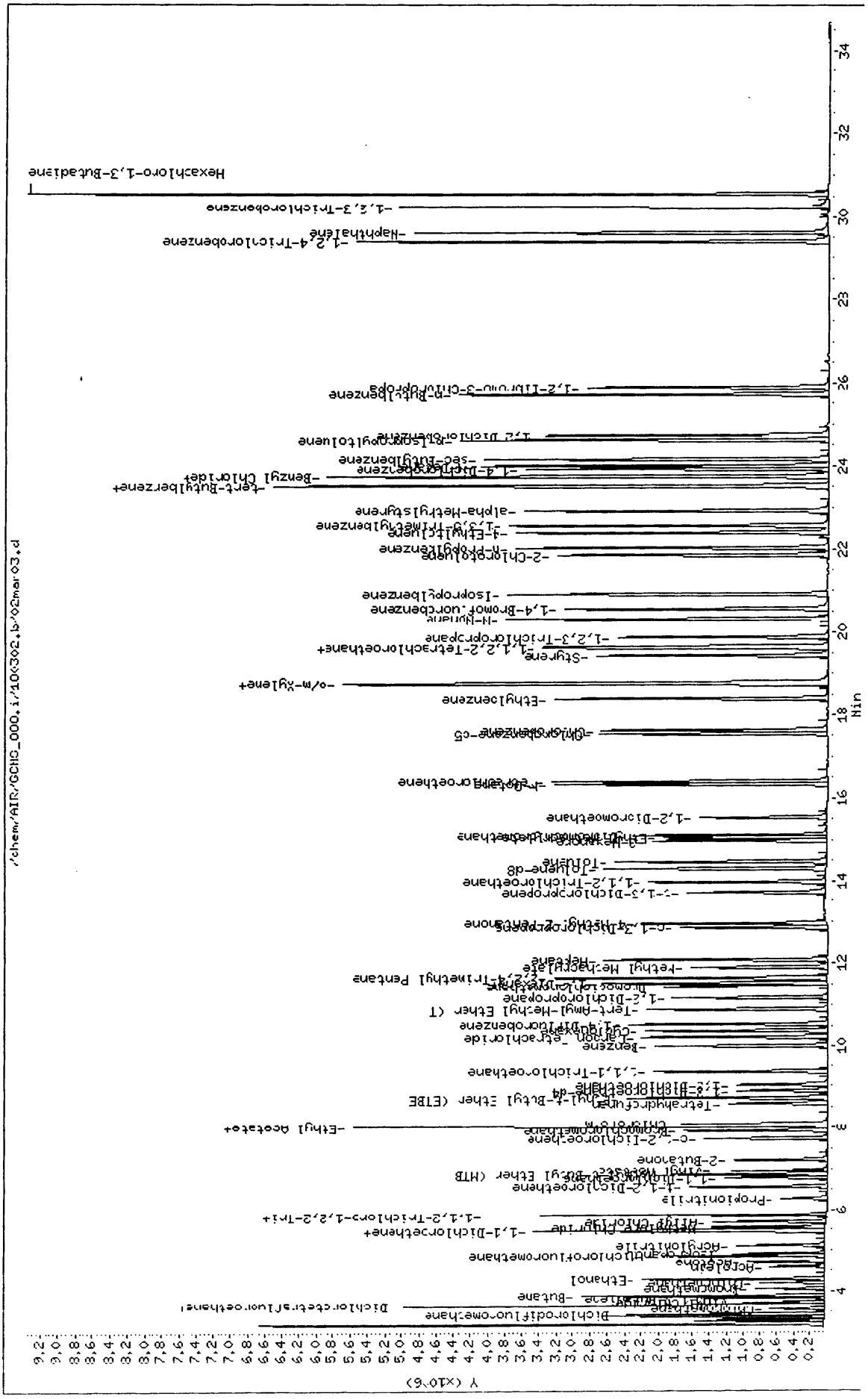
Data File: /chem/AIR/GCMS_000.i/180302.b/02mar03.d
Date : 02-MAR-2018 11:26
Client ID:
Sample Info: LCS 25PPBV 8021840

Instrument: GCMS_000.i
Operator: JXS7
Column diameter: 0.00

Column phase:

/chem/AIR/GCMS_000.i/180302.b/02mar03.d



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar04.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 12:41 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 02-Mar-2018 13:43 jxs7

Sample Name: LCSD 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34) *Bromochloromethane	(1)	7.926	130	796000	25.000	-0.01
47) *1,4-Difluorobenzene	(2)	10.534	114	2771763	25.000	-0.01
68) *Chlorobenzene-d5	(3)	17.547	117	2546494	25.000	0.00
System Monitoring Compounds						
41) $1,2-Dichloroethane-d4	(1)	8.884	65	1050832	24.126	-0.01
SpikedAmount 25.000	Recovery =	96.504				
60) $Toluene-d8	(2)	14.287	98	2766043	24.841	-0.01
SpikedAmount 25.000	Recovery =	99.365				
78) $1,4-Bromofluorobenzene	(3)	20.564	95	1798602	24.863	0.00
SpikedAmount 25.000	Recovery =	99.451				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.257	69	600322	24.704	99
2) 1,1-Difluoroethane	(1)	3.316	51	1070163	22.183	99
3) Propene	(1)	3.381	41	1045295	24.873	100
4) Propane	(1)	3.399	29	1002191	47.552	98
5) Dichlorodifluoromethane	(1)	3.434	85	1865342	24.491	100
6) Chloromethane	(1)	3.563	50	690113	23.499	100
7) Dichlorotetrafluoroethane	(1)	3.646	85	1663893	25.098	99
8) Isobutane	(1)	3.663	43	2140365	46.137	100
9) Methanol	(1)	3.687	31	560583	76.130	96
10) Vinyl Chloride	(1)	3.740	62	705560	24.395	99
11) 1,3-Butadiene	(1)	3.852	54	570026	24.118	98
12) Butane	(1)	3.893	43	1943849	45.350	100
13) Bromomethane	(1)	4.063	94	587787	24.622	99
14) Chloroethane	(1)	4.205	64	305232	24.353	99
15) Ethanol	(1)	4.293	45	1169600	92.428	100
16) Acrolein	(1)	4.587	56	319989	23.893	100
17) Acetone	(1)	4.699	58	349673	24.421	97
18) Trichlorofluoromethane	(1)	4.864	101	1910073	25.601	100
19) Isopropanol	(1)	4.916	45	1813849	25.238	100
20) Acrylonitrile	(1)	5.117	53	832110	23.391	100
21) 1,1-Dichloroethene	(1)	5.458	61	1556034	23.994	99
23) Methylene Chloride	(1)	5.567	84	642056	24.193	98
22) Tert-Butyl Alcohol (TBA)	(1)	5.487	59	3071717	45.048	98
24) Allyl Chloride	(1)	5.692	41	1269625	22.065	100
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.856	101	1543756	24.724	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar04.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 12:41 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 02-Mar-2018 13:43 jxs7

Sample Name: LCSD 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	2017861	24.609	99
27) Propionitrile	(1)	6.259	54	801309	24.610	100
28) t-1,2-Dichloroethene	(1)	6.548	96	766732	25.106	99
29) 1,1-Dichloroethane	(1)	6.763	63	1642792	24.333	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.843	73	2084810	24.956	98
31) Vinyl Acetate	(1)	6.951	43	2698322	24.423	99
32) 2-Butanone	(1)	7.211	43	2085115	25.154	99
33) c-1,2-Dichloroethene	(1)	7.733	96	828857	25.390	99
37) Hexane	(1)	8.039	57	1384712	24.391	99
36) Diisopropyl Ether (DIPE)	(1)	8.034	45	3538836	22.310	98
35) Ethyl Acetate	(1)	8.039	61	288349	26.222	100
38) Chloroform	(1)	8.096	83	1644842	24.339	100
39) Tetrahydrofuran	(1)	8.583	42	1147368	24.718	100
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	2982001	23.474	99
42) 1,2-Dichloroethane	(1)	9.026	62	1283842	24.427	100
43) 1,1,1-Trichloroethane	(1)	9.372	97	1845214	24.838	100
44) Benzene	(2)	9.990	78	2395746	25.010	99
45) Carbon Tetrachloride	(2)	10.199	117	2006776	24.564	100
46) Cyclohexane	(2)	10.381	56	1596780	24.221	99
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	2257070	24.245	99
49) 1,2-Dichloropropane	(2)	11.158	63	1056739	24.323	99
50) Bromodichloromethane	(2)	11.435	83	1906993	24.880	100
52) Trichloroethene	(2)	11.526	95	1114178	25.039	99
53) 2,2,4-Trimethyl Pentane	(2)	11.651	57	4657155	22.653	100
51) 1,4-Dioxane	(2)	11.509	88	566664	26.892	87
54) Methyl Methacrylate	(2)	11.900	69	794692	26.300	98
55) Heptane	(2)	12.082	100	194749	24.629	97
56) c-1,3-Dichloropropene	(2)	12.864	75	1505740	26.239	99
57) 4-Methyl-2-Pentanone	(2)	12.961	58	986920	26.310	99
58) t-1,3-Dichloropropene	(2)	13.726	75	1446341	26.749	99
59) 1,1,2-Trichloroethane	(2)	13.970	83	904130	25.002	99
61) Toluene	(3)	14.452	91	2875151	25.173	100
62) 2-Hexanone	(3)	14.968	58	1283546	27.877	97
63) Ethyl Methacrylate	(3)	15.047	69	1366361	24.637	99
64) Dibromochloromethane	(3)	15.104	129	2049831	25.082	100
65) 1,2-Dibromoethane	(3)	15.523	107	1759500	25.470	100
66) N-Octane	(3)	16.334	57	1022775	24.130	99

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar04.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 12:41 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 02-Mar-2018 13:43 jxs7

Sample Name: LCSD 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1645935	24.847	100
69) Chlorobenzene	(3)	17.627	112	2432396	25.097	99
70) Ethylbenzene	(3)	18.398	91	4005000	25.849	100
71) p/m-Xylene	(3)	18.744	91	6328861	49.869	100
72) Bromoform	(3)	18.749	173	2224998	25.767	100
73) Styrene	(3)	19.447	104	2319093	26.080	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	2333019	24.914	100
75) o-Xylene	(3)	19.657	91	3002709	24.673	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1738468	24.426	99
77) N-Nonane	(3)	20.337	57	2305345	23.783	99
79) Isopropylbenzene	(3)	20.910	105	4267132	24.224	100
80) 2-Chlorotoluene	(3)	21.856	91	3173016	24.689	100
81) n-Propylbenzene	(3)	22.026	91	5151041	24.688	99
82) 4-Ethyltoluene	(3)	22.378	105	4207866	25.968	100
83) 1,3,5-Trimethylbenzene	(3)	22.576	105	3739724	25.708	100
84) alpha-Methylstyrene	(3)	22.917	118	1949088	25.549	100
86) 1,2,4-Trimethylbenzene	(3)	23.518	105	3670550	25.536	98
85) tert-Butylbenzene	(3)	23.495	119	3881545	24.460	100
87) Benzyl Chloride	(3)	23.756	91	3394815	27.342	100
88) 1,3-Dichlorobenzene	(3)	23.767	146	2664512	25.748	100
90) N-Decane	(3)	24.017	57	2729276	23.219	100
89) 1,4-Dichlorobenzene	(3)	23.937	146	2763395	27.187	100
91) sec-Butylbenzene	(3)	24.170	105	5040119	24.136	99
92) p-Isopropyltoluene	(3)	24.618	119	4554849	24.809	100
93) 1,2-Dichlorobenzene	(3)	24.754	146	2667560	26.346	99
94) n-Butylbenzene	(3)	25.701	91	4371107	24.894	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.899	157	1618816	27.645	99
96) 1,2,4-Trichlorobenzene	(3)	29.409	180	3099786	34.033	99
97) Naphthalene	(3)	29.613	128	6159615	34.086	100
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	2556201	26.073	100
99) Hexachloro-1,3-Butadiene	(3)	30.548	225	2772240	29.507	100

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Data File: /chem/AIR/GCMS_000.i/180302.b/02mar04.d

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Date : 02-MAR-2018 12:41

Client ID:

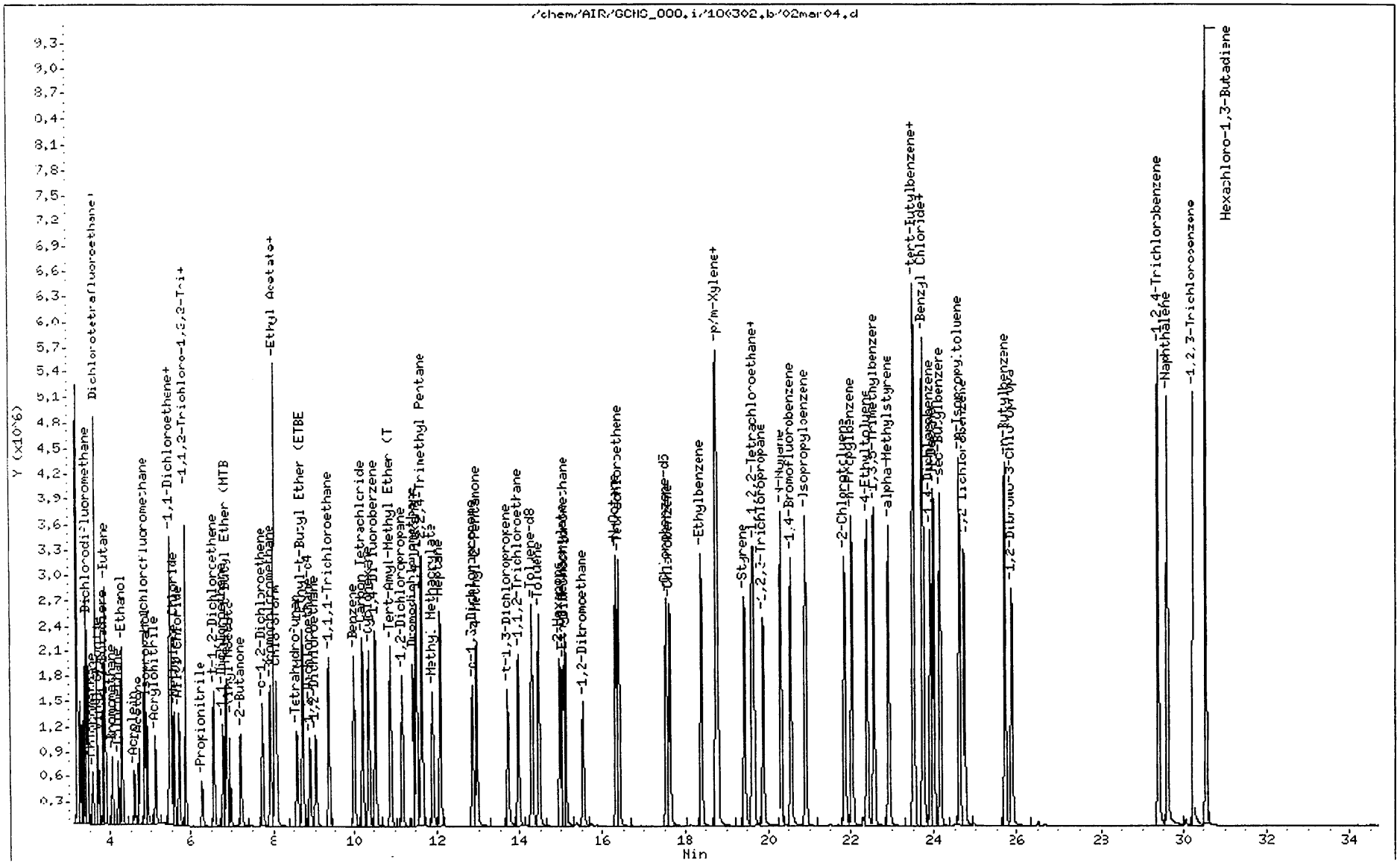
Instrument: GCMS_000.i

Sample Info: LCSD 25PPBV 8021840

Operator: JXS7

Column phase:

Column diameter: 0.00



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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA TO-15

MB SAMPLE ID:	**095-01-021-19819**	ANALYZED BY:	953
MB BATCH ID:	180303L01	D/T ANALYZED:	2018-03-03 14:24
INSTRUMENT:	GC/MS OOO	REVIEWED BY:	
EXTRACTION:	N/A	D/T REVIEWED:	
D/T EXTRACTED:		MATRIX:	Air

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar06.d\03mar06.rr

CLIENT WORK ORDER: 18-03-0118

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	R	WAS00047	2018-03-03 21:35	Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar13.d\03mar13.rr
2	R	WAS00048	2018-03-03 23:09	Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar15.d\03mar15.rr

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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: **095-01-021**
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-03 14:24
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar06.d\03mar06.rr

 # MB **CLIENT SAMPLE NUMBER:** **Method Blank**

LCS/MB BATCH: 180303L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
1,2,4-Trichlorobenzene	0.000	1.00	ND	2.0	
Acetone	0.0689	1.00	ND	2.0	
Benzene	0.000	1.00	ND	0.50	
Benzyl Chloride	0.000	1.00	ND	1.5	
Bromodichloromethane	0.000	1.00	ND	0.50	
Bromoform	0.000	1.00	ND	0.50	
Bromomethane	0.000	1.00	ND	0.50	
2-Butanone	0.000	1.00	ND	1.5	
n-Butylbenzene	0.000	1.00	ND	0.50	
sec-Butylbenzene	0.000	1.00	ND	0.50	
tert-Butylbenzene	0.000	1.00	ND	0.50	
Carbon Disulfide	0.000	1.00	ND	2.0	
Carbon Tetrachloride	0.000	1.00	ND	0.50	
Chlorobenzene	0.000	1.00	ND	0.50	
Chloroethane	0.000	1.00	ND	0.50	
Chloroform	0.000	1.00	ND	0.50	
Chloromethane	0.000	1.00	ND	0.50	
Dibromochloromethane	0.000	1.00	ND	0.50	
1,2-Dibromoethane	0.000	1.00	ND	0.50	
1,2-Dichlorobenzene	0.000	1.00	ND	0.50	
1,3-Dichlorobenzene	0.000	1.00	ND	0.50	
1,4-Dichlorobenzene	0.000	1.00	ND	0.50	
Dichlorodifluoromethane	0.000	1.00	ND	0.50	
1,1-Dichloroethane	0.000	1.00	ND	0.50	
1,2-Dichloroethane	0.000	1.00	ND	0.50	
1,1-Dichloroethene	0.000	1.00	ND	0.50	
c-1,2-Dichloroethene	0.000	1.00	ND	0.50	
t-1,2-Dichloroethene	0.000	1.00	ND	0.50	
1,2-Dichloropropane	0.000	1.00	ND	0.50	
c-1,3-Dichloropropene	0.000	1.00	ND	0.50	
t-1,3-Dichloropropene	0.000	1.00	ND	1.0	
Dichlorotetrafluoroethane	0.000	1.00	ND	2.0	
1,1-Difluoroethane	0.000	1.00	ND	2.0	
Ethylbenzene	0.000	1.00	ND	0.50	
4-Ethyltoluene	0.000	1.00	ND	0.50	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	1.5	
2-Hexanone	0.000	1.00	ND	1.5	
Isopropanol	0.000	1.00	ND	5.0	
Methyl-t-Butyl Ether (MTBE)	0.000	1.00	ND	2.0	

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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: **095-01-021**
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-03 14:24
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar06.d\03mar06.rr

 # MB **CLIENT SAMPLE NUMBER:** **Method Blank**

LCS/MB BATCH: 180303L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Methylene Chloride	0.000	1.00	ND	5.0	
4-Methyl-2-Pentanone	0.000	1.00	ND	1.5	
Styrene	0.000	1.00	ND	1.5	
1,1,2,2-Tetrachloroethane	0.000	1.00	ND	1.0	
Tetrachloroethene	0.000	1.00	ND	0.50	
Toluene	0.000	1.00	ND	0.50	
1,1,1-Trichloroethane	0.000	1.00	ND	0.50	
1,1,2-Trichloroethane	0.000	1.00	ND	0.50	
Trichloroethene	0.000	1.00	ND	0.50	
Trichlorofluoromethane	0.000	1.00	ND	1.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.000	1.00	ND	1.5	
1,2,4-Trimethylbenzene	0.000	1.00	ND	1.5	
1,3,5-Trimethylbenzene	0.000	1.00	ND	0.50	
Vinyl Acetate	0.000	1.00	ND	2.0	
Vinyl Chloride	0.000	1.00	ND	0.50	
o-Xylene	0.000	1.00	ND	0.50	
p/m-Xylene	0.000	1.00	ND	2.0	

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LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19819
LCS/LCSD BATCH: 180303L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-03 11:35
LCSD: 2018-03-03 12:24
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
Acetone	25.00	24.89	100	24.76	99	67-133	56-144	1	0-30	PASS	
Benzene	25.00	23.84	95	24.52	98	70-130	60-140	3	0-30	PASS	
Benzyl Chloride	25.00	27.74	111	27.34	109	38-158	18-178	1	0-30	PASS	
Bromodichloromethane	25.00	25.50	102	25.41	102	70-130	60-140	0	0-30	PASS	
Bromoform	25.00	26.31	105	26.04	104	63-147	49-161	1	0-30	PASS	
Bromomethane	25.00	25.15	101	25.09	100	70-139	58-150	0	0-30	PASS	
1,3-Butadiene	25.00	25.13	101	24.74	99	68-140	56-152	2	0-30	PASS	
2-Butanone	25.00	25.22	101	24.85	99	66-132	55-143	1	0-30	PASS	
Carbon Disulfide	25.00	23.59	94	23.97	96	68-146	55-159	2	0-30	PASS	
Carbon Tetrachloride	25.00	26.15	105	25.86	103	70-136	59-147	1	0-30	PASS	
Chlorobenzene	25.00	24.36	97	24.55	98	70-130	60-140	1	0-30	PASS	
Chloroethane	25.00	24.79	99	24.47	98	65-149	51-163	1	0-30	PASS	
Chloroform	25.00	24.39	98	24.24	97	70-130	60-140	1	0-30	PASS	
Chloromethane	25.00	25.11	100	24.62	98	69-141	57-153	2	0-30	PASS	
Cyclohexane	25.00	24.43	98	24.64	99	70-130	60-140	1	0-30	PASS	
Dibromochloromethane	25.00	25.39	102	24.94	100	70-138	59-149	2	0-30	PASS	
Dichlorodifluoromethane	25.00	26.63	107	25.93	104	67-139	55-151	3	0-30	PASS	
Diisopropyl Ether (DIPE)	25.00	22.74	91	22.40	90	63-130	52-141	1	0-30	PASS	
1,1-Dichloroethane	25.00	23.82	95	24.06	96	70-130	60-140	1	0-30	PASS	
1,1-Dichloroethene	25.00	24.53	98	24.34	97	70-135	59-146	1	0-30	PASS	
1,2-Dibromoethane	25.00	25.10	100	24.97	100	70-133	60-144	1	0-30	PASS	
Dichlorotetrafluoroethane	25.00	26.09	104	25.80	103	51-135	37-149	1	0-30	PASS	
1,2-Dichlorobenzene	25.00	27.39	110	26.66	107	48-138	33-153	3	0-30	PASS	
1,2-Dichloroethane	25.00	25.76	103	25.12	100	70-132	60-142	3	0-30	PASS	
1,2-Dichloropropane	25.00	24.06	96	24.36	97	70-130	60-140	1	0-30	PASS	
1,3-Dichlorobenzene	25.00	26.39	106	25.83	103	56-134	43-147	2	0-30	PASS	
1,4-Dichlorobenzene	25.00	27.84	111	27.37	109	52-136	38-150	2	0-30	PASS	
1,4-Dioxane	25.00	25.96	104	26.02	104	52-136	38-150	0	0-30	PASS	

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19819
LCS/LCSD BATCH: 180303L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-03 11:35
LCSD: 2018-03-03 12:24
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
c-1,3-Dichloropropene	25.00	25.68	103	26.07	104	70-130	60-140	2	0-30	PASS	
c-1,2-Dichloroethene	25.00	24.19	97	24.55	98	70-130	60-140	1	0-30	PASS	
t-1,2-Dichloroethene	25.00	24.30	97	24.36	97	70-130	60-140	0	0-30	PASS	
t-1,3-Dichloropropene	25.00	26.85	107	26.98	108	70-147	57-160	0	0-30	PASS	
Ethanol	100.0	96.96	97	94.73	95	37-139	20-156	2	0-30	PASS	
Ethyl Acetate	25.00	24.69	99	24.38	98	70-133	60-144	1	0-30	PASS	
Ethyl-t-Butyl Ether (ETBE)	25.00	23.58	94	23.41	94	67-130	56-140	1	0-30	PASS	
Ethylbenzene	25.00	25.11	100	25.02	100	70-130	60-140	0	0-30	PASS	
4-Ethyltoluene	25.00	26.46	106	26.07	104	68-130	58-140	1	0-30	PASS	
Heptane	25.00	24.38	98	24.60	98	70-130	60-140	1	0-30	PASS	
Hexachloro-1,3-Butadiene	25.00	31.90	128	31.18	125	44-146	27-163	2	0-30	PASS	
Hexane	25.00	24.16	97	24.05	96	70-130	60-140	0	0-30	PASS	
2-Hexanone	25.00	26.64	107	28.27	113	70-136	59-147	6	0-30	PASS	
Methyl-t-Butyl Ether (MTBE)	25.00	24.87	99	24.68	99	68-130	58-140	1	0-30	PASS	
Methylene Chloride	25.00	24.58	98	24.63	99	69-130	59-140	0	0-30	PASS	
4-Methyl-2-Pentanone	25.00	25.80	103	26.04	104	70-130	60-140	1	0-30	PASS	
Naphthalene	25.00	34.70	139	34.23	137	24-144	4-164	1	0-30	PASS	
o-Xylene	25.00	24.67	99	24.35	97	69-130	59-140	1	0-30	PASS	
p/m-Xylene	50.00	49.76	100	49.45	99	70-132	60-142	1	0-30	PASS	
Propene	25.00	23.53	94	16.21	65	50-164	31-183	37	0-121	PASS	
Styrene	25.00	25.51	102	25.51	102	65-131	54-142	0	0-30	PASS	
Tert-Amyl-Methyl Ether (TAME)	25.00	23.62	94	23.89	96	69-130	59-140	1	0-30	PASS	
Tert-Butyl Alcohol (TBA)	50.00	49.76	100	49.23	98	66-144	53-157	1	0-30	PASS	
Tetrachloroethene	25.00	25.06	100	24.72	99	70-130	60-140	1	0-30	PASS	
Tetrahydrofuran	25.00	24.52	98	24.29	97	64-130	53-141	1	0-30	PASS	
Toluene	25.00	24.15	97	24.20	97	70-130	60-140	0	0-30	PASS	
Trichloroethene	25.00	24.95	100	25.02	100	70-130	60-140	0	0-30	PASS	
Trichlorofluoromethane	25.00	26.46	106	25.55	102	63-141	50-154	4	0-30	PASS	

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: **095-01-021-19819**
LCS/LCSD BATCH: 180303L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-03 11:35
LCSD: 2018-03-03 12:24
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.43	98	24.51	98	70-136	59-147	0	0-30	PASS	
1,1,1-Trichloroethane	25.00	25.45	102	25.16	101	70-130	60-140	1	0-30	PASS	
1,1,2-Trichloroethane	25.00	24.58	98	24.92	100	70-130	60-140	1	0-30	PASS	
N-Octane	25.00	23.69	95	23.48	94	50-150	33-167	1	0-30	PASS	
N-Decane	25.00	24.08	96	23.60	94	50-150	33-167	2	0-30	PASS	
N-Nonane	25.00	24.27	97	23.93	96	50-150	33-167	1	0-30	PASS	
Isopropylbenzene	25.00	24.29	97	24.35	97	70-130	60-140	0	0-30	PASS	
n-Propylbenzene	25.00	24.62	98	24.39	98	68-130	58-140	1	0-30	PASS	
sec-Butylbenzene	25.00	24.80	99	24.37	97	50-150	33-167	2	0-30	PASS	
2-Chlorotoluene	25.00	24.91	100	24.57	98	70-130	60-140	1	0-30	PASS	
tert-Butylbenzene	25.00	25.41	102	24.85	99	50-150	33-167	2	0-30	PASS	
p-Isopropyltoluene	25.00	25.64	103	25.14	101	50-150	33-167	2	0-30	PASS	
n-Butylbenzene	25.00	25.79	103	25.25	101	50-150	33-167	2	0-30	PASS	
1,2,3-Trichlorobenzene	25.00	28.04	112	27.33	109	50-150	33-167	3	0-30	PASS	
1,2,3-Trichloropropane	25.00	24.31	97	24.18	97	70-130	60-140	1	0-30	PASS	
Acrolein	25.00	24.49	98	24.16	97	59-143	45-157	1	0-30	PASS	
Acrylonitrile	25.00	24.21	97	23.98	96	61-130	50-142	1	0-30	PASS	
Methyl Methacrylate	25.00	24.88	100	25.16	101	70-130	60-140	1	0-30	PASS	
Propane	50.00	48.87	98	45.49	91	49-157	31-175	7	0-92	PASS	
Butane	50.00	47.57	95	47.09	94	66-138	54-150	1	0-30	PASS	
Methanol	75.00	81.02	108	80.00	107	11-151	0-174	1	0-30	PASS	
2,2,4-Trimethyl Pentane	25.00	22.93	92	22.96	92	70-130	60-140	0	0-30	PASS	
Isobutane	50.00	48.95	98	47.77	96	63-141	50-154	2	0-30	PASS	
1,1,1,2-Tetrafluoroethane	25.00	26.06	104	24.70	99	70-130	60-140	5	0-30	PASS	
1,3,5-Trimethylbenzene	25.00	25.77	103	25.83	103	62-130	51-141	0	0-30	PASS	
1,1,2,2-Tetrachloroethane	25.00	24.20	97	24.08	96	63-130	52-141	0	0-30	PASS	
1,2,4-Trimethylbenzene	25.00	26.34	105	25.78	103	60-132	48-144	2	0-30	PASS	
1,2,4-Trichlorobenzene	25.00	35.55	142	35.29	141	31-151	11-171	1	0-30	PASS	

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19819
LCS/LCSD BATCH: 180303L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-03 11:35
LCSD: 2018-03-03 12:24
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
Vinyl Acetate	25.00	24.75	99	24.37	97	58-130	46-142	2	0-30	PASS	
Vinyl Chloride	25.00	25.12	100	24.92	100	70-134	59-145	1	0-30	PASS	
1,1-Difluoroethane	25.00	23.52	94	22.80	91	70-131	60-141	3	0-30	PASS	
Isopropanol	25.00	20.25	81	20.01	80	57-135	44-148	1	0-30	PASS	

Total number of LCS compounds: 88
Total number of ME compounds: 0
Total number of ME compounds allowed: 4
LCS ME CL validation result: Pass

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	03mar03.rr	Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar03.d\
LCSD	03mar04.rr	Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar04.d\

SURROGATE RECOVERIES
FOR METHOD: EPA TO-15

WORK ORDER: 18-03-0118
BATCH ID:
LCS/MB: 180303L01
MS:
EXTRACTION : N/A

REVIEWED BY:
D/T REVIEWED:

1R CLIENT SAMPLE NUMBER : WAS00047

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar13.d\03mar13.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-03 21:35

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	111	68-134	PASS	
1,2-Dichloroethane-d4	111	67-133	PASS	
Toluene-d8	89	70-130	PASS	

2R CLIENT SAMPLE NUMBER : WAS00048

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar15.d\03mar15.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-03 23:09

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	106	68-134	PASS	
1,2-Dichloroethane-d4	111	67-133	PASS	
Toluene-d8	97	70-130	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar06.d\03mar06.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-03 14:24

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	96	68-134	PASS	
1,2-Dichloroethane-d4	101	67-133	PASS	
Toluene-d8	97	70-130	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA TO-15

WORK ORDER: 18-03-0118
BATCH ID:
LCS/MB: 180303L01
MS:
EXTRACTION : N/A

REVIEWED BY:
D/T REVIEWED:

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar03.d\03mar03.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-03 11:35

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	102	68-134	PASS	
1,2-Dichloroethane-d4	103	67-133	PASS	
Toluene-d8	101	70-130	PASS	

LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar04.d\03mar04.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-03 12:24

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	100	68-134	PASS	
1,2-Dichloroethane-d4	101	67-133	PASS	
Toluene-d8	101	70-130	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar06.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 14:24 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:47 temprc

Sample Name: MB FC LC828 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	783850	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	2643840	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.542	117	2239443	25.000	0.01
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.878	65	1081920	25.225	0.00
SpikedAmount 25.000	Recovery = 100.899					
60)$Toluene-d8	(2)	14.281	98	2566188	24.161	0.00
SpikedAmount 25.000	Recovery = 96.646					
78)$1,4-Bromofluorobenzene	(3)	20.558	95	1532480	24.089	0.01
SpikedAmount 25.000	Recovery = 96.355					
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	0.000		0	N.D.	
2) 1,1-Difluoroethane	(1)	0.000		0	N.D.	
3) Propene	(1)	0.000		0	N.D.	
4) Propane	(1)	0.000		0D	N.D.	
5) Dichlorodifluoromethane	(1)	0.000		0	N.D.	
6) Chloromethane	(1)	0.000		0	N.D.	
7) Dichlorotetrafluoroethane	(1)	0.000		0	N.D.	
8) Isobutane	(1)	0.000		0	N.D.	
9) Methanol	(1)	3.681	31	2816	0.388	31
10) Vinyl Chloride	(1)	0.000		0	N.D.	
11) 1,3-Butadiene	(1)	0.000		0	N.D.	
12) Butane	(1)	0.000		0	N.D.	
13) Bromomethane	(1)	0.000		0	N.D.	
14) Chloroethane	(1)	0.000		0	N.D.	
15) Ethanol	(1)	0.000		0	N.D.	
16) Acrolein	(1)	0.000		0	N.D.	
17) Acetone	(1)	4.763	58	971	0.069	88
18) Trichlorofluoromethane	(1)	0.000		0	N.D.	
19) Isopropanol	(1)	0.000		0	N.D.	
20) Acrylonitrile	(1)	0.000		0	N.D.	
21) 1,1-Dichloroethene	(1)	0.000		0	N.D.	
23) Methylene Chloride	(1)	0.000		0	N.D.	
22) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
24) Allyl Chloride	(1)	0.000		0	N.D.	
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar06.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 14:24 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:47 temprc

Sample Name: MB FC LC828 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	0.000		0	N.D.	
27) Propionitrile	(1)	0.000		0	N.D.	
28) t-1,2-Dichloroethene	(1)	0.000		0	N.D.	
29) 1,1-Dichloroethane	(1)	0.000		0	N.D.	
30) Methyl-t-Butyl Ether (MTBE)	(1)	0.000		0	N.D.	
31) Vinyl Acetate	(1)	0.000		0	N.D.	
32) 2-Butanone	(1)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(1)	0.000		0	N.D.	
37) Hexane	(1)	0.000		0	N.D.	
36) Diisopropyl Ether (DIPE)	(1)	0.000		0	N.D.	
35) Ethyl Acetate	(1)	0.000		0	N.D.	
38) Chloroform	(1)	0.000		0	N.D.	
39) Tetrahydrofuran	(1)	0.000		0	N.D.	
40) Ethyl-t-Butyl Ether (ETBE)	(1)	0.000		0	N.D.	
42) 1,2-Dichloroethane	(1)	0.000		0	N.D.	
43) 1,1,1-Trichloroethane	(1)	0.000		0	N.D.	
44) Benzene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
46) Cyclohexane	(2)	0.000		0	N.D.	
48) Tert-Amyl-Methyl Ether (TAME)	(2)	0.000		0	N.D.	
49) 1,2-Dichloropropane	(2)	0.000		0	N.D.	
50) Bromodichloromethane	(2)	0.000		0	N.D.	
52) Trichloroethene	(2)	0.000		0	N.D.	
53) 2,2,4-Trimethyl Pentane	(2)	0.000		0	N.D.	
51) 1,4-Dioxane	(2)	0.000		0	N.D.	
54) Methyl Methacrylate	(2)	0.000		0	N.D.	
55) Heptane	(2)	0.000		0	N.D.	
56) c-1,3-Dichloropropene	(2)	0.000		0	N.D.	
57) 4-Methyl-2-Pentanone	(2)	0.000		0	N.D.	
58) t-1,3-Dichloropropene	(2)	0.000		0	N.D.	
59) 1,1,2-Trichloroethane	(2)	0.000		0	N.D.	
61) Toluene	(3)	0.000		0	N.D.	
62) 2-Hexanone	(3)	0.000		0	N.D.	
63) Ethyl Methacrylate	(3)	0.000		0	N.D.	
64) Dibromochloromethane	(3)	0.000		0	N.D.	
65) 1,2-Dibromoethane	(3)	0.000		0	N.D.	
66) N-Octane	(3)	0.000		0	N.D.	

Return to Contents

Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar06.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 14:24 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:47 temprc

Sample Name: MB FC LC828 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	0.000		0	N.D.	
69) Chlorobenzene	(3)	0.000		0	N.D.	
70) Ethylbenzene	(3)	0.000		0	N.D.	
71) p/m-Xylene	(3)	0.000		0	N.D.	
72) Bromoform	(3)	0.000		0	N.D.	
73) Styrene	(3)	0.000		0	N.D.	
74) 1,1,2,2-Tetrachloroethane	(3)	0.000		0	N.D.	
75) o-Xylene	(3)	0.000		0	N.D.	
76) 1,2,3-Trichloropropane	(3)	0.000		0	N.D.	
77) N-Nonane	(3)	0.000		0	N.D.	
79) Isopropylbenzene	(3)	0.000		0	N.D.	
80) 2-Chlorotoluene	(3)	0.000		0	N.D.	
81) n-Propylbenzene	(3)	0.000		0	N.D.	
82) 4-Ethyltoluene	(3)	0.000		0	N.D.	
83) 1,3,5-Trimethylbenzene	(3)	0.000		0	N.D.	
84) alpha-Methylstyrene	(3)	0.000		0	N.D.	
86) 1,2,4-Trimethylbenzene	(3)	0.000		0	N.D.	
85) tert-Butylbenzene	(3)	0.000		0	N.D.	
87) Benzyl Chloride	(3)	0.000		0	N.D.	
88) 1,3-Dichlorobenzene	(3)	0.000		0	N.D.	
90) N-Decane	(3)	0.000		0	N.D.	
89) 1,4-Dichlorobenzene	(3)	0.000		0	N.D.	
91) sec-Butylbenzene	(3)	0.000		0	N.D.	
92) p-Isopropyltoluene	(3)	0.000		0	N.D.	
93) 1,2-Dichlorobenzene	(3)	0.000		0	N.D.	
94) n-Butylbenzene	(3)	0.000		0	N.D.	
95) 1,2-Dibromo-3-Chloropropane	(3)	0.000		0	N.D.	
96) 1,2,4-Trichlorobenzene	(3)	0.000		0	N.D.	
97) Naphthalene	(3)	0.000		0	N.D.	
98) 1,2,3-Trichlorobenzene	(3)	0.000		0	N.D.	
99) Hexachloro-1,3-Butadiene	(3)	0.000		0	N.D.	

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar06.d

Date : 03-MAR-2018 14:24

Client ID:

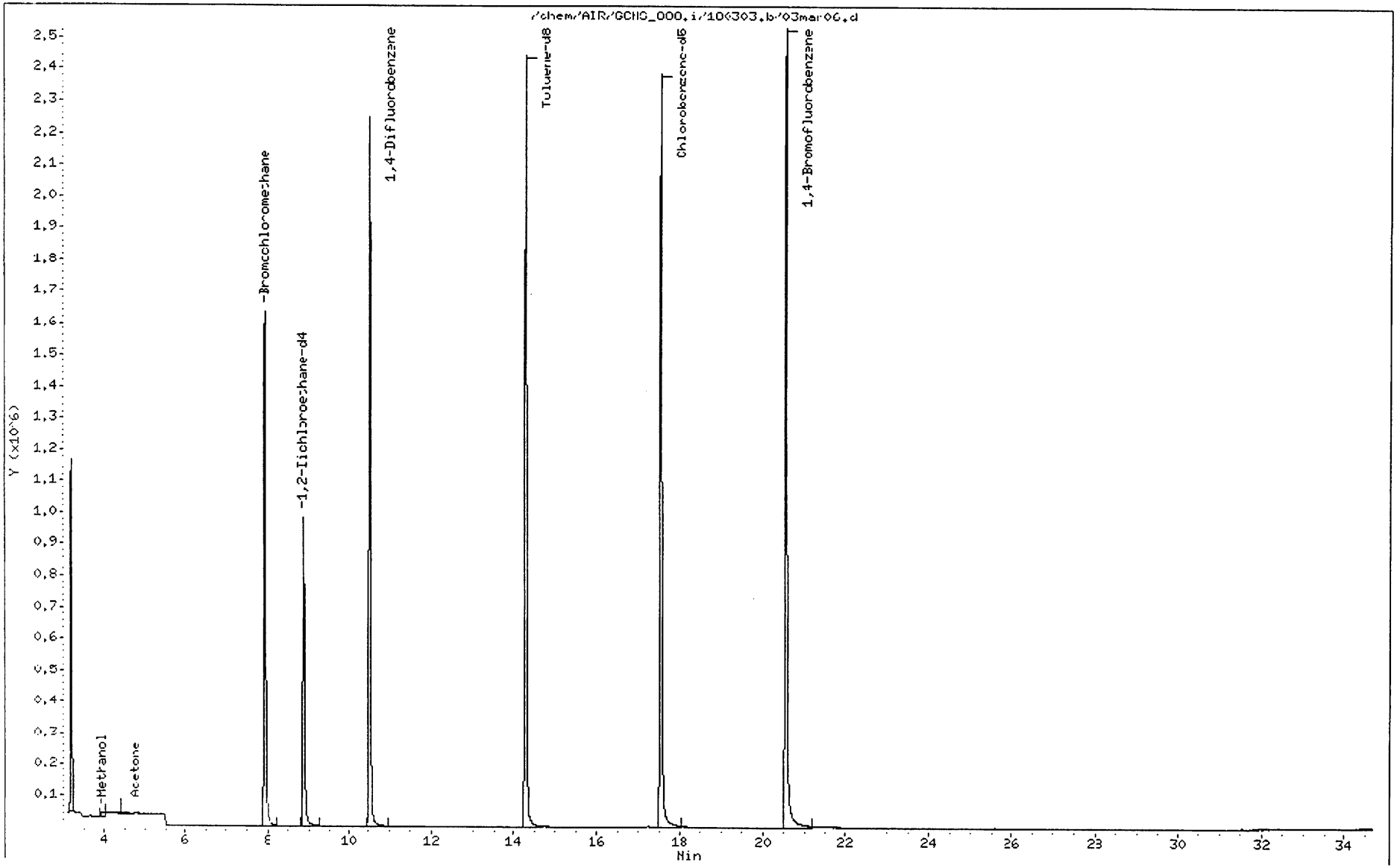
Sample Info: MB FC LC828

Column phase:

Instrument: GCMS_LUU.i

Operator: UPY2

Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar03.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 11:35 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:46 temprc

Sample Name: LCS 25PPBV 8021840 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	668711	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	2287911	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.547	117	2139850	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.884	65	946030	25.854	-0.01
SpikedAmount 25.000	Recovery = 103.416					
60)$Toluene-d8	(2)	14.282	98	2310200	25.135	0.00
SpikedAmount 25.000	Recovery = 100.540					
78)$1,4-Bromofluorobenzene	(3)	20.564	95	1550349	25.504	0.00
SpikedAmount 25.000	Recovery = 102.015					
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.252	69	532114	26.065	97
2) 1,1-Difluoroethane	(1)	3.310	51	953266	23.521	97
3) Propene	(1)	3.369	41	830900	23.535	99
4) Propane	(1)	3.387	29	865353	48.875	97
5) Dichlorodifluoromethane	(1)	3.428	85	1703862	26.629	100
6) Chloromethane	(1)	3.552	50	619444	25.107	100
7) Dichlorotetrafluoroethane	(1)	3.640	85	1453270	26.094	100
8) Isobutane	(1)	3.658	43	1907844	48.952	99
9) Methanol	(1)	3.675	31	501190	81.020	96
10) Vinyl Chloride	(1)	3.734	62	610347	25.120	100
11) 1,3-Butadiene	(1)	3.846	54	498874	25.126	96
12) Butane	(1)	3.887	43	1712785	47.566	100
13) Bromomethane	(1)	4.058	94	504310	25.147	100
14) Chloroethane	(1)	4.199	64	261000	24.788	100
15) Ethanol	(1)	4.287	45	1030759	96.962	99
16) Acrolein	(1)	4.581	56	275523	24.489	100
17) Acetone	(1)	4.693	58	299363	24.887	96
18) Trichlorofluoromethane	(1)	4.858	101	1658500	26.461	100
19) Isopropanol	(1)	4.911	45	1222907	20.255	98
20) Acrylonitrile	(1)	5.111	53	723648	24.214	100
21) 1,1-Dichloroethene	(1)	5.452	61	1336183	24.526	99
23) Methylene Chloride	(1)	5.562	84	548067	24.582	92
22) Tert-Butyl Alcohol (TBA)	(1)	5.481	59	2850156	49.755	99
24) Allyl Chloride	(1)	5.686	41	1086773	22.482	99
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.851	101	1281585	24.432	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar03.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 11:35 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:46 temprc

Sample Name: LCS 25PPBV 8021840 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.856	76	1624713	23.586	98
27) Propionitrile	(1)	6.253	54	668136	24.426	99
28) t-1,2-Dichloroethene	(1)	6.542	96	623440	24.300	99
29) 1,1-Dichloroethane	(1)	6.758	63	1351285	23.825	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.843	73	1745493	24.871	99
31) Vinyl Acetate	(1)	6.945	43	2297507	24.754	99
32) 2-Butanone	(1)	7.206	43	1756544	25.224	99
33) c-1,2-Dichloroethene	(1)	7.727	96	663515	24.194	99
37) Hexane	(1)	8.034	57	1152498	24.164	99
36) Diisopropyl Ether (DIPE)	(1)	8.034	45	3029751	22.737	98
35) Ethyl Acetate	(1)	8.039	61	228127	24.695	100
38) Chloroform	(1)	8.090	83	1384537	24.387	99
39) Tetrahydrofuran	(1)	8.578	42	956283	24.523	99
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	2516343	23.579	100
42) 1,2-Dichloroethane	(1)	9.020	62	1137606	25.765	99
43) 1,1,1-Trichloroethane	(1)	9.366	97	1588593	25.454	100
44) Benzene	(2)	9.984	78	1885022	23.840	98
45) Carbon Tetrachloride	(2)	10.194	117	1763388	26.150	100
46) Cyclohexane	(2)	10.381	56	1329318	24.428	99
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.886	73	1815430	23.625	98
49) 1,2-Dichloropropane	(2)	11.158	63	862737	24.057	98
50) Bromodichloromethane	(2)	11.435	83	1613179	25.498	100
52) Trichloroethene	(2)	11.521	95	916551	24.954	100
53) 2,2,4-Trimethyl Pentane	(2)	11.645	57	3890820	22.927	99
51) 1,4-Dioxane	(2)	11.509	88	451488	25.957	87
54) Methyl Methacrylate	(2)	11.900	69	620529	24.879	97
55) Heptane	(2)	12.076	100	159156	24.385	99
56) c-1,3-Dichloropropene	(2)	12.864	75	1216224	25.676	98
57) 4-Methyl-2-Pentanone	(2)	12.955	58	798746	25.796	98
58) t-1,3-Dichloropropene	(2)	13.720	75	1198402	26.851	98
59) 1,1,2-Trichloroethane	(2)	13.970	83	733716	24.581	100
61) Toluene	(3)	14.446	91	2317761	24.149	100
62) 2-Hexanone	(3)	14.968	58	1030743	26.641	96
63) Ethyl Methacrylate	(3)	15.047	69	1092358	23.439	97
64) Dibromochloromethane	(3)	15.104	129	1743507	25.388	100
65) 1,2-Dibromoethane	(3)	15.523	107	1457201	25.103	100
66) N-Octane	(3)	16.334	57	843875	23.693	99

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar03.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 11:35 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:46 temprc

Sample Name: LCS 25PPBV 8021840 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1394733	25.056	100
69) Chlorobenzene	(3)	17.627	112	1984042	24.361	99
70) Ethylbenzene	(3)	18.398	91	3269268	25.110	100
71) p/m-Xylene	(3)	18.744	91	5306221	49.757	100
72) Bromoform	(3)	18.749	173	1908771	26.305	100
73) Styrene	(3)	19.447	104	1906353	25.513	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	1904143	24.198	100
75) o-Xylene	(3)	19.657	91	2523231	24.673	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1453814	24.308	100
77) N-Nonane	(3)	20.337	57	1976556	24.266	99
79) Isopropylbenzene	(3)	20.910	105	3596005	24.293	100
80) 2-Chlorotoluene	(3)	21.857	91	2689811	24.907	100
81) n-Propylbenzene	(3)	22.027	91	4317218	24.624	100
82) 4-Ethyltoluene	(3)	22.378	105	3603011	26.461	99
83) 1,3,5-Trimethylbenzene	(3)	22.577	105	3149911	25.768	100
84) alpha-Methylstyrene	(3)	22.917	118	1656625	25.842	100
86) 1,2,4-Trimethylbenzene	(3)	23.518	105	3181586	26.340	98
85) tert-Butylbenzene	(3)	23.495	119	3388377	25.410	99
87) Benzyl Chloride	(3)	23.756	91	2893882	27.736	100
88) 1,3-Dichlorobenzene	(3)	23.767	146	2294474	26.386	100
90) N-Decane	(3)	24.017	57	2378609	24.081	99
89) 1,4-Dichlorobenzene	(3)	23.943	146	2378086	27.842	100
91) sec-Butylbenzene	(3)	24.170	105	4351853	24.800	100
92) p-Isopropyltoluene	(3)	24.618	119	3955908	25.641	100
93) 1,2-Dichlorobenzene	(3)	24.759	146	2330369	27.390	100
94) n-Butylbenzene	(3)	25.701	91	3804929	25.787	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.899	157	1407980	28.614	100
96) 1,2,4-Trichlorobenzene	(3)	29.409	180	2721069	35.553	99
97) Naphthalene	(3)	29.613	128	5269524	34.702	99
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	2309857	28.037	99
99) Hexachloro-1,3-Butadiene	(3)	30.548	225	2518105	31.896	100

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar03.d

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Date : 03-MAR-2018 11:35

Client ID:

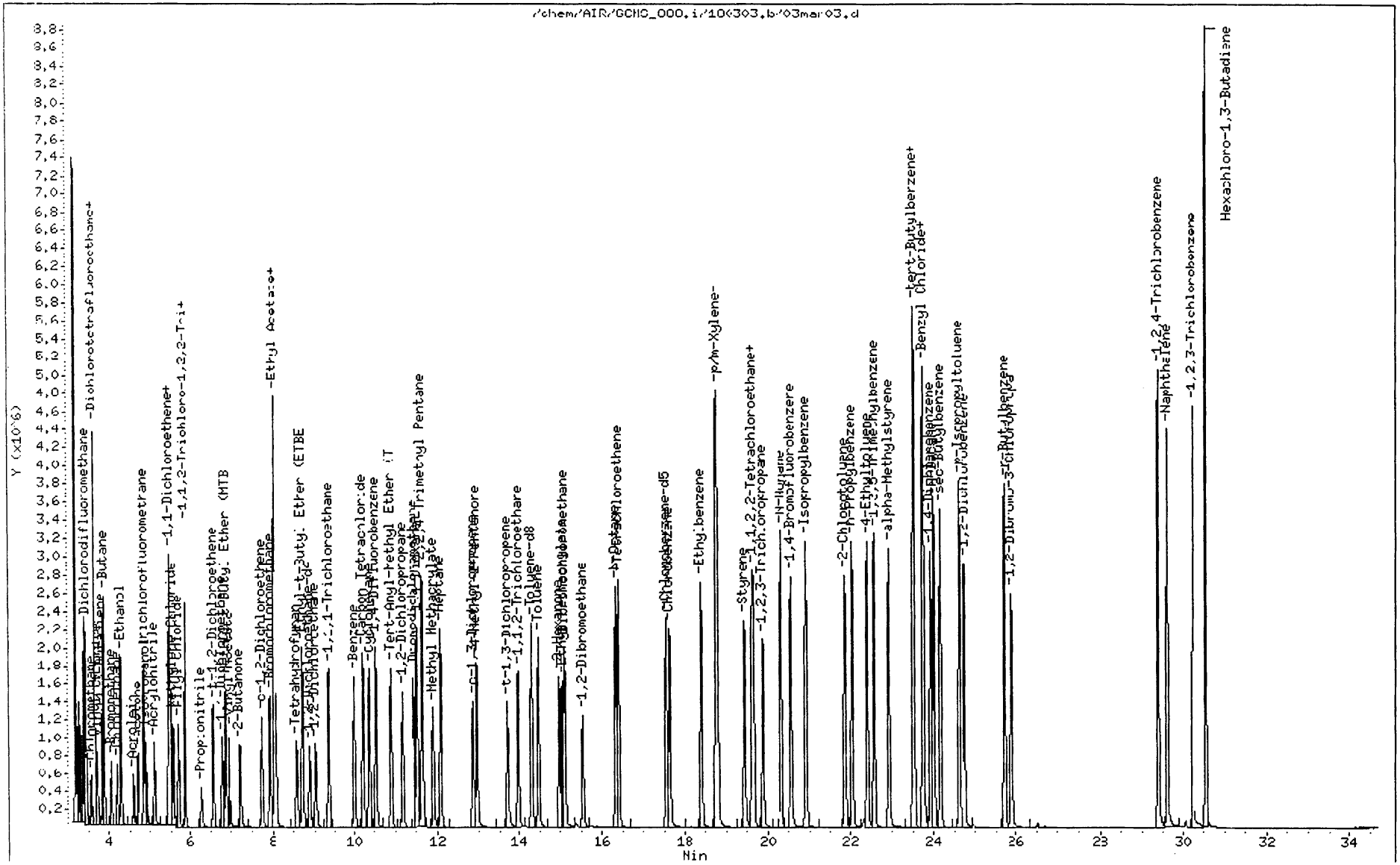
Instrument: GCMS_000.i

Sample Info: LCS 25PPBV 8021840

Operator: UPY2

Column phase:

Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar04.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 12:24 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:46 temprc

Sample Name: LCSD 25PPBV 8021840 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.920	130	708150	25.000	0.00
47)*1,4-Difluorobenzene	(2)	10.528	114	2410710	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.547	117	2275431	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.884	65	974346	25.145	-0.01
SpikedAmount 25.000	Recovery = 100.580					
60)$Toluene-d8	(2)	14.287	98	2436895	25.163	-0.01
SpikedAmount 25.000	Recovery = 100.652					
78)$1,4-Bromofluorobenzene	(3)	20.564	95	1613800	24.966	0.00
SpikedAmount 25.000	Recovery = 99.863					
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.252	69	533948	24.698	95
2) 1,1-Difluoroethane	(1)	3.310	51	978391	22.796	96
3) Propene	(1)	3.369	41	606085	16.211	96
4) Propane	(1)	3.387	29	853006	45.494	87
5) Dichlorodifluoromethane	(1)	3.428	85	1757110	25.931	100
6) Chloromethane	(1)	3.552	50	643209	24.619	99
7) Dichlorotetrafluoroethane	(1)	3.640	85	1521412	25.796	100
8) Isobutane	(1)	3.658	43	1971394	47.766	99
9) Methanol	(1)	3.681	31	524086	80.003	96
10) Vinyl Chloride	(1)	3.734	62	641150	24.918	99
11) 1,3-Butadiene	(1)	3.846	54	520241	24.743	95
12) Butane	(1)	3.887	43	1795603	47.088	99
13) Bromomethane	(1)	4.058	94	532887	25.092	100
14) Chloroethane	(1)	4.199	64	272858	24.471	99
15) Ethanol	(1)	4.287	45	1066437	94.731	99
16) Acrolein	(1)	4.581	56	287879	24.162	99
17) Acetone	(1)	4.693	58	315419	24.761	94
18) Trichlorofluoromethane	(1)	4.858	101	1695558	25.545	100
19) Isopropanol	(1)	4.911	45	1279144	20.006	97
20) Acrylonitrile	(1)	5.111	53	758791	23.976	100
21) 1,1-Dichloroethene	(1)	5.452	61	1404472	24.344	98
23) Methylene Chloride	(1)	5.562	84	581527	24.630	90
22) Tert-Butyl Alcohol (TBA)	(1)	5.487	59	2986600	49.233	97
24) Allyl Chloride	(1)	5.686	41	1146082	22.389	98
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.851	101	1361297	24.506	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar04.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 12:24 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:46 temprc

Sample Name: LCSD 25PPBV 8021840 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.856	76	1748786	23.973	97
27) Propionitrile	(1)	6.253	54	699762	24.157	98
28) t-1,2-Dichloroethene	(1)	6.542	96	661847	24.360	98
29) 1,1-Dichloroethane	(1)	6.758	63	1444989	24.058	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.843	73	1834480	24.683	98
31) Vinyl Acetate	(1)	6.951	43	2395494	24.372	98
32) 2-Butanone	(1)	7.211	43	1832217	24.846	96
33) c-1,2-Dichloroethene	(1)	7.727	96	713092	24.553	98
37) Hexane	(1)	8.034	57	1214588	24.048	98
36) Diisopropyl Ether (DIPE)	(1)	8.034	45	3160393	22.396	98
35) Ethyl Acetate	(1)	8.039	61	238468	24.377	99
38) Chloroform	(1)	8.090	83	1457513	24.242	99
39) Tetrahydrofuran	(1)	8.578	42	1002957	24.288	98
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	2645346	23.407	99
42) 1,2-Dichloroethane	(1)	9.020	62	1174527	25.119	100
43) 1,1,1-Trichloroethane	(1)	9.366	97	1663019	25.163	100
44) Benzene	(2)	9.984	78	2042616	24.518	96
45) Carbon Tetrachloride	(2)	10.194	117	1837201	25.857	100
46) Cyclohexane	(2)	10.381	56	1412881	24.641	98
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	1934544	23.892	96
49) 1,2-Dichloropropane	(2)	11.158	63	920544	24.362	97
50) Bromodichloromethane	(2)	11.435	83	1693809	25.409	99
52) Trichloroethene	(2)	11.526	95	968416	25.023	100
53) 2,2,4-Trimethyl Pentane	(2)	11.645	57	4105111	22.958	99
51) 1,4-Dioxane	(2)	11.509	88	476931	26.023	86
54) Methyl Methacrylate	(2)	11.900	69	661346	25.165	95
55) Heptane	(2)	12.082	100	169201	24.603	96
56) c-1,3-Dichloropropene	(2)	12.864	75	1301355	26.074	97
57) 4-Methyl-2-Pentanone	(2)	12.961	58	849625	26.042	97
58) t-1,3-Dichloropropene	(2)	13.720	75	1268660	26.977	98
59) 1,1,2-Trichloroethane	(2)	13.970	83	783620	24.915	100
61) Toluene	(3)	14.446	91	2469579	24.198	100
62) 2-Hexanone	(3)	14.968	58	1163081	28.270	97
63) Ethyl Methacrylate	(3)	15.047	69	1166147	23.532	95
64) Dibromochloromethane	(3)	15.104	129	1821351	24.941	100
65) 1,2-Dibromoethane	(3)	15.523	107	1541515	24.973	100
66) N-Octane	(3)	16.334	57	889378	23.482	97

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar04.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 12:24 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:46 temprc

Sample Name: LCSD 25PPBV 8021840 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1463361	24.722	100
69) Chlorobenzene	(3)	17.627	112	2125858	24.547	99
70) Ethylbenzene	(3)	18.398	91	3463328	25.016	99
71) p/m-Xylene	(3)	18.744	91	5607786	49.451	99
72) Bromoform	(3)	18.749	173	2009608	26.045	100
73) Styrene	(3)	19.447	104	2026783	25.508	99
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	2015225	24.084	100
75) o-Xylene	(3)	19.657	91	2647800	24.348	99
76) 1,2,3-Trichloropropane	(3)	19.883	75	1537821	24.181	100
77) N-Nonane	(3)	20.337	57	2072849	23.932	98
79) Isopropylbenzene	(3)	20.910	105	3832614	24.349	100
80) 2-Chlorotoluene	(3)	21.856	91	2821181	24.567	100
81) n-Propylbenzene	(3)	22.027	91	4547232	24.390	100
82) 4-Ethyltoluene	(3)	22.378	105	3774206	26.066	99
83) 1,3,5-Trimethylbenzene	(3)	22.577	105	3357839	25.833	99
84) alpha-Methylstyrene	(3)	22.917	118	1741879	25.553	100
86) 1,2,4-Trimethylbenzene	(3)	23.518	105	3311364	25.781	98
85) tert-Butylbenzene	(3)	23.495	119	3523009	24.845	99
87) Benzyl Chloride	(3)	23.756	91	3033723	27.344	99
88) 1,3-Dichlorobenzene	(3)	23.767	146	2388700	25.833	100
90) N-Decane	(3)	24.017	57	2479002	23.602	99
89) 1,4-Dichlorobenzene	(3)	23.943	146	2485719	27.368	100
91) sec-Butylbenzene	(3)	24.170	105	4546425	24.365	100
92) p-Isopropyltoluene	(3)	24.618	119	4123703	25.136	100
93) 1,2-Dichlorobenzene	(3)	24.754	146	2411789	26.658	99
94) n-Butylbenzene	(3)	25.701	91	3961569	25.249	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.893	157	1464630	27.991	99
96) 1,2,4-Trichlorobenzene	(3)	29.409	180	2871785	35.286	99
97) Naphthalene	(3)	29.613	128	5526740	34.227	99
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	2394071	27.328	99
99) Hexachloro-1,3-Butadiene	(3)	30.548	225	2617975	31.185	100

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar04.d

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Date : 03-MAR-2018 12:24

Client ID:

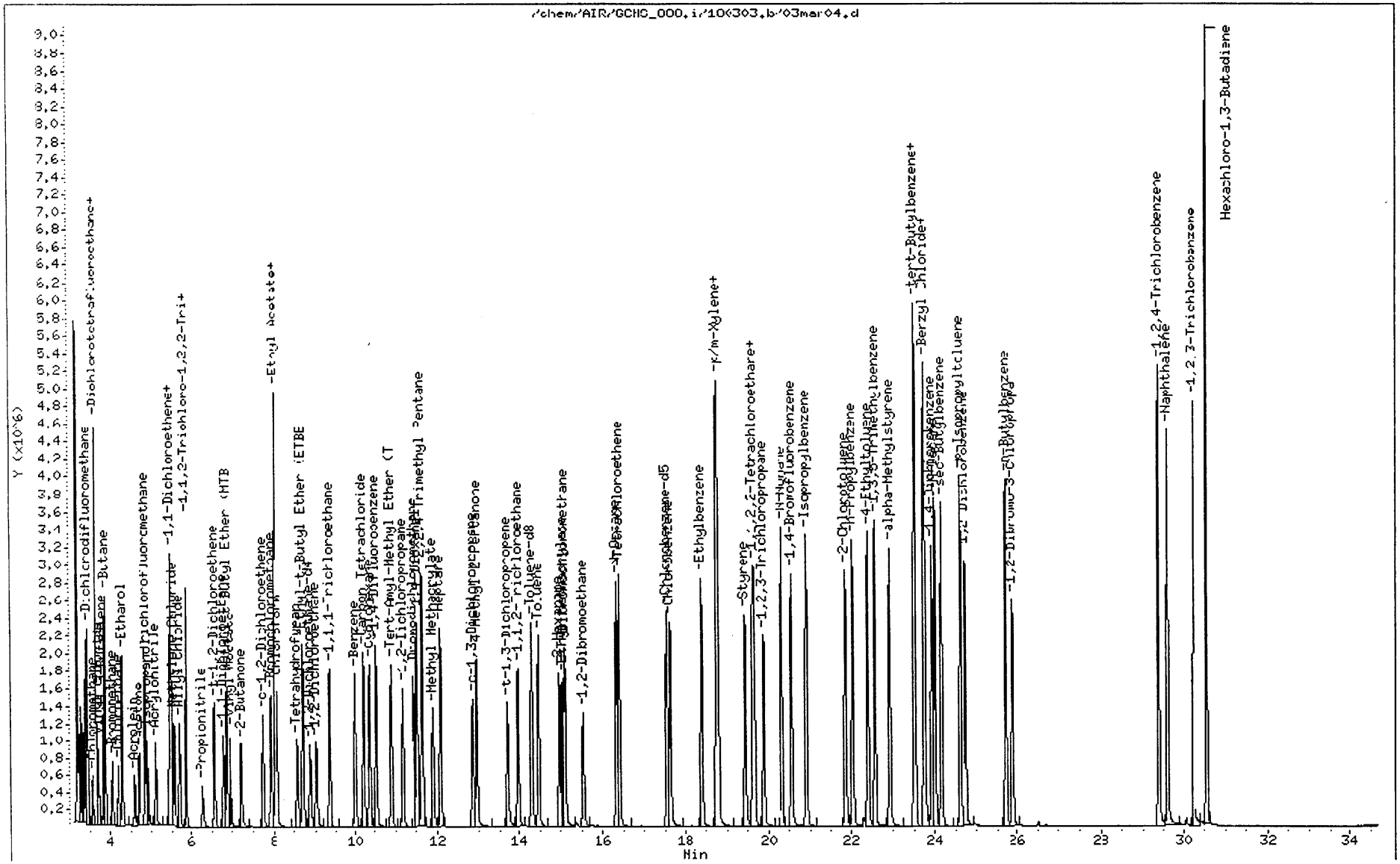
Instrument: GCMS_LUU.1

Sample Info: LCSD 25PPBV 8021840

Operator: UPY2

Column phase:

Column diameter: 0.00



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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA TO-15

MB SAMPLE ID:	**095-01-021-19823**	ANALYZED BY:	953
MB BATCH ID:	180305L01	D/T ANALYZED:	2018-03-05 14:33
INSTRUMENT:	GC/MS OOO	REVIEWED BY:	
EXTRACTION:	N/A	D/T REVIEWED:	
D/T EXTRACTED:		MATRIX:	Air

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar06.d\05mar06.rr

CLIENT WORK ORDER: 18-03-0118

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
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RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: **095-01-021**
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-05 14:33
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar06.d\05mar06.rr

 # MB **CLIENT SAMPLE NUMBER:** **Method Blank**

LCS/MB BATCH: 180305L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
1,2,4-Trichlorobenzene	0.000	1.00	ND	2.0	
Acetone	0.000	1.00	ND	2.0	
Benzene	0.000	1.00	ND	0.50	
Benzyl Chloride	0.000	1.00	ND	1.5	
Bromodichloromethane	0.000	1.00	ND	0.50	
Bromoform	0.000	1.00	ND	0.50	
Bromomethane	0.000	1.00	ND	0.50	
2-Butanone	0.000	1.00	ND	1.5	
n-Butylbenzene	0.000	1.00	ND	0.50	
sec-Butylbenzene	0.000	1.00	ND	0.50	
tert-Butylbenzene	0.000	1.00	ND	0.50	
Carbon Disulfide	0.000	1.00	ND	2.0	
Carbon Tetrachloride	0.000	1.00	ND	0.50	
Chlorobenzene	0.000	1.00	ND	0.50	
Chloroethane	0.000	1.00	ND	0.50	
Chloroform	0.000	1.00	ND	0.50	
Chloromethane	0.000	1.00	ND	0.50	
Dibromochloromethane	0.000	1.00	ND	0.50	
1,2-Dibromoethane	0.000	1.00	ND	0.50	
1,2-Dichlorobenzene	0.000	1.00	ND	0.50	
1,3-Dichlorobenzene	0.000	1.00	ND	0.50	
1,4-Dichlorobenzene	0.000	1.00	ND	0.50	
Dichlorodifluoromethane	0.000	1.00	ND	0.50	
1,1-Dichloroethane	0.000	1.00	ND	0.50	
1,2-Dichloroethane	0.000	1.00	ND	0.50	
1,1-Dichloroethene	0.000	1.00	ND	0.50	
c-1,2-Dichloroethene	0.000	1.00	ND	0.50	
t-1,2-Dichloroethene	0.000	1.00	ND	0.50	
1,2-Dichloropropane	0.000	1.00	ND	0.50	
c-1,3-Dichloropropene	0.000	1.00	ND	0.50	
t-1,3-Dichloropropene	0.000	1.00	ND	1.0	
Dichlorotetrafluoroethane	0.000	1.00	ND	2.0	
1,1-Difluoroethane	0.000	1.00	ND	2.0	
Ethylbenzene	0.000	1.00	ND	0.50	
4-Ethyltoluene	0.000	1.00	ND	0.50	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	1.5	
2-Hexanone	0.000	1.00	ND	1.5	
Isopropanol	0.000	1.00	ND	5.0	
Methyl-t-Butyl Ether (MTBE)	0.000	1.00	ND	2.0	

Return to Contents

RAW DATA SHEET
FOR METHOD: EPA TO-15

WORK ORDER: **095-01-021**
INSTRUMENT: GC/MS OOO
EXTRACTION : N/A
D/T EXTRACTED:

ANALYZED BY: 953
D/T ANALYZED: 2018-03-05 14:33
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar06.d\05mar06.rr

 # MB **CLIENT SAMPLE NUMBER:** **Method Blank**

LCS/MB BATCH: 180305L01
MS/MSD BATCH:
UNITS: ppb (v/v)

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Methylene Chloride	0.000	1.00	ND	5.0	
4-Methyl-2-Pentanone	0.000	1.00	ND	1.5	
Styrene	0.000	1.00	ND	1.5	
1,1,2,2-Tetrachloroethane	0.000	1.00	ND	1.0	
Tetrachloroethene	0.000	1.00	ND	0.50	
Toluene	0.000	1.00	ND	0.50	
1,1,1-Trichloroethane	0.000	1.00	ND	0.50	
1,1,2-Trichloroethane	0.000	1.00	ND	0.50	
Trichloroethene	0.000	1.00	ND	0.50	
Trichlorofluoromethane	0.000	1.00	ND	1.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.000	1.00	ND	1.5	
1,2,4-Trimethylbenzene	0.000	1.00	ND	1.5	
1,3,5-Trimethylbenzene	0.000	1.00	ND	0.50	
Vinyl Acetate	0.000	1.00	ND	2.0	
Vinyl Chloride	0.000	1.00	ND	0.50	
o-Xylene	0.000	1.00	ND	0.50	
p/m-Xylene	0.000	1.00	ND	2.0	

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LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19823
LCS/LCSD BATCH: 180305L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-05 11:46
LCSD: 2018-03-05 12:39
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
Acetone	25.00	24.06	96	24.58	98	67-133	56-144	2	0-30	PASS	
Benzene	25.00	25.02	100	25.26	101	70-130	60-140	1	0-30	PASS	
Benzyl Chloride	25.00	27.23	109	27.45	110	38-158	18-178	1	0-30	PASS	
Bromodichloromethane	25.00	25.22	101	25.37	101	70-130	60-140	1	0-30	PASS	
Bromoform	25.00	25.81	103	26.10	104	63-147	49-161	1	0-30	PASS	
Bromomethane	25.00	24.87	99	25.21	101	70-139	58-150	1	0-30	PASS	
1,3-Butadiene	25.00	24.10	96	24.40	98	68-140	56-152	1	0-30	PASS	
2-Butanone	25.00	24.63	99	24.24	97	66-132	55-143	2	0-30	PASS	
Carbon Disulfide	25.00	24.37	97	24.67	99	68-146	55-159	1	0-30	PASS	
Carbon Tetrachloride	25.00	25.26	101	25.32	101	70-136	59-147	0	0-30	PASS	
Chlorobenzene	25.00	24.95	100	25.25	101	70-130	60-140	1	0-30	PASS	
Chloroethane	25.00	24.24	97	24.81	99	65-149	51-163	2	0-30	PASS	
Chloroform	25.00	24.46	98	24.65	99	70-130	60-140	1	0-30	PASS	
Chloromethane	25.00	23.81	95	24.08	96	69-141	57-153	1	0-30	PASS	
Cyclohexane	25.00	24.34	97	24.71	99	70-130	60-140	2	0-30	PASS	
Dibromochloromethane	25.00	25.13	101	25.32	101	70-138	59-149	1	0-30	PASS	
Dichlorodifluoromethane	25.00	24.21	97	24.51	98	67-139	55-151	1	0-30	PASS	
Diisopropyl Ether (DIPE)	25.00	22.18	89	22.34	89	63-130	52-141	1	0-30	PASS	
1,1-Dichloroethane	25.00	23.95	96	24.37	97	70-130	60-140	2	0-30	PASS	
1,1-Dichloroethene	25.00	24.05	96	24.66	99	70-135	59-146	3	0-30	PASS	
1,2-Dibromoethane	25.00	25.36	101	25.77	103	70-133	60-144	2	0-30	PASS	
Dichlorotetrafluoroethane	25.00	25.24	101	25.59	102	51-135	37-149	1	0-30	PASS	
1,2-Dichlorobenzene	25.00	26.16	105	26.46	106	48-138	33-153	1	0-30	PASS	
1,2-Dichloroethane	25.00	24.64	99	24.74	99	70-132	60-142	0	0-30	PASS	
1,2-Dichloropropane	25.00	24.44	98	24.74	99	70-130	60-140	1	0-30	PASS	
1,3-Dichlorobenzene	25.00	25.77	103	25.97	104	56-134	43-147	1	0-30	PASS	
1,4-Dichlorobenzene	25.00	26.97	108	27.39	110	52-136	38-150	2	0-30	PASS	
1,4-Dioxane	25.00	26.44	106	26.57	106	52-136	38-150	1	0-30	PASS	

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: **095-01-021-19823**
LCS/LCSD BATCH: 180305L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-05 11:46
LCSD: 2018-03-05 12:39
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
c-1,3-Dichloropropene	25.00	26.27	105	26.55	106	70-130	60-140	1	0-30	PASS	
c-1,2-Dichloroethene	25.00	25.13	101	25.45	102	70-130	60-140	1	0-30	PASS	
t-1,2-Dichloroethene	25.00	24.85	99	25.26	101	70-130	60-140	2	0-30	PASS	
t-1,3-Dichloropropene	25.00	26.82	107	27.13	109	70-147	57-160	1	0-30	PASS	
Ethanol	100.0	91.66	92	93.37	93	37-139	20-156	2	0-30	PASS	
Ethyl Acetate	25.00	24.66	99	25.22	101	70-133	60-144	2	0-30	PASS	
Ethyl-t-Butyl Ether (ETBE)	25.00	23.22	93	23.60	94	67-130	56-140	2	0-30	PASS	
Ethylbenzene	25.00	25.55	102	25.89	104	70-130	60-140	1	0-30	PASS	
4-Ethyltoluene	25.00	25.96	104	26.61	106	68-130	58-140	2	0-30	PASS	
Heptane	25.00	24.85	99	25.42	102	70-130	60-140	2	0-30	PASS	
Hexachloro-1,3-Butadiene	25.00	30.01	120	30.34	121	44-146	27-163	1	0-30	PASS	
Hexane	25.00	24.25	97	24.58	98	70-130	60-140	1	0-30	PASS	
2-Hexanone	25.00	28.67	115	28.82	115	70-136	59-147	1	0-30	PASS	
Methyl-t-Butyl Ether (MTBE)	25.00	24.98	100	25.28	101	68-130	58-140	1	0-30	PASS	
Methylene Chloride	25.00	24.01	96	24.34	97	69-130	59-140	1	0-30	PASS	
4-Methyl-2-Pentanone	25.00	26.17	105	26.02	104	70-130	60-140	1	0-30	PASS	
Naphthalene	25.00	33.76	135	34.19	137	24-144	4-164	1	0-30	PASS	
o-Xylene	25.00	24.56	98	24.76	99	69-130	59-140	1	0-30	PASS	
p/m-Xylene	50.00	49.64	99	50.04	100	70-132	60-142	1	0-30	PASS	
Propene	25.00	24.92	100	21.30	85	50-164	31-183	16	0-121	PASS	
Styrene	25.00	26.00	104	25.99	104	65-131	54-142	0	0-30	PASS	
Tert-Amyl-Methyl Ether (TAME)	25.00	23.85	95	24.41	98	69-130	59-140	2	0-30	PASS	
Tert-Butyl Alcohol (TBA)	50.00	43.86	88	45.97	92	66-144	53-157	5	0-30	PASS	
Tetrachloroethene	25.00	25.17	101	25.35	101	70-130	60-140	1	0-30	PASS	
Tetrahydrofuran	25.00	24.09	96	24.20	97	64-130	53-141	0	0-30	PASS	
Toluene	25.00	24.79	99	25.04	100	70-130	60-140	1	0-30	PASS	
Trichloroethene	25.00	25.26	101	25.31	101	70-130	60-140	0	0-30	PASS	
Trichlorofluoromethane	25.00	27.45	110	24.72	99	63-141	50-154	10	0-30	PASS	

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19823
LCS/LCSD BATCH: 180305L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-05 11:46
LCSD: 2018-03-05 12:39
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
1,1,2-Trichloro-1,2,2-Trifluoroethane	25.00	24.72	99	25.09	100	70-136	59-147	1	0-30	PASS	
1,1,1-Trichloroethane	25.00	25.02	100	25.27	101	70-130	60-140	1	0-30	PASS	
1,1,2-Trichloroethane	25.00	25.24	101	25.26	101	70-130	60-140	0	0-30	PASS	
N-Decane	25.00	23.01	92	23.45	94	50-150	33-167	2	0-30	PASS	
N-Nonane	25.00	23.64	95	24.12	96	50-150	33-167	2	0-30	PASS	
N-Octane	25.00	23.84	95	24.06	96	50-150	33-167	1	0-30	PASS	
sec-Butylbenzene	25.00	23.98	96	24.13	97	50-150	33-167	1	0-30	PASS	
Isopropylbenzene	25.00	24.14	97	24.51	98	70-130	60-140	2	0-30	PASS	
n-Propylbenzene	25.00	24.54	98	24.75	99	68-130	58-140	1	0-30	PASS	
n-Butylbenzene	25.00	24.56	98	25.02	100	50-150	33-167	2	0-30	PASS	
tert-Butylbenzene	25.00	24.58	98	24.87	99	50-150	33-167	1	0-30	PASS	
2-Chlorotoluene	25.00	24.64	99	24.92	100	70-130	60-140	1	0-30	PASS	
p-Isopropyltoluene	25.00	24.66	99	24.96	100	50-150	33-167	1	0-30	PASS	
1,2,3-Trichlorobenzene	25.00	26.71	107	26.74	107	50-150	33-167	0	0-30	PASS	
1,2,3-Trichloropropane	25.00	24.08	96	24.58	98	70-130	60-140	2	0-30	PASS	
Acrolein	25.00	23.53	94	24.12	96	59-143	45-157	2	0-30	PASS	
Acrylonitrile	25.00	23.71	95	23.93	96	61-130	50-142	1	0-30	PASS	
Methyl Methacrylate	25.00	25.71	103	25.94	104	70-130	60-140	1	0-30	PASS	
Propane	50.00	47.04	94	47.03	94	49-157	31-175	0	0-92	PASS	
Butane	50.00	44.91	90	45.76	92	66-138	54-150	2	0-30	PASS	
Methanol	75.00	71.87	96	76.23	102	11-151	0-174	6	0-30	PASS	
2,2,4-Trimethyl Pentane	25.00	22.98	92	22.94	92	70-130	60-140	0	0-30	PASS	
Isobutane	50.00	45.70	91	46.37	93	63-141	50-154	1	0-30	PASS	
1,1,1,2-Tetrafluoroethane	25.00	23.31	93	23.51	94	70-130	60-140	1	0-30	PASS	
1,3,5-Trimethylbenzene	25.00	25.55	102	25.74	103	62-130	51-141	1	0-30	PASS	
1,1,2,2-Tetrachloroethane	25.00	24.62	98	24.84	99	63-130	52-141	1	0-30	PASS	
1,2,4-Trimethylbenzene	25.00	25.64	103	25.73	103	60-132	48-144	0	0-30	PASS	
1,2,4-Trichlorobenzene	25.00	34.02	136	34.58	138	31-151	11-171	2	0-30	PASS	

LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

LCS/LCSD SAMPLE ID: 095-01-021-19823
LCS/LCSD BATCH: 180305L01
INSTRUMENTS:
LCS: GC/MS OOO
LCSD: GC/MS OOO

EXTRACTION: N/A
D/T EXTRACTED:
LCS:
LCSD:

ANALYZED BY: 953
D/T ANALYZED:
LCS: 2018-03-05 11:46
LCSD: 2018-03-05 12:39
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS%REC	LCSD CON	LCSD%REC	% REC CL	ME CL	RPD	RPD CL	STATUS	QUALIFIER
Vinyl Acetate	25.00	23.88	96	24.32	97	58-130	46-142	2	0-30	PASS	
Vinyl Chloride	25.00	24.48	98	24.65	99	70-134	59-145	1	0-30	PASS	
1,1-Difluoroethane	25.00	22.63	91	22.83	91	70-131	60-141	1	0-30	PASS	
Isopropanol	25.00	25.76	103	22.66	91	57-135	44-148	13	0-30	PASS	

Total number of LCS compounds: 88
Total number of ME compounds: 0
Total number of ME compounds allowed: 4
LCS ME CL validation result: Pass

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	05mar03.rr	Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar03.d\
LCSD	05mar04.rr	Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar04.d\

SURROGATE RECOVERIES
FOR METHOD: EPA TO-15

WORK ORDER: 18-03-0118
BATCH ID:
LCS/MB: 180305L01
MS:
EXTRACTION : N/A

REVIEWED BY:
D/T REVIEWED:

1R CLIENT SAMPLE NUMBER : WAS00047

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar07.d\05mar07.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-05 15:17

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	96	68-134	PASS	
1,2-Dichloroethane-d4	98	67-133	PASS	
Toluene-d8	96	70-130	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar06.d\05mar06.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-05 14:33

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	95	68-134	PASS	
1,2-Dichloroethane-d4	98	67-133	PASS	
Toluene-d8	98	70-130	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar03.d\05mar03.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-05 11:46

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	99	68-134	PASS	
1,2-Dichloroethane-d4	97	67-133	PASS	
Toluene-d8	101	70-130	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA TO-15

WORK ORDER: 18-03-0118
BATCH ID:
LCS/MB: 180305L01
MS:
EXTRACTION : N/A

REVIEWED BY:
D/T REVIEWED:

 # LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

INSTRUMENT: GC/MS OOO
D/T EXTRACTED:
DATA FILE: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar04.d\05mar04.rr

ANALYZED BY: 953
D/T ANALYZED 2018-03-05 12:39

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
1,4-Bromofluorobenzene	99	68-134	PASS	
1,2-Dichloroethane-d4	97	67-133	PASS	
Toluene-d8	100	70-130	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar06.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 14:33 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 06-Mar-2018 10:53 jxs7

Sample Name: MB FC LC449 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34) *Bromochloromethane	(1)	7.920	130	854074	25.000	0.00
47) *1,4-Difluorobenzene	(2)	10.522	114	2890073	25.000	0.01
68) *Chlorobenzene-d5	(3)	17.542	117	2482286	25.000	0.01
System Monitoring Compounds						
41) $1,2-Dichloroethane-d4	(1)	8.878	65	1141902	24.434	0.00
SpikedAmount 25.000	Recovery =	97.736				
60) $Toluene-d8	(2)	14.281	98	2831645	24.389	0.00
SpikedAmount 25.000	Recovery =	97.557				
78) $1,4-Bromofluorobenzene	(3)	20.558	95	1682821	23.864	0.01
SpikedAmount 25.000	Recovery =	95.456				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	0.000		0	N.D.	
2) 1,1-Difluoroethane	(1)	0.000		0	N.D.	
3) Propene	(1)	0.000		0	N.D.	
4) Propane	(1)	0.000		0	N.D.	
5) Dichlorodifluoromethane	(1)	0.000		0	N.D.	
6) Chloromethane	(1)	0.000		0	N.D.	
7) Dichlorotetrafluoroethane	(1)	0.000		0	N.D.	
8) Isobutane	(1)	0.000		0	N.D.	
9) Methanol	(1)	3.681	31	3683	0.466	17
10) Vinyl Chloride	(1)	0.000		0	N.D.	
11) 1,3-Butadiene	(1)	0.000		0	N.D.	
12) Butane	(1)	0.000		0	N.D.	
13) Bromomethane	(1)	0.000		0	N.D.	
14) Chloroethane	(1)	0.000		0	N.D.	
15) Ethanol	(1)	0.000		0	N.D.	
16) Acrolein	(1)	0.000		0	N.D.	
17) Acetone	(1)	0.000		0	N.D.	
18) Trichlorofluoromethane	(1)	0.000		0	N.D.	
19) Isopropanol	(1)	0.000		0	N.D.	
20) Acrylonitrile	(1)	0.000		0	N.D.	
21) 1,1-Dichloroethene	(1)	0.000		0	N.D.	
23) Methylene Chloride	(1)	0.000		0	N.D.	
22) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
24) Allyl Chloride	(1)	0.000		0	N.D.	
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	0.000		0	N.D.	

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar06.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 14:33 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 06-Mar-2018 10:53 jxs7

Sample Name: MB FC LC449 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	0.000		0	N.D.	
27) Propionitrile	(1)	0.000		0	N.D.	
28) t-1,2-Dichloroethene	(1)	0.000		0	N.D.	
29) 1,1-Dichloroethane	(1)	0.000		0	N.D.	
30) Methyl-t-Butyl Ether (MTBE)	(1)	0.000		0	N.D.	
31) Vinyl Acetate	(1)	0.000		0	N.D.	
32) 2-Butanone	(1)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(1)	0.000		0	N.D.	
37) Hexane	(1)	0.000		0	N.D.	
36) Diisopropyl Ether (DIPE)	(1)	0.000		0	N.D.	
35) Ethyl Acetate	(1)	0.000		0	N.D.	
38) Chloroform	(1)	0.000		0	N.D.	
39) Tetrahydrofuran	(1)	0.000		0	N.D.	
40) Ethyl-t-Butyl Ether (ETBE)	(1)	0.000		0	N.D.	
42) 1,2-Dichloroethane	(1)	0.000		0	N.D.	
43) 1,1,1-Trichloroethane	(1)	0.000		0	N.D.	
44) Benzene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
46) Cyclohexane	(2)	0.000		0	N.D.	
48) Tert-Amyl-Methyl Ether (TAME)	(2)	0.000		0	N.D.	
49) 1,2-Dichloropropane	(2)	0.000		0	N.D.	
50) Bromodichloromethane	(2)	0.000		0	N.D.	
52) Trichloroethene	(2)	0.000		0	N.D.	
53) 2,2,4-Trimethyl Pentane	(2)	0.000		0	N.D.	
51) 1,4-Dioxane	(2)	0.000		0	N.D.	
54) Methyl Methacrylate	(2)	0.000		0	N.D.	
55) Heptane	(2)	0.000		0	N.D.	
56) c-1,3-Dichloropropene	(2)	0.000		0	N.D.	
57) 4-Methyl-2-Pentanone	(2)	0.000		0	N.D.	
58) t-1,3-Dichloropropene	(2)	0.000		0	N.D.	
59) 1,1,2-Trichloroethane	(2)	0.000		0	N.D.	
61) Toluene	(3)	0.000		0	N.D.	
62) 2-Hexanone	(3)	0.000		0	N.D.	
63) Ethyl Methacrylate	(3)	0.000		0	N.D.	
64) Dibromochloromethane	(3)	0.000		0	N.D.	
65) 1,2-Dibromoethane	(3)	0.000		0	N.D.	
66) N-Octane	(3)	0.000		0	N.D.	

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar06.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 14:33 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 06-Mar-2018 10:53 jxs7

Sample Name: MB FC LC449 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	0.000		0	N.D.	
69) Chlorobenzene	(3)	0.000		0	N.D.	
70) Ethylbenzene	(3)	0.000		0	N.D.	
71) p/m-Xylene	(3)	0.000		0	N.D.	
72) Bromoform	(3)	0.000		0	N.D.	
73) Styrene	(3)	0.000		0	N.D.	
74) 1,1,2,2-Tetrachloroethane	(3)	0.000		0	N.D.	
75) o-Xylene	(3)	0.000		0	N.D.	
76) 1,2,3-Trichloropropane	(3)	0.000		0	N.D.	
77) N-Nonane	(3)	0.000		0	N.D.	
79) Isopropylbenzene	(3)	0.000		0	N.D.	
80) 2-Chlorotoluene	(3)	0.000		0	N.D.	
81) n-Propylbenzene	(3)	0.000		0	N.D.	
82) 4-Ethyltoluene	(3)	0.000		0	N.D.	
83) 1,3,5-Trimethylbenzene	(3)	0.000		0	N.D.	
84) alpha-Methylstyrene	(3)	0.000		0	N.D.	
86) 1,2,4-Trimethylbenzene	(3)	0.000		0	N.D.	
85) tert-Butylbenzene	(3)	0.000		0	N.D.	
87) Benzyl Chloride	(3)	0.000		0	N.D.	
88) 1,3-Dichlorobenzene	(3)	0.000		0	N.D.	
90) N-Decane	(3)	0.000		0	N.D.	
89) 1,4-Dichlorobenzene	(3)	0.000		0	N.D.	
91) sec-Butylbenzene	(3)	0.000		0	N.D.	
92) p-Isopropyltoluene	(3)	0.000		0	N.D.	
93) 1,2-Dichlorobenzene	(3)	0.000		0	N.D.	
94) n-Butylbenzene	(3)	0.000		0	N.D.	
95) 1,2-Dibromo-3-Chloropropane	(3)	0.000		0	N.D.	
96) 1,2,4-Trichlorobenzene	(3)	0.000		0	N.D.	
97) Naphthalene	(3)	0.000		0	N.D.	
98) 1,2,3-Trichlorobenzene	(3)	0.000		0	N.D.	
99) Hexachloro-1,3-Butadiene	(3)	0.000		0	N.D.	

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Data File: /chem/AIR/GCMS_000.i/180305.b/05mar06.d

Date : 05-MAR-2018 14:33

Client ID:

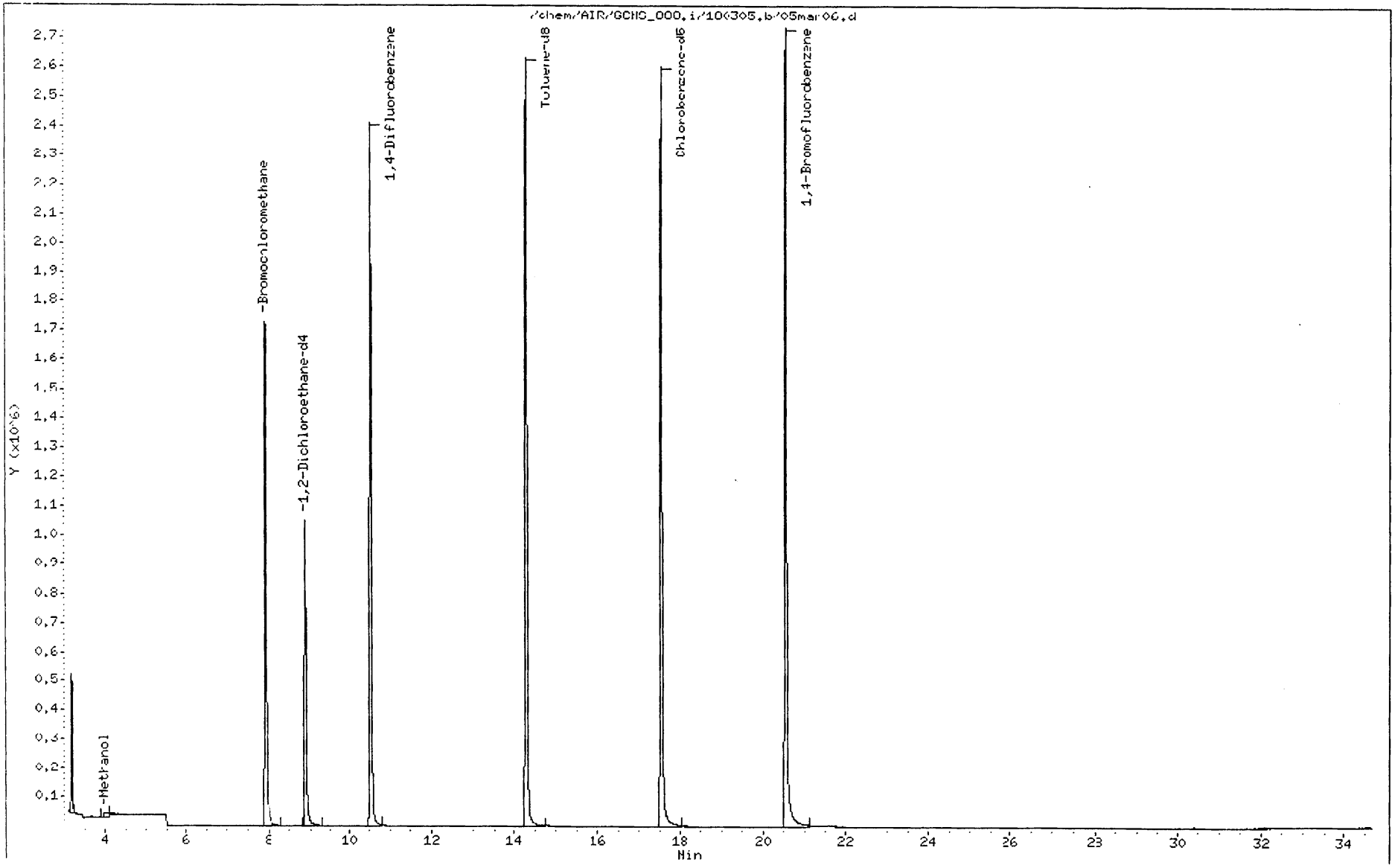
Sample Info: MB FC LC449

Column phase:

Instrument: GCMS_000.i

Operator: JXS7

Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar03.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 11:46 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 05-Mar-2018 13:14 jxs7

Sample Name: LCS 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.926	130	750107	25.000	-0.01
47)*1,4-Difluorobenzene	(2)	10.534	114	2570878	25.000	-0.01
68)*Chlorobenzene-d5	(3)	17.547	117	2396981	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.889	65	999727	24.357	-0.01
SpikedAmount 25.000	Recovery = 97.427					
60)$Toluene-d8	(2)	14.287	98	2596604	25.142	-0.01
SpikedAmount 25.000	Recovery = 100.567					
78)$1,4-Bromofluorobenzene	(3)	20.564	95	1687551	24.783	0.00
SpikedAmount 25.000	Recovery = 99.131					
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.263	69	533885	23.314	100
2) 1,1-Difluoroethane	(1)	3.322	51	1028747	22.629	99
3) Propene	(1)	3.387	41	986737	24.916	100
4) Propane	(1)	3.404	29	934151	47.035	98
5) Dichlorodifluoromethane	(1)	3.440	85	1737514	24.208	100
6) Chloromethane	(1)	3.569	50	658881	23.808	100
7) Dichlorotetrafluoroethane	(1)	3.651	85	1576613	25.237	99
8) Isobutane	(1)	3.669	43	1997688	45.696	100
9) Methanol	(1)	3.687	31	498680	71.867	99
10) Vinyl Chloride	(1)	3.746	62	667334	24.485	100
11) 1,3-Butadiene	(1)	3.857	54	536642	24.095	96
12) Butane	(1)	3.898	43	1813872	44.907	100
13) Bromomethane	(1)	4.069	94	559398	24.867	100
14) Chloroethane	(1)	4.210	64	286297	24.240	99
15) Ethanol	(1)	4.299	45	1093041	91.663	99
16) Acrolein	(1)	4.593	56	297005	23.533	100
17) Acetone	(1)	4.705	58	324682	24.063	98
18) Trichlorofluoromethane	(1)	4.869	101	1929936	27.450	100
19) Isopropanol	(1)	4.922	45	1744587	25.760	100
20) Acrylonitrile	(1)	5.122	53	794880	23.712	100
21) 1,1-Dichloroethene	(1)	5.463	61	1469687	24.050	99
23) Methylene Chloride	(1)	5.573	84	600414	24.008	99
22) Tert-Butyl Alcohol (TBA)	(1)	5.493	59	2818175	43.858	98
24) Allyl Chloride	(1)	5.697	41	1192861	21.999	100
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.862	101	1454732	24.724	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar03.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 11:46 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 05-Mar-2018 13:14 jxs7

Sample Name: LCS 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.867	76	1883298	24.373	99
27) Propionitrile	(1)	6.264	54	739452	24.099	100
28) t-1,2-Dichloroethene	(1)	6.553	96	715060	24.847	100
29) 1,1-Dichloroethane	(1)	6.769	63	1523870	23.952	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.848	73	1966330	24.978	99
31) Vinyl Acetate	(1)	6.956	43	2486115	23.879	100
32) 2-Butanone	(1)	7.217	43	1923612	24.626	100
33) c-1,2-Dichloroethene	(1)	7.738	96	773098	25.130	100
37) Hexane	(1)	8.045	57	1297120	24.246	99
36) Diisopropyl Ether (DIPE)	(1)	8.039	45	3314826	22.177	98
35) Ethyl Acetate	(1)	8.045	61	255495	24.656	100
38) Chloroform	(1)	8.101	83	1557684	24.459	100
39) Tetrahydrofuran	(1)	8.583	42	1053900	24.094	99
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.719	59	2780118	23.224	100
42) 1,2-Dichloroethane	(1)	9.026	62	1220241	24.637	100
43) 1,1,1-Trichloroethane	(1)	9.371	97	1751365	25.017	100
44) Benzene	(2)	9.989	78	2222567	25.015	99
45) Carbon Tetrachloride	(2)	10.199	117	1914181	25.262	100
46) Cyclohexane	(2)	10.386	56	1488225	24.338	99
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	2059137	23.847	100
49) 1,2-Dichloropropane	(2)	11.163	63	984866	24.440	99
50) Bromodichloromethane	(2)	11.441	83	1792674	25.217	99
52) Trichloroethene	(2)	11.526	95	1042530	25.260	99
53) 2,2,4-Trimethyl Pentane	(2)	11.651	57	4381326	22.976	100
51) 1,4-Dioxane	(2)	11.509	88	516679	26.436	90
54) Methyl Methacrylate	(2)	11.900	69	720573	25.710	99
55) Heptane	(2)	12.082	100	182237	24.848	100
56) c-1,3-Dichloropropene	(2)	12.864	75	1398486	26.274	99
57) 4-Methyl-2-Pentanone	(2)	12.960	58	910633	26.173	100
58) t-1,3-Dichloropropene	(2)	13.726	75	1345162	26.822	100
59) 1,1,2-Trichloroethane	(2)	13.970	83	846619	25.241	100
61) Toluene	(3)	14.451	91	2664954	24.788	100
62) 2-Hexanone	(3)	14.973	58	1242523	28.670	100
63) Ethyl Methacrylate	(3)	15.047	69	1253855	24.018	100
64) Dibromochloromethane	(3)	15.104	129	1932855	25.126	99
65) 1,2-Dibromoethane	(3)	15.523	107	1649062	25.360	100
66) N-Octane	(3)	16.328	57	950998	23.836	100

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar03.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 11:46 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 05-Mar-2018 13:14 jxs7

Sample Name: LCS 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1569656	25.173	100
69) Chlorobenzene	(3)	17.627	112	2276284	24.951	100
70) Ethylbenzene	(3)	18.398	91	3726284	25.550	100
71) p/m-Xylene	(3)	18.744	91	5929696	49.638	100
72) Bromoform	(3)	18.749	173	2097978	25.811	100
73) Styrene	(3)	19.447	104	2176236	26.000	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	2170059	24.619	100
75) o-Xylene	(3)	19.656	91	2813047	24.556	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1612982	24.077	100
77) N-Nonane	(3)	20.331	57	2156618	23.636	100
79) Isopropylbenzene	(3)	20.909	105	4003415	24.144	100
80) 2-Chlorotoluene	(3)	21.856	91	2980656	24.639	100
81) n-Propylbenzene	(3)	22.026	91	4819750	24.541	100
82) 4-Ethyltoluene	(3)	22.378	105	3959354	25.958	100
83) 1,3,5-Trimethylbenzene	(3)	22.576	105	3497987	25.546	100
84) alpha-Methylstyrene	(3)	22.916	118	1832586	25.520	100
86) 1,2,4-Trimethylbenzene	(3)	23.517	105	3468608	25.636	98
85) tert-Butylbenzene	(3)	23.495	119	3671076	24.576	100
87) Benzyl Chloride	(3)	23.756	91	3182437	27.230	100
88) 1,3-Dichlorobenzene	(3)	23.767	146	2510395	25.772	100
90) N-Decane	(3)	24.016	57	2546362	23.014	99
89) 1,4-Dichlorobenzene	(3)	23.937	146	2580076	26.966	100
91) sec-Butylbenzene	(3)	24.169	105	4714213	23.983	100
92) p-Isopropyltoluene	(3)	24.617	119	4261090	24.657	100
93) 1,2-Dichlorobenzene	(3)	24.753	146	2493281	26.161	100
94) n-Butylbenzene	(3)	25.700	91	4058956	24.558	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.893	157	1500869	27.229	100
96) 1,2,4-Trichlorobenzene	(3)	29.408	180	2916466	34.018	99
97) Naphthalene	(3)	29.612	128	5742900	33.762	100
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	2464693	26.707	99
99) Hexachloro-1,3-Butadiene	(3)	30.548	225	2653536	30.006	100

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Data File: /chem/AIR/GCMS_000.i/180305.b/05mar03.d

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Date : 05-MAR-2018 11:46

Client ID:

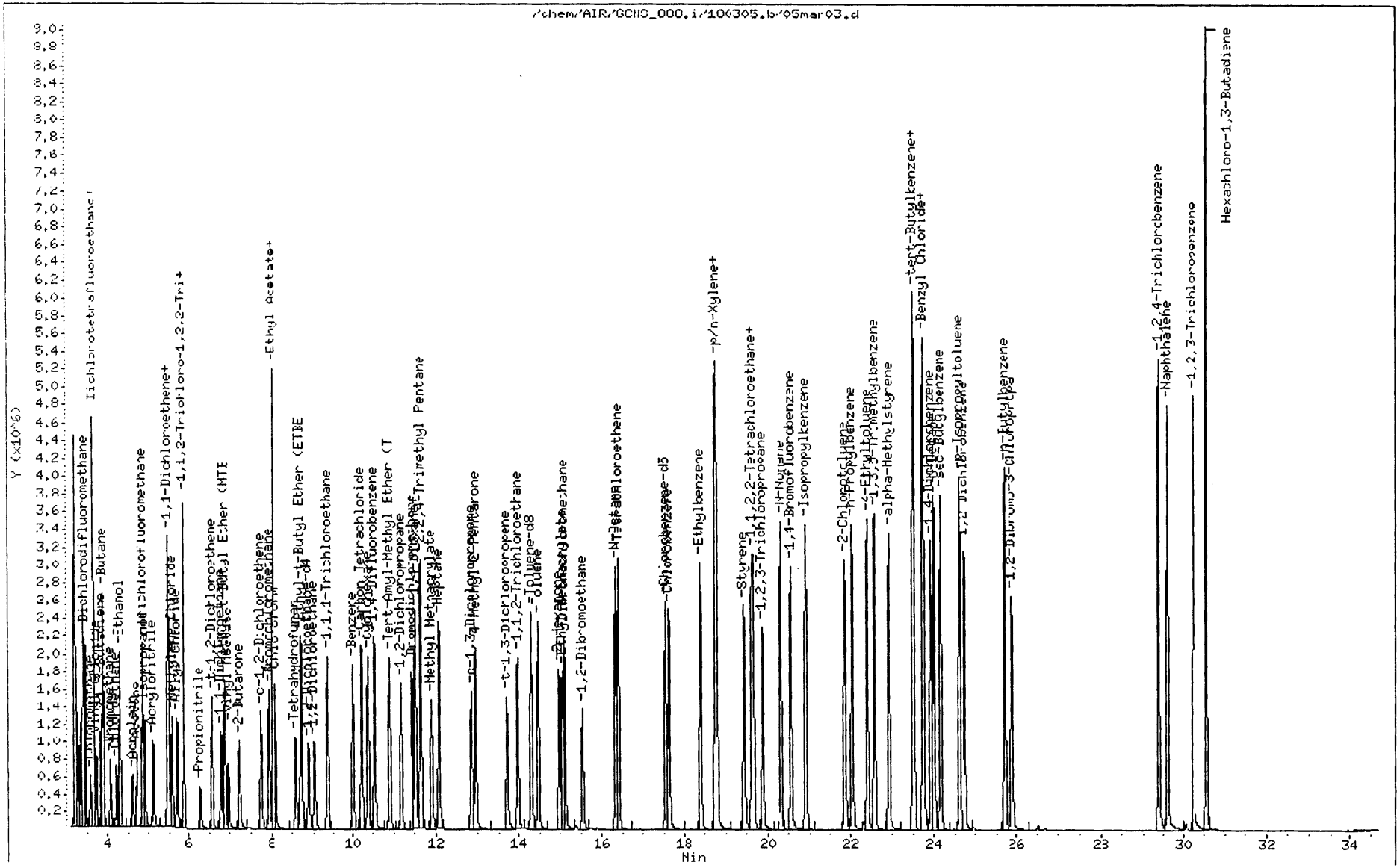
Instrument: GCMS_LUU.i

Sample Info: LCS 25PPBV 8021840

Operator: JXS7

Column phase:

Column diameter: 0.00



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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar04.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 12:39 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 05-Mar-2018 13:35 jxs7

Sample Name: LCSD 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.926	130	758032	25.000	-0.01
47)*1,4-Difluorobenzene	(2)	10.528	114	2613002	25.000	0.00
68)*Chlorobenzene-d5	(3)	17.547	117	2418671	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.884	65	1006914	24.275	-0.01
SpikedAmount 25.000	Recovery = 97.102					
60)$Toluene-d8	(2)	14.287	98	2626940	25.025	-0.01
SpikedAmount 25.000	Recovery = 100.101					
78)$1,4-Bromofluorobenzene	(3)	20.564	95	1698859	24.725	0.00
SpikedAmount 25.000	Recovery = 98.901					
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.257	69	544036	23.509	100
2) 1,1-Difluoroethane	(1)	3.310	51	1048916	22.831	99
3) Propene	(1)	3.369	41	852516	21.302	98
4) Propane	(1)	3.393	29	943973	47.033	97
5) Dichlorodifluoromethane	(1)	3.434	85	1777519	24.506	100
6) Chloromethane	(1)	3.557	50	673373	24.077	100
7) Dichlorotetrafluoroethane	(1)	3.646	85	1615867	25.595	99
8) Isobutane	(1)	3.663	43	2048684	46.372	100
9) Methanol	(1)	3.681	31	534554	76.231	96
10) Vinyl Chloride	(1)	3.734	62	678891	24.648	100
11) 1,3-Butadiene	(1)	3.846	54	549287	24.405	98
12) Butane	(1)	3.893	43	1867889	45.761	100
13) Bromomethane	(1)	4.063	94	573221	25.215	100
14) Chloroethane	(1)	4.205	64	296121	24.810	100
15) Ethanol	(1)	4.293	45	1125203	93.374	100
16) Acrolein	(1)	4.587	56	307608	24.119	100
17) Acetone	(1)	4.699	58	335118	24.577	98
18) Trichlorofluoromethane	(1)	4.863	101	1756106	24.716	100
19) Isopropanol	(1)	4.922	45	1551203	22.665	98
20) Acrylonitrile	(1)	5.116	53	810823	23.934	100
21) 1,1-Dichloroethene	(1)	5.458	61	1522891	24.660	99
23) Methylene Chloride	(1)	5.567	84	615272	24.345	98
22) Tert-Butyl Alcohol (TBA)	(1)	5.487	59	2985172	45.972	98
24) Allyl Chloride	(1)	5.692	41	1218773	22.242	100
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.856	101	1491758	25.088	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar04.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 12:39 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 05-Mar-2018 13:35 jxs7

Sample Name: LCSD 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	1926399	24.670	99
27) Propionitrile	(1)	6.259	54	752747	24.276	100
28) t-1,2-Dichloroethene	(1)	6.548	96	734688	25.262	100
29) 1,1-Dichloroethane	(1)	6.763	63	1566652	24.367	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.843	73	2011469	25.284	99
31) Vinyl Acetate	(1)	6.950	43	2559044	24.323	99
32) 2-Butanone	(1)	7.211	43	1913089	24.235	99
33) c-1,2-Dichloroethene	(1)	7.733	96	791149	25.448	99
37) Hexane	(1)	8.039	57	1328758	24.577	99
36) Diisopropyl Ether (DIPE)	(1)	8.033	45	3374407	22.339	98
35) Ethyl Acetate	(1)	8.039	61	264114	25.221	99
38) Chloroform	(1)	8.096	83	1586550	24.652	99
39) Tetrahydrofuran	(1)	8.583	42	1069904	24.204	99
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	2854601	23.597	100
42) 1,2-Dichloroethane	(1)	9.026	62	1238153	24.738	99
43) 1,1,1-Trichloroethane	(1)	9.371	97	1787809	25.271	100
44) Benzene	(2)	9.989	78	2280932	25.259	99
45) Carbon Tetrachloride	(2)	10.199	117	1950152	25.322	100
46) Cyclohexane	(2)	10.381	56	1535869	24.712	99
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	2142293	24.410	99
49) 1,2-Dichloropropane	(2)	11.157	63	1013166	24.737	99
50) Bromodichloromethane	(2)	11.435	83	1833117	25.370	100
52) Trichloroethene	(2)	11.526	95	1061828	25.313	99
53) 2,2,4-Trimethyl Pentane	(2)	11.651	57	4445841	22.939	100
51) 1,4-Dioxane	(2)	11.509	88	527860	26.572	89
54) Methyl Methacrylate	(2)	11.900	69	738996	25.942	99
55) Heptane	(2)	12.082	100	189475	25.418	99
56) c-1,3-Dichloropropene	(2)	12.864	75	1436205	26.548	99
57) 4-Methyl-2-Pentanone	(2)	12.960	58	920111	26.019	99
58) t-1,3-Dichloropropene	(2)	13.726	75	1383136	27.135	100
59) 1,1,2-Trichloroethane	(2)	13.970	83	861068	25.258	100
61) Toluene	(3)	14.446	91	2716912	25.045	100
62) 2-Hexanone	(3)	14.968	58	1260224	28.817	99
63) Ethyl Methacrylate	(3)	15.047	69	1287544	24.443	98
64) Dibromochloromethane	(3)	15.104	129	1965049	25.315	100
65) 1,2-Dibromoethane	(3)	15.523	107	1691179	25.775	100
66) N-Octane	(3)	16.334	57	968817	24.065	99

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar04.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 12:39 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 05-Mar-2018 13:35 jxs7

Sample Name: LCSD 25PPBV 8021840 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1595266	25.355	100
69) Chlorobenzene	(3)	17.627	112	2324180	25.248	99
70) Ethylbenzene	(3)	18.398	91	3810591	25.894	100
71) p/m-Xylene	(3)	18.744	91	6031449	50.037	100
72) Bromoform	(3)	18.749	173	2140645	26.100	100
73) Styrene	(3)	19.441	104	2194698	25.986	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	2208923	24.835	100
75) o-Xylene	(3)	19.656	91	2862089	24.760	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1661778	24.582	100
77) N-Nonane	(3)	20.331	57	2220686	24.120	99
79) Isopropylbenzene	(3)	20.909	105	4100855	24.510	100
80) 2-Chlorotoluene	(3)	21.856	91	3041901	24.920	100
81) n-Propylbenzene	(3)	22.026	91	4903835	24.745	100
82) 4-Ethyltoluene	(3)	22.378	105	4094873	26.606	99
83) 1,3,5-Trimethylbenzene	(3)	22.576	105	3557124	25.745	100
84) alpha-Methylstyrene	(3)	22.917	118	1871052	25.822	100
86) 1,2,4-Trimethylbenzene	(3)	23.518	105	3513242	25.733	98
85) tert-Butylbenzene	(3)	23.495	119	3747992	24.866	100
87) Benzyl Chloride	(3)	23.756	91	3237674	27.454	99
88) 1,3-Dichlorobenzene	(3)	23.767	146	2552995	25.975	100
90) N-Decane	(3)	24.017	57	2618566	23.454	99
89) 1,4-Dichlorobenzene	(3)	23.937	146	2644604	27.393	100
91) sec-Butylbenzene	(3)	24.170	105	4786557	24.133	100
92) p-Isopropyltoluene	(3)	24.618	119	4353055	24.963	100
93) 1,2-Dichlorobenzene	(3)	24.754	146	2544699	26.461	100
94) n-Butylbenzene	(3)	25.700	91	4173332	25.024	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.893	157	1538876	27.669	100
96) 1,2,4-Trichlorobenzene	(3)	29.408	180	2991442	34.580	99
97) Naphthalene	(3)	29.613	128	5868490	34.191	100
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	2489615	26.735	99
99) Hexachloro-1,3-Butadiene	(3)	30.548	225	2707008	30.336	99

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Data File: /chem/AIR/GCMS_000.i/180305.b/05mar04.d

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Date : 05-MAR-2018 12:39

Client ID:

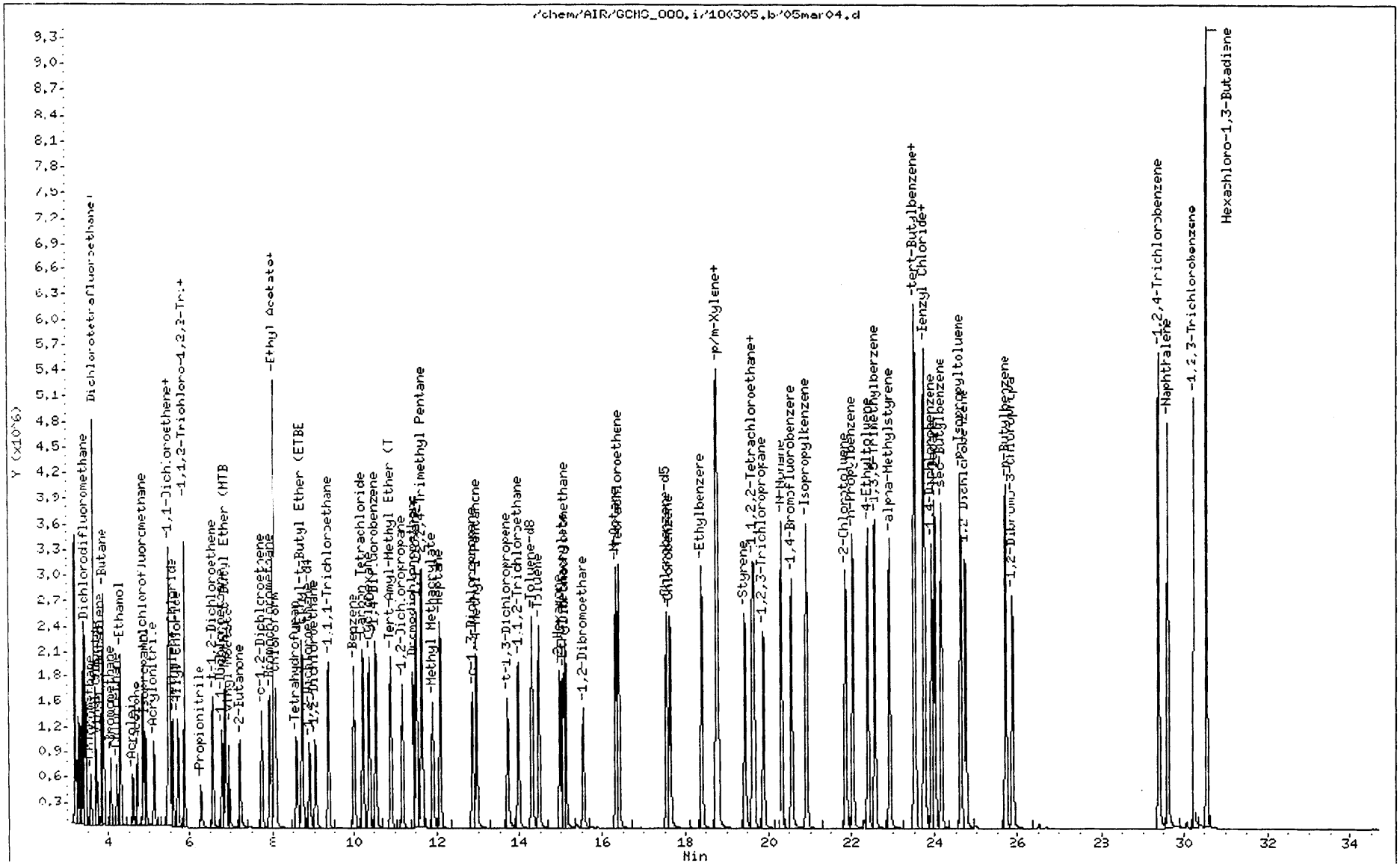
Instrument: GCMS_LUU.i

Sample Info: LCSD 25PPBV 8021840

Operator: JXS7

Column phase:

Column diameter: 0.00



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EPA METHOD TO-15

CONTINUING CALIBRATION

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA TO-15

BATCH ID: **180302A** ANALYZED BY: 953
INSTRUMENT: GC/MS OOO

WORK ORDER: **099-10-024** REVIEWED BY:
MATRIX: Air D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
22549	Daily Calibration	2018-03-02 10:35	Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar02.d\02mar02.rr

WORK ORDER: **18-03-0118** REVIEWED BY:
MATRIX: Air D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	WAS00047	2018-03-03 00:16	Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar16.d\02mar16.rr
2	WAS00048	2018-03-03 01:08	Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar17.d\02mar17.rr

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-10-024-22549-1156
INSTRUMENT: GC/MS OOO
BATCH ID:
INITIAL: 180213IC
CCV: 180302A

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
CCV: 2018-03-02 10:35
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar02.d\02mar02.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	C	Avg Resp	0.00	0.450	0.404			10	0-30	PASS
Benzene	C	Avg Resp	0.00	0.864	0.832			4	0-30	PASS
Benzyl Chloride	C	Avg Resp	0.00	1.219	1.025			16	0-30	PASS
Bromodichloromethane	C	Avg Resp	0.00	0.691	0.645			7	0-30	PASS
Bromoform	C	Avg Resp	0.00	0.848	0.785			7	0-30	PASS
Bromomethane	C	Avg Resp	0.00	0.750	0.731			3	0-30	PASS
2-Butanone	C	Avg Resp	0.00	2.603	2.455			6	0-30	PASS
Carbon Disulfide	C	Avg Resp	0.00	2.575	2.441			5	0-30	PASS
Carbon Tetrachloride	C	Avg Resp	0.00	0.737	0.678			8	0-30	PASS
Chlorobenzene	C	Avg Resp	0.00	0.952	0.838			12	0-30	PASS
Chloroethane	C	Avg Resp	0.00	0.394	0.373			5	0-30	PASS
Chloroform	C	Avg Resp	0.00	2.123	1.947			8	0-30	PASS
Chloromethane	C	Avg Resp	0.00	0.922	0.852			8	0-30	PASS
Dibromochloromethane	C	Avg Resp	0.00	0.802	0.731			9	0-30	PASS
Dichlorodifluoromethane	C	Avg Resp	0.00	2.392	2.278			5	0-30	PASS
1,1-Dichloroethane	C	Avg Resp	0.00	2.120	1.944			8	0-30	PASS
1,1-Dichloroethene	C	Avg Resp	0.00	2.037	1.887			7	0-30	PASS
1,2-Dibromoethane	C	Avg Resp	0.00	0.678	0.618			9	0-30	PASS
Dichlorotetrafluoroethane	C	Avg Resp	0.00	2.082	1.992			4	0-30	PASS
1,2-Dichlorobenzene	C	Avg Resp	0.00	0.994	0.822			17	0-30	PASS
1,2-Dichloroethane	C	Avg Resp	0.00	1.651	1.504			9	0-30	PASS
1,2-Dichloropropane	C	Avg Resp	0.00	0.392	0.361			8	0-30	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-10-024-22549-1156
INSTRUMENT: GC/MS OOO
BATCH ID:
INITIAL: 180213IC
CCV: 180302A

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
CCV: 2018-03-02 10:35
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar02.d\02mar02.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
1,3-Dichlorobenzene	C	Avg Resp	0.00	1.016	0.841			17	0-30	PASS
1,4-Dichlorobenzene	C	Avg Resp	0.00	0.998	0.853			15	0-30	PASS
c-1,3-Dichloropropene	C	Avg Resp	0.00	0.518	0.490			5	0-30	PASS
c-1,2-Dichloroethene	C	Avg Resp	0.00	1.025	0.969			5	0-30	PASS
t-1,2-Dichloroethene	C	Avg Resp	0.00	0.959	0.910			5	0-30	PASS
t-1,3-Dichloropropene	C	Avg Resp	0.00	0.488	0.462			5	0-30	PASS
Ethylbenzene	C	Avg Resp	0.00	1.521	1.387			9	0-30	PASS
4-Ethyltoluene	C	Avg Resp	0.00	1.591	1.423			11	0-30	PASS
Hexachloro-1,3-Butadiene	C	Avg Resp	0.00	0.922	0.705			24	0-30	PASS
2-Hexanone	C	Avg Resp	0.00	0.452	0.449			1	0-30	PASS
Methyl-t-Butyl Ether (MTBE)	C	Avg Resp	0.00	2.624	2.439			7	0-30	PASS
Methylene Chloride	C	Avg Resp	0.00	0.834	0.759			9	0-30	PASS
4-Methyl-2-Pentanone	C	Avg Resp	0.00	0.338	0.330			2	0-30	PASS
o-Xylene	C	Avg Resp	0.00	1.195	1.072			10	0-30	PASS
p/m-Xylene	C	Avg Resp	0.00	1.246	1.116			10	0-30	PASS
Styrene	C	Avg Resp	0.00	0.873	0.797			9	0-30	PASS
Tetrachloroethene	C	Avg Resp	0.00	0.650	0.581			11	0-30	PASS
Toluene	C	Avg Resp	0.00	1.121	1.058			6	0-30	PASS
Trichloroethene	C	Avg Resp	0.00	0.401	0.372			7	0-30	PASS
Trichlorofluoromethane	C	Avg Resp	0.00	2.343	2.360			-1	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	C	Avg Resp	0.00	1.961	1.843			6	0-30	PASS
1,1,1-Trichloroethane	C	Avg Resp	0.00	2.333	2.147			8	0-30	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

CCV WORK ORDER: **099-10-024-22549-1156**
INSTRUMENT: GC/MS OOO
BATCH ID:
INITIAL: 180213IC
CCV: 180302A

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
CCV: 2018-03-02 10:35
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar02.d\02mar02.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
1,1,2-Trichloroethane	C	Avg Resp	0.00	0.326	0.304			7	0-30	PASS
sec-Butylbenzene	C	Avg Resp	0.00	2.050	1.855			10	0-30	PASS
tert-Butylbenzene	C	Avg Resp	0.00	1.558	1.413			9	0-30	PASS
n-Butylbenzene	C	Avg Resp	0.00	1.724	1.584			8	0-30	PASS
1,3,5-Trimethylbenzene	C	Avg Resp	0.00	1.428	1.243			13	0-30	PASS
1,1,2,2-Tetrachloroethane	C	Avg Resp	0.00	0.919	0.808			12	0-30	PASS
1,2,4-Trimethylbenzene	C	Avg Resp	0.00	1.411	1.200			15	0-30	PASS
1,2,4-Trichlorobenzene	C	Avg Resp	0.00	0.894	0.661			26	0-30	PASS
Vinyl Acetate	C	Avg Resp	0.00	3.470	3.234			7	0-30	PASS
Vinyl Chloride	C	Avg Resp	0.00	0.908	0.838			8	0-30	PASS
1,1-Difluoroethane	C	Avg Resp	0.00	1.515	1.496			1	0-30	PASS
Isopropanol	C	Avg Resp	0.00	2.257	2.203			2	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

ICAL Internal Standards Average Compound Area Report for Method: EPA TO-15

Sample ID: 099-10-024-22470 **D/T Analyzed:** 2018-02-13 12:34
Batch ID: 180213IC

Analyte	1	2	3	4	5	6	7	8	9	Avg. Area	Lower Area Limit	Upper Area Limit
Bromochloromethane	738788	747915	741570	724762	693606	704160	647997			714114	428468	999760
1,4-Difluorobenzene	2523780	2571614	2546897	2481223	2386026	2456099	2229205			2456406	1473844	3438969
Chlorobenzene-d5	2216252	2288782	2288885	2270789	2221093	2302354	2159695			2249693	1349816	3149570

ICV, CCV And Samples Internal Standard Compounds Area Report for Method: EPA TO-15

ICV
Sample ID: 099-10-024-22470 **Run #:** 10
CCV Batch ID: 180213IC **D/T Analyzed:** 2018-02-13 19:54
Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb11.d\13feb11.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	716913	428468	999760	7.93	PASS	
1,4-Difluorobenzene	2493438	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2289394	1349816	3149570	17.55	PASS	

CCV
Sample ID: 099-10-024-22549 **Run #:** 0
CCV Batch ID: 180302A **D/T Analyzed:** 2018-03-02 10:35
Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar02.d\02mar02.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	803473	428468	999760	7.93	PASS	
1,4-Difluorobenzene	2776942	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2583221	1349816	3149570	17.55	PASS	

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LCS

Sample ID: 095-01-021-19815 **Run #:** 1

CCV Batch ID: 180302A **D/T Analyzed:** 2018-03-02 11:26

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar03.d\02mar03.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	789953	428468	999760	7.92	PASS	
1,4-Difluorobenzene	2741040	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2530812	1349816	3149570	17.55	PASS	

LCD

Sample ID: 095-01-021-19815 **Run #:** 2

CCV Batch ID: 180302A **D/T Analyzed:** 2018-03-02 12:41

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar04.d\02mar04.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	796000	428468	999760	7.93	PASS	
1,4-Difluorobenzene	2771763	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2546494	1349816	3149570	17.55	PASS	

MB

Sample ID: 095-01-021-19815 **Run #:** 0

CCV Batch ID: 180302A **D/T Analyzed:** 2018-03-02 14:44

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar06.d\02mar06.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	883324	428468	999760	7.92	PASS	
1,4-Difluorobenzene	2996702	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2620953	1349816	3149570	17.54	PASS	

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CS

Sample ID: 18-03-0118-1 **Run #:** 0

CCV Batch ID: 180302A **D/T Analyzed:** 2018-03-03 00:16

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar16.d\02mar16.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	583736	428468	999760	8.01	PASS	
1,4-Difluorobenzene	2088906	1473844	3438969	10.59	PASS	
Chlorobenzene-d5	1830702	1349816	3149570	17.56	PASS	

CS

Sample ID: 18-03-0118-2 **Run #:** 0

CCV Batch ID: 180302A **D/T Analyzed:** 2018-03-03 01:08

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180302\02mar17.d\02mar17.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	671583	428468	999760	7.93	PASS	
1,4-Difluorobenzene	2366266	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2124180	1349816	3149570	17.55	PASS	

Notes:
For all samples including QC, all internal standard area responses must be within 60% to 140% of the mean area response in the initial calibration.

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Data File: /chem/AIR/GCMS_000.i/180302.b/02mar02.d
Report Date: 03/02/2018 12:28

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: CCV 25PPBV 8021988
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180302.b/to15.m

Injection Date and Time: 02-MAR-2018 10:35
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,1,1,2-Tetrafluoroethane	0.763	0.788	0.01	-3	30	Averaged
1,1-Difluoroethane	1.515	1.496	0.01	1	30	Averaged
Propene	1.320	1.354	0.01	-3	30	Averaged
Propane	0.662	0.684	0.01	-3	30	Averaged
Dichlorodifluoromethane	2.392	2.278	0.01	5	30	Averaged
Chloromethane	0.922	0.852	0.01	8	30	Averaged
Dichlorotetrafluoroethane	2.082	1.992	0.01	4	30	Averaged
Isobutane	1.457	1.380	0.01	5	30	Averaged
Methanol	0.231	0.207	0.01	10	30	Averaged
Vinyl Chloride	0.908	0.838	0.01	8	30	Averaged
1,3-Butadiene	0.742	0.704	0.01	5	30	Averaged
Butane	1.346	1.251	0.01	7	30	Averaged
Bromomethane	0.750	0.731	0.01	3	30	Averaged
Chloroethane	0.394	0.373	0.01	5	30	Averaged
Ethanol	0.397	0.354	0.01	11	30	Averaged
Acrolein	0.421	0.387	0.01	8	30	Averaged
Acetone	0.450	0.404	0.01	10	30	Averaged
Trichlorofluoromethane	2.343	2.360	0.01	-1	30	Averaged
Isopropanol	2.257	2.203	0.01	2	30	Averaged
Acrylonitrile	1.117	1.037	0.01	7	30	Averaged
1,1-Dichloroethene	2.037	1.887	0.01	7	30	Averaged
Methylene Chloride	0.834	0.759	0.01	9	30	Averaged
Tert-Butyl Alcohol (TBA)	2.142	1.953	0.01	9	30	Averaged
Allyl Chloride	1.807	1.633	0.01	10	30	Averaged
1,1,2-Trichloro-1,2,2-Trifluor	1.961	1.843	0.01	6	30	Averaged
Carbon Disulfide	2.575	2.441	0.01	5	30	Averaged
Propionitrile	1.023	0.964	0.01	6	30	Averaged
t-1,2-Dichloroethene	0.959	0.910	0.01	5	30	Averaged
1,1-Dichloroethane	2.120	1.944	0.01	8	30	Averaged
Methyl-t-Butyl Ether (MTBE)	2.624	2.439	0.01	7	30	Averaged
Vinyl Acetate	3.470	3.234	0.01	7	30	Averaged
2-Butanone	2.603	2.455	0.01	6	30	Averaged
c-1,2-Dichloroethene	1.025	0.969	0.01	5	30	Averaged
Hexane	1.783	1.639	0.01	8	30	Averaged
Diisopropyl Ether (DIPE)	4.982	4.396	0.01	12	30	Averaged
Ethyl Acetate	0.345	0.338	0.01	2	30	Averaged
Chloroform	2.123	1.947	0.01	8	30	Averaged
Tetrahydrofuran	1.458	1.374	0.01	6	30	Averaged
Ethyl-t-Butyl Ether (ETBE)	3.990	3.709	0.01	7	30	Averaged
1,2-Dichloroethane	1.651	1.504	0.01	9	30	Averaged
1,1,1-Trichloroethane	2.333	2.147	0.01	8	30	Averaged
Benzene	0.864	0.832	0.01	4	30	Averaged
Carbon Tetrachloride	0.737	0.678	0.01	8	30	Averaged
Cyclohexane	0.595	0.545	0.01	8	30	Averaged
Tert-Amyl-Methyl Ether (TAME)	0.840	0.794	0.01	5	30	Averaged
1,2-Dichloropropane	0.392	0.361	0.01	8	30	Averaged
Bromodichloromethane	0.691	0.645	0.01	7	30	Averaged
Trichloroethene	0.401	0.372	0.01	7	30	Averaged

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Data File: /chem/AIR/GCMS_000.i/180302.b/02mar02.d
Report Date: 03/02/2018 12:28

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: CCV 25PPBV 8021988
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180302.b/to15.m

Injection Date and Time: 02-MAR-2018 10:35
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,2,4-Trimethyl Pentane	1.854	1.696	0.01	9	30	Averaged
1,4-Dioxane	0.190	0.182	0.01	4	30	Averaged
Methyl Methacrylate	0.273	0.265	0.01	3	30	Averaged
Heptane	0.071	0.065	0.01	8	30	Averaged
c-1,3-Dichloropropene	0.518	0.490	0.01	5	30	Averaged
4-Methyl-2-Pentanone	0.338	0.330	0.01	2	30	Averaged
t-1,3-Dichloropropene	0.488	0.462	0.01	5	30	Averaged
1,1,2-Trichloroethane	0.326	0.304	0.01	7	30	Averaged
Toluene	1.121	1.058	0.01	6	30	Averaged
2-Hexanone	0.452	0.449	0.01	1	30	Averaged
Ethyl Methacrylate	0.544	0.516	0.01	5	30	Averaged
Dibromochloromethane	0.802	0.731	0.01	9	30	Averaged
1,2-Dibromoethane	0.678	0.618	0.01	9	30	Averaged
N-Octane	0.416	0.382	0.01	8	30	Averaged
Tetrachloroethene	0.650	0.581	0.01	11	30	Averaged
Chlorobenzene	0.952	0.838	0.01	12	30	Averaged
Ethylbenzene	1.521	1.387	0.01	9	30	Averaged
p/m-Xylene	1.246	1.116	0.01	10	30	Averaged
Bromoform	0.848	0.785	0.01	7	30	Averaged
Styrene	0.873	0.797	0.01	9	30	Averaged
1,1,2,2-Tetrachloroethane	0.919	0.808	0.01	12	30	Averaged
o-Xylene	1.195	1.072	0.01	10	30	Averaged
1,2,3-Trichloropropane	0.699	0.647	0.01	7	30	Averaged
N-Nonane	0.952	0.881	0.01	7	30	Averaged
Isopropylbenzene	1.729	1.606	0.01	7	30	Averaged
2-Chlorotoluene	1.262	1.186	0.01	6	30	Averaged
n-Propylbenzene	2.048	1.902	0.01	7	30	Averaged
4-Ethyltoluene	1.591	1.423	0.01	11	30	Averaged
1,3,5-Trimethylbenzene	1.428	1.243	0.01	13	30	Averaged
alpha-Methylstyrene	0.749	0.695	0.01	7	30	Averaged
1,2,4-Trimethylbenzene	1.411	1.200	0.01	15	30	Averaged
tert-Butylbenzene	1.558	1.413	0.01	9	30	Averaged
Benzyl Chloride	1.219	1.025	0.01	16	30	Averaged
1,3-Dichlorobenzene	1.016	0.841	0.01	17	30	Averaged
N-Decane	1.154	1.041	0.01	10	30	Averaged
1,4-Dichlorobenzene	0.998	0.853	0.01	15	30	Averaged
sec-Butylbenzene	2.050	1.855	0.01	10	30	Averaged
p-Isopropyltoluene	1.802	1.651	0.01	8	30	Averaged
1,2-Dichlorobenzene	0.994	0.822	0.01	17	30	Averaged
n-Butylbenzene	1.724	1.584	0.01	8	30	Averaged
1,2-Dibromo-3-Chloropropane	0.575	0.550	0.01	4	30	Averaged
1,2,4-Trichlorobenzene	0.894	0.661	0.01	26	30	Averaged
Naphthalene	1.774	1.301	0.01	27	30	Averaged
1,2,3-Trichlorobenzene	0.963	0.767	0.01	20	30	Averaged
Hexachloro-1,3-Butadiene	0.922	0.705	0.01	24	30	Averaged

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Data File: /chem/AIR/GCMS_000.i/180302.b/02mar02.d
Report Date: 03/02/2018 12:28

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: CCV 25PPBV 8021988
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180302.b/to15.m

Injection Date and Time: 02-MAR-2018 10:35
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,2-Dichloroethane-d4	1.368	1.347	0.01	2	30	Averaged
Toluene-d8	1.004	1.000	0.01	0	30	Averaged
1,4-Bromofluorobenzene	0.710	0.707	0.01	0	30	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar02.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 10:35 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 02-Mar-2018 12:28 jxs7

Sample Name: CCV 25PPBV 8021988 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.926	130	803473	25.000	-0.01
47)*1,4-Difluorobenzene	(2)	10.534	114	2776942	25.000	-0.01
68)*Chlorobenzene-d5	(3)	17.547	117	2583221	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.884	65	1081979	24.610	-0.01
SpikedAmount 25.000	Recovery =	0.000				
60)$Toluene-d8	(2)	14.287	98	2777678	24.899	-0.01
SpikedAmount 25.000	Recovery =	0.000				
78)$1,4-Bromofluorobenzene	(3)	20.564	95	1827407	24.902	0.00
SpikedAmount 25.000	Recovery =	0.000				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.257	69	633092	25.810	100
2) 1,1-Difluoroethane	(1)	3.316	51	1201830	24.680	100
3) Propene	(1)	3.381	41	1087638	25.640	100
4) Propane	(1)	3.399	29	1098359	51.630	100
5) Dichlorodifluoromethane	(1)	3.434	85	1829971	23.803	100
6) Chloromethane	(1)	3.563	50	684350	23.086	100
7) Dichlorotetrafluoroethane	(1)	3.646	85	1600589	23.919	100
8) Isobutane	(1)	3.663	43	2216927	47.342	100
9) Methanol	(1)	3.687	31	499923	67.261	100
10) Vinyl Chloride	(1)	3.740	62	673564	23.072	100
11) 1,3-Butadiene	(1)	3.852	54	565534	23.706	100
12) Butane	(1)	3.893	43	2010581	46.471	100
13) Bromomethane	(1)	4.063	94	587364	24.376	100
14) Chloroethane	(1)	4.205	64	299693	23.689	100
15) Ethanol	(1)	4.293	45	1138494	89.134	100
16) Acrolein	(1)	4.587	56	310674	22.981	100
17) Acetone	(1)	4.699	58	324786	22.472	100
18) Trichlorofluoromethane	(1)	4.864	101	1895834	25.174	100
19) Isopropanol	(1)	4.922	45	1770170	24.401	100
20) Acrylonitrile	(1)	5.117	53	833118	23.202	100
21) 1,1-Dichloroethene	(1)	5.458	61	1516310	23.164	100
23) Methylene Chloride	(1)	5.567	84	610045	22.773	100
22) Tert-Butyl Alcohol (TBA)	(1)	5.493	59	3138048	45.593	100
24) Allyl Chloride	(1)	5.692	41	1312228	22.593	100
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.856	101	1480683	23.493	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar02.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 10:35 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 02-Mar-2018 12:28 jxs7

Sample Name: CCV 25PPBV 8021988 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	1961674	23.701	100
27) Propionitrile	(1)	6.259	54	774174	23.555	100
28) t-1,2-Dichloroethene	(1)	6.548	96	731246	23.721	100
29) 1,1-Dichloroethane	(1)	6.763	63	1561907	22.919	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.849	73	1959717	23.240	100
31) Vinyl Acetate	(1)	6.951	43	2598646	23.302	100
32) 2-Butanone	(1)	7.211	43	1972349	23.573	100
33) c-1,2-Dichloroethene	(1)	7.733	96	778538	23.626	100
37) Hexane	(1)	8.039	57	1316667	22.976	100
36) Diisopropyl Ether (DIPE)	(1)	8.034	45	3531695	22.058	100
35) Ethyl Acetate	(1)	8.045	61	271285	24.441	100
38) Chloroform	(1)	8.096	83	1563990	22.927	100
39) Tetrahydrofuran	(1)	8.583	42	1104280	23.569	100
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	2979935	23.240	100
42) 1,2-Dichloroethane	(1)	9.026	62	1208160	22.773	100
43) 1,1,1-Trichloroethane	(1)	9.372	97	1724808	23.001	100
44) Benzene	(2)	9.990	78	2310821	24.079	100
45) Carbon Tetrachloride	(2)	10.199	117	1882499	23.000	100
46) Cyclohexane	(2)	10.381	56	1513935	22.921	100
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	2204704	23.638	100
49) 1,2-Dichloropropane	(2)	11.158	63	1003124	23.046	100
50) Bromodichloromethane	(2)	11.435	83	1792051	23.337	100
52) Trichloroethene	(2)	11.526	95	1032611	23.163	100
53) 2,2,4-Trimethyl Pentane	(2)	11.651	57	4708500	22.860	100
51) 1,4-Dioxane	(2)	11.509	88	506420	23.988	100
54) Methyl Methacrylate	(2)	11.900	69	735717	24.302	100
55) Heptane	(2)	12.082	100	181600	22.924	100
56) c-1,3-Dichloropropene	(2)	12.864	75	1360797	23.669	100
57) 4-Methyl-2-Pentanone	(2)	12.961	58	917457	24.412	100
58) t-1,3-Dichloropropene	(2)	13.726	75	1282722	23.679	100
59) 1,1,2-Trichloroethane	(2)	13.970	83	844434	23.308	100
61) Toluene	(3)	14.452	91	2732857	23.587	100
62) 2-Hexanone	(3)	14.968	58	1160968	24.856	100
63) Ethyl Methacrylate	(3)	15.047	69	1334091	23.713	100
64) Dibromochloromethane	(3)	15.104	129	1888185	22.776	100
65) 1,2-Dibromoethane	(3)	15.523	107	1596917	22.788	100
66) N-Octane	(3)	16.334	57	987112	22.958	100

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180302.b/02mar02.d Instrument ID: GCMS_OOO.i
Injection date and time: 02-MAR-2018 10:35 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180302.b/to15.m Sublist used: all
Calibration date and time: 02-MAR-2018 12:28
Date, time and analyst ID of latest file update: 02-Mar-2018 12:28 jxs7

Sample Name: CCV 25PPBV 8021988 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1500061	22.323	100
69) Chlorobenzene	(3)	17.627	112	2163522	22.005	100
70) Ethylbenzene	(3)	18.398	91	3581940	22.790	100
71) p/m-Xylene	(3)	18.744	91	5765469	44.784	100
72) Bromoform	(3)	18.749	173	2028283	23.155	100
73) Styrene	(3)	19.447	104	2058472	22.820	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	2086211	21.962	100
75) o-Xylene	(3)	19.657	91	2768325	22.423	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1670144	23.132	100
77) N-Nonane	(3)	20.337	57	2276958	23.156	100
79) Isopropylbenzene	(3)	20.910	105	4148037	23.213	100
80) 2-Chlorotoluene	(3)	21.856	91	3064806	23.508	100
81) n-Propylbenzene	(3)	22.026	91	4914034	23.217	100
82) 4-Ethyltoluene	(3)	22.378	105	3675878	22.362	100
83) 1,3,5-Trimethylbenzene	(3)	22.576	105	3210299	21.755	100
84) alpha-Methylstyrene	(3)	22.917	118	1795965	23.207	100
86) 1,2,4-Trimethylbenzene	(3)	23.512	105	3100655	21.264	100
85) tert-Butylbenzene	(3)	23.495	119	3650665	22.678	100
87) Benzyl Chloride	(3)	23.756	91	2646800	21.014	100
88) 1,3-Dichlorobenzene	(3)	23.767	146	2171257	20.684	100
90) N-Decane	(3)	24.017	57	2689335	22.554	100
89) 1,4-Dichlorobenzene	(3)	23.937	146	2202511	21.361	100
91) sec-Butylbenzene	(3)	24.170	105	4792074	22.622	100
92) p-Isopropyltoluene	(3)	24.618	119	4263765	22.893	100
93) 1,2-Dichlorobenzene	(3)	24.754	146	2124525	20.685	100
94) n-Butylbenzene	(3)	25.701	91	4090916	22.967	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.893	157	1419481	23.896	100
96) 1,2,4-Trichlorobenzene	(3)	29.403	180	1707759	18.483	100
97) Naphthalene	(3)	29.607	128	3359947	18.329	100
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	1981239	19.921	100
99) Hexachloro-1,3-Butadiene	(3)	30.543	225	1820903	19.106	100

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Instrument: GCMS_UUU.i

Operator: JXS7

Column diameter: 0.00

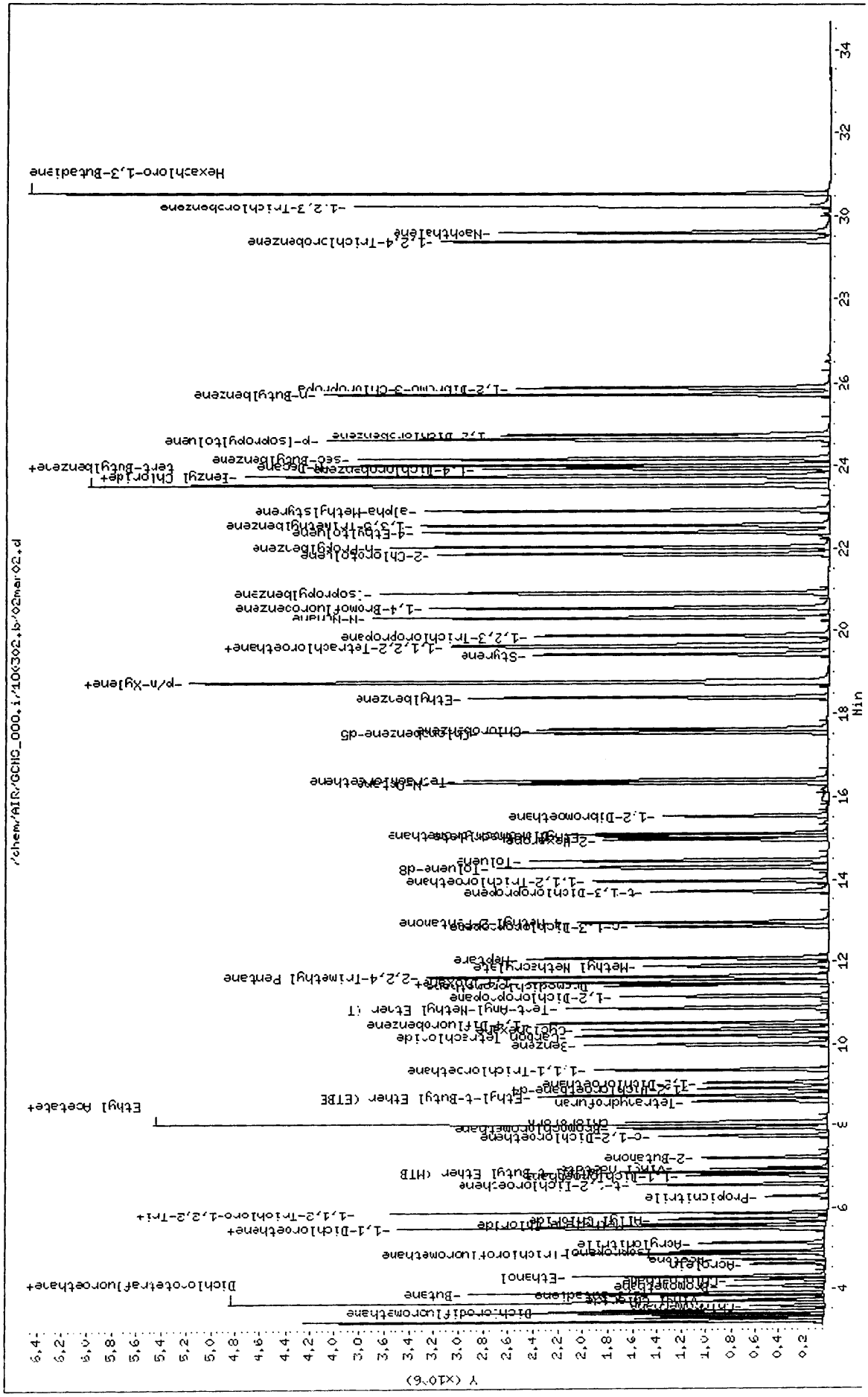
Data File: /chem/AIR/GCMS_000.i/180302.b/02mar02.d

Date : 02-MAR-2018 10:35

Client ID:

Sample Info: CCV 25PPBV 8021988

Column phase:



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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA TO-15

BATCH ID: **180303A** ANALYZED BY: 953
INSTRUMENT: GC/MS OOO

WORK ORDER: **099-10-024** REVIEWED BY:
MATRIX: Air D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
22550	Daily Calibration	2018-03-03 10:39	Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar02.d\03mar02.rr

WORK ORDER: **18-03-0118** REVIEWED BY:
MATRIX: Air D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	WAS00047	2018-03-03 21:35	Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar13.d\03mar13.rr
2	WAS00048	2018-03-03 23:09	Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar15.d\03mar15.rr

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

CCV WORK ORDER: **099-10-024-22550-1156**
INSTRUMENT: GC/MS OOO
BATCH ID:
INITIAL: 180213IC
CCV: 180303A

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
CCV: 2018-03-03 10:39
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar02.d\03mar02.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	C	Avg Resp	0.00	0.450	0.416			8	0-30	PASS
Benzene	C	Avg Resp	0.00	0.864	0.784			9	0-30	PASS
Benzyl Chloride	C	Avg Resp	0.00	1.219	1.062			13	0-30	PASS
Bromodichloromethane	C	Avg Resp	0.00	0.691	0.675			2	0-30	PASS
Bromoform	C	Avg Resp	0.00	0.848	0.830			2	0-30	PASS
Bromomethane	C	Avg Resp	0.00	0.750	0.743			1	0-30	PASS
2-Butanone	C	Avg Resp	0.00	2.603	2.482			5	0-30	PASS
Carbon Disulfide	C	Avg Resp	0.00	2.575	2.321			10	0-30	PASS
Carbon Tetrachloride	C	Avg Resp	0.00	0.737	0.745			-1	0-30	PASS
Chlorobenzene	C	Avg Resp	0.00	0.952	0.822			14	0-30	PASS
Chloroethane	C	Avg Resp	0.00	0.394	0.374			5	0-30	PASS
Chloroform	C	Avg Resp	0.00	2.123	1.982			7	0-30	PASS
Chloromethane	C	Avg Resp	0.00	0.922	0.913			1	0-30	PASS
Dibromochloromethane	C	Avg Resp	0.00	0.802	0.762			5	0-30	PASS
Dichlorodifluoromethane	C	Avg Resp	0.00	2.392	2.519			-5	0-30	PASS
1,1-Dichloroethane	C	Avg Resp	0.00	2.120	1.927			9	0-30	PASS
1,1-Dichloroethene	C	Avg Resp	0.00	2.037	1.949			4	0-30	PASS
1,2-Dibromoethane	C	Avg Resp	0.00	0.678	0.613			10	0-30	PASS
Dichlorotetrafluoroethane	C	Avg Resp	0.00	2.082	2.117			-2	0-30	PASS
1,2-Dichlorobenzene	C	Avg Resp	0.00	0.994	0.871			12	0-30	PASS
1,2-Dichloroethane	C	Avg Resp	0.00	1.651	1.619			2	0-30	PASS
1,2-Dichloropropane	C	Avg Resp	0.00	0.392	0.353			10	0-30	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

CCV WORK ORDER: **099-10-024-22550-1156**
INSTRUMENT: GC/MS OOO
BATCH ID:
INITIAL: 180213IC
CCV: 180303A

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
CCV: 2018-03-03 10:39
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar02.d\03mar02.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
1,3-Dichlorobenzene	C	Avg Resp	0.00	1.016	0.884			13	0-30	PASS
1,4-Dichlorobenzene	C	Avg Resp	0.00	0.998	0.898			10	0-30	PASS
c-1,3-Dichloropropene	C	Avg Resp	0.00	0.518	0.488			6	0-30	PASS
c-1,2-Dichloroethene	C	Avg Resp	0.00	1.025	0.924			10	0-30	PASS
t-1,2-Dichloroethene	C	Avg Resp	0.00	0.959	0.872			9	0-30	PASS
t-1,3-Dichloropropene	C	Avg Resp	0.00	0.488	0.464			5	0-30	PASS
Ethylbenzene	C	Avg Resp	0.00	1.521	1.381			9	0-30	PASS
4-Ethyltoluene	C	Avg Resp	0.00	1.591	1.500			6	0-30	PASS
Hexachloro-1,3-Butadiene	C	Avg Resp	0.00	0.922	0.793			14	0-30	PASS
2-Hexanone	C	Avg Resp	0.00	0.452	0.454			0	0-30	PASS
Methyl-t-Butyl Ether (MTBE)	C	Avg Resp	0.00	2.624	2.436			7	0-30	PASS
Methylene Chloride	C	Avg Resp	0.00	0.834	0.716			14	0-30	PASS
4-Methyl-2-Pentanone	C	Avg Resp	0.00	0.338	0.324			4	0-30	PASS
o-Xylene	C	Avg Resp	0.00	1.195	1.105			8	0-30	PASS
p/m-Xylene	C	Avg Resp	0.00	1.246	1.127			10	0-30	PASS
Styrene	C	Avg Resp	0.00	0.873	0.790			10	0-30	PASS
Tetrachloroethene	C	Avg Resp	0.00	0.650	0.591			9	0-30	PASS
Toluene	C	Avg Resp	0.00	1.121	1.013			10	0-30	PASS
Trichloroethene	C	Avg Resp	0.00	0.401	0.374			7	0-30	PASS
Trichlorofluoromethane	C	Avg Resp	0.00	2.343	2.565			-9	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	C	Avg Resp	0.00	1.961	1.832			7	0-30	PASS
1,1,1-Trichloroethane	C	Avg Resp	0.00	2.333	2.285			2	0-30	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

CCV WORK ORDER: **099-10-024-22550-1156**
INSTRUMENT: GC/MS OOO
BATCH ID:
INITIAL: 180213IC
CCV: 180303A

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
CCV: 2018-03-03 10:39
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar02.d\03mar02.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
1,1,2-Trichloroethane	C	Avg Resp	0.00	0.326	0.299			8	0-30	PASS
sec-Butylbenzene	C	Avg Resp	0.00	2.050	1.961			4	0-30	PASS
tert-Butylbenzene	C	Avg Resp	0.00	1.558	1.506			3	0-30	PASS
n-Butylbenzene	C	Avg Resp	0.00	1.724	1.682			2	0-30	PASS
1,3,5-Trimethylbenzene	C	Avg Resp	0.00	1.428	1.303			9	0-30	PASS
1,1,2,2-Tetrachloroethane	C	Avg Resp	0.00	0.919	0.799			13	0-30	PASS
1,2,4-Trimethylbenzene	C	Avg Resp	0.00	1.411	1.282			9	0-30	PASS
1,2,4-Trichlorobenzene	C	Avg Resp	0.00	0.894	0.725			19	0-30	PASS
Vinyl Acetate	C	Avg Resp	0.00	3.470	3.323			4	0-30	PASS
Vinyl Chloride	C	Avg Resp	0.00	0.908	0.845			7	0-30	PASS
1,1-Difluoroethane	C	Avg Resp	0.00	1.515	1.569			-4	0-30	PASS
Isopropanol	C	Avg Resp	0.00	2.257	1.780			21	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

ICAL Internal Standards Average Compound Area Report for Method: EPA TO-15

Sample ID: 099-10-024-22470 **D/T Analyzed:** 2018-02-13 12:34
Batch ID: 180213IC

Analyte	1	2	3	4	5	6	7	8	9	Avg. Area	Lower Area Limit	Upper Area Limit
Bromochloromethane	738788	747915	741570	724762	693606	704160	647997			714114	428468	999760
1,4-Difluorobenzene	2523780	2571614	2546897	2481223	2386026	2456099	2229205			2456406	1473844	3438969
Chlorobenzene-d5	2216252	2288782	2288885	2270789	2221093	2302354	2159695			2249693	1349816	3149570

ICV, CCV And Samples Internal Standard Compounds Area Report for Method: EPA TO-15

ICV
Sample ID: 099-10-024-22470 **Run #:** 10
CCV Batch ID: 180213IC **D/T Analyzed:** 2018-02-13 19:54
Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb11.d\13feb11.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	716913	428468	999760	7.93	PASS	
1,4-Difluorobenzene	2493438	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2289394	1349816	3149570	17.55	PASS	

CCV
Sample ID: 099-10-024-22550 **Run #:** 0
CCV Batch ID: 180303A **D/T Analyzed:** 2018-03-03 10:39
Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar02.d\03mar02.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	623322	428468	999760	7.92	PASS	
1,4-Difluorobenzene	2130427	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2056513	1349816	3149570	17.55	PASS	

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LCS

Sample ID: 095-01-021-19819 **Run #:** 1

CCV Batch ID: 180303A **D/T Analyzed:** 2018-03-03 11:35

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar03.d\03mar03.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	668711	428468	999760	7.92	PASS	
1,4-Difluorobenzene	2287911	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2139850	1349816	3149570	17.55	PASS	

LCD

Sample ID: 095-01-021-19819 **Run #:** 2

CCV Batch ID: 180303A **D/T Analyzed:** 2018-03-03 12:24

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar04.d\03mar04.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	708150	428468	999760	7.92	PASS	
1,4-Difluorobenzene	2410710	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2275431	1349816	3149570	17.55	PASS	

MB

Sample ID: 095-01-021-19819 **Run #:** 0

CCV Batch ID: 180303A **D/T Analyzed:** 2018-03-03 14:24

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar06.d\03mar06.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	783850	428468	999760	7.92	PASS	
1,4-Difluorobenzene	2643840	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2239443	1349816	3149570	17.54	PASS	

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CS

Sample ID: 18-03-0118-1 **Run #:** 1

CCV Batch ID: 180303A **D/T Analyzed:** 2018-03-03 21:35

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar13.d\03mar13.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	521768	428468	999760	7.94	PASS	
1,4-Difluorobenzene	1792265	1473844	3438969	10.54	PASS	
Chlorobenzene-d5	1507019	1349816	3149570	17.55	PASS	

CS

Sample ID: 18-03-0118-2 **Run #:** 1

CCV Batch ID: 180303A **D/T Analyzed:** 2018-03-03 23:09

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180303\03mar15.d\03mar15.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	571446	428468	999760	7.92	PASS	
1,4-Difluorobenzene	1914671	1473844	3438969	10.52	PASS	
Chlorobenzene-d5	1675326	1349816	3149570	17.54	PASS	

Notes:
For all samples including QC, all internal standard area responses must be within 60% to 140% of the mean area response in the initial calibration.

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar02.d
Report Date: 03/03/2018 16:47

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: CCV 25PPBV 8021988
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180303.b/to15.m

Injection Date and Time: 03-MAR-2018 10:39
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,1,1,2-Tetrafluoroethane	0.763	0.776	0.01	-2	30	Averaged
1,1-Difluoroethane	1.515	1.569	0.01	-4	30	Averaged
Propene	1.320	1.394	0.01	-6	30	Averaged
Propane	0.662	0.684	0.01	-3	30	Averaged
Dichlorodifluoromethane	2.392	2.519	0.01	-5	30	Averaged
Chloromethane	0.922	0.913	0.01	1	30	Averaged
Dichlorotetrafluoroethane	2.082	2.117	0.01	-2	30	Averaged
Isobutane	1.457	1.451	0.01	0	30	Averaged
Methanol	0.231	0.217	0.01	6	30	Averaged
Vinyl Chloride	0.908	0.845	0.01	7	30	Averaged
1,3-Butadiene	0.742	0.736	0.01	1	30	Averaged
Butane	1.346	1.320	0.01	2	30	Averaged
Bromomethane	0.750	0.743	0.01	1	30	Averaged
Chloroethane	0.394	0.374	0.01	5	30	Averaged
Ethanol	0.397	0.368	0.01	7	30	Averaged
Acrolein	0.421	0.396	0.01	6	30	Averaged
Acetone	0.450	0.416	0.01	8	30	Averaged
Trichlorofluoromethane	2.343	2.565	0.01	-9	30	Averaged
Isopropanol	2.257	1.780	0.01	21	30	Averaged
Acrylonitrile	1.117	1.061	0.01	5	30	Averaged
1,1-Dichloroethene	2.037	1.949	0.01	4	30	Averaged
Methylene Chloride	0.834	0.716	0.01	14	30	Averaged
Tert-Butyl Alcohol (TBA)	2.142	2.097	0.01	2	30	Averaged
Allyl Chloride	1.807	1.692	0.01	6	30	Averaged
1,1,2-Trichloro-1,2,2-Trifluor	1.961	1.832	0.01	7	30	Averaged
Carbon Disulfide	2.575	2.321	0.01	10	30	Averaged
Propionitrile	1.023	0.953	0.01	7	30	Averaged
t-1,2-Dichloroethene	0.959	0.872	0.01	9	30	Averaged
1,1-Dichloroethane	2.120	1.927	0.01	9	30	Averaged
Methyl-t-Butyl Ether (MTBE)	2.624	2.436	0.01	7	30	Averaged
Vinyl Acetate	3.470	3.323	0.01	4	30	Averaged
2-Butanone	2.603	2.482	0.01	5	30	Averaged
c-1,2-Dichloroethene	1.025	0.924	0.01	10	30	Averaged
Hexane	1.783	1.631	0.01	9	30	Averaged
Diisopropyl Ether (DIPE)	4.982	4.536	0.01	9	30	Averaged
Ethyl Acetate	0.345	0.317	0.01	8	30	Averaged
Chloroform	2.123	1.982	0.01	7	30	Averaged
Tetrahydrofuran	1.458	1.354	0.01	7	30	Averaged
Ethyl-t-Butyl Ether (ETBE)	3.990	3.769	0.01	6	30	Averaged
1,2-Dichloroethane	1.651	1.619	0.01	2	30	Averaged
1,1,1-Trichloroethane	2.333	2.285	0.01	2	30	Averaged
Benzene	0.864	0.784	0.01	9	30	Averaged
Carbon Tetrachloride	0.737	0.745	0.01	-1	30	Averaged
Cyclohexane	0.595	0.545	0.01	8	30	Averaged
Tert-Amyl-Methyl Ether (TAME)	0.840	0.787	0.01	6	30	Averaged
1,2-Dichloropropane	0.392	0.353	0.01	10	30	Averaged
Bromodichloromethane	0.691	0.675	0.01	2	30	Averaged
Trichloroethene	0.401	0.374	0.01	7	30	Averaged

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar02.d
Report Date: 03/03/2018 16:47

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: CCV 25PPBV 8021988
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180303.b/to15.m

Injection Date and Time: 03-MAR-2018 10:39
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,2,4-Trimethyl Pentane	1.854	1.702	0.01	8	30	Averaged
1,4-Dioxane	0.190	0.174	0.01	8	30	Averaged
Methyl Methacrylate	0.273	0.246	0.01	10	30	Averaged
Heptane	0.071	0.066	0.01	7	30	Averaged
c-1,3-Dichloropropene	0.518	0.488	0.01	6	30	Averaged
4-Methyl-2-Pentanone	0.338	0.324	0.01	4	30	Averaged
t-1,3-Dichloropropene	0.488	0.464	0.01	5	30	Averaged
1,1,2-Trichloroethane	0.326	0.299	0.01	8	30	Averaged
Toluene	1.121	1.013	0.01	10	30	Averaged
2-Hexanone	0.452	0.454	0.01	0	30	Averaged
Ethyl Methacrylate	0.544	0.493	0.01	9	30	Averaged
Dibromochloromethane	0.802	0.762	0.01	5	30	Averaged
1,2-Dibromoethane	0.678	0.613	0.01	10	30	Averaged
N-Octane	0.416	0.384	0.01	8	30	Averaged
Tetrachloroethene	0.650	0.591	0.01	9	30	Averaged
Chlorobenzene	0.952	0.822	0.01	14	30	Averaged
Ethylbenzene	1.521	1.381	0.01	9	30	Averaged
p/m-Xylene	1.246	1.127	0.01	10	30	Averaged
Bromoform	0.848	0.830	0.01	2	30	Averaged
Styrene	0.873	0.790	0.01	10	30	Averaged
1,1,2,2-Tetrachloroethane	0.919	0.799	0.01	13	30	Averaged
o-Xylene	1.195	1.105	0.01	8	30	Averaged
1,2,3-Trichloropropane	0.699	0.651	0.01	7	30	Averaged
N-Nonane	0.952	0.898	0.01	6	30	Averaged
Isopropylbenzene	1.729	1.649	0.01	5	30	Averaged
2-Chlorotoluene	1.262	1.218	0.01	3	30	Averaged
n-Propylbenzene	2.048	1.951	0.01	5	30	Averaged
4-Ethyltoluene	1.591	1.500	0.01	6	30	Averaged
1,3,5-Trimethylbenzene	1.428	1.303	0.01	9	30	Averaged
alpha-Methylstyrene	0.749	0.723	0.01	3	30	Averaged
1,2,4-Trimethylbenzene	1.411	1.282	0.01	9	30	Averaged
tert-Butylbenzene	1.558	1.506	0.01	3	30	Averaged
Benzyl Chloride	1.219	1.062	0.01	13	30	Averaged
1,3-Dichlorobenzene	1.016	0.884	0.01	13	30	Averaged
N-Decane	1.154	1.096	0.01	5	30	Averaged
1,4-Dichlorobenzene	0.998	0.898	0.01	10	30	Averaged
sec-Butylbenzene	2.050	1.961	0.01	4	30	Averaged
p-Isopropyltoluene	1.802	1.763	0.01	2	30	Averaged
1,2-Dichlorobenzene	0.994	0.871	0.01	12	30	Averaged
n-Butylbenzene	1.724	1.682	0.01	2	30	Averaged
1,2-Dibromo-3-Chloropropane	0.575	0.591	0.01	-3	30	Averaged
1,2,4-Trichlorobenzene	0.894	0.725	0.01	19	30	Averaged
Naphthalene	1.774	1.402	0.01	21	30	Averaged
1,2,3-Trichlorobenzene	0.963	0.842	0.01	13	30	Averaged
Hexachloro-1,3-Butadiene	0.922	0.793	0.01	14	30	Averaged

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar02.d
Report Date: 03/03/2018 16:47

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: CCV 25PPBV 8021988
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180303.b/to15.m

Injection Date and Time: 03-MAR-2018 10:39
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,2-Dichloroethane-d4	1.368	1.461	0.01	-7	30	Averaged
Toluene-d8	1.004	1.025	0.01	-2	30	Averaged
1,4-Bromofluorobenzene	0.710	0.726	0.01	-2	30	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar02.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 10:39 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:46 temprc

Sample Name: CCV 25PPBV 8021988 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34) *Bromochloromethane	(1)	7.920	130	623322	25.000	0.00
47) *1,4-Difluorobenzene	(2)	10.528	114	2130427	25.000	0.00
68) *Chlorobenzene-d5	(3)	17.547	117	2056513	25.000	0.00
System Monitoring Compounds						
41) $1,2-Dichloroethane-d4	(1)	8.884	65	910528	26.696	-0.01
SpikedAmount 25.000	Recovery =	0.000				
60) $Toluene-d8	(2)	14.287	98	2183622	25.514	-0.01
SpikedAmount 25.000	Recovery =	0.000				
78) $1,4-Bromofluorobenzene	(3)	20.564	95	1493520	25.565	0.00
SpikedAmount 25.000	Recovery =	0.000				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.252	69	483723	25.420	100
2) 1,1-Difluoroethane	(1)	3.310	51	977808	25.883	100
3) Propene	(1)	3.375	41	868831	26.401	100
4) Propane	(1)	3.393	29	853054	51.688	100
5) Dichlorodifluoromethane	(1)	3.434	85	1570310	26.329	100
6) Chloromethane	(1)	3.558	50	569097	24.746	100
7) Dichlorotetrafluoroethane	(1)	3.640	85	1319478	25.417	100
8) Isobutane	(1)	3.658	43	1808421	49.780	100
9) Methanol	(1)	3.681	31	406370	70.476	100
10) Vinyl Chloride	(1)	3.734	62	526820	23.261	100
11) 1,3-Butadiene	(1)	3.846	54	458728	24.786	100
12) Butane	(1)	3.893	43	1645711	49.031	100
13) Bromomethane	(1)	4.063	94	463197	24.779	100
14) Chloroethane	(1)	4.205	64	233033	23.744	100
15) Ethanol	(1)	4.287	45	918651	92.708	100
16) Acrolein	(1)	4.581	56	247145	23.566	100
17) Acetone	(1)	4.693	58	259136	23.111	100
18) Trichlorofluoromethane	(1)	4.864	101	1598823	27.366	100
19) Isopropanol	(1)	4.917	45	1109777	19.719	100
20) Acrylonitrile	(1)	5.111	53	661120	23.733	100
21) 1,1-Dichloroethene	(1)	5.452	61	1214848	23.923	100
23) Methylene Chloride	(1)	5.567	84	446062	21.464	100
22) Tert-Butyl Alcohol (TBA)	(1)	5.487	59	2613902	48.954	100
24) Allyl Chloride	(1)	5.686	41	1054719	23.408	100
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.851	101	1141918	23.355	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar02.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 10:39 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:46 temprc

Sample Name: CCV 25PPBV 8021988 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	1446715	22.531	100
27) Propionitrile	(1)	6.253	54	594017	23.297	100
28) t-1,2-Dichloroethene	(1)	6.548	96	543376	22.721	100
29) 1,1-Dichloroethane	(1)	6.764	63	1201258	22.722	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.843	73	1518604	23.214	100
31) Vinyl Acetate	(1)	6.951	43	2071554	23.944	100
32) 2-Butanone	(1)	7.211	43	1547300	23.837	100
33) c-1,2-Dichloroethene	(1)	7.727	96	575878	22.527	100
37) Hexane	(1)	8.039	57	1016612	22.867	100
36) Diisopropyl Ether (DIPE)	(1)	8.034	45	2827191	22.761	100
35) Ethyl Acetate	(1)	8.039	61	197424	22.927	100
38) Chloroform	(1)	8.096	83	1235734	23.351	100
39) Tetrahydrofuran	(1)	8.578	42	843704	23.212	100
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	2349434	23.618	100
42) 1,2-Dichloroethane	(1)	9.026	62	1009018	24.516	100
43) 1,1,1-Trichloroethane	(1)	9.366	97	1424087	24.480	100
44) Benzene	(2)	9.984	78	1669438	22.675	100
45) Carbon Tetrachloride	(2)	10.194	117	1586821	25.271	100
46) Cyclohexane	(2)	10.381	56	1162033	22.932	100
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	1676898	23.435	100
49) 1,2-Dichloropropane	(2)	11.158	63	752382	22.531	100
50) Bromodichloromethane	(2)	11.435	83	1437164	24.395	100
52) Trichloroethene	(2)	11.526	95	797123	23.307	100
53) 2,2,4-Trimethyl Pentane	(2)	11.645	57	3626443	22.949	100
51) 1,4-Dioxane	(2)	11.509	88	370419	22.871	100
54) Methyl Methacrylate	(2)	11.900	69	524122	22.567	100
55) Heptane	(2)	12.082	100	140375	23.097	100
56) c-1,3-Dichloropropene	(2)	12.864	75	1039649	23.571	100
57) 4-Methyl-2-Pentanone	(2)	12.961	58	691305	23.977	100
58) t-1,3-Dichloropropene	(2)	13.726	75	989458	23.808	100
59) 1,1,2-Trichloroethane	(2)	13.970	83	637925	22.951	100
61) Toluene	(3)	14.452	91	2083821	22.592	100
62) 2-Hexanone	(3)	14.968	58	933607	25.108	100
63) Ethyl Methacrylate	(3)	15.047	69	1012898	22.615	100
64) Dibromochloromethane	(3)	15.104	129	1567709	23.753	100
65) 1,2-Dibromoethane	(3)	15.523	107	1260944	22.602	100
66) N-Octane	(3)	16.328	57	789081	23.052	100

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180303.b/03mar02.d Instrument ID: GCMS_OOO.i
Injection date and time: 03-MAR-2018 10:39 Analyst ID: UPY2

Method used: /chem/AIR/GCMS_OOO.i/180303.b/to15.m Sublist used: all
Calibration date and time: 03-MAR-2018 16:46
Date, time and analyst ID of latest file update: 03-Mar-2018 16:46 temprc

Sample Name: CCV 25PPBV 8021988 Misc Info: 8010685 UPY2
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1215659	22.724	100
69) Chlorobenzene	(3)	17.627	112	1689843	21.589	100
70) Ethylbenzene	(3)	18.398	91	2839645	22.694	100
71) p/m-Xylene	(3)	18.744	91	4634576	45.220	100
72) Bromoform	(3)	18.749	173	1706437	24.470	100
73) Styrene	(3)	19.441	104	1625319	22.633	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	1643829	21.737	100
75) o-Xylene	(3)	19.657	91	2273053	23.127	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1338592	23.289	100
77) N-Nonane	(3)	20.331	57	1847694	23.603	100
79) Isopropylbenzene	(3)	20.910	105	3390430	23.833	100
80) 2-Chlorotoluene	(3)	21.856	91	2504675	24.132	100
81) n-Propylbenzene	(3)	22.027	91	4013061	23.817	100
82) 4-Ethyltoluene	(3)	22.378	105	3085486	23.578	100
83) 1,3,5-Trimethylbenzene	(3)	22.577	105	2680663	22.818	100
84) alpha-Methylstyrene	(3)	22.917	118	1487315	24.141	100
86) 1,2,4-Trimethylbenzene	(3)	23.512	105	2636883	22.715	100
85) tert-Butylbenzene	(3)	23.495	119	3097343	24.168	100
87) Benzyl Chloride	(3)	23.756	91	2183416	21.775	100
88) 1,3-Dichlorobenzene	(3)	23.767	146	1818409	21.759	100
90) N-Decane	(3)	24.017	57	2253114	23.735	100
89) 1,4-Dichlorobenzene	(3)	23.937	146	1846924	22.500	100
91) sec-Butylbenzene	(3)	24.170	105	4032304	23.910	100
92) p-Isopropyltoluene	(3)	24.618	119	3624930	24.448	100
93) 1,2-Dichlorobenzene	(3)	24.754	146	1792167	21.918	100
94) n-Butylbenzene	(3)	25.701	91	3459617	24.397	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.893	157	1215937	25.712	100
96) 1,2,4-Trichlorobenzene	(3)	29.403	180	1491416	20.276	100
97) Naphthalene	(3)	29.613	128	2883454	19.758	100
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	1732119	21.877	100
99) Hexachloro-1,3-Butadiene	(3)	30.543	225	1630740	21.493	100

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Data File: /chem/AIR/GCMS_000.i/180303.b/03mar02.d

Date : 03-MAR-2018 10:39

Client ID:

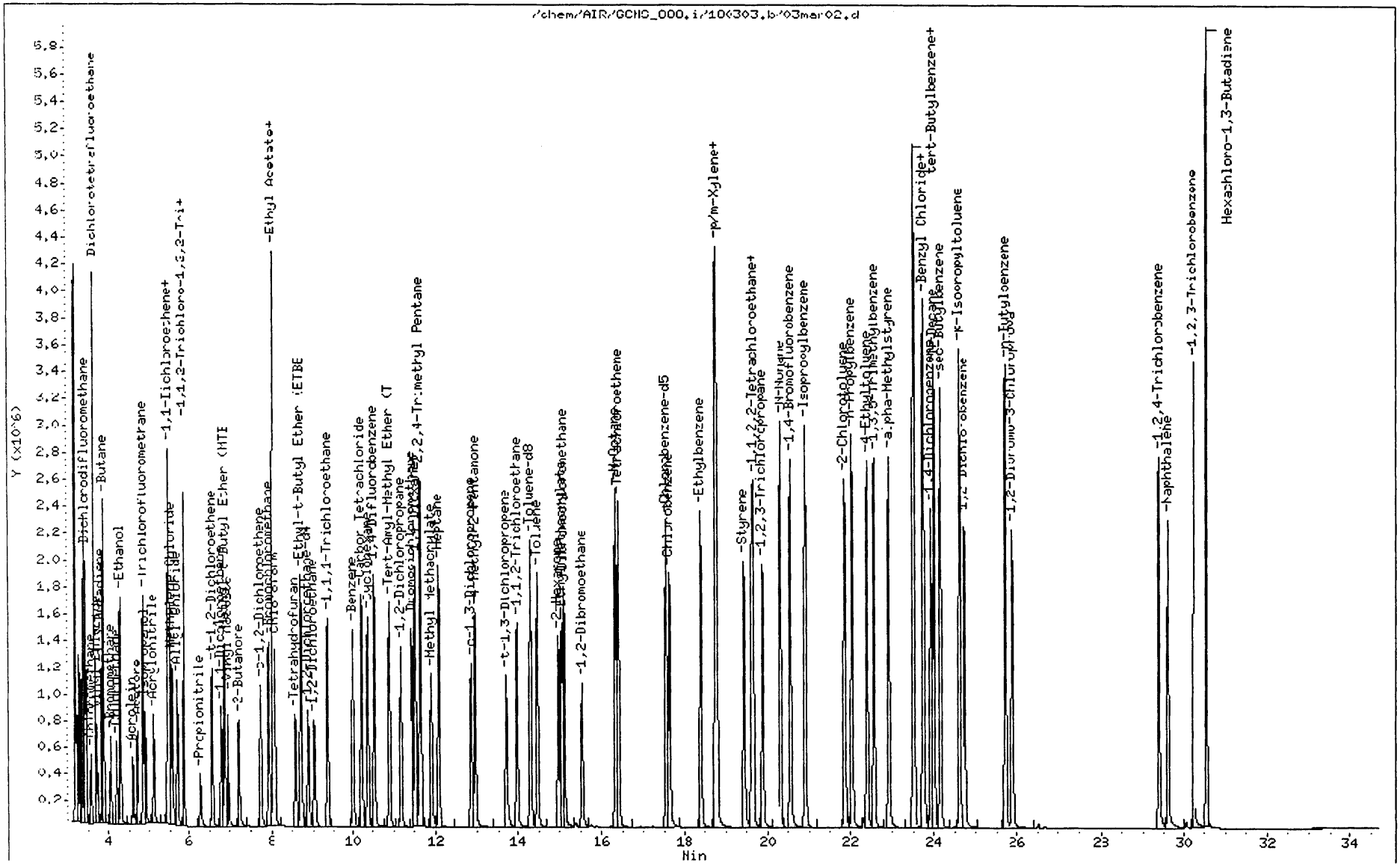
Sample Info: CCV 25PPBV 8021988

Column phase:

Instrument: GCMS_LUU.i

Operator: UPY2

Column diameter: 0.00



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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA TO-15

BATCH ID: **180305A** ANALYZED BY: 953
INSTRUMENT: GC/MS OOO

WORK ORDER: **099-10-024** REVIEWED BY:
MATRIX: Air D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
22551	Daily Calibration	2018-03-05 10:37	Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar02.d\05mar02.rr

WORK ORDER: **18-03-0118** REVIEWED BY:
MATRIX: Air D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	WAS00047	2018-03-05 15:17	Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar07.d\05mar07.rr

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-10-024-22551-1156
INSTRUMENT: GC/MS OOO
BATCH ID:
INITIAL: 180213IC
CCV: 180305A

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
CCV: 2018-03-05 10:37
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar02.d\05mar02.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	C	Avg Resp	0.00	0.450	0.403			10	0-30	PASS
Benzene	C	Avg Resp	0.00	0.864	0.818			5	0-30	PASS
Benzyl Chloride	C	Avg Resp	0.00	1.219	1.012			17	0-30	PASS
Bromodichloromethane	C	Avg Resp	0.00	0.691	0.657			5	0-30	PASS
Bromoform	C	Avg Resp	0.00	0.848	0.794			6	0-30	PASS
Bromomethane	C	Avg Resp	0.00	0.750	0.733			2	0-30	PASS
2-Butanone	C	Avg Resp	0.00	2.603	2.389			8	0-30	PASS
Carbon Disulfide	C	Avg Resp	0.00	2.575	2.414			6	0-30	PASS
Carbon Tetrachloride	C	Avg Resp	0.00	0.737	0.693			6	0-30	PASS
Chlorobenzene	C	Avg Resp	0.00	0.952	0.832			13	0-30	PASS
Chloroethane	C	Avg Resp	0.00	0.394	0.373			5	0-30	PASS
Chloroform	C	Avg Resp	0.00	2.123	1.947			8	0-30	PASS
Chloromethane	C	Avg Resp	0.00	0.922	0.845			8	0-30	PASS
Dibromochloromethane	C	Avg Resp	0.00	0.802	0.736			8	0-30	PASS
Dichlorodifluoromethane	C	Avg Resp	0.00	2.392	2.308			4	0-30	PASS
1,1-Dichloroethane	C	Avg Resp	0.00	2.120	1.942			8	0-30	PASS
1,1-Dichloroethene	C	Avg Resp	0.00	2.037	1.897			7	0-30	PASS
1,2-Dibromoethane	C	Avg Resp	0.00	0.678	0.618			9	0-30	PASS
Dichlorotetrafluoroethane	C	Avg Resp	0.00	2.082	2.024			3	0-30	PASS
1,2-Dichlorobenzene	C	Avg Resp	0.00	0.994	0.832			16	0-30	PASS
1,2-Dichloroethane	C	Avg Resp	0.00	1.651	1.519			8	0-30	PASS
1,2-Dichloropropane	C	Avg Resp	0.00	0.392	0.362			8	0-30	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

CCV WORK ORDER: 099-10-024-22551-1156
INSTRUMENT: GC/MS OOO
BATCH ID:
INITIAL: 180213IC
CCV: 180305A

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
CCV: 2018-03-05 10:37
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar02.d\05mar02.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
1,3-Dichlorobenzene	C	Avg Resp	0.00	1.016	0.844			17	0-30	PASS
1,4-Dichlorobenzene	C	Avg Resp	0.00	0.998	0.850			15	0-30	PASS
c-1,3-Dichloropropene	C	Avg Resp	0.00	0.518	0.484			7	0-30	PASS
c-1,2-Dichloroethene	C	Avg Resp	0.00	1.025	0.965			6	0-30	PASS
t-1,2-Dichloroethene	C	Avg Resp	0.00	0.959	0.909			5	0-30	PASS
t-1,3-Dichloropropene	C	Avg Resp	0.00	0.488	0.455			7	0-30	PASS
Ethylbenzene	C	Avg Resp	0.00	1.521	1.397			8	0-30	PASS
4-Ethyltoluene	C	Avg Resp	0.00	1.591	1.442			9	0-30	PASS
Hexachloro-1,3-Butadiene	C	Avg Resp	0.00	0.922	0.736			20	0-30	PASS
2-Hexanone	C	Avg Resp	0.00	0.452	0.457			-1	0-30	PASS
Methyl-t-Butyl Ether (MTBE)	C	Avg Resp	0.00	2.624	2.457			6	0-30	PASS
Methylene Chloride	C	Avg Resp	0.00	0.834	0.754			10	0-30	PASS
4-Methyl-2-Pentanone	C	Avg Resp	0.00	0.338	0.324			4	0-30	PASS
o-Xylene	C	Avg Resp	0.00	1.195	1.081			10	0-30	PASS
p/m-Xylene	C	Avg Resp	0.00	1.246	1.112			11	0-30	PASS
Styrene	C	Avg Resp	0.00	0.873	0.795			9	0-30	PASS
Tetrachloroethene	C	Avg Resp	0.00	0.650	0.588			10	0-30	PASS
Toluene	C	Avg Resp	0.00	1.121	1.047			7	0-30	PASS
Trichloroethene	C	Avg Resp	0.00	0.401	0.375			6	0-30	PASS
Trichlorofluoromethane	C	Avg Resp	0.00	2.343	2.385			-2	0-30	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	C	Avg Resp	0.00	1.961	1.848			6	0-30	PASS
1,1,1-Trichloroethane	C	Avg Resp	0.00	2.333	2.178			7	0-30	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA TO-15

CCV WORK ORDER: **099-10-024-22551-1156**
INSTRUMENT: GC/MS OOO
BATCH ID:
INITIAL: 180213IC
CCV: 180305A

ANALYZED BY: 953
D/T ANALYZED:
INITIAL: 2018-02-13 16:03
CCV: 2018-03-05 10:37
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar02.d\05mar02.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
1,1,2-Trichloroethane	C	Avg Resp	0.00	0.326	0.301			8	0-30	PASS
sec-Butylbenzene	C	Avg Resp	0.00	2.050	1.875			9	0-30	PASS
tert-Butylbenzene	C	Avg Resp	0.00	1.558	1.432			8	0-30	PASS
n-Butylbenzene	C	Avg Resp	0.00	1.724	1.610			7	0-30	PASS
1,3,5-Trimethylbenzene	C	Avg Resp	0.00	1.428	1.254			12	0-30	PASS
1,1,2,2-Tetrachloroethane	C	Avg Resp	0.00	0.919	0.804			13	0-30	PASS
1,2,4-Trimethylbenzene	C	Avg Resp	0.00	1.411	1.220			14	0-30	PASS
1,2,4-Trichlorobenzene	C	Avg Resp	0.00	0.894	0.689			23	0-30	PASS
Vinyl Acetate	C	Avg Resp	0.00	3.470	3.178			8	0-30	PASS
Vinyl Chloride	C	Avg Resp	0.00	0.908	0.843			7	0-30	PASS
1,1-Difluoroethane	C	Avg Resp	0.00	1.515	1.486			2	0-30	PASS
Isopropanol	C	Avg Resp	0.00	2.257	2.203			2	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

ICAL Internal Standards Average Compound Area Report for Method: EPA TO-15

Sample ID: 099-10-024-22470 **D/T Analyzed:** 2018-02-13 12:34
Batch ID: 180213IC

Analyte	1	2	3	4	5	6	7	8	9	Avg. Area	Lower Area Limit	Upper Area Limit
Bromochloromethane	738788	747915	741570	724762	693606	704160	647997			714114	428468	999760
1,4-Difluorobenzene	2523780	2571614	2546897	2481223	2386026	2456099	2229205			2456406	1473844	3438969
Chlorobenzene-d5	2216252	2288782	2288885	2270789	2221093	2302354	2159695			2249693	1349816	3149570

ICV, CCV And Samples Internal Standard Compounds Area Report for Method: EPA TO-15

ICV
Sample ID: 099-10-024-22470 **Run #:** 10
CCV Batch ID: 180213IC **D/T Analyzed:** 2018-02-13 19:54
Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180213\13feb11.d\13feb11.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	716913	428468	999760	7.93	PASS	
1,4-Difluorobenzene	2493438	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2289394	1349816	3149570	17.55	PASS	

CCV
Sample ID: 099-10-024-22551 **Run #:** 0
CCV Batch ID: 180305A **D/T Analyzed:** 2018-03-05 10:37
Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar02.d\05mar02.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	753007	428468	999760	7.93	PASS	
1,4-Difluorobenzene	2589926	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2431099	1349816	3149570	17.55	PASS	

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LCS

Sample ID: 095-01-021-19823 **Run #:** 1

CCV Batch ID: 180305A **D/T Analyzed:** 2018-03-05 11:46

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar03.d\05mar03.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	750107	428468	999760	7.93	PASS	
1,4-Difluorobenzene	2570878	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2396981	1349816	3149570	17.55	PASS	

LCD

Sample ID: 095-01-021-19823 **Run #:** 2

CCV Batch ID: 180305A **D/T Analyzed:** 2018-03-05 12:39

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar04.d\05mar04.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	758032	428468	999760	7.93	PASS	
1,4-Difluorobenzene	2613002	1473844	3438969	10.53	PASS	
Chlorobenzene-d5	2418671	1349816	3149570	17.55	PASS	

MB

Sample ID: 095-01-021-19823 **Run #:** 0

CCV Batch ID: 180305A **D/T Analyzed:** 2018-03-05 14:33

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar06.d\05mar06.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	854074	428468	999760	7.92	PASS	
1,4-Difluorobenzene	2890073	1473844	3438969	10.52	PASS	
Chlorobenzene-d5	2482286	1349816	3149570	17.54	PASS	

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CS

Sample ID: 18-03-0118-1 **Run #:** 2

CCV Batch ID: 180305A **D/T Analyzed:** 2018-03-05 15:17

Data File: Z:\GCMS_OOO\GCMS_OOO_data\2018\180305\05mar07.d\05mar07.rr

IS Compound	Area	Lower Area Limit	Upper Area Limit	Retention Time	Status	Remark
Bromochloromethane	753551	428468	999760	7.91	PASS	
1,4-Difluorobenzene	2513167	1473844	3438969	10.52	PASS	
Chlorobenzene-d5	2131218	1349816	3149570	17.54	PASS	

Notes:
For all samples including QC, all internal standard area responses must be within 60% to 140% of the mean area response in the initial calibration.

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Data File: /chem/AIR/GCMS_000.i/180305.b/05mar02.d
Report Date: 03/05/2018 13:16

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: CCV 25PPBV 8021988
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180305.b/to15.m

Injection Date and Time: 05-MAR-2018 10:37
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,1,1,2-Tetrafluoroethane	0.763	0.768	0.01	-1	30	Averaged
1,1-Difluoroethane	1.515	1.486	0.01	2	30	Averaged
Propene	1.320	1.337	0.01	-1	30	Averaged
Propane	0.662	0.663	0.01	0	30	Averaged
Dichlorodifluoromethane	2.392	2.308	0.01	4	30	Averaged
Chloromethane	0.922	0.845	0.01	8	30	Averaged
Dichlorotetrafluoroethane	2.082	2.024	0.01	3	30	Averaged
Isobutane	1.457	1.356	0.01	7	30	Averaged
Methanol	0.231	0.202	0.01	13	30	Averaged
Vinyl Chloride	0.908	0.843	0.01	7	30	Averaged
1,3-Butadiene	0.742	0.697	0.01	6	30	Averaged
Butane	1.346	1.228	0.01	9	30	Averaged
Bromomethane	0.750	0.733	0.01	2	30	Averaged
Chloroethane	0.394	0.373	0.01	5	30	Averaged
Ethanol	0.397	0.351	0.01	12	30	Averaged
Acrolein	0.421	0.375	0.01	11	30	Averaged
Acetone	0.450	0.403	0.01	10	30	Averaged
Trichlorofluoromethane	2.343	2.385	0.01	-2	30	Averaged
Isopropanol	2.257	2.203	0.01	2	30	Averaged
Acrylonitrile	1.117	1.038	0.01	7	30	Averaged
1,1-Dichloroethene	2.037	1.897	0.01	7	30	Averaged
Methylene Chloride	0.834	0.754	0.01	10	30	Averaged
Tert-Butyl Alcohol (TBA)	2.142	1.938	0.01	10	30	Averaged
Allyl Chloride	1.807	1.616	0.01	11	30	Averaged
1,1,2-Trichloro-1,2,2-Trifluor	1.961	1.848	0.01	6	30	Averaged
Carbon Disulfide	2.575	2.414	0.01	6	30	Averaged
Propionitrile	1.023	0.945	0.01	8	30	Averaged
t-1,2-Dichloroethene	0.959	0.909	0.01	5	30	Averaged
1,1-Dichloroethane	2.120	1.942	0.01	8	30	Averaged
Methyl-t-Butyl Ether (MTBE)	2.624	2.457	0.01	6	30	Averaged
Vinyl Acetate	3.470	3.178	0.01	8	30	Averaged
2-Butanone	2.603	2.389	0.01	8	30	Averaged
c-1,2-Dichloroethene	1.025	0.965	0.01	6	30	Averaged
Hexane	1.783	1.631	0.01	9	30	Averaged
Diisopropyl Ether (DIPE)	4.982	4.365	0.01	12	30	Averaged
Ethyl Acetate	0.345	0.321	0.01	7	30	Averaged
Chloroform	2.123	1.947	0.01	8	30	Averaged
Tetrahydrofuran	1.458	1.329	0.01	9	30	Averaged
Ethyl-t-Butyl Ether (ETBE)	3.990	3.714	0.01	7	30	Averaged
1,2-Dichloroethane	1.651	1.519	0.01	8	30	Averaged
1,1,1-Trichloroethane	2.333	2.178	0.01	7	30	Averaged
Benzene	0.864	0.818	0.01	5	30	Averaged
Carbon Tetrachloride	0.737	0.693	0.01	6	30	Averaged
Cyclohexane	0.595	0.542	0.01	9	30	Averaged
Tert-Amyl-Methyl Ether (TAME)	0.840	0.795	0.01	5	30	Averaged
1,2-Dichloropropane	0.392	0.362	0.01	8	30	Averaged
Bromodichloromethane	0.691	0.657	0.01	5	30	Averaged
Trichloroethene	0.401	0.375	0.01	6	30	Averaged

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Data File: /chem/AIR/GCMS_000.i/180305.b/05mar02.d
Report Date: 03/05/2018 13:16

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: CCV 25PPBV 8021988
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180305.b/to15.m

Injection Date and Time: 05-MAR-2018 10:37
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,2,4-Trimethyl Pentane	1.854	1.689	0.01	9	30	Averaged
1,4-Dioxane	0.190	0.180	0.01	5	30	Averaged
Methyl Methacrylate	0.273	0.257	0.01	6	30	Averaged
Heptane	0.071	0.068	0.01	4	30	Averaged
c-1,3-Dichloropropene	0.518	0.484	0.01	7	30	Averaged
4-Methyl-2-Pentanone	0.338	0.324	0.01	4	30	Averaged
t-1,3-Dichloropropene	0.488	0.455	0.01	7	30	Averaged
1,1,2-Trichloroethane	0.326	0.301	0.01	8	30	Averaged
Toluene	1.121	1.047	0.01	7	30	Averaged
2-Hexanone	0.452	0.457	0.01	-1	30	Averaged
Ethyl Methacrylate	0.544	0.512	0.01	6	30	Averaged
Dibromochloromethane	0.802	0.736	0.01	8	30	Averaged
1,2-Dibromoethane	0.678	0.618	0.01	9	30	Averaged
N-Octane	0.416	0.383	0.01	8	30	Averaged
Tetrachloroethene	0.650	0.588	0.01	10	30	Averaged
Chlorobenzene	0.952	0.832	0.01	13	30	Averaged
Ethylbenzene	1.521	1.397	0.01	8	30	Averaged
p/m-Xylene	1.246	1.112	0.01	11	30	Averaged
Bromoform	0.848	0.794	0.01	6	30	Averaged
Styrene	0.873	0.795	0.01	9	30	Averaged
1,1,2,2-Tetrachloroethane	0.919	0.804	0.01	13	30	Averaged
o-Xylene	1.195	1.081	0.01	10	30	Averaged
1,2,3-Trichloropropane	0.699	0.638	0.01	9	30	Averaged
N-Nonane	0.952	0.875	0.01	8	30	Averaged
Isopropylbenzene	1.729	1.607	0.01	7	30	Averaged
2-Chlorotoluene	1.262	1.184	0.01	6	30	Averaged
n-Propylbenzene	2.048	1.908	0.01	7	30	Averaged
4-Ethyltoluene	1.591	1.442	0.01	9	30	Averaged
1,3,5-Trimethylbenzene	1.428	1.254	0.01	12	30	Averaged
alpha-Methylstyrene	0.749	0.704	0.01	6	30	Averaged
1,2,4-Trimethylbenzene	1.411	1.220	0.01	14	30	Averaged
tert-Butylbenzene	1.558	1.432	0.01	8	30	Averaged
Benzyl Chloride	1.219	1.012	0.01	17	30	Averaged
1,3-Dichlorobenzene	1.016	0.844	0.01	17	30	Averaged
N-Decane	1.154	1.034	0.01	10	30	Averaged
1,4-Dichlorobenzene	0.998	0.850	0.01	15	30	Averaged
sec-Butylbenzene	2.050	1.875	0.01	9	30	Averaged
p-Isopropyltoluene	1.802	1.684	0.01	7	30	Averaged
1,2-Dichlorobenzene	0.994	0.832	0.01	16	30	Averaged
n-Butylbenzene	1.724	1.610	0.01	7	30	Averaged
1,2-Dibromo-3-Chloropropane	0.575	0.562	0.01	2	30	Averaged
1,2,4-Trichlorobenzene	0.894	0.689	0.01	23	30	Averaged
Naphthalene	1.774	1.358	0.01	23	30	Averaged
1,2,3-Trichlorobenzene	0.963	0.803	0.01	17	30	Averaged
Hexachloro-1,3-Butadiene	0.922	0.736	0.01	20	30	Averaged

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Data File: /chem/AIR/GCMS_000.i/180305.b/05mar02.d
Report Date: 03/05/2018 13:16

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_000.i
Sample Name: CCV 25PPBV 8021988
Sublist used: all.sub
Method used: /chem/AIR/GCMS_000.i/180305.b/to15.m

Injection Date and Time: 05-MAR-2018 10:37
Initial Calibration Date(s): 31-JAN-2018 13-FEB-2018
Initial Calibration Time(s): 11:53 18:37

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,2-Dichloroethane-d4	1.368	1.350	0.01	1	30	Averaged
Toluene-d8	1.004	1.010	0.01	-1	30	Averaged
1,4-Bromofluorobenzene	0.710	0.700	0.01	1	30	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar02.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 10:37 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 05-Mar-2018 13:14 jxs7

Sample Name: CCV 25PPBV 8021988 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	DEV(Min)
Internal Standards						
34)*Bromochloromethane	(1)	7.926	130	753007	25.000	-0.01
47)*1,4-Difluorobenzene	(2)	10.534	114	2589926	25.000	-0.01
68)*Chlorobenzene-d5	(3)	17.547	117	2431099	25.000	0.00
System Monitoring Compounds						
41)$1,2-Dichloroethane-d4	(1)	8.884	65	1016212	24.663	-0.01
SpikedAmount 25.000	Recovery =	0.000				
60)$Toluene-d8	(2)	14.281	98	2614972	25.133	0.00
SpikedAmount 25.000	Recovery =	0.000				
78)$1,4-Bromofluorobenzene	(3)	20.564	95	1700998	24.630	0.00
SpikedAmount 25.000	Recovery =	0.000				
Target Compounds						QValue
1) 1,1,1,2-Tetrafluoroethane	(1)	3.257	69	578635	25.171	100
2) 1,1-Difluoroethane	(1)	3.316	51	1119320	24.526	100
3) Propene	(1)	3.375	41	1006612	25.320	100
4) Propane	(1)	3.398	29	998616	50.087	100
5) Dichlorodifluoromethane	(1)	3.434	85	1737694	24.117	100
6) Chloromethane	(1)	3.563	50	636438	22.908	100
7) Dichlorotetrafluoroethane	(1)	3.646	85	1524296	24.305	100
8) Isobutane	(1)	3.663	43	2042050	46.530	100
9) Methanol	(1)	3.687	31	456689	65.562	100
10) Vinyl Chloride	(1)	3.740	62	634484	23.190	100
11) 1,3-Butadiene	(1)	3.851	54	525160	23.489	100
12) Butane	(1)	3.893	43	1849996	45.625	100
13) Bromomethane	(1)	4.063	94	552239	24.454	100
14) Chloroethane	(1)	4.204	64	280714	23.676	100
15) Ethanol	(1)	4.293	45	1056310	88.242	100
16) Acrolein	(1)	4.587	56	282114	22.267	100
17) Acetone	(1)	4.699	58	303481	22.405	100
18) Trichlorofluoromethane	(1)	4.863	101	1795733	25.443	100
19) Isopropanol	(1)	4.922	45	1658738	24.398	100
20) Acrylonitrile	(1)	5.116	53	781966	23.237	100
21) 1,1-Dichloroethene	(1)	5.458	61	1428603	23.287	100
23) Methylene Chloride	(1)	5.567	84	567407	22.600	100
22) Tert-Butyl Alcohol (TBA)	(1)	5.493	59	2918594	45.246	100
24) Allyl Chloride	(1)	5.692	41	1217100	22.360	100
25) 1,1,2-Trichloro-1,2,2-Trifluor	(1)	5.856	101	1391475	23.557	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar02.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 10:37 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 05-Mar-2018 13:14 jxs7

Sample Name: CCV 25PPBV 8021988 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
26) Carbon Disulfide	(1)	5.862	76	1818029	23.438	100
27) Propionitrile	(1)	6.259	54	711377	23.095	100
28) t-1,2-Dichloroethene	(1)	6.548	96	684557	23.695	100
29) 1,1-Dichloroethane	(1)	6.763	63	1462128	22.893	100
30) Methyl-t-Butyl Ether (MTBE)	(1)	6.848	73	1850393	23.414	100
31) Vinyl Acetate	(1)	6.950	43	2392989	22.896	100
32) 2-Butanone	(1)	7.211	43	1799243	22.945	100
33) c-1,2-Dichloroethene	(1)	7.733	96	726599	23.528	100
37) Hexane	(1)	8.039	57	1228181	22.869	100
36) Diisopropyl Ether (DIPE)	(1)	8.033	45	3287122	21.907	100
35) Ethyl Acetate	(1)	8.045	61	241369	23.203	100
38) Chloroform	(1)	8.096	83	1466265	22.935	100
39) Tetrahydrofuran	(1)	8.583	42	1001011	22.797	100
40) Ethyl-t-Butyl Ether (ETBE)	(1)	8.714	59	2796483	23.271	100
42) 1,2-Dichloroethane	(1)	9.026	62	1143732	23.004	100
43) 1,1,1-Trichloroethane	(1)	9.371	97	1639980	23.336	100
44) Benzene	(2)	9.989	78	2118812	23.672	100
45) Carbon Tetrachloride	(2)	10.199	117	1795476	23.521	100
46) Cyclohexane	(2)	10.381	56	1404204	22.795	100
48) Tert-Amyl-Methyl Ether (TAME)	(2)	10.891	73	2058082	23.659	100
49) 1,2-Dichloropropane	(2)	11.157	63	938361	23.115	100
50) Bromodichloromethane	(2)	11.435	83	1702527	23.772	100
52) Trichloroethene	(2)	11.526	95	970915	23.352	100
53) 2,2,4-Trimethyl Pentane	(2)	11.645	57	4374777	22.773	100
51) 1,4-Dioxane	(2)	11.509	88	466985	23.717	100
54) Methyl Methacrylate	(2)	11.900	69	665083	23.556	100
55) Heptane	(2)	12.076	100	175149	23.706	100
56) c-1,3-Dichloropropene	(2)	12.864	75	1253447	23.376	100
57) 4-Methyl-2-Pentanone	(2)	12.960	58	838110	23.911	100
58) t-1,3-Dichloropropene	(2)	13.726	75	1179384	23.343	100
59) 1,1,2-Trichloroethane	(2)	13.970	83	780763	23.107	100
61) Toluene	(3)	14.452	91	2546405	23.353	100
62) 2-Hexanone	(3)	14.967	58	1111868	25.295	100
63) Ethyl Methacrylate	(3)	15.047	69	1243951	23.494	100
64) Dibromochloromethane	(3)	15.104	129	1789065	22.930	100
65) 1,2-Dibromoethane	(3)	15.523	107	1503417	22.796	100
66) N-Octane	(3)	16.328	57	929975	22.982	100

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Quant Report Target Revision 3.5

Data File: /chem/AIR/GCMS_OOO.i/180305.b/05mar02.d Instrument ID: GCMS_OOO.i
Injection date and time: 05-MAR-2018 10:37 Analyst ID: JXS7

Method used: /chem/AIR/GCMS_OOO.i/180305.b/to15.m Sublist used: all
Calibration date and time: 05-MAR-2018 13:14
Date, time and analyst ID of latest file update: 05-Mar-2018 13:14 jxs7

Sample Name: CCV 25PPBV 8021988 Misc Info: 8010685 JXS7
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ppbv)	QValue
67) Tetrachloroethene	(3)	16.402	166	1429108	22.598	100
69) Chlorobenzene	(3)	17.627	112	2022669	21.860	100
70) Ethylbenzene	(3)	18.398	91	3396112	22.960	100
71) p/m-Xylene	(3)	18.744	91	5408085	44.637	100
72) Bromoform	(3)	18.749	173	1929788	23.409	100
73) Styrene	(3)	19.447	104	1932336	22.762	100
74) 1,1,2,2-Tetrachloroethane	(3)	19.617	83	1955025	21.868	100
75) o-Xylene	(3)	19.656	91	2627348	22.613	100
76) 1,2,3-Trichloropropane	(3)	19.883	75	1550723	22.822	100
77) N-Nonane	(3)	20.331	57	2126020	22.974	100
79) Isopropylbenzene	(3)	20.909	105	3906721	23.230	100
80) 2-Chlorotoluene	(3)	21.856	91	2877888	23.456	100
81) n-Propylbenzene	(3)	22.026	91	4637897	23.284	100
82) 4-Ethyltoluene	(3)	22.378	105	3505274	22.659	100
83) 1,3,5-Trimethylbenzene	(3)	22.576	105	3048106	21.948	100
84) alpha-Methylstyrene	(3)	22.916	118	1712149	23.508	100
86) 1,2,4-Trimethylbenzene	(3)	23.512	105	2966011	21.614	100
85) tert-Butylbenzene	(3)	23.495	119	3482416	22.986	100
87) Benzyl Chloride	(3)	23.756	91	2459313	20.747	100
88) 1,3-Dichlorobenzene	(3)	23.767	146	2051394	20.764	100
90) N-Decane	(3)	24.016	57	2512595	22.390	100
89) 1,4-Dichlorobenzene	(3)	23.937	146	2065697	21.287	100
91) sec-Butylbenzene	(3)	24.170	105	4557228	22.859	100
92) p-Isopropyltoluene	(3)	24.617	119	4094908	23.362	100
93) 1,2-Dichlorobenzene	(3)	24.753	146	2023605	20.935	100
94) n-Butylbenzene	(3)	25.700	91	3913529	23.346	100
95) 1,2-Dibromo-3-Chloropropane	(3)	25.893	157	1365131	24.419	100
96) 1,2,4-Trichlorobenzene	(3)	29.403	180	1675486	19.269	100
97) Naphthalene	(3)	29.613	128	3300393	19.131	100
98) 1,2,3-Trichlorobenzene	(3)	30.225	180	1951378	20.848	100
99) Hexachloro-1,3-Butadiene	(3)	30.542	225	1790208	19.959	100

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Data File: /chem/AIR/GCMS_000.i/180305.b/05mar02.d

Date : 05-MAR-2018 10:37

Client ID:

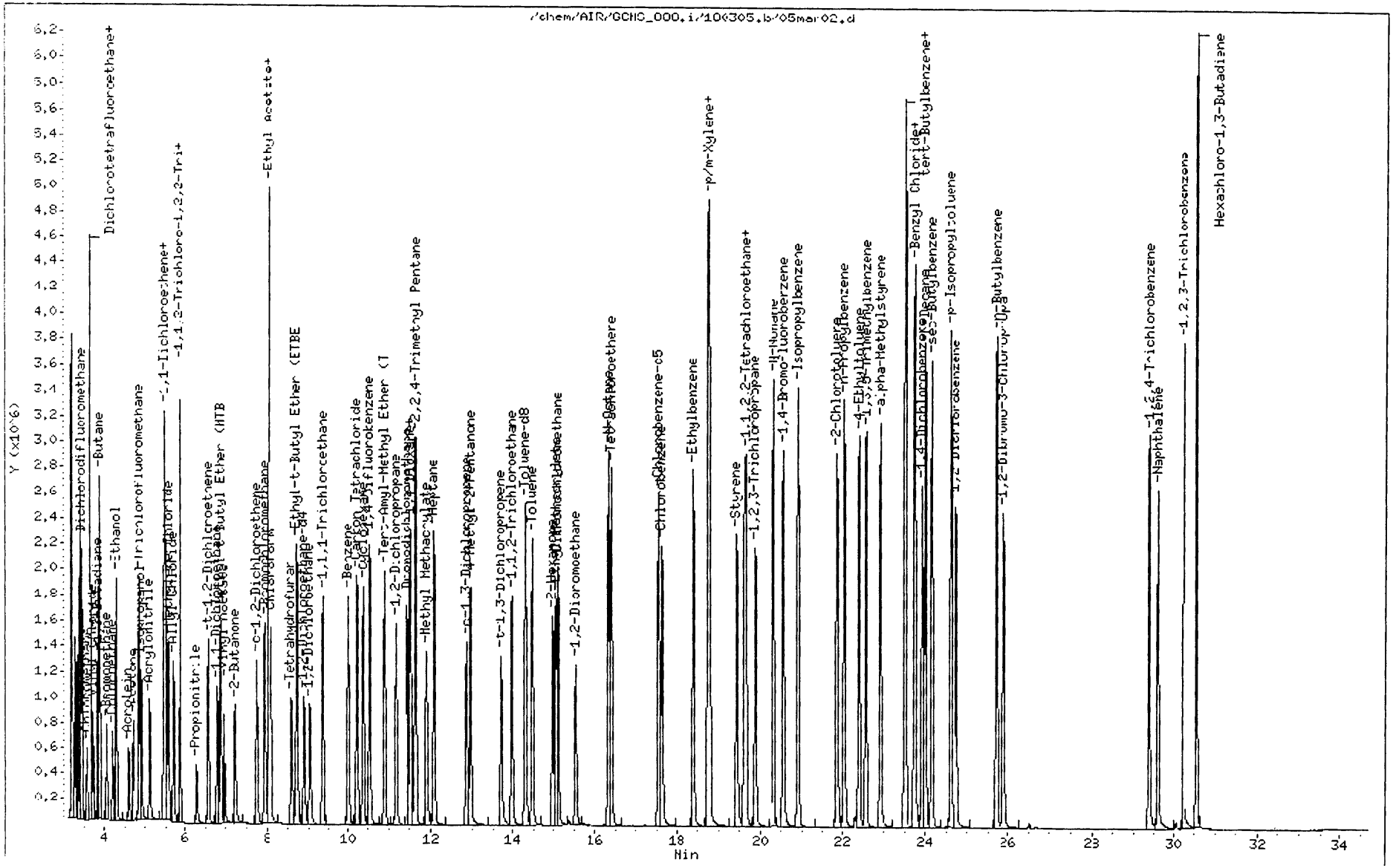
Sample Info: CCV 25PPBV 8021988

Column phase:

Instrument: GCMS_LUU.1

Operator: JXS7

Column diameter: 0.00



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EPA METHOD TO-15

TUNING REPORTS

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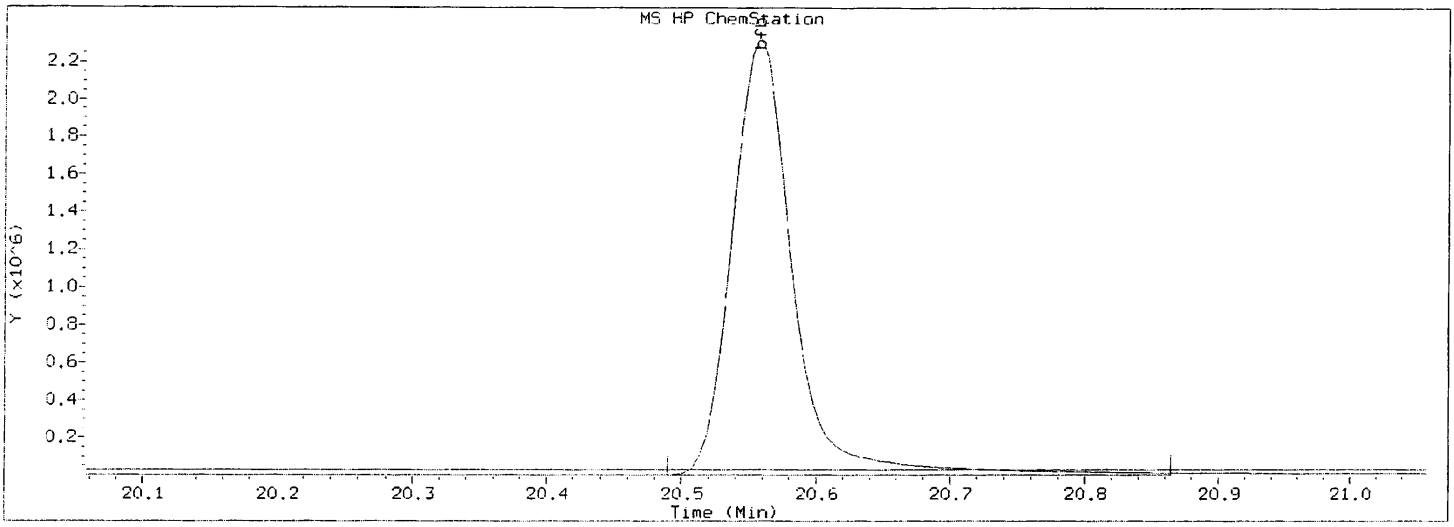
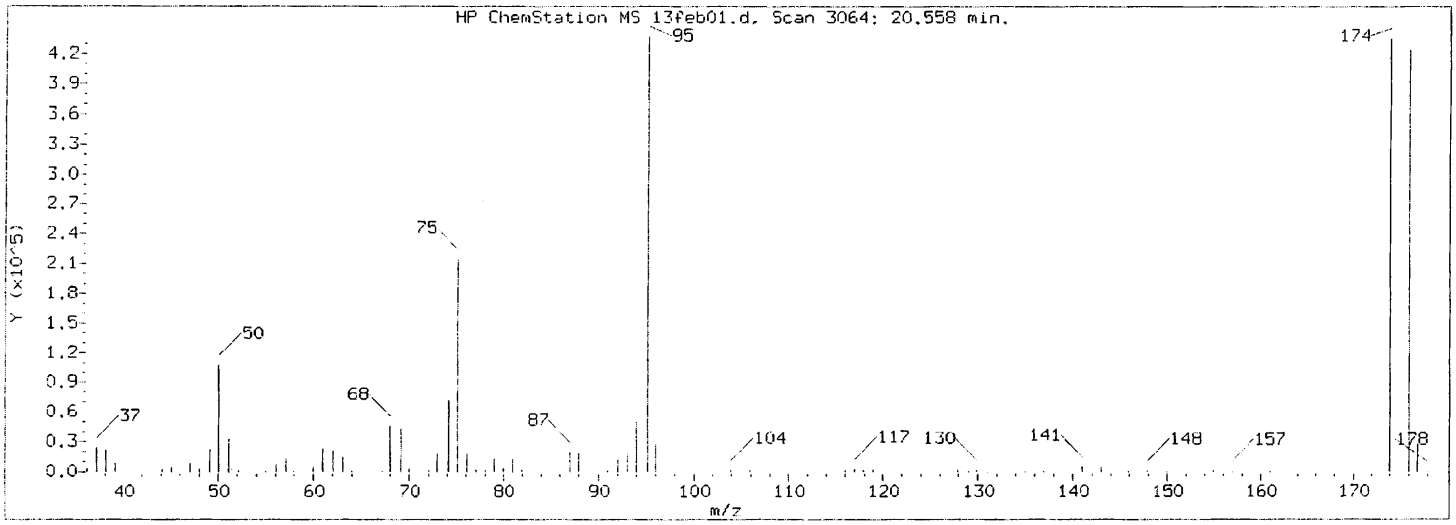
BFB TUNE SAMPLE AND GRAPHIC REPORT

Report Date: Wed Feb 14 13:20:04 2018
Datafile Analyzed: /chem/AIR/GCMS_OOO.i/180213.b/13feb01.d
Method Used: /chem/AIR/GCMS_OOO.i/bfbtune.m Inst: GCMS_OOO
Injection Date: 13-FEB-2018 10:28 Operator: 953
Sample Info: TUNE CHECK
Misc Info: 1@A02-09-18 953





BFB Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Response	Test
95	Base Peak, 100% relative abundance	100.0		427328	PASS
50	15 - 40% of mass 95	24.5		104656	PASS
75	30 - 60% of mass 95	48.9		208896	PASS
96	5 - 9% of mass 95	6.5		27752	PASS
173	Less than 2% of mass 174	0.0	(0.0)	0	PASS
174	50 - 120% of mass 95	98.2		419818	PASS
175	5 - 9% of mass 174	7.4	(7.5)	31570	PASS
176	95 - 101% of mass 174	96.0	(97.7)	410197	PASS
177	5 - 9% of mass 176	6.4	(6.6)	27152	PASS

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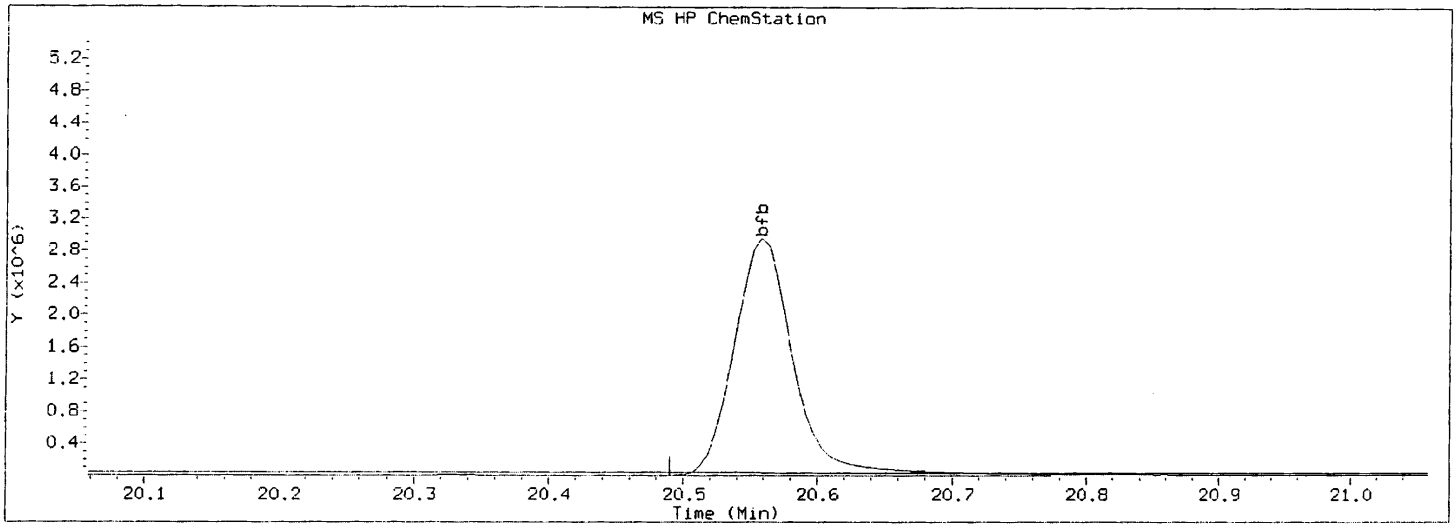
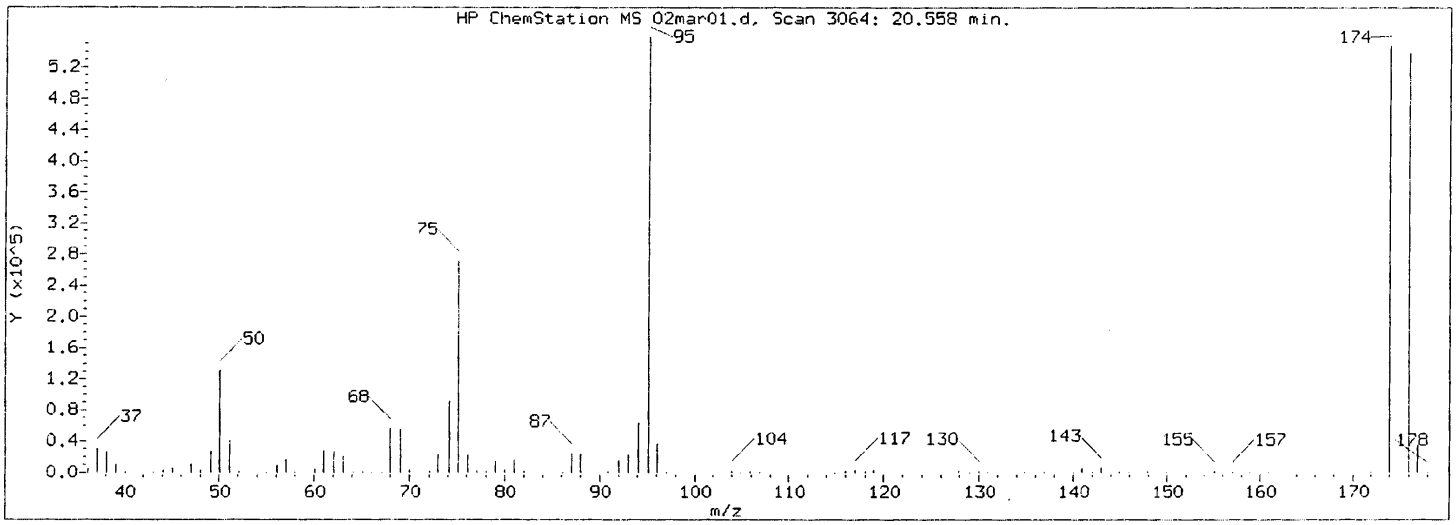
BFB TUNE SAMPLE AND GRAPHIC REPORT

Report Date: Fri Mar 2 10:55:20 2018
Datafile Analyzed: /chem/AIR/GCMS_000.i/180302.b/02mar01.d
Method Used: /chem/AIR/GCMS_000.i/bfbtune.m Inst: GCMS_000
Injection Date: 02-MAR-2018 09:43 Operator: JXS7
Sample Info: TUNE CHECK emv-10
Misc Info: 8010685 JXS7





BFB Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Response	Test
95	Base Peak, 100% relative abundance	100.0		546837	PASS
50	15 - 40% of mass 95	23.7		129517	PASS
75	30 - 60% of mass 95	48.5		265024	PASS
96	5 - 9% of mass 95	6.6		36120	PASS
173	Less than 2% of mass 174	0.0	(0.0)	0	PASS
174	50 - 120% of mass 95	98.0		535936	PASS
175	5 - 9% of mass 174	7.5	(7.7)	41029	PASS
176	95 - 101% of mass 174	95.8	(97.7)	523733	PASS
177	5 - 9% of mass 176	6.3	(6.6)	34714	PASS

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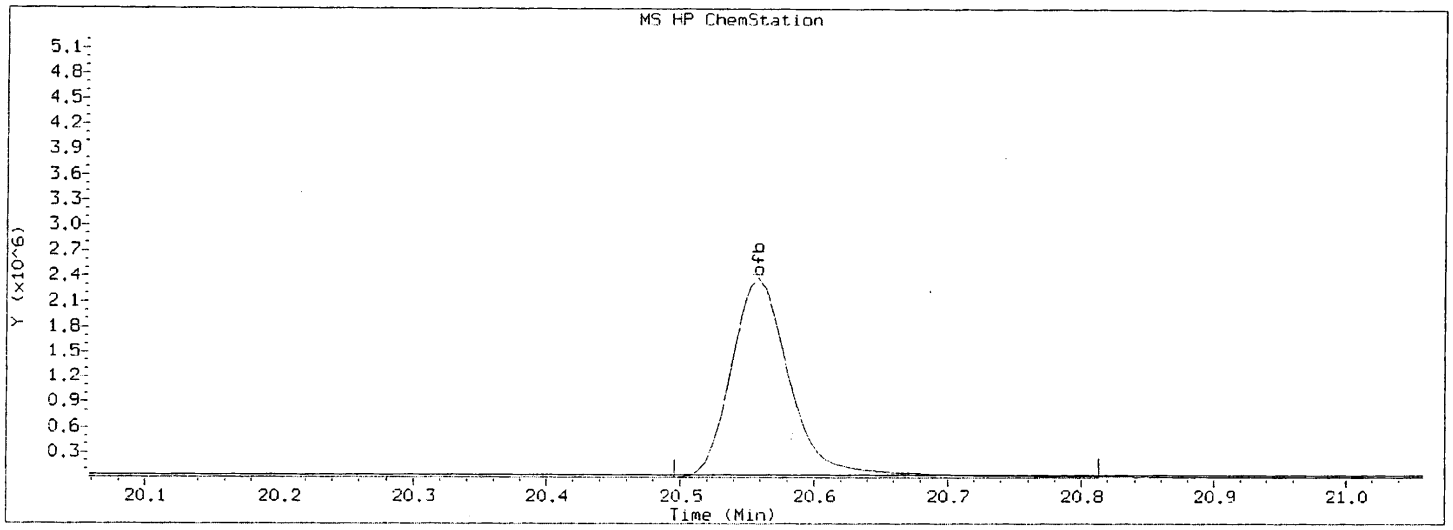
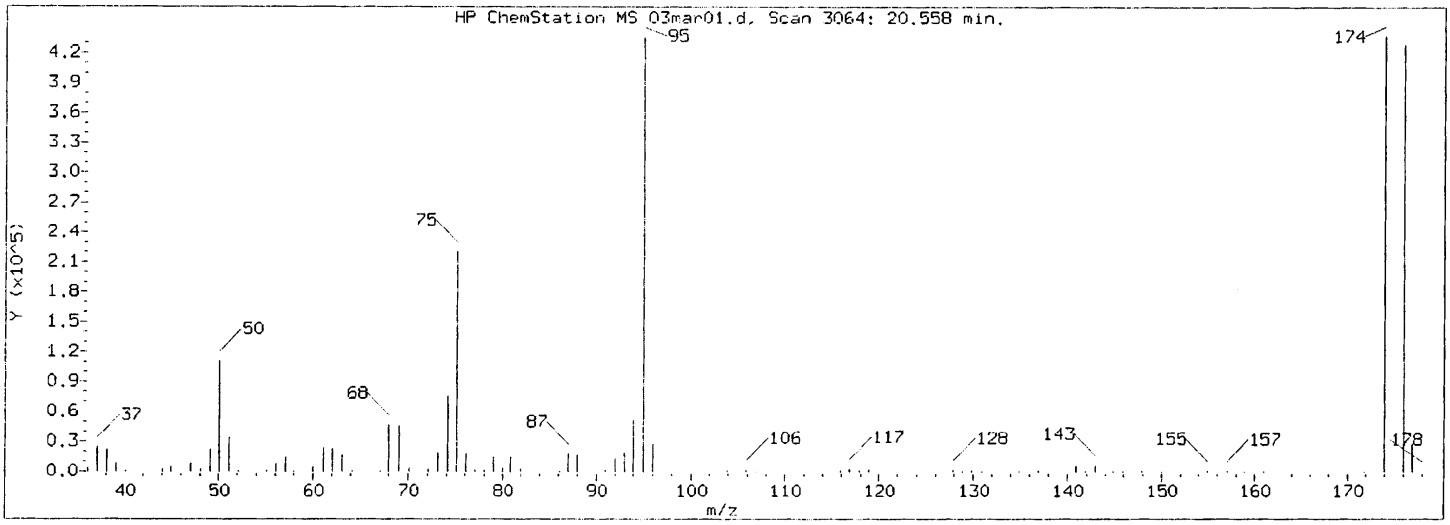
BFB TUNE SAMPLE AND GRAPHIC REPORT

Report Date: Sat Mar 3 16:47:41 2018
Datafile Analyzed: /chem/AIR/GCMS_OOO.i/180303.b/03mar01.d
Method Used: /chem/AIR/GCMS_OOO.i/bfbtune.m Inst: GCMS_OOO
Injection Date: 03-MAR-2018 09:48 Operator: UPY2
Sample Info: TUNE CHECK
Misc Info: 8010685 UPY2





BFB Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Response	Test
95	Base Peak, 100% relative abundance	99.8		422805	PASS
50	15 - 40% of mass 95	25.4		107440	PASS
75	30 - 60% of mass 95	50.7		214378	PASS
96	5 - 9% of mass 95	6.6		27717	PASS
173	Less than 2% of mass 174	0.0	(0.0)	0	PASS
174	50 - 120% of mass 95	100.2		423850	PASS
175	5 - 9% of mass 174	7.7	(7.7)	32496	PASS
176	95 - 101% of mass 174	98.1	(97.9)	414890	PASS
177	5 - 9% of mass 176	6.4	(6.5)	27146	PASS

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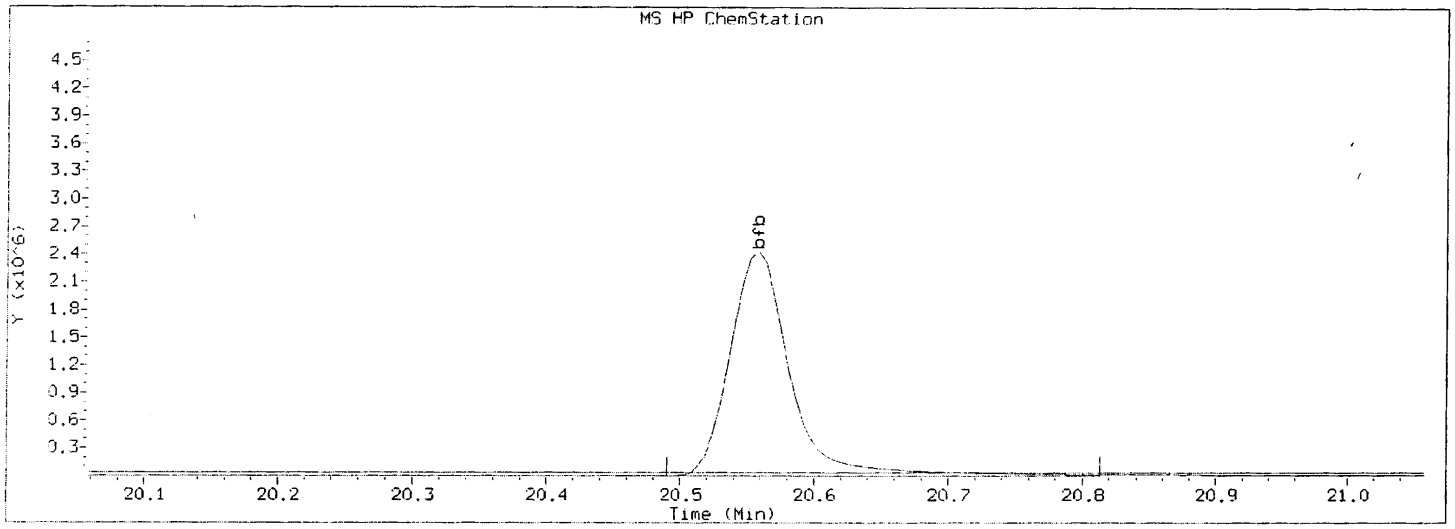
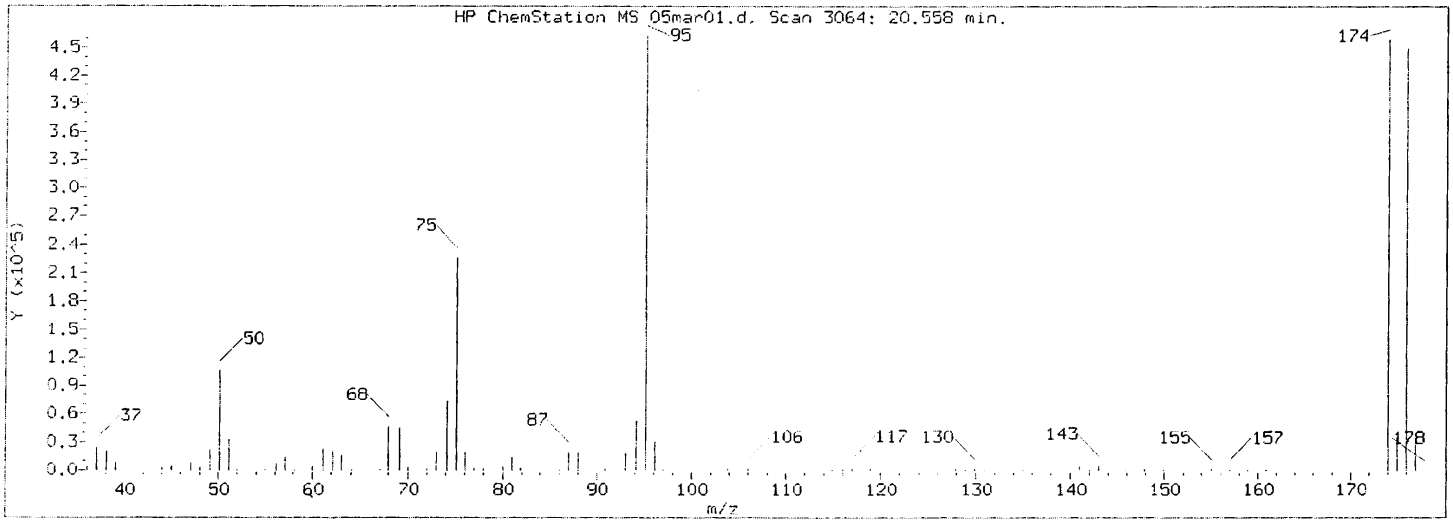
BFB TUNE SAMPLE AND GRAPHIC REPORT

Report Date: Mon Mar 5 13:14:22 2018
Datafile Analyzed: /chem/AIR/GCMS_OOO.i/180305.b/05mar01.d
Method Used: /chem/AIR/GCMS_OOO.i/bfbtune.m Inst: GCMS_OOO
Injection Date: 05-MAR-2018 09:44 Operator: JXS7
Sample Info: TUNE CHECK
Misc Info: 8010685 JXS7





BFB Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Response	Test
95	Base Peak, 100% relative abundance	100.0		449770	PASS
50	15 - 40% of mass 95	23.1		103981	PASS
75	30 - 60% of mass 95	48.4		217706	PASS
96	5 - 9% of mass 95	6.5		29280	PASS
173	Less than 2% of mass 174	0.0	(0.0)	0	PASS
174	50 - 120% of mass 95	99.1		445738	PASS
175	5 - 9% of mass 174	7.5	(7.6)	33685	PASS
176	95 - 101% of mass 174	97.0	(97.8)	436074	PASS
177	5 - 9% of mass 176	6.4	(6.6)	28653	PASS

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EPA METHOD TO-15

RUN LOGS

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Injection Log

Directory: W:\GCMS_OOO\GCMS_OOO_DATA\2018\180213

Line	Vial	FileName	Multiplier		SampleName	Misc Info	Injected
1	1	13feb01.d	1.		TUNE CHECK	1@A02-09-18 953	13 Feb 2018 10:28
2	2	13feb02.d	1.	x	CCV 25PPBV A020718A Failed High	1@A02-09-18 953	13 Feb 2018 11:38
3	2	13feb03.d	1.		ICAL/CCV 25PPBV A021318C	1@A02-09-18 953	13 Feb 2018 12:34
4	2	13feb04.d	1.		ICAL 12.5PPBV A021318C	1@A02-09-18 953	13 Feb 2018 13:43
5	2	13feb05.d	1.		ICAL 6.25PPBV A021318C	1@A02-09-18 953	13 Feb 2018 14:26
6	1	13feb06.d	1.		ICAL 1.25PPBV A020718C	1@A02-09-18 953	13 Feb 2018 15:17
7	1	13feb07.d	1.		ICAL 0.50PPBV A020718C	1@A02-09-18 953	13 Feb 2018 16:03
8	2	13feb08.d	1.		ICAL 100PPBV A020718D	1@A02-09-18 953	13 Feb 2018 16:59
9	2	13feb09.d	1.	x	ICAL 50PPBV A020718D Lost Propane	1@A02-09-18 953	13 Feb 2018 17:48
10	2	13feb10.d	1.		ICAL 50PPBV A020718D	1@A02-09-18 953	13 Feb 2018 18:37
11	1	13feb11.d	1.		ICV/LCS 25PPBV A020218B	1@A02-09-18 460	13 Feb 2018 19:54
12	1	13feb12.d	1.		LCSD 25PPBV A020218B	1@A02-09-18 460	13 Feb 2018 20:52
13	2	13feb13.d	1.		DTSC 50PPBV A020718D	1@A02-09-18 460	13 Feb 2018 22:07
14	2	13feb14.d	1.		IB	1@A02-09-18 460	13 Feb 2018 22:50
15	1	13feb15.d	1.		LAB AIR	1@A02-09-18 460	13 Feb 2018 23:40
16	1	13feb16.d	1.		MB FC LC260	1@A02-09-18 460	14 Feb 2018 00:38
17	1	13feb17.d	1.	x	LCSD 25PPBV A020218B Analyst Error	1@A02-09-18 460	14 Feb 2018 01:28
18	2	13feb18.d	1.		IB	1@A02-09-18 460	14 Feb 2018 02:11
19	3	13feb19.d	1.		18-02-0814-12A 10ML	1@A02-09-18 460	14 Feb 2018 03:17
20	4	13feb20.d	1.		18-02-0814-13A 400ML	1@A02-09-18 460	14 Feb 2018 04:08
21	5	13feb21.d	1.		18-02-0814-14A 400ML	1@A02-09-18 460	14 Feb 2018 05:02
22	6	13feb22.d	1.		18-02-0814-15A 400ML	1@A02-09-18 460	14 Feb 2018 06:19
23	7	13feb23.d	1.		18-02-0814-16A 400ML	1@A02-09-18 460	14 Feb 2018 07:36
24	8	13feb24.d	1.		18-02-0814-17A 400ML	1@A02-09-18 460	14 Feb 2018 08:57
25	9	13feb25.d	1.		18-02-0814-18A 400ML	1@A02-09-18 460	14 Feb 2018 10:13

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Injection Log

Directory: w:\GCMS_OOO\GCMS_OOO_DATA\2018\180302

.ine	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
	1	02mar01.d	1.	TUNE CHECK emv-10	8010685 JXS7	02 Mar 2018 09:43
!	2	02mar02.d	1.	CCV 25PPBV 8021988	8010685 JXS7	02 Mar 2018 10:35
;	2	02mar03.d	1.	LCS 25PPBV 8021840	8010685 JXS7	02 Mar 2018 11:26
.	2	02mar04.d	1.	LCSD 25PPBV 8021840	8010685 JXS7	02 Mar 2018 12:41
;	2	02mar05.d	1.	LAB AIR	8010685 JXS7	02 Mar 2018 13:55
;	1	02mar06.d	1.	MB FC LC748	8010685 JXS7	02 Mar 2018 14:44
'	1	02mar07.d	1.	x 18-03-0049-1A 40ML Ref	8010685 JXS7	02 Mar 2018 15:37
;	1	02mar08.d	1.	18-03-0049-1A 387ML	8010685 JXS7	02 Mar 2018 16:46
)	2	02mar09.d	1.	18-03-0049-2A 400ML	8010685 JXS7	02 Mar 2018 17:43
0	3	02mar10.d	1.	18-03-0047-1A 400ML	8010685 JXS7	02 Mar 2018 18:34
1	4	02mar11.d	1.	18-03-0047-2A 400ML	8010685 JXS7	02 Mar 2018 19:38
2	5	02mar12.d	1.	18-03-0047-3A 400ML	8010685 JXS7	02 Mar 2018 20:31
3	6	02mar13.d	1.	18-03-0047-5A 400ML	8010685 JXS7	02 Mar 2018 21:26
4	7	02mar14.d	1.	18-03-0047-4A 400ML 111TCA 461 11DCE 241	8010685 JXS7	02 Mar 2018 22:20
5	7	02mar15.d	1.	18-03-0047-4A 40ML	8010685 JXS7	02 Mar 2018 23:14
6	8	02mar16.d	1.	18-03-0118-1A 400ML A6557 PCE 167	8010685 JXS7	03 Mar 2018 00:16
7	9	02mar17.d	1.	18-03-0118-2A 400ML ↓ 1703	8010685 JXS7	03 Mar 2018 01:08
8	10	02mar18.d	1.	18-03-0063-1A 40ML	8010685 JXS7	03 Mar 2018 01:59
9	11	02mar19.d	1.	18-03-0063-2A 40ML	8010685 JXS7	03 Mar 2018 02:42
0	12	02mar20.d	1.	18-03-0063-3A 40ML	8010685 JXS7	03 Mar 2018 03:28
1	13	02mar21.d	1.	18-03-0063-4A 40ML	8010685 JXS7	03 Mar 2018 04:12
2	14	02mar22.d	1.	18-03-0063-5A 40ML	8010685 JXS7	03 Mar 2018 04:58
3	15	02mar23.d	1.	18-03-0063-6A 40ML	8010685 JXS7	03 Mar 2018 05:51

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Injection Log

Directory: w:\GCMS_OOO\GCMS_OOO_DATA\2018\180303

.ine	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
	1	03mar01.d	1.	TUNE CHECK	8010685 UPY2	03 Mar 2018 09:48
2	2	03mar02.d	1.	CCV 25PPBV 8021988	8010685 UPY2	03 Mar 2018 10:39
3	2	03mar03.d	1.	LCS 25PPBV 8021840	8010685 UPY2	03 Mar 2018 11:35
4	2	03mar04.d	1.	LCSD 25PPBV 8021840	8010685 UPY2	03 Mar 2018 12:24
5	2	03mar05.d	1.	LAB AIR	8010685 UPY2	03 Mar 2018 13:36
6	1	03mar06.d	1.	MB FC LC828	8010685 UPY2	03 Mar 2018 14:24
7	13	03mar07.d	1.	18-03-0063-4A 200ML	8010685 UPY2	03 Mar 2018 15:22
8	14	03mar08.d	1.	18-03-0063-5A 160ML	8010685 UPY2	03 Mar 2018 16:09
9	15	03mar09.d	1.	18-03-0063-6A 160ML	8010685 UPY2	03 Mar 2018 16:54
10	10	03mar10.d	1.	18-03-0063-1A 100X 200ML	8010685 UPY2	03 Mar 2018 17:56
11	11	03mar11.d	1.	18-03-0063-2A 100X 200ML	8010685 UPY2	03 Mar 2018 18:41
12	12	03mar12.d	1.	18-03-0063-3A 100X 100ML	8010685 UPY2	03 Mar 2018 19:29
13	8	03mar13.d	1.	18-03-0118-1A 2.18X 80ML A3249	8010685 UPY2	03 Mar 2018 21:35
14	7	03mar14.d	1.	x 18-03-0118-1A 100X 100ML 410 Ref	8010685 UPY2	03 Mar 2018 22:20
15	9	03mar15.d	1.	18-03-0118-2A 100X 400ML	8010685 UPY2	03 Mar 2018 23:09
16	1	03mar16.d	1.	18-03-0142-10A 400ML	8010685 UHOG	03 Mar 2018 23:59
17	2	03mar17.d	1.	18-03-0142-9A 400ML	8010685 UHOG	04 Mar 2018 00:50
18	3	03mar18.d	1.	18-03-0142-8A 400ML	8010685 UHOG	04 Mar 2018 01:45
19	5	03mar19.d	1.	18-03-0142-6A 400ML	8010685 UHOG	04 Mar 2018 02:43
20	16	03mar20.d	1.	18-03-0142-5A 10ML	8010685 UHOG	04 Mar 2018 03:27
21	4	03mar21.d	1.	18-03-0142-2A 400ML	8010685 UHOG	04 Mar 2018 04:26
22	5	03mar22.d	1.	x 18-03-0142-7A 40ML Ref	8010685 UHOG	04 Mar 2018 05:10
23	13	03mar23.d	1.	18-03-0142-4A 10ML	8010685 UHOG	04 Mar 2018 05:57
24	14	03mar24.d	1.	18-03-0142-3A 20ML	8010685 UHOG	04 Mar 2018 06:41
25	15	03mar25.d	1.	18-03-0142-1A 10ML	8010685 UHOG	04 Mar 2018 07:26

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Injection Log

Directory: w:\GCMS_OOO\GCMS_OOO_DATA\2018\180305

.ine	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
	1	05mar01.d	1.	TUNE CHECK	8010685 JXS7	05 Mar 2018 09:44
!	2	05mar02.d	1.	CCV 25PPBV 8021988	8010685 JXS7	05 Mar 2018 10:37
;	2	05mar03.d	1.	LCS 25PPBV 8021840	8010685 JXS7	05 Mar 2018 11:46
.	2	05mar04.d	1.	LCSD 25PPBV 8021840	8010685 JXS7	05 Mar 2018 12:39
;	2	05mar05.d	1.	LAB AIR	8010685 JXS7	05 Mar 2018 13:41
;	1	05mar06.d	1.	MB FC LC449	8010685 JXS7	05 Mar 2018 14:33
'	7	05mar07.d	1.	18-03-0118-1A 100X 10ML 2.8X	8010685 JXS7	05 Mar 2018 15:17
;	4	05mar08.d	1.	18-03-0142-7A 394ML	8010685 JXS7	05 Mar 2018 16:34
)	5	05mar09.d	1.	18-03-0142-4A 100ML 35	8010685 JXS7	05 Mar 2018 17:20
0	6	05mar10.d	1.	18-03-0142-3A 400ML	8010685 JXS7	05 Mar 2018 18:17
1	8	05mar11.d	1.	18-03-0088-1A 2.28X 80ML	8010685 JXS7	05 Mar 2018 19:03
2	9	05mar12.d	1.	18-03-0088-2A 2.39X 80ML	8010685 JXS7	05 Mar 2018 19:51
3	10	05mar13.d	1.	18-03-0088-6A 2.37X 80ML	8010685 JXS7	05 Mar 2018 20:39
4	11	05mar14.d	1.	18-03-0088-8A 2.34X 80ML	8010685 JXS7	05 Mar 2018 21:29
5	12	05mar15.d	1.	18-03-0088-10A 2.33X 80ML	8010685 JXS7	05 Mar 2018 22:21
6	13	05mar16.d	1.	18-03-0088-14A 1.47X 400ML-TCEM 141	8010685 JXS7	05 Mar 2018 23:22
7	13	05mar17.d	1.	18-03-0088-14A 1.47X 40ML	8010685 JXS7	06 Mar 2018 00:12
8	14	05mar18.d	1.	18-03-0088-18A 2.49X 80ML	8010685 JXS7	06 Mar 2018 01:02

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EPA METHOD TO-15

CANISTER CERTIFICATIONS

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Summa Canister Activity Report

Client: AECOM (Santa Barbara)

Work Order: 18-03-0118

Summa Can	Sample #	Vac. Out	Vac. In	Press. To	DF	Analysis Type	Date Changed
LC985	1-A	-29.5	-4.8	-4.8	1.00	Pressurize	3/2/2018 3:30:48 PM
LC505	2-A	-29.5	0.0	0.0	1.00	Pressurize	3/2/2018 3:31:26 PM

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Summa Canister Activity Report

Client: AECOM (Santa Barbara)

Work Order: 18-03-0118

Summa Can	Sample #	Vac. Out	Vac. In	Press. To	DF	Analysis Type	Date Changed
LC985	1-A	-29.5	-4.8	-4.8	1.00	Pressurize	3/2/2018 3:30:48 PM
LC985	1-A	-29.5	-16.2	0.0	2.18	Repressurize	3/3/2018 5:28:40 PM
LC505	2-A	-29.5	0.0	0.0	1.00	Pressurize	3/2/2018 3:31:26 PM

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INDIVIDUAL CANISTER QC CERTIFICATION

Batch ID: A180222X

Canister Size: ☐ 6L ☑ 1L

Certified Canister ID:

LC985

Certification Method: ☐ TO-14 ☑ TO-15 ☐ TO-15 SIM

Date Cleaned: 2/20/2018

Date Certified: 2/22/2018

Data File: 22FEB06.D

GC/MS ID: X

Cleaning Equipment ID:

☐ Rack 1	☐ Rack 4a	☑ Oven 1	☐ Oven 4
☐ Rack 2	☐ Rack 4b	☐ Oven 2	☐ Oven 7
☐ Rack 3		☐ Oven 3	☐ Oven 8

Canisters were cleaned as a batch per Eurofins-Calscience SOP T-016. This certifies that the canisters referenced herein contain no target analytes above the reporting limits stated in the applicable SOP and/or any client specified target list of analytes.

Employee ID: 41 Date: 2/23/2018

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BATCH CANISTER QC CERTIFICATION

Batch ID: A180213X

Canister Size: ☐ 6L ☑ 1L

Certified Canister IDs:

LC505	(Certified Canister)	LC1152
LC1138		LC591
LC251		LC483
LC024		LC1035
LC524		LC633
SLC050		SLC011

Certification Method: ☐ TO-14 ☑ TO-15 ☐ TO-15 SIM

Date Cleaned: 2/12/2018

Date Certified: 2/13/2018

Data File: 13FEB11.D

GC/MS ID: X

Cleaning Equipment ID: ☐ Rack 1 ☐ Rack 4a ☐ Oven 1 ☑ Oven 4
☐ Rack 2 ☐ Rack 4b ☐ Oven 2 ☐ Oven 7
☐ Rack 3 ☐ Oven 3 ☐ Oven 8

Canisters were cleaned as a batch per Eurofins-Calscience SOP T-016. This certifies that the canisters referenced herein contain no target analytes above the reporting limits stated in the applicable SOP and/or any client specified target list of analytes.

Employee ID: 41 Date: 2/14/2018

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EPA METHOD TO-15

STANDARDS PREPARATION LOGS

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Air Standard Preparation Logbook

LINE NO	PREP DATE	NEW STD. ID #	FOR METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STD. ID #	INITIAL VOL. (µL)	INITIAL FLOW CONC. (mL/min)	FINAL PRESSURE	FINAL DILUT. FLOW (mL/min)	FINAL CONC.	EXPIRATION DATE	PREP BY
1	1/31/18	A013118E	TO15	Propylene 65 comp Tetrafluoroethane 30 comp	A02-08-10 A02-07-11	– –	20 20	\	760	25 ppbv CCV	2/14/18	411
2	↓	↓ F	↓	Same as A013118E	A02-08-10 A02-07-11	– –	20 20	\	760	↓	↓	↓
3	↓	↓ G	↓	A013118E 25 ppb-V CCV	A013118E	– –	50 –	\	950	1.25 ppb CCV	↓	↓
4	↓	↓ H	↓	A013118E 25 ppb-V CCV	A013118E	– –	50 –	\	950	1.25 ppb CCV	↓	↓
5	1/31/18A	AD1 1/3118 ~~18~~013118I	TO-15	propylene (65 compds) Tetrafluoroethan (30 compounds)	A02-08-10 A02-07-11	– –	40 40	–	720	50 ppbv STD	2/14/18	866
6	1/31/18	AD1 1/3118 ~~A18~~013118J	TO-15	SAME AS A18013118I	A02-08-10 A02-07-11	– –	40 40	–	720	50 ppbv STD	2/14/18	866
7	1/3118	A013118K	TO-15	SAME AS A013118E	A02-08-10 A02-07-11	– –	20 20	–	760	25 ppbv CCV	2/14/18	866
8	01/31/18	↓ L	TO-15	65 compd (2nd source) 30 compd	A02-09-19 A02-09-20	– –	20 20	–	760	25 ppbv LCS	02/14/18	460
9	↓	↓ M	TO-15 SIM	25 ppbv LCS	A013118L	– –	50 –	–	950	1.25 ppbv LCS	↓	↓
10	2/2/18	A020218A	TO-15	Propylene (65 cmpds) Tetrafluoroethane (30 cmpds)	A02-08-10 A02-07-11	– –	20 20	–	760	25 ppbv CCV	2/16/18	1087
11	↓	A020218B ✓	↓	Same as ~~A02~~ A013118L – ~~GG~~ 2/2/18	A02-09-19 A02-09-20	– –	20 20	–	↓	25 ppbv LCS	↓	953

COMMENTS:

Air Standard Preparation Logbook

LINE NO	PREP DATE	NEW STD. ID #	FOR METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STD. ID #	INITIAL VOL. (µL)	INITIAL FLOW CONC. (mL/min)	FINAL PRESSURE	FINAL DILUT. FLOW (mL/min)	FINAL CONC.	EXPIRATION DATE	PREP BY
1	2/7/18	A020718A	TO15	Propylene (65comp) Tetrafluoroethane (30comp) –	A02-08-10 A02-09-24 –	– – –	20 20 –	–	760	25ppbv CCV	2/21/18	953
2	↓	↓ B	↓	Same as A020718A – –	A02-08-10 A02-09-24 –	– – –	20 20 –	–	↓	↓	↓	↓
3		✓ C		25ppbv CCV – –	A020718A – –	– – –	50 – –	–	950	1.25ppbv CCV		
4	↓	✓ D	↓	Same as A020718A – –	A02-08-10 A02-09-24 –	– – –	~~20~~ 40 2/7/18 ~~20~~ 40 –	–	770	50ppbv CCV	↓	↓
5	2/7/18	A020718E	TO-15	same as A020718A – –	A02-08-10 A02-09-24 –	– – –	20 20 ~~2~~	–	760	25ppbv CCV	2/21/18	1087
6	↓	↓ F	↓	25ppbv CCV – –	A020718E – –	– – –	50 – –	–	950	1.25ppbv CCV	↓	↓
7	2/~~18~~ 9/18	A020918A	TO-15	65cmpds (2nd source) ~~same as A020718A~~ 30cmpds (2nd source) –	A02-08-19 A02-09-20 –	– – –	20 20 –	–	760	25ppbv LCS	2/23/18	1087
8		B		same as A020918A – –	A02-09-19 A02-09-20 –	– – –	20 20 –	–	760			
9		C		same as A020918A – –	A02-09-19 A02-09-20 –	– – –	20 20 –	–				
10	↓	↓ D	↓	Same as A020918A – –	A02-09-19 A02-09-20 –	– – –	20 20 –	–	↓	↓	↓	↓
11	2/10/18	A021018A	TO-3M	Gas STD 200ppm – –	A010518B – –	– – –	5 – –	–	995	1ppm CCV STD	2/24/18	1145

COMMENTS:

Air Standard Preparation Logbook

LINE NO	PREP DATE	NEW STD. ID #	FOR METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STD. ID #	INITIAL VOL. (µL)	INITIAL FLOW CONC. (mL/min)	FINAL PRESSURE	FINAL DILUT. FLOW (mL/min)	FINAL CONC.	EXPIRATION DATE	PREP BY
1	2/12/18	A021218A	TO15	Propylene (65comp) Tetrafluoroethane (30comp) —	A02-08-10 A02-07-11 —	— — —	20 20 —	—	760	25ppbv CCV	2/26/18	953
2	↓	↓ B	↓	65comp (2nd Source) 30 comp (2nd Source) —	A02-09-19 A02-09-20 —	— — —	20 20 —	—	↓	25ppbv LCS	↓	↓
3	↓	↓ C	↓	Same as A021218A — —	A02-08-10 A02-07-11 —	— — —	20 20 —	—	↓	25ppbv CCV	↓	↓
4	2/13/18	A021318A 80 20627	↓	Same as A021218A — —	A02-08-10 A02-09-24 —	— — —	20 20 —	—	↓	↓	2/27/18	953
5	↓	↓ B	↓	Same as A021218A — — CCC 2/13/18	A02-08-10 ~~A02-08-10~~ A02-09-24 —	— — —	20 20 —	—	↓	↓	↓	↓
6	↓	↓ C	↓	Same as A021218A — —	A02-08-10 A02-09-24 —	— — —	20 20 —	—	↓	↓	↓	↓
7	2/13/18	A021318D	TO-15	25ppbv CCV — —	A021318B — —	— — —	50 — —	—	950	1.25ppbv CCV	2/27/18	1087
8	2/13/18	A021318E	TO-15	Propen (65comps) Tetrafluoroethane (30 compounds)	A02-09-19 A02-07-11 —	— — —	40 40 —	—	720	50ppbv CCV	2/27/18	860
9	2/14/18	A021418A	TO 15	Propylene 65compds Tetrafluoroethane 30comps —	A02-08-10 A02-09-24 —	— — —	20 20 —		720	25ppbv CCV	2/28/18	41
10		B		Propylene 65compds Tetrafluoro. 30com 	A02-08-10 A02-09-24 	— — —	20 20 —		720			
11		C		25ppbv-CCV — —	A021418A — —	— — —	50 — —		950	1.25ppbv CCV		

COMMENTS:

Air Standard Preparation Logbook

LINE NO	PREP DATE	NEW STD. ID #	FOR METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STD. ID #	INITIAL VOL. (µL)	INITIAL FLOW CONC. (mL/min)	FINAL PRESSURE	FINAL DILUT. FLOW (mL/min)	FINAL CONC.	EXPIRATION DATE	PREP BY
1	02/21/18	8021633	TO-15 SIM	CCV 25ppbv – –	8021630 – –	– – –	50 – –	–	950	1.25ppbv SIM CCV	3/07/18	326
2		8021660 ~~[illegible]~~ HL 02/21/18	TO-15	65 compd (Propylene) 30 compd (tetrafluoroethane) –	8021458 8021090 –	– – –	40 40 –	–	720	50ppbv CCV	03/07/18	460
3	02/22/18	8021751	TO-15	65 compd (2nd source 30 compd (2nd source –	A02-09-19 A02-09-20 –	– – –	20 20 –	–	760	25ppbv LCS	3/11/18	866
4	2/22/18	8021765	TO-3M	gasoline Nanopure H2O –	A02-09-21 NA –	15.4uL 100uL –	– – –	30 psi	–	CCV 200ppm	8/22/18	1144
5		8021767	TO-3M	gasoline Nanopure H2O –	A02-09-22 NA –	15.4uL 100uL –	– – –	30 psi	–	LCS 200ppm	8/22/18	1144
6	2/23/18	8021838	TO-15	Same as 8021660 – –	A02-09-19 A02-09-20 –	– – –	20 20 –	–	760	25ppbv LCS	3/9/18	953
7		8021839		Same as 8021660 – –	A02-09-19 A02-09-20 –	– – –	20 20 –	–				
8		8021840 ✓		Same as 8021660 – –	A02-09-19 A02-09-20 –	– – –	20 20 –	–				
9		8021867	TO-15 SIM	CCV 25ppbv – –	8021537 – –	– – –	5 – –	–	995	0.125ppbv CCV	03/06/18	460
10		8021868		CCV 25ppbv – –	8021537 – –	– – –	20 – –	–	990	0.25ppbv CCV	03/06/18	460
11	02/25/18	8021872	TO-15	Propylene (65 compd) tetrafluoroethane (30 compd) –	8021458 8021090 –	– – –	20 20 –	–	760	25ppbv CCV	03/11/18	460

COMMENTS:

Air Standard Preparation Logbook

LINE NO	PREP DATE	NEW STD. ID #	FOR METHOD	SOURCE STANDARD(S) OR MIXTURE(S)	SOURCE STD. ID #	INITIAL VOL. (µL)	INITIAL FLOW CONC. (mL/min)	FINAL PRESSURE	FINAL DILUT. FLOW (mL/min)	FINAL CONC.	EXPIRATION DATE	PREP BY
1	02/25/18	8021873	TO-15 SIM	25 ppbv CCV	8021872	–	5	–	995	0.125 ppbv CCV	03/11/18	YGC
2	↓	8021874	↓	25 ppbv CCV	8021872	–	10	–	990	0.25 ppbv CCV	↓	↓
3	↓	8021875	↓	25 ppbv CCV	8021872	–	50	–	950	1.25 ppbv CCV	↓	↓
4	↓	8021876	TO-15	65 compds (2nd source) 38 compds (2nd source)	8010186 8010187	– –	20 20	–	760	25 ppbv LCS	03/11/18	YGC
5	↓	8021877	TO-15 SIM	25 ppbv LCS		–	50	–	950	1.25 ppbv LCS	↓	↓
6	02/27/18	SM 2/27/18 ✓ ~~A02~~ 8021988	TO-15	propylene (65 compds) Tetrafluoroethane 30 compds	8021458 8011090 –	– – –	20 20 –	–	760	25 ppbv CCV	03/13/18	USED
7	↓	8021989	↓	Same as 8021988	–	–	20	–	760	↓	↓	↓
8	↓	8021990	↓	CCV 25 ppbv	8021988	–	50	–	950	1.25 ppbv CCV	↓	↓
9	↓	8021991	↓	CCV 25 ppbv ✓	8021989	–	50	–	950	↓	↓	↓
10	↓	8021992	↓	CCV 25 ppbv	8021989	–	10	–	990	0.25 ppbv CCV	↓	↓
11	↓	8021993	↓	CCV 25 ppbv	8021989	–	5	–	995	0.125 ppbv CCV	↓	↓

COMMENTS:

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	TO-17 IS/SS	Ultra	CUS-9349	CR-0661	3/31/2019	2mL	Amp	2/21/17	953			
2												
3												
4												
5												
6												
7	TO15 IS/SS	Linde	24086353	1405084	2/3/18	2000psig	Cylinder	2/27/17	953	2/27/17	953	
8	CCV 100 ppm	Linde	114834214	1405085	2/14/18	890L	Cylinder	2/14/17	1074	3/1/17	1074	
9	LCS 100 ppm	Praxair	HeCD100CMPIC-AQ	109703301	3/7/22	2000psig	Cylinder	3-10-17	1078	3-10-17	1078	
10	TO-15 Propylene (65 comp) CCV SH	Linde	14004551	3084640	2/27/18	1200psig	Cylinder	3/14/17	953	3/14/17	953	
11	H2S LCS 5.07 ppm	Praxair	NIHS5MP-A3	70086712804	5/8/18	2200psig	Cylinder	5/12/17	1074	5/12/17	1074	
12	H2S CCV 502 ppm	Praxair	NIHS5MP-A3	70086712505	5/8/18	2200psig	Cylinder	5/12/17	748	5/12/17	748	
13	SS EPA 524.2 FEV Ketone Mix	SUPELCO	LS7428-U	XA13810V	4/18	1mL	Amp	5/16/17	884			
14										8/17/17	953	
15										9/11/9/17	953	
16												
17	Hex STD 390 PPM	Praxair	AIHX400C-A3	70086711705	5/4/19	2200psig	cylinder	5/18/17	1074			
18	CCV 5ppm	Praxair	AICD5MCMPIC-AQ	70086711706	5/8/22	2200psig	cylinder	5/18/17	1074	6/20/17	1074	
19	502/524 Volatile Organics Cal Mix	Supelco	502111	LC22531V	8/18	1mL	Amp	5/19/17	953			
20	~~8260B Calib~~ 5/26/17									8/17/17	953	
21	8260B Calibration Mix #1	Restek	30633	A0123667	12/2019	1mL	Amp	5/26/17	953		953	
22										10/27/17	326	
23												
24												
25											5/26/17	

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Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	VOA Calibration Mix #1	Restek	30006	A0122363	1/2020	1mL	Amp	5/26/17	953	8/17/17	953	
2	↓	↓	↓	↓	↓	↓	↓	↓	↓	2/21/18	953	
3	↓	↓	↓	↓	↓	↓	↓	↓	↓	10/27/17	326	
4	↓	↓	↓	↓	↓	↓	↓	↓	↓			
5	CO_2 100 ppm	Airgas Specialty	X02NI99CP24C032	160-40014703341	7/12/20	240PSIG	Cylinder	7/13/17	1074	7/13/17	1074	
6	O_2 20% balance in N_2	Supelco	X03NI79CP14 (CGC)	160-40092801 4-1	06/12/20	240 psig	Cylinder	7/25/17	326	07/26/17	748	
7	TO-15 SIM IS/SS	LINDE	24087405	1421282	07/05/2018	2000psig	Cylinder	7/13/17	326	08/02/17	326	8010212
8	TO-15 IS/SS	LINDE	24036333	~~1421282~~ (CGC 8/7/17)	7/5/2018	2000 psig	Cylinder	7/13/17	953	8/7/17	953	Lot# 1421218
9	SS EPA 524.2 Rev Ketone Mix	Supelco	4574 28-U	XA13810V	4/2018	1mL	Amp	8/23/17	953			
10	↓	↓	↓	↓	↓	↓	↓	↓	↓			
11	502/524 volatile organics Cal Mix	↓	502111	VC22531V	8/2018	↓	↓	↓	↓	11/9/17	953	
12	↓	↓	↓	↓	↓	↓	↓	↓	↓	2/21/18	953	
13	↓	↓	↓	↓	↓	↓	↓	↓	↓			
14	↓	↓	↓	↓	↓	↓	↓	↓	↓			
15	VOA EPH Aliphatic HC Mix	Restek	31489	A0130962	10/2024	1mL	Amp	11/28/17	953	12/1/17	953	
16	↓	↓	↓	↓	↓	↓	↓	↓	↓			
17	↓	↓	↓	↓	↓	↓	↓	↓	↓			
18	TO15 IS/SS	Linde	24086533	1435727	11/16/18	2000psig	Cylinder	11/27/17	953	11/28/17	953	8010421
19 ✓	TO15 LCS 65 comp	↓	14004551	3122570	11/23/18	1700psig	↓	12/5/17	953	12/6/17	953	8010186
20 ✓	TO15 LCS 30 comp	↓	↓	↓	↓	1800psig	↓	↓	↓	↓	↓	8010187
21	Isobutane CCV (Regulator included)	Linde	NA	NA	1/5/21	53166	Jar	1/5/18	748	1/5/18	748	
22	Isobutane CCV (Regulator included)	G&M	NA	NA	1/5/21	6.2216	Jar	1/5/18	748	1/5/18	748	
23	He CCV ~~(35)~~ 2/2/18	Praxair	NI HE1H1C-AS	700867 24101	9/11/22	2000psig	Cylinder	1/9/18	1145	1/9/18	748	Exp date 9/11/22 DL 1/9/18
24 ✓	TO15 CCV - ~~Propylene~~ Tetrachloroethylene (30 comp)	Linde	24036943	1439416	12/21/18	2000psig	Cylinder	1/25/18	953	1/25/18	953	8011090
25	Fixed Gas CCV	Praxair	HE CD100 CA NO1 CA	700867 24102	9/11/22	842 psig	Cylinder	2/2/18	1145	2/2/18	1145	

COMMENTS:

Chemical and Supply Receiving Logbook

LINE #	CHEMICAL / SUPPLY NAME (OR DESCRIPTION)	MANUFACTURER	CATALOG #	LOT #	EXPIRATION DATE	AMOUNT RECEIVED	CONTAINER TYPE	RECEIVED DATE	RECEIVED WHO	OPENED DATE	OPENED WHO	COMMENTS
1	TCD 20%	Praxair	NICD20CHMIC-AQ	109705406	2/27/22	2200psig	Cylinder	2/2/18	1145	2/2/18	1145	
2	25.1 FID LCS	Praxair	AICD300CMP1CAQ	700868071101	1/16/23	2200psig	Cylinder	2/6/18	1145	2/6/18	1145	
3	C_1-C_6-100 ppm CCV	Linde	24088028	1441980	1/14/19	2200psig	Cylinder	2/13/18	1145	2/13/18	1145	
4	C_1-C_6 100 ppm LCS	Linde	24088028	1441981	1/19/19	2200psig	Cylinder	2/13/18	1145	2/13/18	1145	6# 2/20/18 ~~8021458~~
5	TO-15 CCV (65 compds)	LINDE	14004551	3130510	01/26/19	1100psig	↓	2/20/18	326	2/20/18	326	8021458
6	TO 15 IS/SS - Summa	LINDE	Custom	3130750	2/20/19	1100psig	↓	3/2/18	753	3/2/18	753	8030195/ 8030196
7												
8												
9												
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Work Order Narrative

Work Order: 18-03-0580 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/07/18. They were assigned to Work Order 18-03-0580.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

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Sample Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	18-03-0580
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401
		PO Number:	98636
		Date/Time Received:	03/07/18 18:10
		Number of Containers:	31
Attn:	Julie Doane-Allmon		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
WAS00034	18-03-0580-1	03/07/18 05:07	1	Air
WAS00037	18-03-0580-2	03/07/18 03:54	1	Air
WAS00040	18-03-0580-3	03/07/18 03:57	1	Air
WAS00041	18-03-0580-4	03/06/18 19:06	1	Air
WAS00046	18-03-0580-5	03/06/18 17:20	1	Air
WAS00043	18-03-0580-6	03/06/18 17:41	1	Air
WAS00039	18-03-0580-7	03/06/18 17:38	1	Air
WAS00036	18-03-0580-8	03/06/18 18:57	1	Air
WAS00031	18-03-0580-9	03/06/18 20:05	1	Air
AAS00329	18-03-0580-10	03/06/18 16:47	1	Air
WAS00032	18-03-0580-11	03/06/18 17:22	1	Air
AAS00330	18-03-0580-12	03/06/18 17:42	1	Air
WAS00044	18-03-0580-13	03/06/18 18:54	1	Air
WAS00052	18-03-0580-14	03/06/18 19:02	1	Air
WAS00033	18-03-0580-15	03/06/18 18:06	1	Air
WAS00030	18-03-0580-16	03/06/18 17:50	1	Air
WAS00045	18-03-0580-17	03/06/18 17:52	1	Air
WAS00035	18-03-0580-18	03/06/18 16:44	1	Air
WAS00038	18-03-0580-19	03/06/18 16:17	1	Air
WAS00049	18-03-0580-20	03/06/18 10:52	1	Air
WAS00050	18-03-0580-21	03/06/18 10:33	1	Air
WAS00051	18-03-0580-22	03/07/18 05:50	1	Air
WAS00042	18-03-0580-23	03/06/18 07:20	1	Air
VSS01335	18-03-0580-24	03/07/18 07:52	1	Air
VSS01336	18-03-0580-25	03/07/18 08:49	1	Air
VSS01337	18-03-0580-26	03/07/18 09:47	1	Air
VSS01340	18-03-0580-27	03/07/18 11:04	1	Air
VSS01334	18-03-0580-28	03/07/18 12:28	1	Air
VSS01339	18-03-0580-29	03/07/18 13:43	1	Air
VSS01338	18-03-0580-30	03/07/18 14:45	1	Air
VSS01341	18-03-0580-31	03/07/18 14:46	1	Air

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QC Association Summary

Work Order: 18-03-0580

Client Sample ID	Method Name	Type	Ext Name	Instrument	MS/MSD/SDP	LCS/LCSD
WAS00034	EPA TO-15 SIM		N/A	GC/MS YY	*2	180309L02
WAS00034	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00037	EPA TO-15 SIM		N/A	GC/MS YY	*2	180309L02
WAS00037	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00040	EPA TO-15 SIM		N/A	GC/MS YY	*2	180309L02
WAS00040	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00040	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180317L02
WAS00041	EPA TO-15 SIM		N/A	GC/MS YY	*2	180309L02
WAS00041	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00046	EPA TO-15 SIM		N/A	GC/MS YY	*2	180309L02
WAS00046	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00043	EPA TO-15 SIM		N/A	GC/MS YY	*2	180309L02
WAS00043	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00039	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00039	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00036	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00036	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00031	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00031	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00031	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180317L02
AAS00329	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
AAS00329	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00032	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00032	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
AAS00330	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
AAS00330	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00044	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00044	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00052	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00052	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00052	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180317L02
WAS00033	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00033	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00030	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00030	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00045	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00045	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00035	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00035	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00038	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00038	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180317L02
WAS00038	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00049	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180308L01
WAS00050	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180308L01

2 = Limited sample received, no MS/MSD performed

R = Rerun

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Client Sample ID	Method Name	Type	Ext Name	Instrument	MS/MSD/SDP	LCS/LCSD
WAS00051	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00051	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180316L01
WAS00042	EPA TO-15 SIM		N/A	GC/MS YY	*2	180312L01
WAS00042	EPA TO-15 SIM	R	N/A	GC/MS YY	*2	180317L02
VSS01335	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180308L01
VSS01336	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180308L01
VSS01336	EPA TO-15 Full List	R	N/A	GC/MS OOO	*2	180310L01
VSS01337	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180308L01
VSS01337	EPA TO-15 Full List	R	N/A	GC/MS OOO	*2	180310L01
VSS01340	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180308L01
VSS01340	EPA TO-15 Full List	R	N/A	GC/MS OOO	*2	180310L01
VSS01334	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180310L01
VSS01339	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180308L01
VSS01338	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180308L01
VSS01338	EPA TO-15 Full List	R	N/A	GC/MS OOO	*2	180312L01
VSS01341	EPA TO-15 Full List		N/A	GC/MS OOO	*2	180308L01
VSS01341	EPA TO-15 Full List	R	N/A	GC/MS OOO	*2	180312L01

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2 = Limited sample received, no MS/MSD performed

R = Rerun

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00034 (18-03-0580-1)						
Acetone	46		7.4	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.4		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.3		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.61		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.31		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.2		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.17		0.10	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	13		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.89		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	20		7.7	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.21		0.090	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.4		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.88		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	1.8		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	16		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.33		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.7		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.55		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.96		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.25		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.0		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.8		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00037 (18-03-0580-2)						
Acetone	42		5.9	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.6		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.3		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.58		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.33		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.1		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	5.4		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	1.1		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	13		6.1	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.14		0.090	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	3.2		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	1.1		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	1.7		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	54		0.94	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.0		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.6		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.55		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.4		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.36		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.2		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	3.2		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00040 (18-03-0580-3)						
Acetone	230		24	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.4		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.1		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.55		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.35		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.1		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	3.1		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	12		5.4	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.85		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	57		9.8	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.18		0.090	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.8		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	1.1		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	4.9		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	8.6		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.14		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.7		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.66		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.4		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.32		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.94		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.4		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00041 (18-03-0580-4)						
Acetone	46		5.9	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.2		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.54		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.18		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.86		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.5		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	5.4		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.71		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	43		6.1	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.2		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	2.6		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	9.3		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.2		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.25		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.53		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.5		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.37		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.91		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.2		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00046 (18-03-0580-5)						
Acetone	28		3.8	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.99		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromodichloromethane	0.27		0.17	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.6		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.49		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.55		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.78		0.052	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.16		0.15	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.3		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	0.83		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.53		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	4.4		1.2	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.86		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.63		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.26		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.8		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.40		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.13		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.65		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.6		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00043 (18-03-0580-6)						
Acetone	28		3.8	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.0		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.52		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.15		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.93		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.8		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	5.1		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.53		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	4.1		1.2	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.94		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.46		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.71		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.6		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.3		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.55		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.14		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.71		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.8		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00039 (18-03-0580-7)						
Acetone	100		12	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.3		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.3		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.58		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.23		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.1		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.9		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.11		0.10	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	11		6.8	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.58		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	47		12	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.1		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.79		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	47		1.7	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.3		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.0		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.70		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.1		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.24		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.77		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.0		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00036 (18-03-0580-8)						
Acetone	60		9.5	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.84		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.50		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.16		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.97		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.8		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.23		0.10	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	1.1		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.44		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	12		1.2	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.90		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.55		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	2.1		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	15		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.4		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.64		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.70		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.17		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.58		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.4		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00031 (18-03-0580-9)						
Acetone	130		15	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.3		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.14		0.097	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.3		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.54		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.28		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.72		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.4		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.13		0.10	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	1800		220	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.99		0.11	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.29		0.25	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	94		15	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.1		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.80		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	6.4		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	15		2.4	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.14		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	4.2		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.53		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.7		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.59		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.3		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	3.2		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
AAS00329 (18-03-0580-10)						
Acetone	19		3.8	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.8		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.4		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.64		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.22		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.2		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	3.6		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.12		0.10	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	1.0		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.84		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	4.6		1.2	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.4		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.95		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.17		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.5		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.9		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.84		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.83		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.21		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.1		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.9		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00032 (18-03-0580-11)						
Acetone	45		5.9	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.8		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.8		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.57		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.26		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.2		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.9		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.13		0.10	ug/m3	EPA TO-15 SIM	N/A
t-1,2-Dichloroethene	0.55		0.099	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	12		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.80		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	25		6.1	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.5		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.71		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.22		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	5.1		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.7		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.90		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.23		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.1		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.9		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
AAS00330 (18-03-0580-12)						
Acetone	30		4.8	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.81		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.7		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.73		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.19		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.1		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	3.2		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.10		0.10	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	0.85		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.60		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	4.2		1.2	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.1		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.39		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.22		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.3		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.7		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.72		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.52		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.13		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.81		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.1		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00044 (18-03-0580-13)						
Acetone	51		9.5	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.1		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.5		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.65		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.17		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.1		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	3.5		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	1.1		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.63		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	10		9.8	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.97		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.70		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.78		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	7.7		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.52		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.6		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.80		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.18		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.91		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.3		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00052 (18-03-0580-14)						
Acetone	370		48	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.3		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.0		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.66		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.21		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.2		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	3.4		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.12		0.10	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	11		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.58		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	22		6.1	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.4		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.80		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	7.5		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	12		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.0		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.2		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.84		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.2		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.28		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.79		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.9		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00033 (18-03-0580-15)						
Acetone	56		7.4	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.4		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.6		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.57		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.19		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.91		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.4		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	45		4.2	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.76		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	54		7.7	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.0		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.62		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	1.6		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	6.2		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.35		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.53		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.86		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.22		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.97		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.5		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00030 (18-03-0580-16)						
Acetone	110		12	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.4		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.5		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.52		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.23		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.4		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.4		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.18		0.10	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	49		6.8	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	1.1		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	23		12	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.1		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.85		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	2.6		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	5.5		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.9		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.85		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.90		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.24		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.6		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	3.6		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00045 (18-03-0580-17)						
Acetone	41		4.8	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.90		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.6		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.53		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.14		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.88		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	0.68		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.54		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	6.4		1.2	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.89		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.38		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	3.2		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.4		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.88		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.4		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.66		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.16		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.76		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.9		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00035 (18-03-0580-18)						
Acetone	25		4.8	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.2		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.57		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.17		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.92		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.5		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	1.4		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.55		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	5.0		1.2	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.7		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.62		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.29		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.3		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.14		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.6		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.56		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.59		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.15		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.74		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.9		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00038 (18-03-0580-19)						
Acetone	290		48	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.3		0.080	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.8		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.57		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.18		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.2		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.7		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	9.3		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.58		0.11	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	29		20	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.1		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.77		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	8.4		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	12		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	1.1		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.8		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.71		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.1		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.25		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.79		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.8		0.22	ug/m3	EPA TO-15 SIM	N/A
WAS00049 (18-03-0580-20)						
Acetone	41		4.8	ug/m3	EPA TO-15	N/A
Benzene	1.2	J	0.27*	ug/m3	EPA TO-15	N/A
Carbon Disulfide	7.9		6.2	ug/m3	EPA TO-15	N/A
Chloromethane	1.3		1.0	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	2.1	J	1.0*	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	5.2	J	2.9*	ug/m3	EPA TO-15	N/A
Isopropanol	52		12	ug/m3	EPA TO-15	N/A
Styrene	1.6	J	1.5*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	2.9	J	0.74*	ug/m3	EPA TO-15	N/A
Toluene	5.2		1.9	ug/m3	EPA TO-15	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00050 (18-03-0580-21)						
Acetone	19		4.8	ug/m3	EPA TO-15	N/A
Benzene	1.2	J	0.27*	ug/m3	EPA TO-15	N/A
2-Butanone	2.3	J	2.1*	ug/m3	EPA TO-15	N/A
Chloromethane	1.3		1.0	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	1.9	J	1.0*	ug/m3	EPA TO-15	N/A
Isopropanol	3.4	J	2.6*	ug/m3	EPA TO-15	N/A
Toluene	4.3		1.9	ug/m3	EPA TO-15	N/A
WAS00051 (18-03-0580-22)						
Acetone	210		24	ug/m3	EPA TO-15 SIM	N/A
Benzene	2.1		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.11		0.097	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	4.1		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.61		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.47		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.98		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.5		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.23		0.10	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	15		14	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	1.3		0.11	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.25		0.25	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	86		25	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.23		0.090	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	2.2		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	1.6		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	4.8		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	11		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.22		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.9		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.9		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.46		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.3		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	3.6		0.22	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00042 (18-03-0580-23)						
Acetone	57		7.4	ug/m3	EPA TO-15 SIM	N/A
Benzene	2.3		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.12		0.097	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	3.1		1.5	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.57		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.46		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.0		0.052	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.17		0.15	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.5		0.12	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.23		0.10	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloropropane	0.12		0.12	ug/m3	EPA TO-15 SIM	N/A
1,1-Difluoroethane	7.3		0.68	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	1.4		0.11	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.29		0.25	ug/m3	EPA TO-15 SIM	N/A
Isopropanol	36		7.7	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.15		0.090	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	2.0		0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	2.2		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	2.3		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	10		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.33		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.7		0.14	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.9		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.48		0.12	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.6		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	4.2		0.22	ug/m3	EPA TO-15 SIM	N/A

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VSS01335 (18-03-0580-24)						
Acetone	17		4.8	ug/m3	EPA TO-15	N/A
Benzene	1.9		1.6	ug/m3	EPA TO-15	N/A
Chloroform	10		2.5	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	1.5	J	1.1*	ug/m3	EPA TO-15	N/A
Ethylbenzene	3.4		2.2	ug/m3	EPA TO-15	N/A
Tetrachloroethene	660		3.4	ug/m3	EPA TO-15	N/A
Toluene	24		1.9	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	0.94	J	0.62*	ug/m3	EPA TO-15	N/A
Trichloroethene	53		2.7	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	10		5.7	ug/m3	EPA TO-15	N/A
o-Xylene	4.2		2.2	ug/m3	EPA TO-15	N/A
p/m-Xylene	13		8.8	ug/m3	EPA TO-15	N/A
VSS01336 (18-03-0580-25)						
Acetone	31		4.8	ug/m3	EPA TO-15	N/A
Benzene	0.56	J	0.27*	ug/m3	EPA TO-15	N/A
Chloroform	1.3	J	0.52*	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	1.7	J	1.0*	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	20		5.4	ug/m3	EPA TO-15	N/A
Isopropanol	200		31	ug/m3	EPA TO-15	N/A
Tetrachloroethene	61		3.4	ug/m3	EPA TO-15	N/A
Toluene	5.3		1.9	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	52		2.7	ug/m3	EPA TO-15	N/A
Trichloroethene	2.6	J	0.61*	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	9.4		5.6	ug/m3	EPA TO-15	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
VSS01337 (18-03-0580-26)						
Acetone	7.2		4.8	ug/m3	EPA TO-15	N/A
Benzene	2.0		1.6	ug/m3	EPA TO-15	N/A
Chloroform	24		2.4	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	5.2		2.5	ug/m3	EPA TO-15	N/A
1,1-Dichloroethane	4.2		2.0	ug/m3	EPA TO-15	N/A
1,1-Dichloroethene	7.7		2.0	ug/m3	EPA TO-15	N/A
c-1,2-Dichloroethene	180		2.0	ug/m3	EPA TO-15	N/A
t-1,2-Dichloroethene	96		2.0	ug/m3	EPA TO-15	N/A
Tetrachloroethene	8100		96	ug/m3	EPA TO-15	N/A
Toluene	6.8		1.9	ug/m3	EPA TO-15	N/A
Trichloroethene	14000		76	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	9.0		5.6	ug/m3	EPA TO-15	N/A
p/m-Xylene	4.7	J	3.4*	ug/m3	EPA TO-15	N/A
VSS01340 (18-03-0580-27)						
Acetone	120		4.8	ug/m3	EPA TO-15	N/A
Benzene	17		1.6	ug/m3	EPA TO-15	N/A
2-Butanone	17		4.5	ug/m3	EPA TO-15	N/A
Chloroethane	3.3		1.3	ug/m3	EPA TO-15	N/A
Chloroform	130		2.5	ug/m3	EPA TO-15	N/A
Chloromethane	3.7		1.0	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	18		2.5	ug/m3	EPA TO-15	N/A
1,1-Dichloroethane	2.7		2.0	ug/m3	EPA TO-15	N/A
t-1,2-Dichloroethene	8.2		2.0	ug/m3	EPA TO-15	N/A
Ethylbenzene	3.6		2.2	ug/m3	EPA TO-15	N/A
Isopropanol	35		12	ug/m3	EPA TO-15	N/A
4-Methyl-2-Pentanone	6.0	J	4.1*	ug/m3	EPA TO-15	N/A
Styrene	2.3	J	1.6*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	42000		400	ug/m3	EPA TO-15	N/A
Toluene	25		1.9	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	20		2.8	ug/m3	EPA TO-15	N/A
Trichloroethene	45000		310	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	93		5.7	ug/m3	EPA TO-15	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	45		12	ug/m3	EPA TO-15	N/A
o-Xylene	4.9		2.2	ug/m3	EPA TO-15	N/A
p/m-Xylene	13		8.8	ug/m3	EPA TO-15	N/A

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VSS01334 (18-03-0580-28)						
Acetone	13		12	ug/m3	EPA TO-15	N/A
Benzene	0.72	J	0.67*	ug/m3	EPA TO-15	N/A
Chloroethane	2.3	J	2.1*	ug/m3	EPA TO-15	N/A
Chloroform	3.1	J	1.3*	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	9.3	J	7.3*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	22		8.4	ug/m3	EPA TO-15	N/A
Trichloroethene	24		6.7	ug/m3	EPA TO-15	N/A
VSS01339 (18-03-0580-29)						
Acetone	9.1		4.8	ug/m3	EPA TO-15	N/A
Benzene	0.48	J	0.27*	ug/m3	EPA TO-15	N/A
Chloroform	1.1	J	0.52*	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	1.9	J	1.0*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	24		3.4	ug/m3	EPA TO-15	N/A
Toluene	5.4		1.9	ug/m3	EPA TO-15	N/A
Trichloroethene	1.6	J	0.61*	ug/m3	EPA TO-15	N/A
VSS01338 (18-03-0580-30)						
Acetone	19		4.9	ug/m3	EPA TO-15	N/A
Benzene	21		1.7	ug/m3	EPA TO-15	N/A
Chlorobenzene	0.53	J	0.48*	ug/m3	EPA TO-15	N/A
Chloroform	230		2.5	ug/m3	EPA TO-15	N/A
Chloromethane	0.38	J	0.31*	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	33		2.6	ug/m3	EPA TO-15	N/A
1,1-Dichloroethane	2.5		2.1	ug/m3	EPA TO-15	N/A
1,1-Dichloroethene	280		2.1	ug/m3	EPA TO-15	N/A
c-1,2-Dichloroethene	46		2.1	ug/m3	EPA TO-15	N/A
t-1,2-Dichloroethene	45		2.1	ug/m3	EPA TO-15	N/A
Ethylbenzene	2.4		2.3	ug/m3	EPA TO-15	N/A
Isopropanol	6.6	J	2.7*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	210000		2000	ug/m3	EPA TO-15	N/A
Toluene	13		2.0	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	1.1	J	0.64*	ug/m3	EPA TO-15	N/A
Trichloroethene	120000		1600	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	290		5.8	ug/m3	EPA TO-15	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	120		12	ug/m3	EPA TO-15	N/A
o-Xylene	2.6		2.3	ug/m3	EPA TO-15	N/A
p/m-Xylene	8.4	J	3.6*	ug/m3	EPA TO-15	N/A

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	18-03-0580
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401
		Received:	03/07/18
Attn:	Julie Doane-Allmon		Page 25 of 25

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
VSS01341 (18-03-0580-31)						
Acetone	41		4.9	ug/m3	EPA TO-15	N/A
Benzene	22		1.6	ug/m3	EPA TO-15	N/A
2-Butanone	3.4	J	2.2*	ug/m3	EPA TO-15	N/A
Chlorobenzene	0.54	J	0.48*	ug/m3	EPA TO-15	N/A
Chloroform	220		2.5	ug/m3	EPA TO-15	N/A
Chloromethane	0.40	J	0.30*	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	30		2.5	ug/m3	EPA TO-15	N/A
1,1-Dichloroethane	2.5		2.1	ug/m3	EPA TO-15	N/A
1,1-Dichloroethene	270		2.0	ug/m3	EPA TO-15	N/A
c-1,2-Dichloroethene	48		2.0	ug/m3	EPA TO-15	N/A
t-1,2-Dichloroethene	46		2.0	ug/m3	EPA TO-15	N/A
Ethylbenzene	2.5		2.2	ug/m3	EPA TO-15	N/A
Isopropanol	13		13	ug/m3	EPA TO-15	N/A
Tetrachloroethene	220000		2000	ug/m3	EPA TO-15	N/A
Toluene	15		1.9	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	1.1	J	0.63*	ug/m3	EPA TO-15	N/A
Trichloroethene	110000		1600	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	260		5.8	ug/m3	EPA TO-15	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		12	ug/m3	EPA TO-15	N/A
o-Xylene	2.8		2.2	ug/m3	EPA TO-15	N/A
p/m-Xylene	9.2		8.9	ug/m3	EPA TO-15	N/A

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 1 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00049	**18-03-0580-20-A**	**03/06/18 10:52**	**Air**	**GC/MS OOO**	**N/A**	**03/08/18 20:08**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	41	4.8	2.6	1.00	
Benzene	1.2	1.6	0.27	1.00	J
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
Carbon Disulfide	7.9	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	1.3	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	2.1	2.5	1.0	1.00	J
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	5.2	5.4	2.9	1.00	J
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 2 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	52	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	1.6	6.4	1.5	1.00	J
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	2.9	3.4	0.74	1.00	J
Toluene	5.2	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	ND	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	104	68-134	
1,2-Dichloroethane-d4	104	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 3 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00050	**18-03-0580-21-A**	**03/06/18 10:33**	**Air**	**GC/MS OOO**	**N/A**	**03/08/18 21:05**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	19	4.8	2.6	1.00	
Benzene	1.2	1.6	0.27	1.00	J
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	2.3	4.4	2.1	1.00	J
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	1.3	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	1.9	2.5	1.0	1.00	J
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 4 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	3.4	12	2.6	1.00	J
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	ND	3.4	0.74	1.00	
Toluene	4.3	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	ND	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	118	68-134	
1,2-Dichloroethane-d4	94	67-133	
Toluene-d8	81	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 5 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01335	**18-03-0580-24-A**	**03/07/18 07:52**	**Air**	**GC/MS OOO**	**N/A**	**03/08/18 22:22**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.01	
Acetone	17	4.8	2.6	1.01	
Benzene	1.9	1.6	0.27	1.01	
Benzyl Chloride	ND	7.8	2.4	1.01	
Bromodichloromethane	ND	3.4	0.63	1.01	
Bromoform	ND	5.2	3.2	1.01	
Bromomethane	ND	2.0	1.0	1.01	
2-Butanone	ND	4.5	2.1	1.01	
Carbon Disulfide	ND	6.3	2.4	1.01	
Carbon Tetrachloride	ND	3.2	0.62	1.01	
Chlorobenzene	ND	2.3	0.47	1.01	
Chloroethane	ND	1.3	0.87	1.01	
Chloroform	10	2.5	0.52	1.01	
Chloromethane	ND	1.0	0.30	1.01	
Dibromochloromethane	ND	4.3	0.97	1.01	
1,2-Dibromoethane	ND	3.9	1.2	1.01	
1,2-Dichlorobenzene	ND	3.0	1.7	1.01	
1,3-Dichlorobenzene	ND	3.0	1.9	1.01	
1,4-Dichlorobenzene	ND	3.0	1.7	1.01	
Dichlorodifluoromethane	1.5	2.5	1.1	1.01	J
1,1-Dichloroethane	ND	2.0	0.40	1.01	
1,2-Dichloroethane	ND	2.0	0.55	1.01	
1,1-Dichloroethene	ND	2.0	0.37	1.01	
c-1,2-Dichloroethene	ND	2.0	1.1	1.01	
t-1,2-Dichloroethene	ND	2.0	0.96	1.01	
1,2-Dichloropropane	ND	2.3	0.38	1.01	
c-1,3-Dichloropropene	ND	2.3	1.3	1.01	
t-1,3-Dichloropropene	ND	4.6	1.1	1.01	
Dichlorotetrafluoroethane	ND	14	6.0	1.01	
1,1-Difluoroethane	ND	5.5	3.0	1.01	
Ethylbenzene	3.4	2.2	1.7	1.01	
4-Ethyltoluene	ND	2.5	1.6	1.01	
Hexachloro-1,3-Butadiene	ND	16	13	1.01	
2-Hexanone	ND	6.2	3.3	1.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 6 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	ND	12	2.6	1.01	
Methyl-t-Butyl Ether (MTBE)	ND	7.3	2.4	1.01	
Methylene Chloride	ND	18	3.9	1.01	
4-Methyl-2-Pentanone	ND	6.2	4.1	1.01	
Styrene	ND	6.5	1.6	1.01	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.01	
Tetrachloroethene	660	3.4	0.75	1.01	
Toluene	24	1.9	1.4	1.01	
1,1,1-Trichloroethane	0.94	2.8	0.62	1.01	J
1,1,2-Trichloroethane	ND	2.8	0.63	1.01	
Trichloroethene	53	2.7	0.61	1.01	
Trichlorofluoromethane	10	5.7	4.7	1.01	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	4.9	1.01	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.01	
1,3,5-Trimethylbenzene	ND	2.5	1.9	1.01	
Vinyl Acetate	ND	7.1	3.7	1.01	
Vinyl Chloride	ND	1.3	0.35	1.01	
o-Xylene	4.2	2.2	1.4	1.01	
p/m-Xylene	13	8.8	3.5	1.01	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	115	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	92	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 7 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01336	**18-03-0580-25-A**	**03/07/18 08:49**	**Air**	**GC/MS OOO**	**N/A**	**03/08/18 23:18**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	31	4.8	2.6	1.00	
Benzene	0.56	1.6	0.27	1.00	J
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	1.3	2.4	0.52	1.00	J
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	1.7	2.5	1.0	1.00	J
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	20	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 8 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	61	3.4	0.74	1.00	
Toluene	5.3	1.9	1.4	1.00	
1,1,1-Trichloroethane	52	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	2.6	2.7	0.61	1.00	J
Trichlorofluoromethane	9.4	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	68-134	
1,2-Dichloroethane-d4	100	67-133	
Toluene-d8	99	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01336	**18-03-0580-25-A**	**03/07/18 08:49**	**Air**	**GC/MS OOO**	**N/A**	**03/10/18 18:01**	**180310L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	200	31	6.5	2.53	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	68-134	
1,2-Dichloroethane-d4	96	67-133	
Toluene-d8	99	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 9 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01337	**18-03-0580-26-A**	**03/07/18 09:47**	**Air**	**GC/MS OOO**	**N/A**	**03/09/18 00:19**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	7.2	4.8	2.6	1.00	
Benzene	2.0	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	24	2.4	0.52	1.00	
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	5.2	2.5	1.0	1.00	
1,1-Dichloroethane	4.2	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	7.7	2.0	0.36	1.00	
c-1,2-Dichloroethene	180	2.0	1.1	1.00	
t-1,2-Dichloroethene	96	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 10 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	ND	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Toluene	6.8	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichlorofluoromethane	9.0	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	4.7	8.7	3.4	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	107	68-134	
1,2-Dichloroethane-d4	104	67-133	
Toluene-d8	97	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01337	**18-03-0580-26-A**	**03/07/18 09:47**	**Air**	**GC/MS OOO**	**N/A**	**03/10/18 20:32**	**180310L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	8100	96	21	28.4	
Trichloroethene	14000	76	17	28.4	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	68-134	
1,2-Dichloroethane-d4	99	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 11 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01340	**18-03-0580-27-A**	**03/07/18 11:04**	**Air**	**GC/MS OOO**	**N/A**	**03/09/18 01:44**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.01	
Acetone	120	4.8	2.6	1.01	
Benzene	17	1.6	0.27	1.01	
Benzyl Chloride	ND	7.8	2.4	1.01	
Bromodichloromethane	ND	3.4	0.63	1.01	
Bromoform	ND	5.2	3.2	1.01	
Bromomethane	ND	2.0	1.0	1.01	
2-Butanone	17	4.5	2.1	1.01	
Carbon Disulfide	ND	6.3	2.4	1.01	
Carbon Tetrachloride	ND	3.2	0.62	1.01	
Chlorobenzene	ND	2.3	0.47	1.01	
Chloroethane	3.3	1.3	0.87	1.01	
Chloroform	130	2.5	0.52	1.01	
Chloromethane	3.7	1.0	0.30	1.01	
Dibromochloromethane	ND	4.3	0.97	1.01	
1,2-Dibromoethane	ND	3.9	1.2	1.01	
1,2-Dichlorobenzene	ND	3.0	1.7	1.01	
1,3-Dichlorobenzene	ND	3.0	1.9	1.01	
1,4-Dichlorobenzene	ND	3.0	1.7	1.01	
Dichlorodifluoromethane	18	2.5	1.1	1.01	
1,1-Dichloroethane	2.7	2.0	0.40	1.01	
1,2-Dichloroethane	ND	2.0	0.55	1.01	
1,1-Dichloroethene	ND	2.0	0.37	1.01	
c-1,2-Dichloroethene	ND	2.0	1.1	1.01	
t-1,2-Dichloroethene	8.2	2.0	0.96	1.01	
1,2-Dichloropropane	ND	2.3	0.38	1.01	
c-1,3-Dichloropropene	ND	2.3	1.3	1.01	
t-1,3-Dichloropropene	ND	4.6	1.1	1.01	
Dichlorotetrafluoroethane	ND	14	6.0	1.01	
1,1-Difluoroethane	ND	5.5	3.0	1.01	
Ethylbenzene	3.6	2.2	1.7	1.01	
4-Ethyltoluene	ND	2.5	1.6	1.01	
Hexachloro-1,3-Butadiene	ND	16	13	1.01	
2-Hexanone	ND	6.2	3.3	1.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
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Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	35	12	2.6	1.01	
Methyl-t-Butyl Ether (MTBE)	ND	7.3	2.4	1.01	
Methylene Chloride	ND	18	3.9	1.01	
4-Methyl-2-Pentanone	6.0	6.2	4.1	1.01	J
Styrene	2.3	6.5	1.6	1.01	J
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.01	
Toluene	25	1.9	1.4	1.01	
1,1,1-Trichloroethane	20	2.8	0.62	1.01	
1,1,2-Trichloroethane	ND	2.8	0.63	1.01	
Trichlorofluoromethane	93	5.7	4.7	1.01	
1,1,2-Trichloro-1,2,2-Trifluoroethane	45	12	4.9	1.01	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.01	
1,3,5-Trimethylbenzene	ND	2.5	1.9	1.01	
Vinyl Acetate	ND	7.1	3.7	1.01	
Vinyl Chloride	ND	1.3	0.35	1.01	
o-Xylene	4.9	2.2	1.4	1.01	
p/m-Xylene	13	8.8	3.5	1.01	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	112	68-134	
1,2-Dichloroethane-d4	106	67-133	
Toluene-d8	99	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01340	**18-03-0580-27-A**	**03/07/18 11:04**	**Air**	**GC/MS OOO**	**N/A**	**03/10/18 21:19**	**180310L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	42000	400	87	117	
Trichloroethene	45000	310	71	117	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	68-134	
1,2-Dichloroethane-d4	99	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01334	**18-03-0580-28-A**	**03/07/18 12:28**	**Air**	**GC/MS OOO**	**N/A**	**03/10/18 18:54**	**180310L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	37	26	2.49	
Acetone	13	12	6.5	2.49	
Benzene	0.72	4.0	0.67	2.49	J
Benzyl Chloride	ND	19	5.9	2.49	
Bromodichloromethane	ND	8.3	1.6	2.49	
Bromoform	ND	13	7.8	2.49	
Bromomethane	ND	4.8	2.5	2.49	
2-Butanone	ND	11	5.2	2.49	
Carbon Disulfide	ND	16	5.8	2.49	
Carbon Tetrachloride	ND	7.8	1.5	2.49	
Chlorobenzene	ND	5.7	1.2	2.49	
Chloroethane	2.3	3.3	2.1	2.49	J
Chloroform	3.1	6.1	1.3	2.49	J
Chloromethane	ND	2.6	0.74	2.49	
Dibromochloromethane	ND	11	2.4	2.49	
1,2-Dibromoethane	ND	9.6	2.9	2.49	
1,2-Dichlorobenzene	ND	7.5	4.1	2.49	
1,3-Dichlorobenzene	ND	7.5	4.6	2.49	
1,4-Dichlorobenzene	ND	7.5	4.3	2.49	
Dichlorodifluoromethane	ND	6.2	2.6	2.49	
1,1-Dichloroethane	ND	5.0	0.98	2.49	
1,2-Dichloroethane	ND	5.0	1.4	2.49	
1,1-Dichloroethene	ND	4.9	0.91	2.49	
c-1,2-Dichloroethene	ND	4.9	2.8	2.49	
t-1,2-Dichloroethene	ND	4.9	2.4	2.49	
1,2-Dichloropropane	ND	5.8	0.94	2.49	
c-1,3-Dichloropropene	ND	5.7	3.1	2.49	
t-1,3-Dichloropropene	ND	11	2.8	2.49	
Dichlorotetrafluoroethane	ND	35	15	2.49	
1,1-Difluoroethane	9.3	13	7.3	2.49	J
Ethylbenzene	ND	5.4	4.3	2.49	
4-Ethyltoluene	ND	6.1	4.0	2.49	
Hexachloro-1,3-Butadiene	ND	40	32	2.49	
2-Hexanone	ND	15	8.2	2.49	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 14 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	ND	31	6.4	2.49	
Methyl-t-Butyl Ether (MTBE)	ND	18	6.0	2.49	
Methylene Chloride	ND	43	9.5	2.49	
4-Methyl-2-Pentanone	ND	15	10	2.49	
Styrene	ND	16	3.9	2.49	
1,1,2,2-Tetrachloroethane	ND	17	6.6	2.49	
Tetrachloroethene	22	8.4	1.8	2.49	
Toluene	ND	4.7	3.4	2.49	
1,1,1-Trichloroethane	ND	6.8	1.5	2.49	
1,1,2-Trichloroethane	ND	6.8	1.6	2.49	
Trichloroethene	24	6.7	1.5	2.49	
Trichlorofluoromethane	ND	14	12	2.49	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	29	12	2.49	
1,2,4-Trimethylbenzene	ND	18	12	2.49	
1,3,5-Trimethylbenzene	ND	6.1	4.6	2.49	
Vinyl Acetate	ND	18	9.0	2.49	
Vinyl Chloride	ND	3.2	0.87	2.49	
o-Xylene	ND	5.4	3.4	2.49	
p/m-Xylene	ND	22	8.6	2.49	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01339	**18-03-0580-29-A**	**03/07/18 13:43**	**Air**	**GC/MS OOO**	**N/A**	**03/09/18 03:42**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	9.1	4.8	2.6	1.00	
Benzene	0.48	1.6	0.27	1.00	J
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	1.1	2.4	0.52	1.00	J
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	1.9	2.5	1.0	1.00	J
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 16 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	ND	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	24	3.4	0.74	1.00	
Toluene	5.4	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	1.6	2.7	0.61	1.00	J
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	105	68-134	
1,2-Dichloroethane-d4	102	67-133	
Toluene-d8	100	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01338	**18-03-0580-30-A**	**03/07/18 14:45**	**Air**	**GC/MS OOO**	**N/A**	**03/09/18 05:08**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.04	
Acetone	19	4.9	2.7	1.04	
Benzene	21	1.7	0.28	1.04	
Benzyl Chloride	ND	8.1	2.4	1.04	
Bromodichloromethane	ND	3.5	0.65	1.04	
Bromoform	ND	5.4	3.3	1.04	
Bromomethane	ND	2.0	1.0	1.04	
2-Butanone	ND	4.6	2.2	1.04	
Carbon Disulfide	ND	6.5	2.4	1.04	
Carbon Tetrachloride	ND	3.3	0.64	1.04	
Chlorobenzene	0.53	2.4	0.48	1.04	J
Chloroethane	ND	1.4	0.90	1.04	
Chloroform	230	2.5	0.54	1.04	
Chloromethane	0.38	1.1	0.31	1.04	J
Dibromochloromethane	ND	4.4	1.0	1.04	
1,2-Dibromoethane	ND	4.0	1.2	1.04	
1,2-Dichlorobenzene	ND	3.1	1.7	1.04	
1,3-Dichlorobenzene	ND	3.1	1.9	1.04	
1,4-Dichlorobenzene	ND	3.1	1.8	1.04	
Dichlorodifluoromethane	33	2.6	1.1	1.04	
1,1-Dichloroethane	2.5	2.1	0.41	1.04	
1,2-Dichloroethane	ND	2.1	0.57	1.04	
1,1-Dichloroethene	280	2.1	0.38	1.04	
c-1,2-Dichloroethene	46	2.1	1.2	1.04	
t-1,2-Dichloroethene	45	2.1	0.98	1.04	
1,2-Dichloropropane	ND	2.4	0.39	1.04	
c-1,3-Dichloropropene	ND	2.4	1.3	1.04	
t-1,3-Dichloropropene	ND	4.7	1.2	1.04	
Dichlorotetrafluoroethane	ND	15	6.1	1.04	
1,1-Difluoroethane	ND	5.6	3.1	1.04	
Ethylbenzene	2.4	2.3	1.8	1.04	
4-Ethyltoluene	ND	2.6	1.7	1.04	
Hexachloro-1,3-Butadiene	ND	17	13	1.04	
2-Hexanone	ND	6.4	3.4	1.04	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 18 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	6.6	13	2.7	1.04	J
Methyl-t-Butyl Ether (MTBE)	ND	7.5	2.5	1.04	
Methylene Chloride	ND	18	4.0	1.04	
4-Methyl-2-Pentanone	ND	6.4	4.2	1.04	
Styrene	ND	6.6	1.6	1.04	
1,1,2,2-Tetrachloroethane	ND	7.1	2.8	1.04	
Toluene	13	2.0	1.4	1.04	
1,1,1-Trichloroethane	1.1	2.8	0.64	1.04	J
1,1,2-Trichloroethane	ND	2.8	0.65	1.04	
Trichlorofluoromethane	290	5.8	4.8	1.04	
1,1,2-Trichloro-1,2,2-Trifluoroethane	120	12	5.1	1.04	
1,2,4-Trimethylbenzene	ND	7.7	5.2	1.04	
1,3,5-Trimethylbenzene	ND	2.6	1.9	1.04	
Vinyl Acetate	ND	7.3	3.8	1.04	
Vinyl Chloride	ND	1.3	0.36	1.04	
o-Xylene	2.6	2.3	1.4	1.04	
p/m-Xylene	8.4	9.0	3.6	1.04	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	111	68-134	
1,2-Dichloroethane-d4	105	67-133	
Toluene-d8	98	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01338	**18-03-0580-30-A**	**03/07/18 14:45**	**Air**	**GC/MS OOO**	**N/A**	**03/13/18 05:15**	**180312L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	210000	2000	450	602	
Trichloroethene	120000	1600	360	602	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	109	68-134	
1,2-Dichloroethane-d4	105	67-133	
Toluene-d8	94	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 19 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01341	**18-03-0580-31-A**	**03/07/18 14:46**	**Air**	**GC/MS OOO**	**N/A**	**03/09/18 06:30**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.03	
Acetone	41	4.9	2.7	1.03	
Benzene	22	1.6	0.28	1.03	
Benzyl Chloride	ND	8.0	2.4	1.03	
Bromodichloromethane	ND	3.5	0.65	1.03	
Bromoform	ND	5.3	3.2	1.03	
Bromomethane	ND	2.0	1.0	1.03	
2-Butanone	3.4	4.6	2.2	1.03	J
Carbon Disulfide	ND	6.4	2.4	1.03	
Carbon Tetrachloride	ND	3.2	0.63	1.03	
Chlorobenzene	0.54	2.4	0.48	1.03	J
Chloroethane	ND	1.4	0.89	1.03	
Chloroform	220	2.5	0.53	1.03	
Chloromethane	0.40	1.1	0.30	1.03	J
Dibromochloromethane	ND	4.4	0.99	1.03	
1,2-Dibromoethane	ND	4.0	1.2	1.03	
1,2-Dichlorobenzene	ND	3.1	1.7	1.03	
1,3-Dichlorobenzene	ND	3.1	1.9	1.03	
1,4-Dichlorobenzene	ND	3.1	1.8	1.03	
Dichlorodifluoromethane	30	2.5	1.1	1.03	
1,1-Dichloroethane	2.5	2.1	0.41	1.03	
1,2-Dichloroethane	ND	2.1	0.56	1.03	
1,1-Dichloroethene	270	2.0	0.38	1.03	
c-1,2-Dichloroethene	48	2.0	1.2	1.03	
t-1,2-Dichloroethene	46	2.0	0.98	1.03	
1,2-Dichloropropane	ND	2.4	0.39	1.03	
c-1,3-Dichloropropene	ND	2.3	1.3	1.03	
t-1,3-Dichloropropene	ND	4.7	1.2	1.03	
Dichlorotetrafluoroethane	ND	14	6.1	1.03	
1,1-Difluoroethane	ND	5.6	3.0	1.03	
Ethylbenzene	2.5	2.2	1.8	1.03	
4-Ethyltoluene	ND	2.5	1.7	1.03	
Hexachloro-1,3-Butadiene	ND	16	13	1.03	
2-Hexanone	ND	6.3	3.4	1.03	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 20 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	13	13	2.6	1.03	
Methyl-t-Butyl Ether (MTBE)	ND	7.4	2.5	1.03	
Methylene Chloride	ND	18	3.9	1.03	
4-Methyl-2-Pentanone	ND	6.3	4.2	1.03	
Styrene	ND	6.6	1.6	1.03	
1,1,2,2-Tetrachloroethane	ND	7.1	2.7	1.03	
Toluene	15	1.9	1.4	1.03	
1,1,1-Trichloroethane	1.1	2.8	0.63	1.03	J
1,1,2-Trichloroethane	ND	2.8	0.65	1.03	
Trichlorofluoromethane	260	5.8	4.8	1.03	
1,1,2-Trichloro-1,2,2-Trifluoroethane	110	12	5.0	1.03	
1,2,4-Trimethylbenzene	ND	7.6	5.1	1.03	
1,3,5-Trimethylbenzene	ND	2.5	1.9	1.03	
Vinyl Acetate	ND	7.3	3.7	1.03	
Vinyl Chloride	ND	1.3	0.36	1.03	
o-Xylene	2.8	2.2	1.4	1.03	
p/m-Xylene	9.2	8.9	3.5	1.03	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	112	68-134	
1,2-Dichloroethane-d4	100	67-133	
Toluene-d8	96	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01341	**18-03-0580-31-A**	**03/07/18 14:46**	**Air**	**GC/MS OOO**	**N/A**	**03/13/18 06:04**	**180312L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	220000	2000	450	602	
Trichloroethene	110000	1600	360	602	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	115	68-134	
1,2-Dichloroethane-d4	104	67-133	
Toluene-d8	84	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19836**	**N/A**	**Air**	**GC/MS OOO**	**N/A**	**03/08/18 14:34**	**180308L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	ND	4.8	2.6	1.00	
Benzene	ND	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	ND	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 22 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	ND	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	ND	3.4	0.74	1.00	
Toluene	ND	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	ND	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19845**	**N/A**	**Air**	**GC/MS OOO**	**N/A**	**03/10/18 16:52**	**180310L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	ND	4.8	2.6	1.00	
Benzene	ND	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	ND	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 24 of 24

Parameter	Result	RL	MDL	DF	Qualifiers
Isopropanol	ND	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	ND	3.4	0.74	1.00	
Toluene	ND	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	ND	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	68-134	
1,2-Dichloroethane-d4	94	67-133	
Toluene-d8	98	70-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19851**	**N/A**	**Air**	**GC/MS OOO**	**N/A**	**03/12/18 14:10**	**180312L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	ND	3.4	0.74	1.00	
Trichloroethene	ND	2.7	0.61	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 1 of 47

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00034	**18-03-0580-1-A**	**03/07/18 05:07**	**Air**	**GC/MS YY**	**N/A**	**03/10/18 04:56**	**180309L02**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.4	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	2.3	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.61	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.31	0.12	1.00	
Chloromethane	1.2	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.6	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.17	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	13	0.68	1.00	
Ethylbenzene	0.89	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	0.21	0.090	1.00	
Methylene Chloride	1.4	0.087	1.00	
Styrene	0.88	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	1.8	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 2 of 47

Parameter	Result	RL	DF	Qualifiers
Toluene	16	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.33	0.13	1.00	
Trichlorofluoromethane	1.7	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.55	0.19	1.00	
1,2,4-Trimethylbenzene	0.96	0.25	1.00	
1,3,5-Trimethylbenzene	0.25	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	1.0	0.11	1.00	
p/m-Xylene	2.8	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	112	37-163	
1,4-Bromofluorobenzene	94	45-153	
Toluene-d8	100	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00034	**18-03-0580-1-A**	**03/07/18 05:07**	**Air**	**GC/MS YY**	**N/A**	**03/16/18 21:23**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	46	7.4	6.25	
Isopropanol	20	7.7	6.25	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	79	45-153	
Toluene-d8	97	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00037	**18-03-0580-2-A**	**03/07/18 03:54**	**Air**	**GC/MS YY**	**N/A**	**03/10/18 05:46**	**180309L02**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.6	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	2.3	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.58	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.33	0.12	1.00	
Chloromethane	1.1	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.6	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	5.4	0.68	1.00	
Ethylbenzene	1.1	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	0.14	0.090	1.00	
Methylene Chloride	3.2	0.087	1.00	
Styrene	1.1	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	1.7	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	1.0	0.13	1.00	
Trichlorofluoromethane	1.6	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.55	0.19	1.00	
1,2,4-Trimethylbenzene	1.4	0.25	1.00	
1,3,5-Trimethylbenzene	0.36	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	1.2	0.11	1.00	
p/m-Xylene	3.2	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	110	37-163	
1,4-Bromofluorobenzene	98	45-153	
Toluene-d8	100	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00037	**18-03-0580-2-A**	**03/07/18 03:54**	**Air**	**GC/MS YY**	**N/A**	**03/16/18 22:11**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	42	5.9	5.00	
Isopropanol	13	6.1	5.00	
Toluene	54	0.94	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	86	45-153	
Toluene-d8	94	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00040	**18-03-0580-3-A**	**03/07/18 03:57**	**Air**	**GC/MS YY**	**N/A**	**03/10/18 06:36**	**180309L02**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.4	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	2.1	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.55	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.35	0.12	1.00	
Chloromethane	1.1	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	3.1	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
Ethylbenzene	0.85	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	0.18	0.090	1.00	
Methylene Chloride	1.8	0.087	1.00	
Styrene	1.1	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	4.9	0.17	1.00	
Toluene	8.6	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.14	0.13	1.00	
Trichlorofluoromethane	1.7	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.66	0.19	1.00	
1,2,4-Trimethylbenzene	1.4	0.25	1.00	
1,3,5-Trimethylbenzene	0.32	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.94	0.11	1.00	
p/m-Xylene	2.4	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	111	37-163	
1,4-Bromofluorobenzene	96	45-153	
Toluene-d8	103	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00040	**18-03-0580-3-A**	**03/07/18 03:57**	**Air**	**GC/MS YY**	**N/A**	**03/16/18 22:56**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
1,1-Difluoroethane	12	5.4	8.00	
Isopropanol	57	9.8	8.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	80	45-153	
Toluene-d8	91	73-121	

WAS00040	**18-03-0580-3-A**	**03/07/18 03:57**	**Air**	**GC/MS YY**	**N/A**	**03/18/18 00:59**	**180317L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	230	24	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	96	37-163	
1,4-Bromofluorobenzene	92	45-153	
Toluene-d8	92	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00041	**18-03-0580-4-A**	**03/06/18 19:06**	**Air**	**GC/MS YY**	**N/A**	**03/10/18 07:31**	**180309L02**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.2	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	ND	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.54	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.18	0.12	1.00	
Chloromethane	0.86	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.5	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	5.4	0.68	1.00	
Ethylbenzene	0.71	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.2	0.087	1.00	
Styrene	2.6	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	9.3	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Toluene	4.2	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.25	0.13	1.00	
Trichlorofluoromethane	1.5	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.53	0.19	1.00	
1,2,4-Trimethylbenzene	1.5	0.25	1.00	
1,3,5-Trimethylbenzene	0.37	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.91	0.11	1.00	
p/m-Xylene	2.2	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	104	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	95	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00041	**18-03-0580-4-A**	**03/06/18 19:06**	**Air**	**GC/MS YY**	**N/A**	**03/16/18 23:41**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	46	5.9	5.00	
Isopropanol	43	6.1	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	102	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	101	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00046	**18-03-0580-5-A**	**03/06/18 17:20**	**Air**	**GC/MS YY**	**N/A**	**03/10/18 08:25**	**180309L02**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	0.99	0.080	1.00	
Bromodichloromethane	0.27	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	1.6	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.49	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.55	0.12	1.00	
Chloromethane	0.78	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	0.16	0.15	1.00	
Dichlorodifluoromethane	2.3	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	0.83	0.68	1.00	
Ethylbenzene	0.53	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Isopropanol	4.4	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.86	0.087	1.00	
Styrene	0.63	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	0.26	0.17	1.00	
Toluene	2.8	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	1.5	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52	0.19	1.00	
1,2,4-Trimethylbenzene	0.40	0.25	1.00	
1,3,5-Trimethylbenzene	0.13	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.65	0.11	1.00	
p/m-Xylene	1.6	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	105	37-163	
1,4-Bromofluorobenzene	97	45-153	
Toluene-d8	101	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00046	**18-03-0580-5-A**	**03/06/18 17:20**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 00:27**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	28	3.8	3.20	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	92	45-153	
Toluene-d8	95	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00043	**18-03-0580-6-A**	**03/06/18 17:41**	**Air**	**GC/MS YY**	**N/A**	**03/10/18 09:19**	**180309L02**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.0	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	ND	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.52	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.15	0.12	1.00	
Chloromethane	0.93	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.8	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	5.1	0.68	1.00	
Ethylbenzene	0.53	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Isopropanol	4.1	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.94	0.087	1.00	
Styrene	0.46	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 12 of 47

Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	0.71	0.17	1.00	
Toluene	3.6	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	1.3	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62	0.19	1.00	
1,2,4-Trimethylbenzene	0.55	0.25	1.00	
1,3,5-Trimethylbenzene	0.14	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.71	0.11	1.00	
p/m-Xylene	1.8	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	96	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00043	**18-03-0580-6-A**	**03/06/18 17:41**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 01:12**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	28	3.8	3.20	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	98	37-163	
1,4-Bromofluorobenzene	91	45-153	
Toluene-d8	90	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00039	**18-03-0580-7-A**	**03/06/18 17:38**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 18:22**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.3	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	2.3	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.58	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.23	0.12	1.00	
Chloromethane	1.1	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.9	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.11	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
Ethylbenzene	0.58	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.1	0.087	1.00	
Styrene	0.79	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Toluene	4.3	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	2.0	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.70	0.19	1.00	
1,2,4-Trimethylbenzene	1.1	0.25	1.00	
1,3,5-Trimethylbenzene	0.24	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.77	0.11	1.00	
p/m-Xylene	2.0	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	123	37-163	
1,4-Bromofluorobenzene	100	45-153	
Toluene-d8	107	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00039	**18-03-0580-7-A**	**03/06/18 17:38**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 01:59**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	100	12	10.0	
1,1-Difluoroethane	11	6.8	10.0	
Isopropanol	47	12	10.0	
Tetrachloroethene	47	1.7	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	79	45-153	
Toluene-d8	89	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00036	**18-03-0580-8-A**	**03/06/18 18:57**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 19:10**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	0.84	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	ND	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.50	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.16	0.12	1.00	
Chloromethane	0.97	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.8	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.23	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	1.1	0.68	1.00	
Ethylbenzene	0.44	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Isopropanol	12	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.90	0.087	1.00	
Styrene	0.55	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	2.1	0.17	1.00	
Toluene	15	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	1.4	0.13	1.00	
Trichlorofluoromethane	1.5	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.64	0.19	1.00	
1,2,4-Trimethylbenzene	0.70	0.25	1.00	
1,3,5-Trimethylbenzene	0.17	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.58	0.11	1.00	
p/m-Xylene	1.4	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	121	37-163	
1,4-Bromofluorobenzene	99	45-153	
Toluene-d8	112	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00036	**18-03-0580-8-A**	**03/06/18 18:57**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 02:47**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	60	9.5	8.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	76	45-153	
Toluene-d8	91	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00031	**18-03-0580-9-A**	**03/06/18 20:05**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 20:00**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.3	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	0.14	0.097	1.00	
2-Butanone	2.3	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.54	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.28	0.12	1.00	
Chloromethane	0.72	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.4	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.13	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
Ethylbenzene	0.99	0.11	1.00	
4-Ethyltoluene	0.29	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.1	0.087	1.00	
Styrene	0.80	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	6.4	0.17	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.14	0.13	1.00	
Trichlorofluoromethane	4.2	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.53	0.19	1.00	
1,2,4-Trimethylbenzene	1.7	0.25	1.00	
1,3,5-Trimethylbenzene	0.59	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	1.3	0.11	1.00	
p/m-Xylene	3.2	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	109	37-163	
1,4-Bromofluorobenzene	87	45-153	
Toluene-d8	95	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00031	**18-03-0580-9-A**	**03/06/18 20:05**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 03:32**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	130	15	12.5	
Isopropanol	94	15	12.5	
Toluene	15	2.4	12.5	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	83	45-153	
Toluene-d8	93	73-121	

WAS00031	**18-03-0580-9-A**	**03/06/18 20:05**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 23:28**	**180317L02**

Parameter	Result	RL	DF	Qualifiers
1,1-Difluoroethane	1800	220	320	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	102	37-163	
1,4-Bromofluorobenzene	82	45-153	
Toluene-d8	95	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AAS00329	**18-03-0580-10-A**	**03/06/18 16:47**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 20:49**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.8	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	2.4	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.64	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.22	0.12	1.00	
Chloromethane	1.2	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	3.6	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.12	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	1.0	0.68	1.00	
Ethylbenzene	0.84	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Isopropanol	4.6	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.4	0.087	1.00	
Styrene	0.95	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 20 of 47

Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	0.17	0.17	1.00	
Toluene	4.5	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	1.9	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.84	0.19	1.00	
1,2,4-Trimethylbenzene	0.83	0.25	1.00	
1,3,5-Trimethylbenzene	0.21	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	1.1	0.11	1.00	
p/m-Xylene	2.9	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	125	37-163	
1,4-Bromofluorobenzene	96	45-153	
Toluene-d8	113	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AAS00329	**18-03-0580-10-A**	**03/06/18 16:47**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 04:23**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	19	3.8	3.20	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	99	37-163	
1,4-Bromofluorobenzene	77	45-153	
Toluene-d8	93	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 21 of 47

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00032	**18-03-0580-11-A**	**03/06/18 17:22**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 21:40**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.8	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	2.8	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.57	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.26	0.12	1.00	
Chloromethane	1.2	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.9	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.13	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	0.55	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	12	0.68	1.00	
Ethylbenzene	0.80	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.5	0.087	1.00	
Styrene	0.71	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	0.22	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 22 of 47

Parameter	Result	RL	DF	Qualifiers
Toluene	5.1	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	1.7	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59	0.19	1.00	
1,2,4-Trimethylbenzene	0.90	0.25	1.00	
1,3,5-Trimethylbenzene	0.23	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	1.1	0.11	1.00	
p/m-Xylene	2.9	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	75	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	111	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00032	**18-03-0580-11-A**	**03/06/18 17:22**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 05:13**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	45	5.9	5.00	
Isopropanol	25	6.1	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	105	37-163	
1,4-Bromofluorobenzene	85	45-153	
Toluene-d8	94	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AAS00330	**18-03-0580-12-A**	**03/06/18 17:42**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 22:30**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	0.81	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	1.7	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.73	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.19	0.12	1.00	
Chloromethane	1.1	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	3.2	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.10	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	0.85	0.68	1.00	
Ethylbenzene	0.60	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Isopropanol	4.2	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.1	0.087	1.00	
Styrene	0.39	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	0.22	0.17	1.00	
Toluene	3.3	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	1.7	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.72	0.19	1.00	
1,2,4-Trimethylbenzene	0.52	0.25	1.00	
1,3,5-Trimethylbenzene	0.13	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.81	0.11	1.00	
p/m-Xylene	2.1	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	105	37-163	
1,4-Bromofluorobenzene	99	45-153	
Toluene-d8	111	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AAS00330	**18-03-0580-12-A**	**03/06/18 17:42**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 06:03**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	30	4.8	4.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	104	37-163	
1,4-Bromofluorobenzene	88	45-153	
Toluene-d8	95	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00044	**18-03-0580-13-A**	**03/06/18 18:54**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 23:20**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.1	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	1.5	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.65	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.17	0.12	1.00	
Chloromethane	1.1	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	3.5	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	1.1	0.68	1.00	
Ethylbenzene	0.63	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.97	0.087	1.00	
Styrene	0.70	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	0.78	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Toluene	7.7	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.52	0.13	1.00	
Trichlorofluoromethane	1.6	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60	0.19	1.00	
1,2,4-Trimethylbenzene	0.80	0.25	1.00	
1,3,5-Trimethylbenzene	0.18	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.91	0.11	1.00	
p/m-Xylene	2.3	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	115	37-163	
1,4-Bromofluorobenzene	99	45-153	
Toluene-d8	112	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00044	**18-03-0580-13-A**	**03/06/18 18:54**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 06:54**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	51	9.5	8.00	
Isopropanol	10	9.8	8.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	80	45-153	
Toluene-d8	92	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00052	**18-03-0580-14-A**	**03/06/18 19:02**	**Air**	**GC/MS YY**	**N/A**	**03/13/18 00:09**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.3	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	2.0	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.66	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.21	0.12	1.00	
Chloromethane	1.2	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	3.4	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.12	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	11	0.68	1.00	
Ethylbenzene	0.58	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.4	0.087	1.00	
Styrene	0.80	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	7.5	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Toluene	12	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	1.0	0.13	1.00	
Trichlorofluoromethane	2.2	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.84	0.19	1.00	
1,2,4-Trimethylbenzene	1.2	0.25	1.00	
1,3,5-Trimethylbenzene	0.28	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.79	0.11	1.00	
p/m-Xylene	1.9	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	130	37-163	
1,4-Bromofluorobenzene	101	45-153	
Toluene-d8	111	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00052	**18-03-0580-14-A**	**03/06/18 19:02**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 07:46**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Isopropanol	22	6.1	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	102	37-163	
1,4-Bromofluorobenzene	88	45-153	
Toluene-d8	95	73-121	

WAS00052	**18-03-0580-14-A**	**03/06/18 19:02**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 22:42**	**180317L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	370	48	40.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	94	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	95	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00033	**18-03-0580-15-A**	**03/06/18 18:06**	**Air**	**GC/MS YY**	**N/A**	**03/13/18 00:59**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.4	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	1.6	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.57	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.19	0.12	1.00	
Chloromethane	0.91	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.4	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
Ethylbenzene	0.76	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.0	0.087	1.00	
Styrene	0.62	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	1.6	0.17	1.00	
Toluene	6.2	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 30 of 47

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.35	0.13	1.00	
Trichlorofluoromethane	1.5	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.53	0.19	1.00	
1,2,4-Trimethylbenzene	0.86	0.25	1.00	
1,3,5-Trimethylbenzene	0.22	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.97	0.11	1.00	
p/m-Xylene	2.5	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	109	37-163	
1,4-Bromofluorobenzene	82	45-153	
Toluene-d8	101	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00033	**18-03-0580-15-A**	**03/06/18 18:06**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 08:36**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	56	7.4	6.25	
1,1-Difluoroethane	45	4.2	6.25	
Isopropanol	54	7.7	6.25	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	83	45-153	
Toluene-d8	93	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00030	**18-03-0580-16-A**	**03/06/18 17:50**	**Air**	**GC/MS YY**	**N/A**	**03/13/18 01:50**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.4	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	2.5	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.52	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.23	0.12	1.00	
Chloromethane	1.4	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.4	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.18	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
Ethylbenzene	1.1	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.1	0.087	1.00	
Styrene	0.85	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	2.6	0.17	1.00	
Toluene	5.5	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	1.9	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.85	0.19	1.00	
1,2,4-Trimethylbenzene	0.90	0.25	1.00	
1,3,5-Trimethylbenzene	0.24	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	1.6	0.11	1.00	
p/m-Xylene	3.6	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	108	37-163	
1,4-Bromofluorobenzene	90	45-153	
Toluene-d8	97	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00030	**18-03-0580-16-A**	**03/06/18 17:50**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 09:22**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	110	12	10.0	
1,1-Difluoroethane	49	6.8	10.0	
Isopropanol	23	12	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	101	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00045	**18-03-0580-17-A**	**03/06/18 17:52**	**Air**	**GC/MS YY**	**N/A**	**03/13/18 02:40**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	0.90	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	1.6	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.53	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.14	0.12	1.00	
Chloromethane	0.88	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.6	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	0.68	0.68	1.00	
Ethylbenzene	0.54	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Isopropanol	6.4	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	0.89	0.087	1.00	
Styrene	0.38	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	3.2	0.17	1.00	
Toluene	3.4	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.88	0.13	1.00	
Trichlorofluoromethane	1.4	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.50	0.19	1.00	
1,2,4-Trimethylbenzene	0.66	0.25	1.00	
1,3,5-Trimethylbenzene	0.16	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.76	0.11	1.00	
p/m-Xylene	1.9	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	108	37-163	
1,4-Bromofluorobenzene	86	45-153	
Toluene-d8	96	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00045	**18-03-0580-17-A**	**03/06/18 17:52**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 10:07**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	41	4.8	4.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	91	45-153	
Toluene-d8	100	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00035	**18-03-0580-18-A**	**03/06/18 16:44**	**Air**	**GC/MS YY**	**N/A**	**03/13/18 03:29**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.2	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	ND	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.57	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.17	0.12	1.00	
Chloromethane	0.92	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.5	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	1.4	0.68	1.00	
Ethylbenzene	0.55	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Isopropanol	5.0	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.7	0.087	1.00	
Styrene	0.62	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	0.29	0.17	1.00	
Toluene	3.3	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.14	0.13	1.00	
Trichlorofluoromethane	1.6	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.56	0.19	1.00	
1,2,4-Trimethylbenzene	0.59	0.25	1.00	
1,3,5-Trimethylbenzene	0.15	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.74	0.11	1.00	
p/m-Xylene	1.9	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	111	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	110	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00035	**18-03-0580-18-A**	**03/06/18 16:44**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 10:53**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	25	4.8	4.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	87	45-153	
Toluene-d8	96	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00038	**18-03-0580-19-A**	**03/06/18 16:17**	**Air**	**GC/MS YY**	**N/A**	**03/13/18 04:18**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	1.3	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	2.8	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.57	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.18	0.12	1.00	
Chloromethane	1.2	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.7	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	9.3	0.68	1.00	
Ethylbenzene	0.58	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	1.1	0.087	1.00	
Styrene	0.77	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	8.4	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Toluene	12	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	1.1	0.13	1.00	
Trichlorofluoromethane	1.8	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.71	0.19	1.00	
1,2,4-Trimethylbenzene	1.1	0.25	1.00	
1,3,5-Trimethylbenzene	0.25	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	0.79	0.11	1.00	
p/m-Xylene	1.8	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	112	37-163	
1,4-Bromofluorobenzene	100	45-153	
Toluene-d8	110	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00038	**18-03-0580-19-A**	**03/06/18 16:17**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 21:58**	**180317L02**

Parameter	Result	RL	DF	Qualifiers
Isopropanol	29	20	16.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	102	37-163	
1,4-Bromofluorobenzene	82	45-153	
Toluene-d8	93	73-121	

WAS00038	**18-03-0580-19-A**	**03/06/18 16:17**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 11:38**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	290	48	40.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	80	45-153	
Toluene-d8	92	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 39 of 47

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00051	**18-03-0580-22-A**	**03/07/18 05:50**	**Air**	**GC/MS YY**	**N/A**	**03/13/18 05:07**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	2.1	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	0.11	0.097	1.00	
2-Butanone	4.1	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.61	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.47	0.12	1.00	
Chloromethane	0.98	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	2.5	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.23	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
Ethylbenzene	1.3	0.11	1.00	
4-Ethyltoluene	0.25	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	0.23	0.090	1.00	
Methylene Chloride	2.2	0.087	1.00	
Styrene	1.6	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	4.8	0.17	1.00	
Toluene	11	0.19	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 40 of 47

Parameter	Result	RL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.22	0.13	1.00	
Trichlorofluoromethane	1.9	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62	0.19	1.00	
1,2,4-Trimethylbenzene	1.9	0.25	1.00	
1,3,5-Trimethylbenzene	0.46	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	1.3	0.11	1.00	
p/m-Xylene	3.6	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	69	37-163	
1,4-Bromofluorobenzene	102	45-153	
Toluene-d8	113	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00051	**18-03-0580-22-A**	**03/07/18 05:50**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 12:23**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	210	24	20.0	
1,1-Difluoroethane	15	14	20.0	
Isopropanol	86	25	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	81	45-153	
Toluene-d8	91	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00042	**18-03-0580-23-A**	**03/06/18 07:20**	**Air**	**GC/MS YY**	**N/A**	**03/13/18 05:57**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Benzene	2.3	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	0.12	0.097	1.00	
2-Butanone	3.1	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	0.57	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	0.46	0.12	1.00	
Chloromethane	1.0	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	0.17	0.15	1.00	
Dichlorodifluoromethane	2.5	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	0.23	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	0.12	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	7.3	0.68	1.00	
Ethylbenzene	1.4	0.11	1.00	
4-Ethyltoluene	0.29	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	0.15	0.090	1.00	
Methylene Chloride	2.0	0.087	1.00	
Styrene	2.2	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Tetrachloroethene	2.3	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
Toluene	10	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	0.33	0.13	1.00	
Trichlorofluoromethane	1.7	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60	0.19	1.00	
1,2,4-Trimethylbenzene	1.9	0.25	1.00	
1,3,5-Trimethylbenzene	0.48	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	1.6	0.11	1.00	
p/m-Xylene	4.2	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	109	37-163	
1,4-Bromofluorobenzene	100	45-153	
Toluene-d8	117	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00042	**18-03-0580-23-A**	**03/06/18 07:20**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 21:11**	**180317L02**

Parameter	Result	RL	DF	Qualifiers
Acetone	57	7.4	6.25	
Isopropanol	36	7.7	6.25	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	86	45-153	
Toluene-d8	93	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-416**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**03/09/18 16:14**	**180309L02**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Isopropanol	ND	1.2	1.00	
Benzene	ND	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	ND	1.5	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	ND	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	ND	0.12	1.00	
Chloromethane	ND	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	ND	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Ethylbenzene	ND	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	ND	0.087	1.00	
Styrene	ND	0.11	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 44 of 47

Parameter	Result	RL	DF	Qualifiers
Tetrachloroethene	ND	0.17	1.00	
Toluene	ND	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	1.00	
1,2,4-Trimethylbenzene	ND	0.25	1.00	
1,3,5-Trimethylbenzene	ND	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	ND	0.11	1.00	
p/m-Xylene	ND	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	109	37-163	
1,4-Bromofluorobenzene	86	45-153	
Toluene-d8	93	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-418**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 13:28**	**180312L01**

Parameter	Result	RL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	0.19	1.00	
Isopropanol	ND	1.2	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Benzene	ND	0.080	1.00	
Bromodichloromethane	ND	0.17	1.00	
Bromomethane	ND	0.097	1.00	
2-Butanone	ND	1.5	1.00	
Tetrachloroethene	ND	0.17	1.00	
Carbon Disulfide	ND	1.6	1.00	
Carbon Tetrachloride	ND	0.063	1.00	
Chlorobenzene	ND	0.12	1.00	
Chloroethane	ND	0.066	1.00	
Chloroform	ND	0.12	1.00	
Chloromethane	ND	0.052	1.00	
Dibromochloromethane	ND	0.21	1.00	
1,2-Dibromoethane	ND	0.19	1.00	
1,2-Dichlorobenzene	ND	0.15	1.00	
1,3-Dichlorobenzene	ND	0.15	1.00	
1,4-Dichlorobenzene	ND	0.15	1.00	
Dichlorodifluoromethane	ND	0.12	1.00	
1,1-Dichloroethane	ND	0.10	1.00	
1,2-Dichloroethane	ND	0.10	1.00	
1,1-Dichloroethene	ND	0.099	1.00	
c-1,2-Dichloroethene	ND	0.099	1.00	
t-1,2-Dichloroethene	ND	0.099	1.00	
1,2-Dichloropropane	ND	0.12	1.00	
c-1,3-Dichloropropene	ND	0.11	1.00	
t-1,3-Dichloropropene	ND	0.11	1.00	
Dichlorotetrafluoroethane	ND	0.17	1.00	
Ethylbenzene	ND	0.11	1.00	
4-Ethyltoluene	ND	0.25	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	1.00	
Methylene Chloride	ND	0.087	1.00	
Styrene	ND	0.11	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	DF	Qualifiers
1,1,2,2-Tetrachloroethane	ND	0.17	1.00	
Toluene	ND	0.19	1.00	
1,1,1-Trichloroethane	ND	0.14	1.00	
1,1,2-Trichloroethane	ND	0.14	1.00	
Trichloroethene	ND	0.13	1.00	
Trichlorofluoromethane	ND	0.14	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	1.00	
1,2,4-Trimethylbenzene	ND	0.25	1.00	
1,3,5-Trimethylbenzene	ND	0.12	1.00	
Vinyl Chloride	ND	0.026	1.00	
o-Xylene	ND	0.11	1.00	
p/m-Xylene	ND	0.22	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	118	37-163	
1,4-Bromofluorobenzene	90	45-153	
Toluene-d8	105	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-421**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**03/16/18 19:29**	**180316L01**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	1.2	1.00	
1,1-Difluoroethane	ND	0.68	1.00	
Tetrachloroethene	ND	0.17	1.00	
Toluene	ND	0.19	1.00	
Isopropanol	ND	1.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	87	45-153	
Toluene-d8	101	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-422**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 20:12**	**180317L02**

Parameter	Result	RL	DF	Qualifiers
Isopropanol	ND	1.2	1.00	
Acetone	ND	1.2	1.00	
1,1-Difluoroethane	ND	0.68	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	102	37-163	
1,4-Bromofluorobenzene	74	45-153	
Toluene-d8	95	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19836	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/08/18 11:38**	**180308L01**
095-01-021-19836	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/08/18 12:29**	**180308L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	200.3	108	209.1	113	31-151	11-171	4	0-30	
Acetone	59.39	56.33	95	56.68	95	67-133	56-144	1	0-30	
Benzene	79.87	76.47	96	78.62	98	70-130	60-140	3	0-30	
Benzyl Chloride	129.4	132.5	102	135.0	104	38-158	18-178	2	0-30	
Bromodichloromethane	167.5	163.6	98	165.8	99	70-130	60-140	1	0-30	
Bromoform	258.4	258.9	100	260.4	101	63-147	49-161	1	0-30	
Bromomethane	97.08	94.03	97	94.98	98	70-139	58-150	1	0-30	
2-Butanone	73.73	71.26	97	70.96	96	66-132	55-143	0	0-30	
Carbon Disulfide	77.85	73.99	95	74.96	96	68-146	55-159	1	0-30	
Carbon Tetrachloride	157.3	155.5	99	156.4	99	70-136	59-147	1	0-30	
Chlorobenzene	115.1	110.4	96	112.7	98	70-130	60-140	2	0-30	
Chloroethane	65.96	62.58	95	63.60	96	65-149	51-163	2	0-30	
Chloroform	122.1	115.5	95	117.4	96	70-130	60-140	2	0-30	
Chloromethane	51.63	48.13	93	47.68	92	69-141	57-153	1	0-30	
Dibromochloromethane	213.0	206.3	97	209.7	98	70-138	59-149	2	0-30	
1,2-Dibromoethane	192.1	186.5	97	190.6	99	70-133	60-144	2	0-30	
1,2-Dichlorobenzene	150.3	149.5	99	152.6	102	48-138	33-153	2	0-30	
1,3-Dichlorobenzene	150.3	148.3	99	151.0	100	56-134	43-147	2	0-30	
1,4-Dichlorobenzene	150.3	154.1	103	158.8	106	52-136	38-150	3	0-30	
Dichlorodifluoromethane	123.6	126.0	102	125.2	101	67-139	55-151	1	0-30	
1,1-Dichloroethane	101.2	94.96	94	96.59	95	70-130	60-140	2	0-30	
1,2-Dichloroethane	101.2	98.33	97	97.43	96	70-132	60-142	1	0-30	
1,1-Dichloroethene	99.12	94.23	95	93.95	95	70-135	59-146	0	0-30	
c-1,2-Dichloroethene	99.12	96.25	97	97.64	99	70-130	60-140	1	0-30	
t-1,2-Dichloroethene	99.12	95.79	97	98.06	99	70-130	60-140	2	0-30	
1,2-Dichloropropane	115.5	109.3	95	110.8	96	70-130	60-140	1	0-30	
c-1,3-Dichloropropene	113.5	113.3	100	116.5	103	70-130	60-140	3	0-30	
t-1,3-Dichloropropene	113.5	117.4	103	118.6	105	70-147	57-160	1	0-30	
Dichlorotetrafluoroethane	174.8	174.7	100	174.2	100	51-135	37-149	0	0-30	
1,1-Difluoroethane	67.54	60.46	90	59.08	87	70-131	60-141	2	0-30	
Ethylbenzene	108.6	104.8	97	108.5	100	70-130	60-140	3	0-30	
4-Ethyltoluene	122.9	121.8	99	125.6	102	68-130	58-140	3	0-30	
Hexachloro-1,3-Butadiene	266.6	268.8	101	275.5	103	44-146	27-163	2	0-30	
2-Hexanone	102.4	106.2	104	112.9	110	70-136	59-147	6	0-30	
Isopropanol	61.45	50.79	83	53.85	88	57-135	44-148	6	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 2 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Methyl-t-Butyl Ether (MTBE)	90.13	86.98	97	88.47	98	68-130	58-140	2	0-30	
Methylene Chloride	86.84	80.96	93	81.79	94	69-130	59-140	1	0-30	
4-Methyl-2-Pentanone	102.4	103.0	101	103.8	101	70-130	60-140	1	0-30	
Styrene	106.5	105.1	99	107.0	101	65-131	54-142	2	0-30	
1,1,2,2-Tetrachloroethane	171.6	161.8	94	166.1	97	63-130	52-141	3	0-30	
Tetrachloroethene	169.6	163.7	97	166.5	98	70-130	60-140	2	0-30	
Toluene	94.21	89.51	95	91.44	97	70-130	60-140	2	0-30	
1,1,1-Trichloroethane	136.4	133.2	98	133.8	98	70-130	60-140	0	0-30	
1,1,2-Trichloroethane	136.4	132.4	97	134.5	99	70-130	60-140	2	0-30	
Trichloroethene	134.3	130.2	97	133.8	100	70-130	60-140	3	0-30	
Trichlorofluoromethane	140.5	136.8	97	135.9	97	63-141	50-154	1	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	185.7	97	188.0	98	70-136	59-147	1	0-30	
1,2,4-Trimethylbenzene	122.9	120.6	98	122.7	100	60-132	48-144	2	0-30	
1,3,5-Trimethylbenzene	122.9	119.3	97	122.5	100	62-130	51-141	3	0-30	
Vinyl Acetate	88.03	82.60	94	83.33	95	58-130	46-142	1	0-30	
Vinyl Chloride	63.91	61.62	96	61.70	97	70-134	59-145	0	0-30	
o-Xylene	108.6	102.1	94	104.9	97	69-130	59-140	3	0-30	
p/m-Xylene	217.1	207.2	95	210.9	97	70-132	60-142	2	0-30	

Total number of LCS compounds: 53
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 3 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19836	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/08/18 11:38**	**180308L01**
095-01-021-19836	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/08/18 12:29**	**180308L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	178.9	180.0	101	176.3	99	68-134	
1,2-Dichloroethane-d4	105.3	104.2	99	103.0	98	67-133	
Toluene-d8	102.4	103.0	101	102.8	100	70-130	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 4 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19845	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/10/18 12:16**	**180310L01**
095-01-021-19845	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/10/18 14:19**	**180310L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	197.4	106	211.2	114	31-151	11-171	7	0-30	
Acetone	59.39	53.59	90	55.06	93	67-133	56-144	3	0-30	
Benzene	79.87	77.54	97	80.03	100	70-130	60-140	3	0-30	
Benzyl Chloride	129.4	125.9	97	131.5	102	38-158	18-178	4	0-30	
Bromodichloromethane	167.5	157.8	94	162.6	97	70-130	60-140	3	0-30	
Bromoform	258.4	248.1	96	255.3	99	63-147	49-161	3	0-30	
Bromomethane	97.08	91.91	95	94.94	98	70-139	58-150	3	0-30	
2-Butanone	73.73	66.83	91	69.12	94	66-132	55-143	3	0-30	
Carbon Disulfide	77.85	74.00	95	76.49	98	68-146	55-159	3	0-30	
Carbon Tetrachloride	157.3	143.7	91	149.4	95	70-136	59-147	4	0-30	
Chlorobenzene	115.1	110.3	96	115.3	100	70-130	60-140	4	0-30	
Chloroethane	65.96	61.22	93	62.72	95	65-149	51-163	2	0-30	
Chloroform	122.1	113.3	93	116.3	95	70-130	60-140	3	0-30	
Chloromethane	51.63	44.15	86	46.78	91	69-141	57-153	6	0-30	
Dibromochloromethane	213.0	199.6	94	209.5	98	70-138	59-149	5	0-30	
1,2-Dibromoethane	192.1	188.2	98	194.6	101	70-133	60-144	3	0-30	
1,2-Dichlorobenzene	150.3	145.3	97	152.3	101	48-138	33-153	5	0-30	
1,3-Dichlorobenzene	150.3	144.0	96	151.6	101	56-134	43-147	5	0-30	
1,4-Dichlorobenzene	150.3	150.9	100	158.4	105	52-136	38-150	5	0-30	
Dichlorodifluoromethane	123.6	116.9	95	125.9	102	67-139	55-151	7	0-30	
1,1-Dichloroethane	101.2	93.86	93	96.65	96	70-130	60-140	3	0-30	
1,2-Dichloroethane	101.2	91.56	90	93.83	93	70-132	60-142	2	0-30	
1,1-Dichloroethene	99.12	90.76	92	92.26	93	70-135	59-146	2	0-30	
c-1,2-Dichloroethene	99.12	97.75	99	100.8	102	70-130	60-140	3	0-30	
t-1,2-Dichloroethene	99.12	97.56	98	100.3	101	70-130	60-140	3	0-30	
1,2-Dichloropropane	115.5	107.7	93	110.8	96	70-130	60-140	3	0-30	
c-1,3-Dichloropropene	113.5	114.0	100	117.3	103	70-130	60-140	3	0-30	
t-1,3-Dichloropropene	113.5	115.7	102	117.8	104	70-147	57-160	2	0-30	
Dichlorotetrafluoroethane	174.8	165.4	95	173.9	100	51-135	37-149	5	0-30	
1,1-Difluoroethane	67.54	56.79	84	58.97	87	70-131	60-141	4	0-30	
Ethylbenzene	108.6	106.8	98	111.6	103	70-130	60-140	4	0-30	
4-Ethyltoluene	122.9	119.3	97	127.4	104	68-130	58-140	7	0-30	
Hexachloro-1,3-Butadiene	266.6	256.2	96	268.4	101	44-146	27-163	5	0-30	
2-Hexanone	102.4	111.2	109	114.5	112	70-136	59-147	3	0-30	
Isopropanol	61.45	42.79	70	43.65	71	57-135	44-148	2	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 5 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Methyl-t-Butyl Ether (MTBE)	90.13	87.63	97	90.09	100	68-130	58-140	3	0-30	
Methylene Chloride	86.84	86.01	99	83.55	96	69-130	59-140	3	0-30	
4-Methyl-2-Pentanone	102.4	99.74	97	102.3	100	70-130	60-140	3	0-30	
Styrene	106.5	105.6	99	109.9	103	65-131	54-142	4	0-30	
1,1,2,2-Tetrachloroethane	171.6	162.4	95	169.9	99	63-130	52-141	4	0-30	
Tetrachloroethene	169.6	161.5	95	167.5	99	70-130	60-140	4	0-30	
Toluene	94.21	90.53	96	95.30	101	70-130	60-140	5	0-30	
1,1,1-Trichloroethane	136.4	127.3	93	130.3	96	70-130	60-140	2	0-30	
1,1,2-Trichloroethane	136.4	132.4	97	136.8	100	70-130	60-140	3	0-30	
Trichloroethene	134.3	128.0	95	132.6	99	70-130	60-140	4	0-30	
Trichlorofluoromethane	140.5	122.9	88	126.4	90	63-141	50-154	3	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	182.1	95	187.3	98	70-136	59-147	3	0-30	
1,2,4-Trimethylbenzene	122.9	117.9	96	123.1	100	60-132	48-144	4	0-30	
1,3,5-Trimethylbenzene	122.9	116.8	95	124.0	101	62-130	51-141	6	0-30	
Vinyl Acetate	88.03	79.32	90	80.73	92	58-130	46-142	2	0-30	
Vinyl Chloride	63.91	58.76	92	61.24	96	70-134	59-145	4	0-30	
o-Xylene	108.6	100.5	93	106.3	98	69-130	59-140	6	0-30	
p/m-Xylene	217.1	203.7	94	210.8	97	70-132	60-142	3	0-30	

Total number of LCS compounds: 53
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 6 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19845	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/10/18 12:16**	**180310L01**
095-01-021-19845	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/10/18 14:19**	**180310L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	178.9	171.7	96	174.7	98	68-134	
1,2-Dichloroethane-d4	105.3	97.23	92	96.81	92	67-133	
Toluene-d8	102.4	102.5	100	101.9	100	70-130	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 7 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19851	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/12/18 11:35**	**180312L01**
095-01-021-19851	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/12/18 12:27**	**180312L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	212.9	115	214.8	116	31-151	11-171	1	0-30	
Acetone	59.39	56.70	95	56.64	95	67-133	56-144	0	0-30	
Benzene	79.87	78.96	99	78.75	99	70-130	60-140	0	0-30	
Benzyl Chloride	129.4	134.8	104	133.7	103	38-158	18-178	1	0-30	
Bromodichloromethane	167.5	168.6	101	166.5	99	70-130	60-140	1	0-30	
Bromoform	258.4	265.1	103	263.6	102	63-147	49-161	1	0-30	
Bromomethane	97.08	95.38	98	94.46	97	70-139	58-150	1	0-30	
2-Butanone	73.73	71.65	97	70.58	96	66-132	55-143	2	0-30	
Carbon Disulfide	77.85	75.66	97	75.68	97	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	159.7	102	156.2	99	70-136	59-147	2	0-30	
Chlorobenzene	115.1	113.7	99	114.6	100	70-130	60-140	1	0-30	
Chloroethane	65.96	63.53	96	63.31	96	65-149	51-163	0	0-30	
Chloroform	122.1	118.5	97	118.3	97	70-130	60-140	0	0-30	
Chloromethane	51.63	48.90	95	48.10	93	69-141	57-153	2	0-30	
Dibromochloromethane	213.0	214.1	101	212.2	100	70-138	59-149	1	0-30	
1,2-Dibromoethane	192.1	194.3	101	194.8	101	70-133	60-144	0	0-30	
1,2-Dichlorobenzene	150.3	154.9	103	155.4	103	48-138	33-153	0	0-30	
1,3-Dichlorobenzene	150.3	154.0	102	152.4	101	56-134	43-147	1	0-30	
1,4-Dichlorobenzene	150.3	159.4	106	158.3	105	52-136	38-150	1	0-30	
Dichlorodifluoromethane	123.6	127.3	103	123.5	100	67-139	55-151	3	0-30	
1,1-Dichloroethane	101.2	97.79	97	97.76	97	70-130	60-140	0	0-30	
1,2-Dichloroethane	101.2	100.5	99	99.18	98	70-132	60-142	1	0-30	
1,1-Dichloroethene	99.12	96.68	98	95.50	96	70-135	59-146	1	0-30	
c-1,2-Dichloroethene	99.12	98.38	99	98.71	100	70-130	60-140	0	0-30	
t-1,2-Dichloroethene	99.12	98.42	99	98.31	99	70-130	60-140	0	0-30	
1,2-Dichloropropane	115.5	112.4	97	111.6	97	70-130	60-140	1	0-30	
c-1,3-Dichloropropene	113.5	119.5	105	118.5	104	70-130	60-140	1	0-30	
t-1,3-Dichloropropene	113.5	121.5	107	120.4	106	70-147	57-160	1	0-30	
Dichlorotetrafluoroethane	174.8	177.8	102	174.4	100	51-135	37-149	2	0-30	
1,1-Difluoroethane	67.54	63.72	94	61.74	91	70-131	60-141	3	0-30	
Ethylbenzene	108.6	110.5	102	110.8	102	70-130	60-140	0	0-30	
4-Ethyltoluene	122.9	126.9	103	126.2	103	68-130	58-140	1	0-30	
Hexachloro-1,3-Butadiene	266.6	280.5	105	282.1	106	44-146	27-163	1	0-30	
2-Hexanone	102.4	114.8	112	114.9	112	70-136	59-147	0	0-30	
Isopropanol	61.45	46.46	76	52.90	86	57-135	44-148	13	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 8 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Methyl-t-Butyl Ether (MTBE)	90.13	90.16	100	90.34	100	68-130	58-140	0	0-30	
Methylene Chloride	86.84	82.37	95	82.64	95	69-130	59-140	0	0-30	
4-Methyl-2-Pentanone	102.4	106.1	104	103.1	101	70-130	60-140	3	0-30	
Styrene	106.5	108.9	102	109.4	103	65-131	54-142	0	0-30	
1,1,2,2-Tetrachloroethane	171.6	167.1	97	167.4	98	63-130	52-141	0	0-30	
Tetrachloroethene	169.6	169.5	100	168.5	99	70-130	60-140	1	0-30	
Toluene	94.21	93.03	99	92.69	98	70-130	60-140	0	0-30	
1,1,1-Trichloroethane	136.4	136.5	100	135.2	99	70-130	60-140	1	0-30	
1,1,2-Trichloroethane	136.4	136.6	100	135.8	100	70-130	60-140	1	0-30	
Trichloroethene	134.3	133.6	99	133.2	99	70-130	60-140	0	0-30	
Trichlorofluoromethane	140.5	138.7	99	135.5	96	63-141	50-154	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	189.2	99	188.5	98	70-136	59-147	0	0-30	
1,2,4-Trimethylbenzene	122.9	127.0	103	124.1	101	60-132	48-144	2	0-30	
1,3,5-Trimethylbenzene	122.9	126.0	103	124.3	101	62-130	51-141	1	0-30	
Vinyl Acetate	88.03	85.22	97	84.74	96	58-130	46-142	1	0-30	
Vinyl Chloride	63.91	61.94	97	61.83	97	70-134	59-145	0	0-30	
o-Xylene	108.6	106.1	98	105.5	97	69-130	59-140	1	0-30	
p/m-Xylene	217.1	214.4	99	214.4	99	70-132	60-142	0	0-30	

Total number of LCS compounds: 53
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 9 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19851	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**03/12/18 11:35**	**180312L01**
095-01-021-19851	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**03/12/18 12:27**	**180312L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	178.9	180.3	101	178.4	100	68-134	
1,2-Dichloroethane-d4	105.3	104.9	100	103.1	98	67-133	
Toluene-d8	102.4	103.3	101	102.8	100	70-130	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 10 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-416	**LCS**	**Air**	**GC/MS YY**	**N/A**	**03/09/18 14:26**	**180309L02**
099-15-214-416	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**03/09/18 15:14**	**180309L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	3.711	4.877	131	5.259	142	50-150	33-167	8	0-30	
Benzene	1.597	1.501	94	1.573	98	27-153	6-174	5	0-34	
Bromodichloromethane	3.350	4.036	120	4.185	125	50-150	33-167	4	0-30	
Bromomethane	1.942	1.995	103	1.850	95	50-150	33-167	8	0-30	
Carbon Tetrachloride	3.146	3.763	120	3.880	123	7-187	0-217	3	0-31	
Chlorobenzene	2.302	2.567	112	2.651	115	50-150	33-167	3	0-30	
Chloroethane	1.319	1.262	96	1.179	89	50-150	33-167	7	0-30	
Chloroform	2.441	2.497	102	2.607	107	50-150	33-167	4	0-30	
Chloromethane	1.033	0.9317	90	0.8688	84	50-150	33-167	7	0-30	
Dibromochloromethane	4.259	5.410	127	5.825	137	50-150	33-167	7	0-30	
1,2-Dibromoethane	3.842	4.609	120	4.780	124	50-150	33-167	4	0-30	
1,2-Dichlorobenzene	3.006	3.238	108	3.567	119	50-150	33-167	10	0-30	
1,3-Dichlorobenzene	3.006	3.511	117	3.787	126	50-150	33-167	8	0-30	
1,4-Dichlorobenzene	3.006	3.462	115	3.732	124	50-150	33-167	7	0-30	
Dichlorodifluoromethane	2.473	3.307	134	2.575	104	50-150	33-167	25	0-30	
1,1-Dichloroethane	2.024	1.963	97	2.035	101	50-150	33-167	4	0-30	
1,2-Dichloroethane	2.024	2.214	109	2.307	114	28-166	5-189	4	0-40	
1,1-Dichloroethene	1.982	1.816	92	1.854	94	50-150	33-167	2	0-30	
c-1,2-Dichloroethene	1.982	1.810	91	1.895	96	35-165	13-187	5	0-35	
t-1,2-Dichloroethene	1.982	1.823	92	1.875	95	50-150	33-167	3	0-30	
1,2-Dichloropropane	2.311	2.569	111	2.656	115	50-150	33-167	3	0-30	
c-1,3-Dichloropropene	2.269	2.369	104	2.404	106	50-150	33-167	1	0-30	
t-1,3-Dichloropropene	2.269	2.418	107	2.459	108	50-150	33-167	2	0-30	
Dichlorotetrafluoroethane	3.495	4.643	133	3.822	109	50-150	33-167	19	0-30	
1,1-Difluoroethane	1.351	1.405	104	1.490	110	50-150	33-167	6	0-30	
Ethylbenzene	2.171	1.999	92	2.063	95	27-153	6-174	3	0-46	
4-Ethyltoluene	2.458	2.228	91	2.370	96	50-150	33-167	6	0-30	
Hexachloro-1,3-Butadiene	5.333	7.198	135	7.854	147	50-150	33-167	9	0-30	
Methyl-t-Butyl Ether (MTBE)	1.803	1.518	84	1.540	85	50-150	33-167	1	0-30	
Methylene Chloride	1.737	1.476	85	1.508	87	50-150	33-167	2	0-30	
Styrene	2.130	1.836	86	1.900	89	50-150	33-167	3	0-30	
1,1,2,2-Tetrachloroethane	3.433	3.656	106	3.877	113	50-150	33-167	6	0-30	
Tetrachloroethene	3.391	4.372	129	4.586	135	34-154	14-174	5	0-33	
Toluene	1.884	1.861	99	1.968	104	28-154	7-175	6	0-42	
1,1,1-Trichloroethane	2.728	3.221	118	3.334	122	50-150	33-167	3	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 11 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,2-Trichloroethane	2.728	3.270	120	3.250	119	27-171	3-195	1	0-38	
Trichloroethene	2.687	2.867	107	3.106	116	43-139	27-155	8	0-31	
Trichlorofluoromethane	2.809	3.083	110	3.150	112	50-150	33-167	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.708	97	3.676	96	50-150	33-167	1	0-30	
1,2,4-Trimethylbenzene	2.458	2.423	99	2.615	106	50-150	33-167	8	0-30	
1,3,5-Trimethylbenzene	2.458	2.211	90	2.360	96	50-150	33-167	7	0-30	
Vinyl Chloride	1.278	1.143	89	1.235	97	44-140	28-156	8	0-33	
o-Xylene	2.171	2.058	95	2.123	98	22-160	0-183	3	0-48	
p/m-Xylene	4.342	4.377	101	4.493	103	21-165	0-189	3	0-51	

Total number of LCS compounds: 44
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 12 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-416	**LCS**	**Air**	**GC/MS YY**	**N/A**	**03/09/18 14:26**	**180309L02**
099-15-214-416	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**03/09/18 15:14**	**180309L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,2-Dichloroethane-d4	1.053	1.176	112	1.158	110	37-163	
1,4-Bromofluorobenzene	1.789	1.788	100	1.712	96	45-153	
Toluene-d8	1.024	0.9847	96	0.9609	94	73-121	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 13 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-418	**LCS**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 11:54**	**180312L01**
099-15-214-418	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 12:41**	**180312L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	3.711	5.091	137	4.692	126	50-150	33-167	8	0-30	
1,1-Difluoroethane	1.351	1.372	102	1.470	109	50-150	33-167	7	0-30	
Benzene	1.597	1.408	88	1.310	82	27-153	6-174	7	0-34	
Bromodichloromethane	3.350	3.705	111	3.341	100	50-150	33-167	10	0-30	
Bromomethane	1.942	1.670	86	1.786	92	50-150	33-167	7	0-30	
Tetrachloroethene	3.391	4.238	125	3.277	97	34-154	14-174	26	0-33	
Carbon Tetrachloride	3.146	3.444	109	3.301	105	7-187	0-217	4	0-31	
Chlorobenzene	2.302	2.491	108	1.969	86	50-150	33-167	23	0-30	
Chloroethane	1.319	1.114	84	1.200	91	50-150	33-167	7	0-30	
Chloroform	2.441	2.376	97	2.536	104	50-150	33-167	6	0-30	
Chloromethane	1.033	0.7864	76	0.8564	83	50-150	33-167	9	0-30	
Dibromochloromethane	4.259	5.382	126	4.063	95	50-150	33-167	28	0-30	
1,2-Dibromoethane	3.842	4.468	116	3.415	89	50-150	33-167	27	0-30	
1,2-Dichlorobenzene	3.006	3.384	113	3.047	101	50-150	33-167	10	0-30	
1,3-Dichlorobenzene	3.006	3.576	119	3.149	105	50-150	33-167	13	0-30	
1,4-Dichlorobenzene	3.006	3.518	117	3.092	103	50-150	33-167	13	0-30	
Dichlorodifluoromethane	2.473	2.465	100	2.570	104	50-150	33-167	4	0-30	
1,1-Dichloroethane	2.024	1.877	93	2.012	99	50-150	33-167	7	0-30	
1,2-Dichloroethane	2.024	2.124	105	2.198	109	28-166	5-189	3	0-40	
1,1-Dichloroethene	1.982	1.720	87	1.827	92	50-150	33-167	6	0-30	
c-1,2-Dichloroethene	1.982	1.791	90	1.865	94	35-165	13-187	4	0-35	
t-1,2-Dichloroethene	1.982	1.752	88	1.859	94	50-150	33-167	6	0-30	
1,2-Dichloropropane	2.311	2.374	103	2.139	93	50-150	33-167	10	0-30	
c-1,3-Dichloropropene	2.269	2.194	97	1.789	79	50-150	33-167	20	0-30	
t-1,3-Dichloropropene	2.269	2.247	99	1.872	82	50-150	33-167	18	0-30	
Dichlorotetrafluoroethane	3.495	3.275	94	3.504	100	50-150	33-167	7	0-30	
Ethylbenzene	2.171	1.994	92	1.545	71	27-153	6-174	25	0-46	
4-Ethyltoluene	2.458	2.287	93	1.937	79	50-150	33-167	17	0-30	
Hexachloro-1,3-Butadiene	5.333	7.396	139	6.775	127	50-150	33-167	9	0-30	
Methyl-t-Butyl Ether (MTBE)	1.803	1.506	84	1.495	83	50-150	33-167	1	0-30	
Methylene Chloride	1.737	1.384	80	1.481	85	50-150	33-167	7	0-30	
Styrene	2.130	1.840	86	1.442	68	50-150	33-167	24	0-30	
1,1,2,2-Tetrachloroethane	3.433	3.636	106	3.139	91	50-150	33-167	15	0-30	
Toluene	1.884	1.873	99	1.423	76	28-154	7-175	27	0-42	
1,1,1-Trichloroethane	2.728	2.966	109	2.835	104	50-150	33-167	5	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 14 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,2-Trichloroethane	2.728	2.880	106	2.494	91	27-171	3-195	14	0-38	
Trichloroethene	2.687	2.687	100	2.421	90	43-139	27-155	10	0-31	
Trichlorofluoromethane	2.809	2.904	103	3.164	113	50-150	33-167	9	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.354	88	3.660	96	50-150	33-167	9	0-30	
1,2,4-Trimethylbenzene	2.458	2.496	102	2.219	90	50-150	33-167	12	0-30	
1,3,5-Trimethylbenzene	2.458	2.243	91	1.957	80	50-150	33-167	14	0-30	
Vinyl Chloride	1.278	1.158	91	1.250	98	44-140	28-156	8	0-33	
o-Xylene	2.171	1.999	92	1.615	74	22-160	0-183	21	0-48	
p/m-Xylene	4.342	4.254	98	3.381	78	21-165	0-189	23	0-51	

Total number of LCS compounds: 44
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 15 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-418	**LCS**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 11:54**	**180312L01**
099-15-214-418	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**03/12/18 12:41**	**180312L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,2-Dichloroethane-d4	1.053	1.181	112	1.303	124	37-163	
1,4-Bromofluorobenzene	1.789	1.569	88	1.787	100	45-153	
Toluene-d8	1.024	0.9785	96	1.014	99	73-121	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM
130 Robin Hill Road, Suite 100
Santa Barbara, CA 93117-3153

Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401

Date Received: 03/07/18
Work Order: 18-03-0580
Preparation: N/A
Method: EPA TO-15 SIM
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-421	**LCS**	**Air**	**GC/MS YY**	**N/A**	**03/16/18 17:58**	**180316L01**
099-15-214-421	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**03/16/18 18:45**	**180316L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	3.842	3.295	86	3.465	90	50-150	33-167	5	0-30	
Dichlorotetrafluoroethane	3.495	3.349	96	2.637	75	50-150	33-167	24	0-30	
1,2-Dichloropropane	2.311	2.084	90	2.176	94	50-150	33-167	4	0-30	
Bromomethane	1.942	1.599	82	1.432	74	50-150	33-167	11	0-30	
c-1,3-Dichloropropene	2.269	1.830	81	2.040	90	50-150	33-167	11	0-30	
t-1,3-Dichloropropene	2.269	1.719	76	1.877	83	50-150	33-167	9	0-30	
1,1,1-Trichloroethane	2.728	2.338	86	2.403	88	50-150	33-167	3	0-30	
1,1,2,2-Tetrachloroethane	3.433	2.977	87	2.891	84	50-150	33-167	3	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.141	82	3.125	82	50-150	33-167	1	0-30	
1,1,2-Trichloroethane	2.728	2.041	75	2.235	82	27-171	3-195	9	0-38	
1,1-Dichloroethane	2.024	1.829	90	1.821	90	50-150	33-167	0	0-30	
1,1-Dichloroethene	1.982	1.589	80	1.595	80	50-150	33-167	0	0-30	
1,1-Difluoroethane	1.351	1.185	88	1.249	92	50-150	33-167	5	0-30	
1,2,4-Trichlorobenzene	3.711	3.388	91	3.310	89	50-150	33-167	2	0-30	
1,2,4-Trimethylbenzene	2.458	2.400	98	2.300	94	50-150	33-167	4	0-30	
1,2-Dichlorobenzene	3.006	2.788	93	2.679	89	50-150	33-167	4	0-30	
1,2-Dichloroethane	2.024	1.961	97	1.965	97	28-166	5-189	0	0-40	
1,3,5-Trimethylbenzene	2.458	2.347	96	2.269	92	50-150	33-167	3	0-30	
1,3-Dichlorobenzene	3.006	2.826	94	2.758	92	50-150	33-167	2	0-30	
1,4-Dichlorobenzene	3.006	2.767	92	2.706	90	50-150	33-167	2	0-30	
4-Ethyltoluene	2.458	2.183	89	2.121	86	50-150	33-167	3	0-30	
Benzene	1.597	1.320	83	1.356	85	27-153	6-174	3	0-34	
Bromodichloromethane	3.350	2.965	88	3.112	93	50-150	33-167	5	0-30	
Carbon Tetrachloride	3.146	2.650	84	2.716	86	7-187	0-217	2	0-31	
Chlorobenzene	2.302	1.971	86	1.977	86	50-150	33-167	0	0-30	
Chloroethane	1.319	1.113	84	1.063	81	50-150	33-167	5	0-30	
Chloroform	2.441	2.278	93	2.276	93	50-150	33-167	0	0-30	
Chloromethane	1.033	0.9014	87	0.8047	78	50-150	33-167	11	0-30	
Dibromochloromethane	4.259	3.632	85	4.000	94	50-150	33-167	10	0-30	
Dichlorodifluoromethane	2.473	2.237	90	1.880	76	50-150	33-167	17	0-30	
Ethylbenzene	2.171	1.773	82	1.753	81	27-153	6-174	1	0-46	
Hexachloro-1,3-Butadiene	5.333	4.575	86	4.484	84	50-150	33-167	2	0-30	
Methyl-t-Butyl Ether (MTBE)	1.803	1.532	85	1.505	83	50-150	33-167	2	0-30	
Methylene Chloride	1.737	1.323	76	1.315	76	50-150	33-167	1	0-30	
Tetrachloroethene	3.391	3.088	91	3.243	96	34-154	14-174	5	0-33	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 17 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Toluene	1.884	1.734	92	1.794	95	28-154	7-175	3	0-42	
Trichloroethene	2.687	2.432	90	2.479	92	43-139	27-155	2	0-31	
Trichlorofluoromethane	2.809	2.197	78	2.212	79	50-150	33-167	1	0-30	
Vinyl Chloride	1.278	0.9435	74	0.9772	76	44-140	28-156	4	0-33	
c-1,2-Dichloroethene	1.982	1.794	91	1.810	91	35-165	13-187	1	0-35	
o-Xylene	2.171	1.848	85	1.812	83	22-160	0-183	2	0-48	
p/m-Xylene	4.342	3.806	88	3.740	86	21-165	0-189	2	0-51	
t-1,2-Dichloroethene	1.982	1.648	83	1.648	83	50-150	33-167	0	0-30	
Styrene	2.130	1.736	82	1.708	80	50-150	33-167	2	0-30	

Total number of LCS compounds: 44
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

LCS/LCSD - Surrogate

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 18 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-421	**LCS**	**Air**	**GC/MS YY**	**N/A**	**03/16/18 17:58**	**180316L01**
099-15-214-421	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**03/16/18 18:45**	**180316L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,2-Dichloroethane-d4	1.053	1.121	106	1.093	104	37-163	
1,4-Bromofluorobenzene	1.789	1.819	102	1.768	99	45-153	
Toluene-d8	1.024	0.9904	97	1.020	100	73-121	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 19 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-422	**LCS**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 18:42**	**180317L02**
099-15-214-422	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 19:28**	**180317L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	3.842	3.661	95	3.827	100	50-150	33-167	4	0-30	
Dichlorotetrafluoroethane	3.495	2.757	79	2.778	79	50-150	33-167	1	0-30	
1,2-Dichloropropane	2.311	2.241	97	2.236	97	50-150	33-167	0	0-30	
Bromomethane	1.942	1.471	76	1.501	77	50-150	33-167	2	0-30	
c-1,3-Dichloropropene	2.269	2.187	96	2.182	96	50-150	33-167	0	0-30	
t-1,3-Dichloropropene	2.269	2.087	92	2.097	92	50-150	33-167	0	0-30	
1,1,1-Trichloroethane	2.728	2.425	89	2.450	90	50-150	33-167	1	0-30	
1,1,2,2-Tetrachloroethane	3.433	2.911	85	2.996	87	50-150	33-167	3	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.132	82	3.206	84	50-150	33-167	2	0-30	
1,1,2-Trichloroethane	2.728	2.478	91	2.502	92	27-171	3-195	1	0-38	
1,1-Dichloroethane	2.024	1.827	90	1.829	90	50-150	33-167	0	0-30	
1,1-Dichloroethene	1.982	1.598	81	1.609	81	50-150	33-167	1	0-30	
1,1-Difluoroethane	1.351	1.281	95	1.258	93	50-150	33-167	2	0-30	
1,2,4-Trichlorobenzene	3.711	3.129	84	3.183	86	50-150	33-167	2	0-30	
1,2,4-Trimethylbenzene	2.458	2.261	92	2.321	94	50-150	33-167	3	0-30	
1,2-Dichlorobenzene	3.006	2.573	86	2.650	88	50-150	33-167	3	0-30	
1,2-Dichloroethane	2.024	1.999	99	1.989	98	28-166	5-189	0	0-40	
1,3,5-Trimethylbenzene	2.458	2.275	93	2.324	95	50-150	33-167	2	0-30	
1,3-Dichlorobenzene	3.006	2.709	90	2.782	93	50-150	33-167	3	0-30	
1,4-Dichlorobenzene	3.006	2.663	89	2.711	90	50-150	33-167	2	0-30	
4-Ethyltoluene	2.458	2.130	87	2.178	89	50-150	33-167	2	0-30	
Benzene	1.597	1.388	87	1.380	86	27-153	6-174	1	0-34	
Bromodichloromethane	3.350	3.234	97	3.214	96	50-150	33-167	1	0-30	
Carbon Tetrachloride	3.146	2.739	87	2.776	88	7-187	0-217	1	0-31	
Chlorobenzene	2.302	2.207	96	2.251	98	50-150	33-167	2	0-30	
Chloroethane	1.319	1.057	80	1.076	82	50-150	33-167	2	0-30	
Chloroform	2.441	2.304	94	2.306	94	50-150	33-167	0	0-30	
Chloromethane	1.033	0.7944	77	0.8151	79	50-150	33-167	3	0-30	
Dibromochloromethane	4.259	4.120	97	4.371	103	50-150	33-167	6	0-30	
Dichlorodifluoromethane	2.473	1.981	80	1.965	79	50-150	33-167	1	0-30	
Ethylbenzene	2.171	1.952	90	1.985	91	27-153	6-174	2	0-46	
Hexachloro-1,3-Butadiene	5.333	4.227	79	4.373	82	50-150	33-167	3	0-30	
Methyl-t-Butyl Ether (MTBE)	1.803	1.661	92	1.668	93	50-150	33-167	0	0-30	
Methylene Chloride	1.737	1.324	76	1.336	77	50-150	33-167	1	0-30	
Tetrachloroethene	3.391	3.420	101	3.483	103	34-154	14-174	2	0-33	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 20 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Toluene	1.884	1.852	98	1.875	100	28-154	7-175	1	0-42	
Trichloroethene	2.687	2.543	95	2.543	95	43-139	27-155	0	0-31	
Trichlorofluoromethane	2.809	2.224	79	2.266	81	50-150	33-167	2	0-30	
Vinyl Chloride	1.278	0.9624	75	0.9949	78	44-140	28-156	3	0-33	
c-1,2-Dichloroethene	1.982	1.819	92	1.808	91	35-165	13-187	1	0-35	
o-Xylene	2.171	1.965	90	2.010	93	22-160	0-183	2	0-48	
p/m-Xylene	4.342	4.136	95	4.241	98	21-165	0-189	3	0-51	
t-1,2-Dichloroethene	1.982	1.644	83	1.652	83	50-150	33-167	0	0-30	
Styrene	2.130	1.834	86	1.879	88	50-150	33-167	2	0-30	

Total number of LCS compounds: 44
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	03/07/18
130 Robin Hill Road, Suite 100		Work Order:	18-03-0580
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2018.1.0401			Page 21 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-422	**LCS**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 18:42**	**180317L02**
099-15-214-422	**LCSD**	**Air**	**GC/MS YY**	**N/A**	**03/17/18 19:28**	**180317L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,2-Dichloroethane-d4	1.053	1.093	104	1.086	103	37-163	
1,4-Bromofluorobenzene	1.789	1.734	97	1.747	98	45-153	
Toluene-d8	1.024	0.9613	94	0.9515	93	73-121	

RPD: Relative Percent Difference. CL: Control Limits

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Summa Canister Vacuum Summary

Work Order: 18-03-0580

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
WAS00034	-29.50 in Hg	-3.80 in Hg	D122	Summa Canister 6L
WAS00037	-29.50 in Hg	-1.60 in Hg	D938	Summa Canister 6L
WAS00040	-29.50 in Hg	-2.40 in Hg	D659	Summa Canister 6L
WAS00041	-29.50 in Hg	-2.80 in Hg	D114	Summa Canister 6L
WAS00046	-29.50 in Hg	-3.60 in Hg	D457	Summa Canister 6L
WAS00043	-29.50 in Hg	-5.00 in Hg	D618	Summa Canister 6L
WAS00039	-29.50 in Hg	-3.40 in Hg	D728	Summa Canister 6L
WAS00036	-29.50 in Hg	-3.40 in Hg	D551	Summa Canister 6L
WAS00031	-29.50 in Hg	-4.40 in Hg	D565	Summa Canister 6L
AAS00329	-29.50 in Hg	-4.00 in Hg	D422	Summa Canister 6L
WAS00032	-29.50 in Hg	-3.20 in Hg	D689	Summa Canister 6L
AAS00330	-29.50 in Hg	-3.40 in Hg	SIM093	Summa Canister 6L
WAS00044	-29.50 in Hg	-2.40 in Hg	D479	Summa Canister 6L
WAS00052	-29.50 in Hg	-2.80 in Hg	D145	Summa Canister 6L
WAS00033	-29.50 in Hg	-2.60 in Hg	D887	Summa Canister 6L
WAS00030	-29.50 in Hg	-3.80 in Hg	D899	Summa Canister 6L
WAS00045	-29.50 in Hg	-4.40 in Hg	D116	Summa Canister 6L
WAS00035	-29.50 in Hg	-1.40 in Hg	D643	Summa Canister 6L
WAS00038	-29.50 in Hg	-5.40 in Hg	D762	Summa Canister 6L
WAS00049	-29.50 in Hg	-2.00 in Hg	LC964	Summa Canister 1L
WAS00050	-29.50 in Hg	-4.40 in Hg	LC1130	Summa Canister 1L
WAS00051	-29.50 in Hg	-4.20 in Hg	D123	Summa Canister 6L
WAS00042	-29.50 in Hg	-5.00 in Hg	SIM071	Summa Canister 6L
VSS01335	-29.50 in Hg	-5.00 in Hg	LC190	Summa Canister 1L
VSS01336	-29.50 in Hg	-2.60 in Hg	LC838	Summa Canister 1L
VSS01337	-29.50 in Hg	-4.40 in Hg	LC1239	Summa Canister 1L
VSS01340	3,759.00 psi	-5.00 in Hg	LC975	Summa Canister 1L
VSS01334	-29.50 in Hg	-2.60 in Hg	LC911	Summa Canister 1L
VSS01339	-29.50 in Hg	-4.00 in Hg	LC117	Summa Canister 1L
VSS01338	-29.50 in Hg	-5.60 in Hg	LC1146	Summa Canister 1L
VSS01341	-29.50 in Hg	-5.40 in Hg	LC1007	Summa Canister 1L

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Sample Analysis Summary Report

Work Order: 18-03-0580

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA TO-15	N/A	953	GC/MS OOO	2
EPA TO-15 SIM	N/A	460	GC/MS YY	2

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Glossary of Terms and Qualifiers

Work Order: 18-03-0580 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
- [ ] ACCUTEST ( )
- [x] CALSCIENCE ( )
- [ ] TESTAMERICA ( )
- [ ] Other ( )

Lab Vendor # 1080777 (CalScience)

Please Check Appropriate Box:
- [x] SGW FDG
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [ ] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

Print Bill To Contact Name: Julie Doane-Allmon

PlaNet Project ID: IDEA000680

PO #: 98636

GSAP Project ID: USCH/00305

[ ] CHECK IF NO INCIDENT # APPLIES

DATE: 3/7/2018

PAGE: 1 of 4

SAMPLING COMPANY: AECOM

LOG CODE:

ADDRESS: 130 Robin Hill Road, Suite 100, Santa Barbara CA, 93117

PROJECT CONTACT (Hardcopy or PDF Report to): Julie Doane-Allmon, Erich Weaver

TELEPHONE: 805 692 0618 or 805-692-0648

FAX: 805-964-0259

Bill To Contact E-MAIL: julie.doane-allmon@aecom.com

SITE ADDRESS: Street and City: Del Amo Superfund Site, 20245 S. Vermont Ave., Torrance

State: CA

AECOM Project / Task Number: 60487624.2018.1.0401

EDF DELIVERABLE TO (Name, Company, Office Location): Steve Cole, AECOM, 300 S. Grand Ave., Ste. 800, LA, CA 90071

PHONE NO.: Direct: 213-996-2398

E-MAIL: steve.j.cole@aecom.com

CONSULTANT PROJECT NO.:

SAMPLER NAME(S) (Print): Sarah Palladino, Bryan Stempson

18-03-0580

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

DELIVERABLES:
- [ ] LEVEL 1
- [ ] LEVEL 2
- [ ] LEVEL 3
- [x] LEVEL 4
- [ ] OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email results to: julie.doane-allmon@aecom.com; erich.weaver@aecom.com; steve.j.cole@aecom.com; Sarah.Palladino@aecom.com; Bryan.Stempson@aecom.com

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [x] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS: UNIT COST / NON-UNIT COST

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TO-15 SIM
1	WAS00034	3/7/2018	507	Air				X		1	X
2	WAS00037	3/7/2018	354	Air				X		1	X
3	WAS00040	3/7/2018	357	Air				X		1	X
4	WAS00041	3/6/2018	1906	Air				X		1	X
5	WAS00046	3/6/2018	1720	Air				X		1	X
6	WAS00043	3/6/2018	1741	Air				X		1	X
7	WAS00039	3/6/2018	1738	Air				X		1	X
8	WAS00036	3/6/2018	1857	Air				X		1	X
9	WAS00031	3/6/2018	2005	Air				X		1	X
10	AAS00329	3/6/2018	1647	Air				X		1	X

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
B. Stempson	EC	3/7/18	1605
		3/7/18	1810

Version: 11Dec15

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Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
- [ ] ACCUTEST ( )
- [x] CALSCIENCE ( )
- [ ] TESTAMERICA ( )
- [ ] Other ( )

Lab Vendor # 1080777 (CalScience)

Please Check Appropriate Box:
- [x] SGW FDG
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [ ] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

Print Bill To Contact Name: Julie Doane-Allmon

PlaNet Project ID: IDEA000680

PO #: 98636

GSAP Project ID: USCH/00305

[ ] CHECK IF NO INCIDENT # APPLIES

DATE: 3/7/2018

PAGE: 2 of 4

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: Del Amo Superfund Site, 20245 S. Vermont Ave., Torrance

State: CA

AECOM Project / Task Number: 60487624.2018.1.0401

ADDRESS: 130 Robin Hill Road, Suite 100, Santa Barbara CA, 93117

EDF DELIVERABLE TO (Name, Company, Office Location): Steve Cole, AECOM, 300 S. Grand Ave., Ste. 800, LA, CA 90071

PHONE NO.: Direct: 213-996-2398

E-MAIL: steve.j.cole@aecom.com

CONSULTANT PROJECT NO.:

PROJECT CONTACT (Hardcopy or PDF Report to): Julie Doane-Allmon, Erich Weaver

SAMPLER NAME(S) (Print): Sarah Palladino, Bryan Stempson

LAB USE ONLY: 0580

TELEPHONE: 805 692 0618 or 805-692-0648

FAX: 805-964-0259

Bill To Contact E-MAIL: julie.doane-allmon@aecom.com

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

DELIVERABLES:
- [ ] LEVEL 1
- [ ] LEVEL 2
- [ ] LEVEL 3
- [x] LEVEL 4
- [ ] OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email results to: julie.doane-allmon@aecom.com; erich.weaver@aecom.com; steve.j.cole@aecom.com; Sarah.Palladino@aecom.com; Bryan.Stempson@aecom.com

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [x] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	UNIT COST: TO-15 SIM	UNIT COST: TO-15	NON-UNIT COST
11	WAS00032	3/6/2018	1722	Air				X		1	X		
12	AAS00330	3/6/2018	1742	Air				X		1	X		
13	WAS00044	3/6/2018	1854	Air				X		1	X		
14	WAS00052	3/6/2018	1902	Air				X		1	X		
15	WAS00033	3/6/2018	1806	Air				X		1	X		
16	WAS00030	3/6/2018	1750	Air				X		1	X		
17	WAS00045	3/6/2018	1752	Air				X		1	X		
18	WAS00035	3/6/2018	1644	Air				X		1	X		
19	WAS00038	3/6/2018	1617	Air				X		1	X		
20	WAS00049	3/6/2018	1052	Air				X		1		X	

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
B. Stempson	EC	3/7/18	1605
		3/7/18	1810

Version: 11Dec15

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Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
- [ ] ACCUTEST ( )
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- [ ] TESTAMERICA ( )
- [ ] Other ( )

Lab Vendor # 1080777 (CalScience)

Please Check Appropriate Box:
- [x] SGW FDG
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [ ] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

Print Bill To Contact Name: Julie Doane-Allmon

PlaNet Project ID: IDEA000680

PO #: 98636

GSAP Project ID: USCH/00305

[ ] CHECK IF NO INCIDENT # APPLIES

DATE: 3/7/2018

PAGE: 3 of 4

SAMPLING COMPANY: AECOM

LOG CODE:

ADDRESS: 130 Robin Hill Road, Suite 100, Santa Barbara CA, 93117

PROJECT CONTACT (Hardcopy or PDF Report to): Julie Doane-Allmon, Erich Weaver

TELEPHONE: 805 692 0618 or 805-692-0648

FAX: 805-964-0259

Bill To Contact E-MAIL: julie.doane-allmon@aecom.com

SITE ADDRESS: Street and City: Del Amo Superfund Site, 20245 S. Vermont Ave., Torrance

State: CA

AECOM Project / Task Number: 60487624.2018.1.0401

EDF DELIVERABLE TO (Name, Company, Office Location): Steve Cole, AECOM, 300 S. Grand Ave., Ste. 800, LA, CA 90071

PHONE NO.: Direct: 213-996-2398

E-MAIL: steve.j.cole@aecom.com

CONSULTANT PROJECT NO.:

SAMPLER NAME(S) (Print): Sarah Palladino, Bryan Stempson

LAB USE ONLY: 0580

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

DELIVERABLES:
- [ ] LEVEL 1
- [ ] LEVEL 2
- [ ] LEVEL 3
- [x] LEVEL 4
- [ ] OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email results to: julie.doane-allmon@aecom.com; erich.weaver@aecom.com; steve.j.cole@aecom.com; Sarah.Palladino@aecom.com; Bryan.Stempson@aecom.com

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [x] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	UNIT COST TO-15 SIM	UNIT COST TO-15	Container PID Readings or Laboratory Notes
21	WAS00050	3/6/2018	1033	Air				X		1		X	
22	WAS00051	3/7/2018	550	Air				X		1	X		
23	WAS00042	3/6/2018	720	Air				X		1	X		
24	VSS01335	3/7/2018	752	Air				X		1		X	
25	VSS01336	3/7/2018	849	Air				X		1		X	
26	VSS01337	3/7/2018	947	Air				X		1		X	
27	VSS01340	3/7/2018	1104	Air				X		1		X	
28	VSS01334	3/7/2018	1228	Air				X		1		X	
29	VSS01339	3/7/2018	1343	Air				X		1		X	
30	VSS01338	3/7/2018	1445	Air				X		1		X	

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
B. Stempson	EC	3/7/18	1605
Rudy		3/7/18	1810

Version: 11Dec15

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Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
- [ ] ACCUTEST ( )
- [x] CALSCIENCE ( )
- [ ] TESTAMERICA ( )
- [ ] Other ( )

Lab Vendor # 1080777 (CalScience)

Please Check Appropriate Box:
- [x] SGW FDG
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [ ] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

Print Bill To Contact Name: Julie Doane-Allmon

PlaNet Project ID: IDEA000680

PO #: 98636

GSAP Project ID: USCH/00305

[ ] CHECK IF NO INCIDENT # APPLIES

DATE: 3/7/2018

PAGE: 4 of 4

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: Del Amo Superfund Site, 20245 S. Vermont Ave., Torrance

State: CA

AECOM Project / Task Number: 60487624.2018.1.0401

ADDRESS: 130 Robin Hill Road, Suite 100, Santa Barbara CA, 93117

EDF DELIVERABLE TO (Name, Company, Office Location): Steve Cole, AECOM, 300 S. Grand Ave., Ste. 800, LA, CA 90071

PHONE NO.: Direct: 213-996-2398

E-MAIL: steve.j.cole@aecom.com

CONSULTANT PROJECT NO.:

PROJECT CONTACT (Hardcopy or PDF Report to): Julie Doane-Allmon, Erich Weaver

TELEPHONE: 805 692 0618 or 805-692-0648

FAX: 805-964-0259

Bill To Contact E-MAIL: julie.doane-allmon@aecom.com

SAMPLER NAME(S) (Print): Sarah Palladino, Bryan Stempson

LAB USE ONLY: 0580

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

DELIVERABLES:
- [ ] LEVEL 1
- [ ] LEVEL 2
- [ ] LEVEL 3
- [x] LEVEL 4
- [ ] OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email results to: julie.doane-allmon@aecom.com; erich.weaver@aecom.com; steve.j.cole@aecom.com; Sarah.Palladino@aecom.com; Bryan.Stempson@aecom.com

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [x] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	UNIT COST: TO-15 SIM	UNIT COST: TO-15	NON-UNIT COST
31	VSS01341	3/7/2018	1446	Air				X		1		X	

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
B. Stempson	EC	3/7/18	1605
Rudy		3/7/18	1870

Version: 11Dec15

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WORK ORDER NUMBER: 18-03-0580

SAMPLE RECEIPT CHECKLIST

COOLER 0 OF 0

CLIENT: AECOM

DATE: 03/07/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): _____°C (w/ CF): _____°C; ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☑ Air ☐ Filter

Checked by: 676

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present (BOX)	☐ N/A	Checked by: 676
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 1146

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna_2 ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☑ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na_2** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 1140

Reviewed by: 659

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WORK ORDER NUMBER: 18-03- 0580

SAMPLE ANOMALY REPORT

DATE: 03 / 07 / 2018

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ pH outside acceptable range (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☑ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☑ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

(-23) Collection date per label is 3/7/18.

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments:

Reported by: 1140

Reviewed by: 689

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

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Client Project Name: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
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Work Order Narrative

Work Order: 17-09-2204 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/28/17. They were assigned to Work Order 17-09-2204.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2204
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		PO Number:	92793
		Date/Time Received:	09/28/17 14:20
		Number of Containers:	25
Attn:	Julie Doane-Allmon		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
WAS00019	17-09-2204-1	09/27/17 18:10	1	Air
WAS00014	17-09-2204-2	09/27/17 17:31	1	Air
WAS00017	17-09-2204-3	09/27/17 17:58	1	Air
WAS00022	17-09-2204-4	09/27/17 06:25	1	Air
WAS00028	17-09-2204-5	09/27/17 07:16	1	Air
WAS00023	17-09-2204-6	09/27/17 06:15	1	Air
WAS00008	17-09-2204-7	09/27/17 07:31	1	Air
WAS00015	17-09-2204-8	09/27/17 07:15	1	Air
WAS00016	17-09-2204-9	09/27/17 07:16	1	Air
WAS00012	17-09-2204-10	09/27/17 06:21	1	Air
AAS00328	17-09-2204-11	09/27/17 05:05	1	Air
AAS00327	17-09-2204-12	09/27/17 05:35	1	Air
WAS00010	17-09-2204-13	09/27/17 06:35	1	Air
WAS00018	17-09-2204-14	09/27/17 07:20	1	Air
WAS00021	17-09-2204-15	09/27/17 06:23	1	Air
WAS00020	17-09-2204-16	09/27/17 07:22	1	Air
WAS00027	17-09-2204-17	09/27/17 07:15	1	Air
WAS00013	17-09-2204-18	09/27/17 06:31	1	Air
WAS00007	17-09-2204-19	09/27/17 07:35	1	Air
WAS00009	17-09-2204-20	09/27/17 06:17	1	Air
WAS00026	17-09-2204-21	09/27/17 14:12	1	Air
WAS00024	17-09-2204-22	09/27/17 13:47	1	Air
WAS00025	17-09-2204-23	09/27/17 14:02	1	Air
WAS00029	17-09-2204-24	09/27/17 08:05	1	Air
WAS00011	17-09-2204-25	09/27/17 17:35	1	Air

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QC Association Summary

Work Order: 17-09-2204

Client Sample ID	Method Name	Type	Ext Name	Instrument	MS/MSD/SDP	LCS/LCSD
WAS00019	EPA TO-15 SIM		N/A	GC/MS DD		171003L02
WAS00019	EPA TO-15 SIM	R	N/A	GC/MS DD		171003L02
WAS00014	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00014	EPA TO-15 SIM	R	N/A	GC/MS DD		171010L01
WAS00017	EPA TO-15 SIM		N/A	GC/MS DD		171010L01
WAS00017	EPA TO-15 SIM	R	N/A	GC/MS DD		171010L01
WAS00022	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00022	EPA TO-15 SIM	R	N/A	GC/MS DD		171003L02
WAS00028	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00028	EPA TO-15 SIM	R	N/A	GC/MS DD		171003L02
WAS00023	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00023	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
WAS00008	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00008	EPA TO-15 SIM	R	N/A	GC/MS DD		171010L01
WAS00015	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00015	EPA TO-15 SIM	R	N/A	GC/MS DD		171010L01
WAS00016	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00016	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
WAS00012	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00012	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
AAS00328	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
AAS00328	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
AAS00327	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
AAS00327	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
WAS00010	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00010	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
WAS00018	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00018	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
WAS00021	EPA TO-15 SIM		N/A	GC/MS DD		170929L01
WAS00021	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
WAS00020	EPA TO-15 SIM		N/A	GC/MS DD		171003L02
WAS00020	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
WAS00027	EPA TO-15 SIM		N/A	GC/MS DD		171003L02
WAS00027	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01
WAS00013	EPA TO-15 SIM		N/A	GC/MS DD		171003L02
WAS00013	EPA TO-15 SIM	R	N/A	GC/MS DD		171010L01
WAS00007	EPA TO-15 SIM		N/A	GC/MS DD		171003L02
WAS00007	EPA TO-15 SIM	R	N/A	GC/MS DD		171009L02
WAS00009	EPA TO-15 SIM		N/A	GC/MS DD		171003L02
WAS00009	EPA TO-15 SIM	R	N/A	GC/MS DD		171009L02
WAS00026	EPA TO-15 Full List		N/A	GC/MS HH		171006L01
WAS00024	EPA TO-15 Full List		N/A	GC/MS HH		171006L01
WAS00025	EPA TO-15 Full List		N/A	GC/MS HH		171006L01
WAS00025	EPA TO-15 Full List	R	N/A	GC/MS HH		171007L01
WAS00029	EPA TO-15 SIM		N/A	GC/MS DD		171003L02

R = Rerun

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QC Association Summary

Work Order: 17-09-2204

Client Sample ID	Method Name	Type	Ext Name	Instrument	MS/MSD/SDP	LCS/LCSD
WAS00029	EPA TO-15 SIM	R	N/A	GC/MS DD		171009L02
WAS00011	EPA TO-15 SIM		N/A	GC/MS DD		171007L01
WAS00011	EPA TO-15 SIM	R	N/A	GC/MS DD		171007L01

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R = Rerun

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2204
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		Received:	09/28/17
Attn:	Julie Doane-Allmon		Page 1 of 24

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00019 (17-09-2204-1)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.98		0.25	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.11		0.10	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.26		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.10	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.9		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.15	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.94		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.041	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.20	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.66		0.063	ug/m3	EPA TO-15 SIM	N/A
Chlorobenzene	0.15		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.038	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.25		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.99		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.3		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.57		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.72	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	3.4		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	8.0		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.7		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.14		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.68		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.8		0.22	ug/m3	EPA TO-15 SIM	N/A
Acetone	25		5.9	ug/m3	EPA TO-15 SIM	N/A

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* MDL is shown

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2204
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		Received:	09/28/17
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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00014 (17-09-2204-2)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.72		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.19		0.12	ug/m3	EPA TO-15 SIM	N/A
1,3-Dichlorobenzene	0.099	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.6		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.14	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.68		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.044	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.60		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.21		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.4		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	3.1		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.51		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.95	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.56		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.60		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.8		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.16		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.6		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.62		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.7		0.22	ug/m3	EPA TO-15 SIM	N/A
Acetone	370		64	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00017 (17-09-2204-3)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.69		0.25	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.59		0.32	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.17		0.16	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.4	J	0.20*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.70		0.10	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.046	J	0.036*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.79		0.082	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.30		0.16	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.97		0.067	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.8		0.16	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.35		0.14	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.94	B	0.11	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.28		0.14	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.97		0.22	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.9		0.24	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.6		0.18	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.47		0.14	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.2		0.28	ug/m3	EPA TO-15 SIM	N/A
Acetone	180		39	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00022 (17-09-2204-4)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.63		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.15		0.12	ug/m3	EPA TO-15 SIM	N/A
1,3-Dichlorobenzene	0.24		0.15	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.23		0.15	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.2	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.14	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.86		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.030	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.55		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.25		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.2		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.54		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.4	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.43		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	1.6		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.6		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.60		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.64		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.8		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.063	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	15		3.8	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00028 (17-09-2204-5)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.2		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.32		0.12	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.9		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.22	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.2		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.073	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.24	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.53		0.063	ug/m3	EPA TO-15 SIM	N/A
Chlorobenzene	0.38		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.040	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.29		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.3		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.4		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.62		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.3	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.50		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.64		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.3		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.6		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.81		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.1		0.22	ug/m3	EPA TO-15 SIM	N/A
Acetone	70		15	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00023 (17-09-2204-6)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.62		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.20		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.14	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.2	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.15	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.93		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromodichloromethane	0.25		0.17	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.037	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.56		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.039	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	1.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.3		0.052	ug/m3	EPA TO-15 SIM	N/A
Dibromochloromethane	0.12	J	0.082*	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.65		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.6	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.70		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.17		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.7		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.83		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.2		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.056	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	28		3.0	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00008 (17-09-2204-7)						
1,1,2,2-Tetrachloroethane	0.23		0.17	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.2		0.25	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.20		0.10	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.40		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.11	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.8		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.31		0.25	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.7		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.049	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.21	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.55		0.063	ug/m3	EPA TO-15 SIM	N/A
Chlorobenzene	1.4		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.037	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.38		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	2.6		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.4		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	1.2		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.6	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.75		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.37		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	6.8		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	3.0		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.4		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	4.4		0.22	ug/m3	EPA TO-15 SIM	N/A
Acetone	30		9.3	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00015 (17-09-2204-8)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.1		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.31		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.15	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.7		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.21	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.2		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.059	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.44	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.57		0.063	ug/m3	EPA TO-15 SIM	N/A
Chlorobenzene	0.19		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.28		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.3		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.2		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.68		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.7	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.52		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	1.3		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	5.1		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.31		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.4		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.87		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.2		0.22	ug/m3	EPA TO-15 SIM	N/A
Acetone	190		36	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00016 (17-09-2204-9)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.63		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.3		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.35		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.12	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.8		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.23	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.3		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.051	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.23	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.55		0.063	ug/m3	EPA TO-15 SIM	N/A
Chlorobenzene	0.45		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.042	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.30		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.3		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.2		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.74		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.4	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.60		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.65		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.8		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.8		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.95		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.5		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.078	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	100		15	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00012 (17-09-2204-10)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.58		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.56		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.16		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.10	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.4	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.14	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.0		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.050	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	1.3	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.54		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.27		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.2		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.54		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.8	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.47		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.47		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.2		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.98		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.62		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.6		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.062	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	16		2.4	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
AAS00328 (17-09-2204-11)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.60		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.18		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.11	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.4	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.15	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.0		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.051	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.54		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.050	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.28		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.3		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.4		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.52		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.4	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.46		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.18		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.0		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.64		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.6		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.062	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	15		3.0	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
AAS00327 (17-09-2204-12)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.65		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.18		0.12	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.3	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.16	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.90		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.037	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.55		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.25		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.3		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.7		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.50		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.5	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.44		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	1.2		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.4		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.58		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.5		0.22	ug/m3	EPA TO-15 SIM	N/A
Acetone	15		2.4	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00010 (17-09-2204-13)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.67		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.16		0.12	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.4	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.14	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.97		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.061	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.22	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.55		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.040	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.28		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.4		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.52		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.7	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.44		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.29		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.2		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.6		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.63		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.7		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.075	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	43		9.5	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00018 (17-09-2204-14)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.0		0.25	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.070	J	0.058*	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.25		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.10	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.8		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.19	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.1		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.045	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.20	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.54		0.063	ug/m3	EPA TO-15 SIM	N/A
Chlorobenzene	0.11	J	0.065*	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.032	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.28		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.3		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.2		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.65		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.3	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	3.8		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.48		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.6		0.19	ug/m3	EPA TO-15 SIM	N/A
t-1,2-Dichloroethene	0.054	J	0.053*	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.15		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.0		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.77		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.0		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.072	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	37		5.9	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00021 (17-09-2204-15)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.56		0.25	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.061	J	0.058*	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.15		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.15	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.3	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.13	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.90		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.050	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.42	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.55		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.030	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.28		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.3		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.54		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.7	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.47		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.64		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.8		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.41		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.67		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.7		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.056	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	31		5.9	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00020 (17-09-2204-16)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.94		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.28		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.29		0.15	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.1	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.21	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.3		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.032	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.22	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.77		0.063	ug/m3	EPA TO-15 SIM	N/A
Chlorobenzene	0.18		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.28		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.2		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.4		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.80		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	5.9	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.50		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.44		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	3.9		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	2.8		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.0		0.14	ug/m3	EPA TO-15 SIM	N/A
c-1,2-Dichloroethene	0.062	J	0.050*	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	1.0		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.6		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.065	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	29		3.8	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00027 (17-09-2204-17)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.66		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.2		0.25	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloropropane	0.11	J	0.066*	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.32		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.12	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.4	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.22	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.5		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.14		0.097	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.34	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.83		0.063	ug/m3	EPA TO-15 SIM	N/A
Chlorobenzene	0.16		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.062	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.32		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.1		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.5		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.68		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	2.4	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.53		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	1.1		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.6		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.26		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.90		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	2.3		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.071	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	180		19	ug/m3	EPA TO-15 SIM	N/A

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00013 (17-09-2204-18)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61		0.19	ug/m3	EPA TO-15 SIM	N/A
1,1-Dichloroethene	0.061	J	0.037*	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.71		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.18		0.12	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.8		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.14	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.93		0.080	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.75		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.32		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.94		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.47		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.4	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.46		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	2.6		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.7		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.50		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.6		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.60		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.5		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.063	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	260		63	ug/m3	EPA TO-15 SIM	N/A

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* MDL is shown

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2204
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		Received:	09/28/17
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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00007 (17-09-2204-19)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61		0.19	ug/m3	EPA TO-15 SIM	N/A
1,1-Dichloroethene	0.19		0.099	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.92		0.25	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.070	J	0.058*	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.33		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.10	J	0.096*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.1		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.19	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.0		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.035	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.73		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.033	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.48		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.90		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.9		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.49		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	1.5	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.38		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	1.3		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.6		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.32		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.7		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.61		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.5		0.22	ug/m3	EPA TO-15 SIM	N/A
Acetone	90		12	ug/m3	EPA TO-15 SIM	N/A

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2204
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00009 (17-09-2204-20)						
1,1,1-Trichloroethane	0.13	J	0.056*	ug/m3	EPA TO-15 SIM	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.58		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.72		0.25	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.22		0.12	ug/m3	EPA TO-15 SIM	N/A
1,4-Dichlorobenzene	0.16		0.15	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.7		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.14	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.1		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromodichloromethane	0.16	J	0.075*	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.031	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.62		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroethane	0.035	J	0.029*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.39		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.0		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.54		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	2.1	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.55		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.18		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.7		0.19	ug/m3	EPA TO-15 SIM	N/A
t-1,2-Dichloroethene	0.98		0.099	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.48		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.5		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.65		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.7		0.22	ug/m3	EPA TO-15 SIM	N/A
Methyl-t-Butyl Ether (MTBE)	0.055	J	0.044*	ug/m3	EPA TO-15 SIM	N/A
Acetone	28		4.8	ug/m3	EPA TO-15 SIM	N/A

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2204
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		Received:	09/28/17
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Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00026 (17-09-2204-21)						
Acetone	89		5.9	ug/m3	EPA TO-15	N/A
Benzene	2.7		2.0	ug/m3	EPA TO-15	N/A
2-Butanone	4.2	J	2.6*	ug/m3	EPA TO-15	N/A
sec-Butylbenzene	2.9	J	1.7*	ug/m3	EPA TO-15	N/A
Carbon Disulfide	6.3	J	2.9*	ug/m3	EPA TO-15	N/A
Chloromethane	2.2		1.3	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	3.2		3.1	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	11		6.7	ug/m3	EPA TO-15	N/A
Isopropanol	20		15	ug/m3	EPA TO-15	N/A
Tetrachloroethene	5.3		4.2	ug/m3	EPA TO-15	N/A
Toluene	12		2.3	ug/m3	EPA TO-15	N/A
Trichloroethene	1.1	J	0.75*	ug/m3	EPA TO-15	N/A
o-Xylene	2.1	J	1.7*	ug/m3	EPA TO-15	N/A
p/m-Xylene	5.4	J	4.3*	ug/m3	EPA TO-15	N/A
WAS00024 (17-09-2204-22)						
Acetone	83		4.8	ug/m3	EPA TO-15	N/A
Benzene	0.90	J	0.27*	ug/m3	EPA TO-15	N/A
2-Butanone	7.5		4.4	ug/m3	EPA TO-15	N/A
Chloromethane	1.7		1.0	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	3.1		2.5	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	3.7	J	2.9*	ug/m3	EPA TO-15	N/A
Isopropanol	5.1	J	2.6*	ug/m3	EPA TO-15	N/A
Toluene	3.0		1.9	ug/m3	EPA TO-15	N/A
Trichloroethene	7.6		2.7	ug/m3	EPA TO-15	N/A

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Detections Summary

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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00025 (17-09-2204-23)						
Acetone	330		19	ug/m3	EPA TO-15	N/A
Benzene	0.96	J	0.27*	ug/m3	EPA TO-15	N/A
2-Butanone	750		18	ug/m3	EPA TO-15	N/A
Chloromethane	1.4		1.0	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	3.0		2.5	ug/m3	EPA TO-15	N/A
1,1-Dichloroethane	3.6		2.0	ug/m3	EPA TO-15	N/A
Isopropanol	20		12	ug/m3	EPA TO-15	N/A
Tetrachloroethene	7.9		3.4	ug/m3	EPA TO-15	N/A
Toluene	30		1.9	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	160		2.7	ug/m3	EPA TO-15	N/A
Trichloroethene	2.7	J	0.61*	ug/m3	EPA TO-15	N/A
1,2,4-Trimethylbenzene	5.0	J	5.0*	ug/m3	EPA TO-15	N/A
o-Xylene	1.5	J	1.4*	ug/m3	EPA TO-15	N/A
p/m-Xylene	3.5	J	3.4*	ug/m3	EPA TO-15	N/A

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2204
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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00029 (17-09-2204-24)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	1.0		0.25	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.089	J	0.058*	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.27		0.12	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	2.6		1.5	ug/m3	EPA TO-15 SIM	N/A
4-Ethyltoluene	0.16	J	0.081*	ug/m3	EPA TO-15 SIM	N/A
Benzene	1.0		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.043	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Disulfide	0.24	J	0.19*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.74		0.063	ug/m3	EPA TO-15 SIM	N/A
Chlorobenzene	0.082	J	0.065*	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.27		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	0.99		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.6		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.58		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.62	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.48		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.54		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	4.1		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichloroethene	0.23		0.13	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	2.2		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.71		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	1.9		0.22	ug/m3	EPA TO-15 SIM	N/A
Acetone	170		24	ug/m3	EPA TO-15 SIM	N/A

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2204
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		Received:	09/28/17
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Analyte	Result	Qualifiers	RL	Units	Method	Extraction
WAS00011 (17-09-2204-25)						
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62		0.19	ug/m3	EPA TO-15 SIM	N/A
1,2,4-Trimethylbenzene	0.37		0.25	ug/m3	EPA TO-15 SIM	N/A
1,2-Dichloroethane	0.084	J	0.058*	ug/m3	EPA TO-15 SIM	N/A
1,3,5-Trimethylbenzene	0.094	J	0.077*	ug/m3	EPA TO-15 SIM	N/A
2-Butanone	1.3	J	0.15*	ug/m3	EPA TO-15 SIM	N/A
Benzene	0.56		0.080	ug/m3	EPA TO-15 SIM	N/A
Bromomethane	0.045	J	0.028*	ug/m3	EPA TO-15 SIM	N/A
Carbon Tetrachloride	0.64		0.063	ug/m3	EPA TO-15 SIM	N/A
Chloroform	0.18		0.12	ug/m3	EPA TO-15 SIM	N/A
Chloromethane	1.1		0.052	ug/m3	EPA TO-15 SIM	N/A
Dichlorodifluoromethane	2.7		0.12	ug/m3	EPA TO-15 SIM	N/A
Ethylbenzene	0.28		0.11	ug/m3	EPA TO-15 SIM	N/A
Methylene Chloride	0.70	B	0.087	ug/m3	EPA TO-15 SIM	N/A
Styrene	0.22		0.11	ug/m3	EPA TO-15 SIM	N/A
Tetrachloroethene	0.22		0.17	ug/m3	EPA TO-15 SIM	N/A
Toluene	2.1		0.19	ug/m3	EPA TO-15 SIM	N/A
Trichlorofluoromethane	1.6		0.14	ug/m3	EPA TO-15 SIM	N/A
o-Xylene	0.37		0.11	ug/m3	EPA TO-15 SIM	N/A
p/m-Xylene	0.93		0.22	ug/m3	EPA TO-15 SIM	N/A
Acetone	44		5.9	ug/m3	EPA TO-15 SIM	N/A

Subcontracted analyses, if any, are not included in this summary.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 1 of 10

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00026	**17-09-2204-21-A**	**09/27/17 14:12**	**Air**	**GC/MS HH**	**N/A**	**10/06/17 23:22**	**171006L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	18	13	1.24	
Acetone	89	5.9	3.2	1.24	
Benzene	2.7	2.0	0.34	1.24	
Benzyl Chloride	ND	9.6	2.9	1.24	
Bromodichloromethane	ND	4.2	0.78	1.24	
Bromoform	ND	6.4	3.9	1.24	
Bromomethane	ND	2.4	1.2	1.24	
2-Butanone	4.2	5.5	2.6	1.24	J
n-Butylbenzene	ND	3.4	2.2	1.24	
sec-Butylbenzene	2.9	3.4	1.7	1.24	J
tert-Butylbenzene	ND	3.4	1.8	1.24	
Carbon Disulfide	6.3	7.7	2.9	1.24	J
Carbon Tetrachloride	ND	3.9	0.76	1.24	
Chlorobenzene	ND	2.9	0.57	1.24	
Chloroethane	ND	1.6	1.1	1.24	
Chloroform	ND	3.0	0.64	1.24	
Chloromethane	2.2	1.3	0.37	1.24	
Dibromochloromethane	ND	5.3	1.2	1.24	
1,2-Dibromoethane	ND	4.8	1.5	1.24	
1,2-Dichlorobenzene	ND	3.7	2.1	1.24	
1,3-Dichlorobenzene	ND	3.7	2.3	1.24	
1,4-Dichlorobenzene	ND	3.7	2.1	1.24	
Dichlorodifluoromethane	3.2	3.1	1.3	1.24	
1,1-Dichloroethane	ND	2.5	0.49	1.24	
1,2-Dichloroethane	ND	2.5	0.67	1.24	
1,1-Dichloroethene	ND	2.5	0.45	1.24	
c-1,2-Dichloroethene	ND	2.5	1.4	1.24	
t-1,2-Dichloroethene	ND	2.5	1.2	1.24	
1,2-Dichloropropane	ND	2.9	0.47	1.24	
c-1,3-Dichloropropene	ND	2.8	1.5	1.24	
t-1,3-Dichloropropene	ND	5.6	1.4	1.24	
Dichlorotetrafluoroethane	ND	17	7.3	1.24	
1,1-Difluoroethane	11	6.7	3.7	1.24	
Ethylbenzene	ND	2.7	2.1	1.24	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 2 of 10

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	3.0	2.0	1.24	
Hexachloro-1,3-Butadiene	ND	20	16	1.24	
2-Hexanone	ND	7.6	4.1	1.24	
Isopropanol	20	15	3.2	1.24	
Methyl-t-Butyl Ether (MTBE)	ND	8.9	3.0	1.24	
Methylene Chloride	ND	22	4.7	1.24	
4-Methyl-2-Pentanone	ND	7.6	5.1	1.24	
Styrene	ND	7.9	1.9	1.24	
1,1,2,2-Tetrachloroethane	ND	8.5	3.3	1.24	
Tetrachloroethene	5.3	4.2	0.92	1.24	
Toluene	12	2.3	1.7	1.24	
1,1,1-Trichloroethane	ND	3.4	0.76	1.24	
1,1,2-Trichloroethane	ND	3.4	0.78	1.24	
Trichloroethene	1.1	3.3	0.75	1.24	J
Trichlorofluoromethane	ND	7.0	5.7	1.24	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	14	6.0	1.24	
1,2,4-Trimethylbenzene	ND	9.1	6.2	1.24	
1,3,5-Trimethylbenzene	ND	3.0	2.3	1.24	
Vinyl Acetate	ND	8.7	4.5	1.24	
Vinyl Chloride	ND	1.6	0.43	1.24	
o-Xylene	2.1	2.7	1.7	1.24	J
p/m-Xylene	5.4	11	4.3	1.24	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	106	68-134	
1,2-Dichloroethane-d4	95	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 3 of 10

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00024	**17-09-2204-22-A**	**09/27/17 13:47**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 00:15**	**171006L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	83	4.8	2.6	1.00	
Benzene	0.90	1.6	0.27	1.00	J
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	7.5	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	1.7	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	3.1	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	3.7	5.4	2.9	1.00	J
Ethylbenzene	ND	2.2	1.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 4 of 10

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	5.1	12	2.6	1.00	J
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	ND	3.4	0.74	1.00	
Toluene	3.0	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	7.6	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	105	68-134	
1,2-Dichloroethane-d4	94	67-133	
Toluene-d8	96	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 5 of 10

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00025	**17-09-2204-23-A**	**09/27/17 14:02**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 01:09**	**171006L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Benzene	0.96	1.6	0.27	1.00	J
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	1.4	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	3.0	2.5	1.0	1.00	
1,1-Dichloroethane	3.6	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 6 of 10

Parameter	Result	RL	MDL	DF	Qualifiers
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	20	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	7.9	3.4	0.74	1.00	
Toluene	30	1.9	1.4	1.00	
1,1,1-Trichloroethane	160	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	2.7	2.7	0.61	1.00	J
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	5.0	7.4	5.0	1.00	J
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	1.5	2.2	1.4	1.00	J
p/m-Xylene	3.5	8.7	3.4	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	104	68-134	
1,2-Dichloroethane-d4	92	67-133	
Toluene-d8	93	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 7 of 10

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00025	**17-09-2204-23-A**	**09/27/17 14:02**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 19:10**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	330	19	11	4.08	
2-Butanone	750	18	8.5	4.08	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	68-134	
1,2-Dichloroethane-d4	95	67-133	
Toluene-d8	96	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 8 of 10

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19170**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**10/06/17 14:06**	**171006L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	ND	4.8	2.6	1.00	
Benzene	ND	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	ND	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 9 of 10

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	ND	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	ND	3.4	0.74	1.00	
Toluene	ND	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	ND	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-134	
1,2-Dichloroethane-d4	94	67-133	
Toluene-d8	98	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 10 of 10

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19173**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 15:02**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	4.8	2.6	1.00	
2-Butanone	ND	4.4	2.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-134	
1,2-Dichloroethane-d4	96	67-133	
Toluene-d8	98	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 1 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00019	**17-09-2204-1-A**	**09/27/17 18:10**	**Air**	**GC/MS DD**	**N/A**	**10/04/17 01:55**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.98	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	0.11	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.26	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.10	0.15	0.096	1.00	J
2-Butanone	1.9	1.5	0.15	1.00	
4-Ethyltoluene	0.15	0.25	0.081	1.00	J
Benzene	0.94	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.041	0.097	0.028	1.00	J
Carbon Disulfide	0.20	1.6	0.19	1.00	J
Carbon Tetrachloride	0.66	0.063	0.055	1.00	
Chlorobenzene	0.15	0.12	0.065	1.00	
Chloroethane	0.038	0.066	0.029	1.00	J
Chloroform	0.25	0.12	0.068	1.00	
Chloromethane	0.99	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.3	0.12	0.064	1.00	
Ethylbenzene	0.57	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	0.72	0.087	0.016	1.00	B
Styrene	3.4	0.11	0.053	1.00	
Tetrachloroethene	8.0	0.17	0.10	1.00	
Toluene	3.7	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 2 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.14	0.13	0.084	1.00	
Trichlorofluoromethane	1.5	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.68	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.8	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	95	37-163	
1,4-Bromofluorobenzene	108	45-153	
Toluene-d8	100	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00019	**17-09-2204-1-A**	**09/27/17 18:10**	**Air**	**GC/MS DD**	**N/A**	**10/04/17 01:06**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	25	5.9	0.81	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	94	37-163	
1,4-Bromofluorobenzene	107	45-153	
Toluene-d8	97	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 3 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00014	**17-09-2204-2-A**	**09/27/17 17:31**	**Air**	**GC/MS DD**	**N/A**	**09/29/17 23:20**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.72	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.19	0.12	0.077	1.00	
1,3-Dichlorobenzene	0.099	0.15	0.096	1.00	J
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	2.6	1.5	0.15	1.00	
4-Ethyltoluene	0.14	0.25	0.081	1.00	J
Benzene	0.68	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.044	0.097	0.028	1.00	J
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	0.60	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	0.21	0.12	0.068	1.00	
Chloromethane	1.4	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	3.1	0.12	0.064	1.00	
Ethylbenzene	0.51	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	0.95	0.087	0.016	1.00	B
Styrene	0.56	0.11	0.053	1.00	
Tetrachloroethene	0.60	0.17	0.10	1.00	
Toluene	4.8	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 4 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.16	0.13	0.084	1.00	
Trichlorofluoromethane	1.6	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.62	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.7	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	106	37-163	
1,4-Bromofluorobenzene	101	45-153	
Toluene-d8	93	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00014	**17-09-2204-2-A**	**09/27/17 17:31**	**Air**	**GC/MS DD**	**N/A**	**10/11/17 07:20**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	370	64	8.7	54.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	127	37-163	
1,4-Bromofluorobenzene	96	45-153	
Toluene-d8	101	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 5 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00017	**17-09-2204-3-A**	**09/27/17 17:58**	**Air**	**GC/MS DD**	**N/A**	**10/11/17 11:23**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.18	0.073	1.30	
1,1,2,2-Tetrachloroethane	ND	0.22	0.11	1.30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.69	0.25	0.16	1.30	
1,1,2-Trichloroethane	ND	0.18	0.11	1.30	
1,1-Dichloroethane	ND	0.13	0.070	1.30	
1,1-Dichloroethene	ND	0.13	0.049	1.30	
1,2,4-Trimethylbenzene	0.59	0.32	0.083	1.30	
1,2-Dibromoethane	ND	0.25	0.026	1.30	
Dichlorotetrafluoroethane	ND	0.23	0.16	1.30	
1,2-Dichlorobenzene	ND	0.20	0.12	1.30	
1,2-Dichloroethane	ND	0.13	0.075	1.30	
1,2-Dichloropropane	ND	0.15	0.086	1.30	
1,3,5-Trimethylbenzene	0.17	0.16	0.10	1.30	
1,3-Dichlorobenzene	ND	0.20	0.13	1.30	
1,4-Dichlorobenzene	ND	0.20	0.13	1.30	
2-Butanone	1.4	1.9	0.20	1.30	J
4-Ethyltoluene	ND	0.32	0.10	1.30	
Benzene	0.70	0.10	0.062	1.30	
Bromodichloromethane	ND	0.22	0.097	1.30	
Bromomethane	0.046	0.13	0.036	1.30	J
Carbon Disulfide	ND	2.0	0.25	1.30	
Carbon Tetrachloride	0.79	0.082	0.071	1.30	
Chlorobenzene	ND	0.15	0.084	1.30	
Chloroethane	ND	0.086	0.038	1.30	
Chloroform	0.30	0.16	0.089	1.30	
Chloromethane	0.97	0.067	0.036	1.30	
Dibromochloromethane	ND	0.28	0.11	1.30	
Dichlorodifluoromethane	2.8	0.16	0.083	1.30	
Ethylbenzene	0.35	0.14	0.078	1.30	
Hexachloro-1,3-Butadiene	ND	0.35	0.25	1.30	
Methylene Chloride	0.94	0.11	0.020	1.30	B
Styrene	0.28	0.14	0.069	1.30	
Tetrachloroethene	0.97	0.22	0.13	1.30	
Toluene	2.9	0.24	0.076	1.30	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 6 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.13	0.068	1.30	
Trichloroethene	ND	0.17	0.11	1.30	
Trichlorofluoromethane	2.6	0.18	0.076	1.30	
Vinyl Chloride	ND	0.033	0.027	1.30	
c-1,3-Dichloropropene	ND	0.15	0.062	1.30	
c-1,2-Dichloroethene	ND	0.13	0.065	1.30	
o-Xylene	0.47	0.14	0.078	1.30	
t-1,3-Dichloropropene	ND	0.15	0.048	1.30	
p/m-Xylene	1.2	0.28	0.070	1.30	
Methyl-t-Butyl Ether (MTBE)	ND	0.12	0.057	1.30	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	123	37-163	
1,4-Bromofluorobenzene	98	45-153	
Toluene-d8	97	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00017	**17-09-2204-3-A**	**09/27/17 17:58**	**Air**	**GC/MS DD**	**N/A**	**10/11/17 08:08**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	180	39	5.3	32.5	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	124	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	101	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 7 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00022	**17-09-2204-4-A**	**09/27/17 06:25**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 01:18**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.63	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.15	0.12	0.077	1.00	
1,3-Dichlorobenzene	0.24	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.23	0.15	0.096	1.00	
2-Butanone	1.2	1.5	0.15	1.00	J
4-Ethyltoluene	0.14	0.25	0.081	1.00	J
Benzene	0.86	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.030	0.097	0.028	1.00	J
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	0.55	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	0.25	0.12	0.068	1.00	
Chloromethane	1.2	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.6	0.12	0.064	1.00	
Ethylbenzene	0.54	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.4	0.087	0.016	1.00	B
Styrene	0.43	0.11	0.053	1.00	
Tetrachloroethene	1.6	0.17	0.10	1.00	
Toluene	2.6	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 8 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.60	0.13	0.084	1.00	
Trichlorofluoromethane	1.5	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.64	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.8	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.063	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	99	45-153	
Toluene-d8	94	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00022	**17-09-2204-4-A**	**09/27/17 06:25**	**Air**	**GC/MS DD**	**N/A**	**10/04/17 04:21**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	15	3.8	0.52	3.20	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	96	37-163	
1,4-Bromofluorobenzene	105	45-153	
Toluene-d8	99	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 9 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00028	**17-09-2204-5-A**	**09/27/17 07:16**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 02:08**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	1.2	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.32	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	1.9	1.5	0.15	1.00	
4-Ethyltoluene	0.22	0.25	0.081	1.00	J
Benzene	1.2	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.073	0.097	0.028	1.00	J
Carbon Disulfide	0.24	1.6	0.19	1.00	J
Carbon Tetrachloride	0.53	0.063	0.055	1.00	
Chlorobenzene	0.38	0.12	0.065	1.00	
Chloroethane	0.040	0.066	0.029	1.00	J
Chloroform	0.29	0.12	0.068	1.00	
Chloromethane	1.3	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.4	0.12	0.064	1.00	
Ethylbenzene	0.62	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.3	0.087	0.016	1.00	B
Styrene	0.50	0.11	0.053	1.00	
Tetrachloroethene	0.64	0.17	0.10	1.00	
Toluene	4.3	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 10 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	2.6	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.81	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	2.1	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	99	37-163	
1,4-Bromofluorobenzene	105	45-153	
Toluene-d8	96	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00028	**17-09-2204-5-A**	**09/27/17 07:16**	**Air**	**GC/MS DD**	**N/A**	**10/04/17 05:09**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	70	15	2.0	12.5	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	99	37-163	
1,4-Bromofluorobenzene	103	45-153	
Toluene-d8	97	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00023	**17-09-2204-6-A**	**09/27/17 06:15**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 03:00**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.62	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.20	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.14	0.15	0.096	1.00	J
2-Butanone	1.2	1.5	0.15	1.00	J
4-Ethyltoluene	0.15	0.25	0.081	1.00	J
Benzene	0.93	0.080	0.048	1.00	
Bromodichloromethane	0.25	0.17	0.075	1.00	
Bromomethane	0.037	0.097	0.028	1.00	J
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	0.56	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	0.039	0.066	0.029	1.00	J
Chloroform	1.6	0.12	0.068	1.00	
Chloromethane	1.3	0.052	0.028	1.00	
Dibromochloromethane	0.12	0.21	0.082	1.00	J
Dichlorodifluoromethane	2.6	0.12	0.064	1.00	
Ethylbenzene	0.65	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.6	0.087	0.016	1.00	B
Styrene	0.70	0.11	0.053	1.00	
Tetrachloroethene	0.17	0.17	0.10	1.00	
Toluene	2.7	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 12 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	2.5	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.83	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	2.2	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.056	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	97	37-163	
1,4-Bromofluorobenzene	99	45-153	
Toluene-d8	93	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00023	**17-09-2204-6-A**	**09/27/17 06:15**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 03:39**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	28	3.0	0.40	2.50	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	123	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	97	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 13 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00008	**17-09-2204-7-A**	**09/27/17 07:31**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 03:52**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	0.23	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	1.2	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	0.20	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.40	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.11	0.15	0.096	1.00	J
2-Butanone	1.8	1.5	0.15	1.00	
4-Ethyltoluene	0.31	0.25	0.081	1.00	
Benzene	1.7	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.049	0.097	0.028	1.00	J
Carbon Disulfide	0.21	1.6	0.19	1.00	J
Carbon Tetrachloride	0.55	0.063	0.055	1.00	
Chlorobenzene	1.4	0.12	0.065	1.00	
Chloroethane	0.037	0.066	0.029	1.00	J
Chloroform	0.38	0.12	0.068	1.00	
Chloromethane	2.6	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.4	0.12	0.064	1.00	
Ethylbenzene	1.2	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.6	0.087	0.016	1.00	B
Styrene	0.75	0.11	0.053	1.00	
Tetrachloroethene	0.37	0.17	0.10	1.00	
Toluene	6.8	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 14 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	3.0	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	1.4	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	4.4	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	98	37-163	
1,4-Bromofluorobenzene	134	45-153	
Toluene-d8	91	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00008	**17-09-2204-7-A**	**09/27/17 07:31**	**Air**	**GC/MS DD**	**N/A**	**10/11/17 08:56**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	30	9.3	1.3	7.80	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	126	37-163	
1,4-Bromofluorobenzene	96	45-153	
Toluene-d8	104	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 15 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00015	**17-09-2204-8-A**	**09/27/17 07:15**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 04:45**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	1.1	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.31	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.15	0.15	0.096	1.00	J
2-Butanone	1.7	1.5	0.15	1.00	
4-Ethyltoluene	0.21	0.25	0.081	1.00	J
Benzene	1.2	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.059	0.097	0.028	1.00	J
Carbon Disulfide	0.44	1.6	0.19	1.00	J
Carbon Tetrachloride	0.57	0.063	0.055	1.00	
Chlorobenzene	0.19	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	0.28	0.12	0.068	1.00	
Chloromethane	1.3	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.2	0.12	0.064	1.00	
Ethylbenzene	0.68	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.7	0.087	0.016	1.00	B
Styrene	0.52	0.11	0.053	1.00	
Tetrachloroethene	1.3	0.17	0.10	1.00	
Toluene	5.1	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.31	0.13	0.084	1.00	
Trichlorofluoromethane	2.4	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.87	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	2.2	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	98	37-163	
1,4-Bromofluorobenzene	102	45-153	
Toluene-d8	91	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00015	**17-09-2204-8-A**	**09/27/17 07:15**	**Air**	**GC/MS DD**	**N/A**	**10/11/17 09:45**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	190	36	4.9	30.2	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	125	37-163	
1,4-Bromofluorobenzene	94	45-153	
Toluene-d8	102	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 17 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00016	**17-09-2204-9-A**	**09/27/17 07:16**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 05:36**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.63	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	1.3	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.35	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.12	0.15	0.096	1.00	J
2-Butanone	1.8	1.5	0.15	1.00	
4-Ethyltoluene	0.23	0.25	0.081	1.00	J
Benzene	1.3	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.051	0.097	0.028	1.00	J
Carbon Disulfide	0.23	1.6	0.19	1.00	J
Carbon Tetrachloride	0.55	0.063	0.055	1.00	
Chlorobenzene	0.45	0.12	0.065	1.00	
Chloroethane	0.042	0.066	0.029	1.00	J
Chloroform	0.30	0.12	0.068	1.00	
Chloromethane	1.3	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.2	0.12	0.064	1.00	
Ethylbenzene	0.74	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.4	0.087	0.016	1.00	B
Styrene	0.60	0.11	0.053	1.00	
Tetrachloroethene	0.65	0.17	0.10	1.00	
Toluene	4.8	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 18 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	2.8	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.95	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	2.5	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.078	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	98	37-163	
1,4-Bromofluorobenzene	105	45-153	
Toluene-d8	95	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00016	**17-09-2204-9-A**	**09/27/17 07:16**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 06:07**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	100	15	2.0	12.5	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	124	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	100	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00012	**17-09-2204-10-A**	**09/27/17 06:21**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 06:26**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.58	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.56	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.16	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.10	0.15	0.096	1.00	J
2-Butanone	1.4	1.5	0.15	1.00	J
4-Ethyltoluene	0.14	0.25	0.081	1.00	J
Benzene	1.0	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.050	0.097	0.028	1.00	J
Carbon Disulfide	1.3	1.6	0.19	1.00	J
Carbon Tetrachloride	0.54	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	0.27	0.12	0.068	1.00	
Chloromethane	1.2	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.6	0.12	0.064	1.00	
Ethylbenzene	0.54	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.8	0.087	0.016	1.00	B
Styrene	0.47	0.11	0.053	1.00	
Tetrachloroethene	0.47	0.17	0.10	1.00	
Toluene	3.2	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 20 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.98	0.13	0.084	1.00	
Trichlorofluoromethane	1.5	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.62	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.6	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.062	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	98	37-163	
1,4-Bromofluorobenzene	100	45-153	
Toluene-d8	97	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00012	**17-09-2204-10-A**	**09/27/17 06:21**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 06:57**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	16	2.4	0.32	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	124	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	100	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 21 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AAS00328	**17-09-2204-11-A**	**09/27/17 05:05**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 07:18**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.60	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.18	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.11	0.15	0.096	1.00	J
2-Butanone	1.4	1.5	0.15	1.00	J
4-Ethyltoluene	0.15	0.25	0.081	1.00	J
Benzene	1.0	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.051	0.097	0.028	1.00	J
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	0.54	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	0.050	0.066	0.029	1.00	J
Chloroform	0.28	0.12	0.068	1.00	
Chloromethane	1.3	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.4	0.12	0.064	1.00	
Ethylbenzene	0.52	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.4	0.087	0.016	1.00	B
Styrene	0.46	0.11	0.053	1.00	
Tetrachloroethene	0.18	0.17	0.10	1.00	
Toluene	3.0	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 22 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	1.5	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.64	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.6	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.062	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	98	37-163	
1,4-Bromofluorobenzene	97	45-153	
Toluene-d8	94	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AAS00328	**17-09-2204-11-A**	**09/27/17 05:05**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 07:45**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	15	3.0	0.40	2.50	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	124	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	98	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 23 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AAS00327	**17-09-2204-12-A**	**09/27/17 05:35**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 13:08**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.65	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.18	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	1.3	1.5	0.15	1.00	J
4-Ethyltoluene	0.16	0.25	0.081	1.00	J
Benzene	0.90	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.037	0.097	0.028	1.00	J
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	0.55	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	0.25	0.12	0.068	1.00	
Chloromethane	1.3	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.7	0.12	0.064	1.00	
Ethylbenzene	0.50	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.5	0.087	0.016	1.00	B
Styrene	0.44	0.11	0.053	1.00	
Tetrachloroethene	1.2	0.17	0.10	1.00	
Toluene	2.4	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 24 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	1.5	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.58	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.5	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	97	45-153	
Toluene-d8	96	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AAS00327	**17-09-2204-12-A**	**09/27/17 05:35**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 08:33**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	15	2.4	0.32	2.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	125	37-163	
1,4-Bromofluorobenzene	94	45-153	
Toluene-d8	99	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 25 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00010	**17-09-2204-13-A**	**09/27/17 06:35**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 13:59**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.67	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.16	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	1.4	1.5	0.15	1.00	J
4-Ethyltoluene	0.14	0.25	0.081	1.00	J
Benzene	0.97	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.061	0.097	0.028	1.00	J
Carbon Disulfide	0.22	1.6	0.19	1.00	J
Carbon Tetrachloride	0.55	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	0.040	0.066	0.029	1.00	J
Chloroform	0.28	0.12	0.068	1.00	
Chloromethane	1.4	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.6	0.12	0.064	1.00	
Ethylbenzene	0.52	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.7	0.087	0.016	1.00	B
Styrene	0.44	0.11	0.053	1.00	
Tetrachloroethene	0.29	0.17	0.10	1.00	
Toluene	3.2	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 26 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	1.6	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.63	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.7	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.075	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	100	37-163	
1,4-Bromofluorobenzene	97	45-153	
Toluene-d8	96	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00010	**17-09-2204-13-A**	**09/27/17 06:35**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 09:21**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	43	9.5	1.3	8.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	123	37-163	
1,4-Bromofluorobenzene	94	45-153	
Toluene-d8	98	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00018	**17-09-2204-14-A**	**09/27/17 07:20**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 14:49**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.59	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	1.0	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	0.070	0.10	0.058	1.00	J
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.25	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.10	0.15	0.096	1.00	J
2-Butanone	1.8	1.5	0.15	1.00	
4-Ethyltoluene	0.19	0.25	0.081	1.00	J
Benzene	1.1	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.045	0.097	0.028	1.00	J
Carbon Disulfide	0.20	1.6	0.19	1.00	J
Carbon Tetrachloride	0.54	0.063	0.055	1.00	
Chlorobenzene	0.11	0.12	0.065	1.00	J
Chloroethane	0.032	0.066	0.029	1.00	J
Chloroform	0.28	0.12	0.068	1.00	
Chloromethane	1.3	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.2	0.12	0.064	1.00	
Ethylbenzene	0.65	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.3	0.087	0.016	1.00	B
Styrene	3.8	0.11	0.053	1.00	
Tetrachloroethene	0.48	0.17	0.10	1.00	
Toluene	3.6	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	0.054	0.099	0.053	1.00	J
Trichloroethene	0.15	0.13	0.084	1.00	
Trichlorofluoromethane	2.0	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.77	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	2.0	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.072	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	102	37-163	
1,4-Bromofluorobenzene	100	45-153	
Toluene-d8	97	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00018	**17-09-2204-14-A**	**09/27/17 07:20**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 10:09**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	37	5.9	0.81	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	122	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	98	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 29 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00021	**17-09-2204-15-A**	**09/27/17 06:23**	**Air**	**GC/MS DD**	**N/A**	**09/30/17 15:40**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.56	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	0.061	0.10	0.058	1.00	J
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.15	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.15	0.15	0.096	1.00	J
2-Butanone	1.3	1.5	0.15	1.00	J
4-Ethyltoluene	0.13	0.25	0.081	1.00	J
Benzene	0.90	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.050	0.097	0.028	1.00	J
Carbon Disulfide	0.42	1.6	0.19	1.00	J
Carbon Tetrachloride	0.55	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	0.030	0.066	0.029	1.00	J
Chloroform	0.28	0.12	0.068	1.00	
Chloromethane	1.3	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.6	0.12	0.064	1.00	
Ethylbenzene	0.54	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.7	0.087	0.016	1.00	B
Styrene	0.47	0.11	0.053	1.00	
Tetrachloroethene	0.64	0.17	0.10	1.00	
Toluene	4.8	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 30 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.41	0.13	0.084	1.00	
Trichlorofluoromethane	1.5	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.67	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.7	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.056	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	99	37-163	
1,4-Bromofluorobenzene	98	45-153	
Toluene-d8	97	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00021	**17-09-2204-15-A**	**09/27/17 06:23**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 10:57**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	31	5.9	0.81	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	126	37-163	
1,4-Bromofluorobenzene	97	45-153	
Toluene-d8	100	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00020	**17-09-2204-16-A**	**09/27/17 07:22**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 19:11**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.60	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.94	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.28	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.29	0.15	0.096	1.00	
2-Butanone	1.1	1.5	0.15	1.00	J
4-Ethyltoluene	0.21	0.25	0.081	1.00	J
Benzene	1.3	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.032	0.097	0.028	1.00	J
Carbon Disulfide	0.22	1.6	0.19	1.00	J
Carbon Tetrachloride	0.77	0.063	0.055	1.00	
Chlorobenzene	0.18	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	0.28	0.12	0.068	1.00	
Chloromethane	1.2	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.4	0.12	0.064	1.00	
Ethylbenzene	0.80	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	5.9	0.087	0.016	1.00	B
Styrene	0.50	0.11	0.053	1.00	
Tetrachloroethene	0.44	0.17	0.10	1.00	
Toluene	3.9	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	2.8	0.13	0.084	1.00	
Trichlorofluoromethane	2.0	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	0.062	0.099	0.050	1.00	J
o-Xylene	1.0	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	2.6	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.065	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	103	37-163	
1,4-Bromofluorobenzene	110	45-153	
Toluene-d8	92	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00020	**17-09-2204-16-A**	**09/27/17 07:22**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 11:45**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	29	3.8	0.52	3.20	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	127	37-163	
1,4-Bromofluorobenzene	96	45-153	
Toluene-d8	95	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 33 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00027	**17-09-2204-17-A**	**09/27/17 07:15**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 20:02**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.66	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	1.2	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	0.11	0.12	0.066	1.00	J
1,3,5-Trimethylbenzene	0.32	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.12	0.15	0.096	1.00	J
2-Butanone	1.4	1.5	0.15	1.00	J
4-Ethyltoluene	0.22	0.25	0.081	1.00	J
Benzene	1.5	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.14	0.097	0.028	1.00	
Carbon Disulfide	0.34	1.6	0.19	1.00	J
Carbon Tetrachloride	0.83	0.063	0.055	1.00	
Chlorobenzene	0.16	0.12	0.065	1.00	
Chloroethane	0.062	0.066	0.029	1.00	J
Chloroform	0.32	0.12	0.068	1.00	
Chloromethane	1.1	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.5	0.12	0.064	1.00	
Ethylbenzene	0.68	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	2.4	0.087	0.016	1.00	B
Styrene	0.53	0.11	0.053	1.00	
Tetrachloroethene	1.1	0.17	0.10	1.00	
Toluene	4.6	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 34 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.26	0.13	0.084	1.00	
Trichlorofluoromethane	2.5	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.90	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	2.3	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.071	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	99	37-163	
1,4-Bromofluorobenzene	112	45-153	
Toluene-d8	102	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00027	**17-09-2204-17-A**	**09/27/17 07:15**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 12:33**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	180	19	2.6	16.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	125	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	100	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00013	**17-09-2204-18-A**	**09/27/17 06:31**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 20:52**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	0.061	0.099	0.037	1.00	J
1,2,4-Trimethylbenzene	0.71	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.18	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	1.8	1.5	0.15	1.00	
4-Ethyltoluene	0.14	0.25	0.081	1.00	J
Benzene	0.93	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	ND	0.097	0.028	1.00	
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	0.75	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	0.32	0.12	0.068	1.00	
Chloromethane	0.94	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.6	0.12	0.064	1.00	
Ethylbenzene	0.47	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.4	0.087	0.016	1.00	B
Styrene	0.46	0.11	0.053	1.00	
Tetrachloroethene	2.6	0.17	0.10	1.00	
Toluene	4.7	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 36 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.50	0.13	0.084	1.00	
Trichlorofluoromethane	1.6	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.60	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.5	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.063	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	101	37-163	
1,4-Bromofluorobenzene	110	45-153	
Toluene-d8	102	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00013	**17-09-2204-18-A**	**09/27/17 06:31**	**Air**	**GC/MS DD**	**N/A**	**10/11/17 10:34**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	260	63	8.6	53.2	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	126	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	102	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 37 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00007	**17-09-2204-19-A**	**09/27/17 07:35**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 21:43**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	0.19	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.92	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	0.070	0.10	0.058	1.00	J
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.33	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.10	0.15	0.096	1.00	J
2-Butanone	2.1	1.5	0.15	1.00	
4-Ethyltoluene	0.19	0.25	0.081	1.00	J
Benzene	1.0	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.035	0.097	0.028	1.00	J
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	0.73	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	0.033	0.066	0.029	1.00	J
Chloroform	0.48	0.12	0.068	1.00	
Chloromethane	0.90	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.9	0.12	0.064	1.00	
Ethylbenzene	0.49	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	1.5	0.087	0.016	1.00	B
Styrene	0.38	0.11	0.053	1.00	
Tetrachloroethene	1.3	0.17	0.10	1.00	
Toluene	4.6	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 38 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.32	0.13	0.084	1.00	
Trichlorofluoromethane	2.7	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.61	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.5	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	92	37-163	
1,4-Bromofluorobenzene	111	45-153	
Toluene-d8	105	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00007	**17-09-2204-19-A**	**09/27/17 07:35**	**Air**	**GC/MS DD**	**N/A**	**10/09/17 18:07**	**171009L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	90	12	1.6	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	113	37-163	
1,4-Bromofluorobenzene	107	45-153	
Toluene-d8	91	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 39 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00009	**17-09-2204-20-A**	**09/27/17 06:17**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 22:32**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	0.13	0.14	0.056	1.00	J
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.58	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.72	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.22	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	0.16	0.15	0.096	1.00	
2-Butanone	1.7	1.5	0.15	1.00	
4-Ethyltoluene	0.14	0.25	0.081	1.00	J
Benzene	1.1	0.080	0.048	1.00	
Bromodichloromethane	0.16	0.17	0.075	1.00	J
Bromomethane	0.031	0.097	0.028	1.00	J
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	0.62	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	0.035	0.066	0.029	1.00	J
Chloroform	0.39	0.12	0.068	1.00	
Chloromethane	1.0	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.6	0.12	0.064	1.00	
Ethylbenzene	0.54	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	2.1	0.087	0.016	1.00	B
Styrene	0.55	0.11	0.053	1.00	
Tetrachloroethene	0.18	0.17	0.10	1.00	
Toluene	2.7	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	0.98	0.099	0.053	1.00	
Trichloroethene	0.48	0.13	0.084	1.00	
Trichlorofluoromethane	1.5	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.65	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.7	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	0.055	0.090	0.044	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	96	37-163	
1,4-Bromofluorobenzene	106	45-153	
Toluene-d8	100	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00009	**17-09-2204-20-A**	**09/27/17 06:17**	**Air**	**GC/MS DD**	**N/A**	**10/09/17 16:31**	**171009L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	28	4.8	0.65	4.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	113	37-163	
1,4-Bromofluorobenzene	104	45-153	
Toluene-d8	99	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 41 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00029	**17-09-2204-24-A**	**09/27/17 08:05**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 23:23**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	1.0	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	0.089	0.10	0.058	1.00	J
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.27	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	2.6	1.5	0.15	1.00	
4-Ethyltoluene	0.16	0.25	0.081	1.00	J
Benzene	1.0	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.043	0.097	0.028	1.00	J
Carbon Disulfide	0.24	1.6	0.19	1.00	J
Carbon Tetrachloride	0.74	0.063	0.055	1.00	
Chlorobenzene	0.082	0.12	0.065	1.00	J
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	0.27	0.12	0.068	1.00	
Chloromethane	0.99	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.6	0.12	0.064	1.00	
Ethylbenzene	0.58	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	0.62	0.087	0.016	1.00	B
Styrene	0.48	0.11	0.053	1.00	
Tetrachloroethene	0.54	0.17	0.10	1.00	
Toluene	4.1	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 42 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	0.23	0.13	0.084	1.00	
Trichlorofluoromethane	2.2	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.71	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	1.9	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	89	37-163	
1,4-Bromofluorobenzene	112	45-153	
Toluene-d8	101	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00029	**17-09-2204-24-A**	**09/27/17 08:05**	**Air**	**GC/MS DD**	**N/A**	**10/09/17 17:20**	**171009L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	170	24	3.2	20.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	110	37-163	
1,4-Bromofluorobenzene	109	45-153	
Toluene-d8	91	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 43 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00011	**17-09-2204-25-A**	**09/27/17 17:35**	**Air**	**GC/MS DD**	**N/A**	**10/07/17 23:40**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	0.37	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	0.084	0.10	0.058	1.00	J
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	0.094	0.12	0.077	1.00	J
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	1.3	1.5	0.15	1.00	J
4-Ethyltoluene	ND	0.25	0.081	1.00	
Benzene	0.56	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	0.045	0.097	0.028	1.00	J
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	0.64	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	0.18	0.12	0.068	1.00	
Chloromethane	1.1	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	2.7	0.12	0.064	1.00	
Ethylbenzene	0.28	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	0.70	0.087	0.016	1.00	B
Styrene	0.22	0.11	0.053	1.00	
Tetrachloroethene	0.22	0.17	0.10	1.00	
Toluene	2.1	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 44 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	1.6	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	0.37	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	0.93	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	125	37-163	
1,4-Bromofluorobenzene	98	45-153	
Toluene-d8	96	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
WAS00011	**17-09-2204-25-A**	**09/27/17 17:35**	**Air**	**GC/MS DD**	**N/A**	**10/08/17 01:13**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	44	5.9	0.81	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	124	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	98	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-379**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**09/29/17 21:21**	**170929L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	ND	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	ND	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	ND	1.5	0.15	1.00	
4-Ethyltoluene	ND	0.25	0.081	1.00	
Benzene	ND	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	ND	0.097	0.028	1.00	
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	ND	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	ND	0.12	0.068	1.00	
Chloromethane	ND	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	ND	0.12	0.064	1.00	
Ethylbenzene	ND	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	0.029	0.087	0.016	1.00	J
Styrene	ND	0.11	0.053	1.00	
Tetrachloroethene	ND	0.17	0.10	1.00	
Toluene	ND	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 46 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	ND	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	ND	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	ND	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	119	37-163	
1,4-Bromofluorobenzene	92	45-153	
Toluene-d8	97	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 47 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-381**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 17:40**	**171003L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	ND	0.25	0.063	1.00	
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
1,3,5-Trimethylbenzene	ND	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	ND	1.5	0.15	1.00	
4-Ethyltoluene	ND	0.25	0.081	1.00	
Benzene	ND	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Bromomethane	ND	0.097	0.028	1.00	
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	ND	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	ND	0.12	0.068	1.00	
Chloromethane	ND	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	ND	0.12	0.064	1.00	
Ethylbenzene	ND	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methylene Chloride	0.027	0.087	0.016	1.00	J
Styrene	ND	0.11	0.053	1.00	
Tetrachloroethene	ND	0.17	0.10	1.00	
Toluene	ND	0.19	0.059	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 48 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	ND	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	ND	0.11	0.060	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
p/m-Xylene	ND	0.22	0.054	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	
Acetone	ND	1.2	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	118	37-163	
1,4-Bromofluorobenzene	94	45-153	
Toluene-d8	98	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 49 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-387**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**10/07/17 21:55**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
Acetone	ND	1.2	0.16	1.00	
Bromomethane	ND	0.097	0.028	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	ND	0.25	0.063	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,3,5-Trimethylbenzene	ND	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	ND	1.5	0.15	1.00	
4-Ethyltoluene	ND	0.25	0.081	1.00	
Benzene	ND	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	ND	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	ND	0.12	0.068	1.00	
Chloromethane	ND	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	ND	0.12	0.064	1.00	
Ethylbenzene	ND	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 50 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
Methylene Chloride	0.060	0.087	0.016	1.00	J
Tetrachloroethene	ND	0.17	0.10	1.00	
Toluene	ND	0.19	0.059	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	ND	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	ND	0.11	0.060	1.00	
p/m-Xylene	ND	0.22	0.054	1.00	
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Styrene	ND	0.11	0.053	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	123	37-163	
1,4-Bromofluorobenzene	95	45-153	
Toluene-d8	99	73-121	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-389**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**10/09/17 14:46**	**171009L02**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	1.2	0.16	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	130	37-163	
1,4-Bromofluorobenzene	91	45-153	
Toluene-d8	101	73-121	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 51 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-214-388**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**10/10/17 20:18**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2-Dibromoethane	ND	0.19	0.020	1.00	
Dichlorotetrafluoroethane	ND	0.17	0.12	1.00	
1,2-Dichloropropane	ND	0.12	0.066	1.00	
Acetone	ND	1.2	0.16	1.00	
Bromomethane	ND	0.097	0.028	1.00	
c-1,3-Dichloropropene	ND	0.11	0.048	1.00	
t-1,3-Dichloropropene	ND	0.11	0.037	1.00	
1,1,1-Trichloroethane	ND	0.14	0.056	1.00	
1,1,2,2-Tetrachloroethane	ND	0.17	0.084	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.19	0.12	1.00	
1,1,2-Trichloroethane	ND	0.14	0.085	1.00	
1,1-Dichloroethane	ND	0.10	0.054	1.00	
1,1-Dichloroethene	ND	0.099	0.037	1.00	
1,2,4-Trimethylbenzene	ND	0.25	0.063	1.00	
1,2-Dichlorobenzene	ND	0.15	0.094	1.00	
1,2-Dichloroethane	ND	0.10	0.058	1.00	
1,3,5-Trimethylbenzene	ND	0.12	0.077	1.00	
1,3-Dichlorobenzene	ND	0.15	0.096	1.00	
1,4-Dichlorobenzene	ND	0.15	0.096	1.00	
2-Butanone	ND	1.5	0.15	1.00	
4-Ethyltoluene	ND	0.25	0.081	1.00	
Benzene	ND	0.080	0.048	1.00	
Bromodichloromethane	ND	0.17	0.075	1.00	
Carbon Disulfide	ND	1.6	0.19	1.00	
Carbon Tetrachloride	ND	0.063	0.055	1.00	
Chlorobenzene	ND	0.12	0.065	1.00	
Chloroethane	ND	0.066	0.029	1.00	
Chloroform	ND	0.12	0.068	1.00	
Chloromethane	ND	0.052	0.028	1.00	
Dibromochloromethane	ND	0.21	0.082	1.00	
Dichlorodifluoromethane	ND	0.12	0.064	1.00	
Ethylbenzene	ND	0.11	0.060	1.00	
Hexachloro-1,3-Butadiene	ND	0.27	0.19	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	0.090	0.044	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 52 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
Methylene Chloride	0.034	0.087	0.016	1.00	J
Tetrachloroethene	ND	0.17	0.10	1.00	
Toluene	ND	0.19	0.059	1.00	
Trichloroethene	ND	0.13	0.084	1.00	
Trichlorofluoromethane	ND	0.14	0.058	1.00	
Vinyl Chloride	ND	0.026	0.020	1.00	
c-1,2-Dichloroethene	ND	0.099	0.050	1.00	
o-Xylene	ND	0.11	0.060	1.00	
p/m-Xylene	ND	0.22	0.054	1.00	
t-1,2-Dichloroethene	ND	0.099	0.053	1.00	
Styrene	ND	0.11	0.053	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,2-Dichloroethane-d4	129	37-163	
1,4-Bromofluorobenzene	93	45-153	
Toluene-d8	101	73-121	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - LCS/LCSD

AECOM
130 Robin Hill Road, Suite 100
Santa Barbara, CA 93117-3153

Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5

Date Received: 09/28/17
Work Order: 17-09-2204
Preparation: N/A
Method: EPA TO-15

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19170	**LCS**	**Air**	**GC/MS HH**	**N/A**	**10/06/17 11:33**	**171006L01**
095-01-021-19170	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**10/06/17 12:24**	**171006L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	208.9	113	209.2	113	31-151	11-171	0	0-30	
Acetone	59.39	60.95	103	62.77	106	67-133	56-144	3	0-30	
Benzene	79.87	86.57	108	89.67	112	70-130	60-140	4	0-30	
Benzyl Chloride	129.4	157.6	122	163.4	126	38-158	18-178	4	0-30	
Bromodichloromethane	167.5	185.2	111	189.8	113	70-130	60-140	2	0-30	
Bromoform	258.4	307.6	119	315.8	122	63-147	49-161	3	0-30	
Bromomethane	97.08	96.49	99	98.09	101	70-139	58-150	2	0-30	
2-Butanone	73.73	79.15	107	80.71	109	66-132	55-143	2	0-30	
n-Butylbenzene	137.2	147.2	107	151.2	110	50-150	33-167	3	0-30	
sec-Butylbenzene	137.2	151.1	110	156.2	114	50-150	33-167	3	0-30	
tert-Butylbenzene	137.2	151.4	110	157.1	115	50-150	33-167	4	0-30	
Carbon Disulfide	77.85	90.37	116	92.12	118	68-146	55-159	2	0-30	
Carbon Tetrachloride	157.3	172.8	110	176.6	112	70-136	59-147	2	0-30	
Chlorobenzene	115.1	131.5	114	135.4	118	70-130	60-140	3	0-30	
Chloroethane	65.96	67.78	103	68.38	104	65-149	51-163	1	0-30	
Chloroform	122.1	128.4	105	131.2	107	70-130	60-140	2	0-30	
Chloromethane	51.63	54.47	106	55.89	108	69-141	57-153	3	0-30	
Dibromochloromethane	213.0	245.2	115	252.8	119	70-138	59-149	3	0-30	
1,2-Dibromoethane	192.1	218.1	114	225.1	117	70-133	60-144	3	0-30	
1,2-Dichlorobenzene	150.3	165.0	110	169.5	113	48-138	33-153	3	0-30	
1,3-Dichlorobenzene	150.3	167.9	112	171.7	114	56-134	43-147	2	0-30	
1,4-Dichlorobenzene	150.3	166.3	111	170.4	113	52-136	38-150	2	0-30	
Dichlorodifluoromethane	123.6	130.4	105	131.6	106	67-139	55-151	1	0-30	
1,1-Dichloroethane	101.2	109.9	109	113.7	112	70-130	60-140	3	0-30	
1,2-Dichloroethane	101.2	106.8	106	109.3	108	70-132	60-142	2	0-30	
1,1-Dichloroethene	99.12	126.5	128	129.2	130	70-135	59-146	2	0-30	
c-1,2-Dichloroethene	99.12	106.9	108	109.3	110	70-130	60-140	2	0-30	
t-1,2-Dichloroethene	99.12	104.9	106	108.3	109	70-130	60-140	3	0-30	
1,2-Dichloropropane	115.5	130.0	113	133.7	116	70-130	60-140	3	0-30	
c-1,3-Dichloropropene	113.5	141.2	124	145.2	128	70-130	60-140	3	0-30	
t-1,3-Dichloropropene	113.5	146.9	129	150.6	133	70-147	57-160	2	0-30	
Dichlorotetrafluoroethane	174.8	179.7	103	182.5	104	51-135	37-149	2	0-30	
1,1-Difluoroethane	67.54	71.25	106	72.38	107	70-131	60-141	2	0-30	
Ethylbenzene	108.6	126.4	116	129.1	119	70-130	60-140	2	0-30	
4-Ethyltoluene	122.9	138.7	113	142.7	116	68-130	58-140	3	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 2 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Hexachloro-1,3-Butadiene	266.6	267.4	100	269.7	101	44-146	27-163	1	0-30	
2-Hexanone	102.4	107.9	105	111.2	109	70-136	59-147	3	0-30	
Isopropanol	61.45	65.22	106	70.11	114	57-135	44-148	7	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	106.8	119	112.5	125	68-130	58-140	5	0-30	
Methylene Chloride	86.84	99.45	115	101.5	117	69-130	59-140	2	0-30	
4-Methyl-2-Pentanone	102.4	110.3	108	113.9	111	70-130	60-140	3	0-30	
Styrene	106.5	119.6	112	122.7	115	65-131	54-142	3	0-30	
1,1,2,2-Tetrachloroethane	171.6	195.3	114	201.3	117	63-130	52-141	3	0-30	
Tetrachloroethene	169.6	186.2	110	192.5	114	70-130	60-140	3	0-30	
Toluene	94.21	103.0	109	107.1	114	70-130	60-140	4	0-30	
1,1,1-Trichloroethane	136.4	152.6	112	156.6	115	70-130	60-140	3	0-30	
1,1,2-Trichloroethane	136.4	153.3	112	158.0	116	70-130	60-140	3	0-30	
Trichloroethene	134.3	146.2	109	149.2	111	70-130	60-140	2	0-30	
Trichlorofluoromethane	140.5	141.2	101	143.6	102	63-141	50-154	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	212.9	111	217.3	113	70-136	59-147	2	0-30	
1,2,4-Trimethylbenzene	122.9	135.7	110	139.7	114	60-132	48-144	3	0-30	
1,3,5-Trimethylbenzene	122.9	138.3	113	142.1	116	62-130	51-141	3	0-30	
Vinyl Acetate	88.03	94.18	107	98.03	111	58-130	46-142	4	0-30	
Vinyl Chloride	63.91	68.15	107	68.76	108	70-134	59-145	1	0-30	
o-Xylene	108.6	119.6	110	122.9	113	69-130	59-140	3	0-30	
p/m-Xylene	217.1	245.0	113	250.8	116	70-132	60-142	2	0-30	

Total number of LCS compounds: 56
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 3 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19170	**LCS**	**Air**	**GC/MS HH**	**N/A**	**10/06/17 11:33**	**171006L01**
095-01-021-19170	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**10/06/17 12:24**	**171006L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	178.9	181.5	101	183.6	103	68-134	
1,2-Dichloroethane-d4	105.3	97.88	93	97.19	92	67-133	
Toluene-d8	102.4	101.2	99	100.8	98	70-130	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 4 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19173	**LCS**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 11:57**	**171007L01**
095-01-021-19173	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 12:49**	**171007L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	223.8	121	226.2	122	31-151	11-171	1	0-30	
Acetone	59.39	65.58	110	65.25	110	67-133	56-144	1	0-30	
Benzene	79.87	89.90	113	91.71	115	70-130	60-140	2	0-30	
Benzyl Chloride	129.4	166.6	129	169.4	131	38-158	18-178	2	0-30	
Bromodichloromethane	167.5	193.6	116	198.2	118	70-130	60-140	2	0-30	
Bromoform	258.4	336.0	130	341.4	132	63-147	49-161	2	0-30	
Bromomethane	97.08	102.8	106	102.7	106	70-139	58-150	0	0-30	
2-Butanone	73.73	81.09	110	82.22	112	66-132	55-143	1	0-30	
n-Butylbenzene	137.2	159.2	116	160.5	117	50-150	33-167	1	0-30	
sec-Butylbenzene	137.2	163.5	119	165.1	120	50-150	33-167	1	0-30	
tert-Butylbenzene	137.2	166.1	121	167.7	122	50-150	33-167	1	0-30	
Carbon Disulfide	77.85	94.71	122	95.06	122	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	183.2	116	187.3	119	70-136	59-147	2	0-30	
Chlorobenzene	115.1	140.3	122	142.3	124	70-130	60-140	1	0-30	
Chloroethane	65.96	72.26	110	72.44	110	65-149	51-163	0	0-30	
Chloroform	122.1	134.1	110	135.2	111	70-130	60-140	1	0-30	
Chloromethane	51.63	58.31	113	58.72	114	69-141	57-153	1	0-30	
Dibromochloromethane	213.0	267.5	126	270.7	127	70-138	59-149	1	0-30	
1,2-Dibromoethane	192.1	232.7	121	237.6	124	70-133	60-144	2	0-30	
1,2-Dichlorobenzene	150.3	176.9	118	179.4	119	48-138	33-153	1	0-30	
1,3-Dichlorobenzene	150.3	181.0	120	183.9	122	56-134	43-147	2	0-30	
1,4-Dichlorobenzene	150.3	178.6	119	180.7	120	52-136	38-150	1	0-30	
Dichlorodifluoromethane	123.6	139.2	113	138.3	112	67-139	55-151	1	0-30	
1,1-Dichloroethane	101.2	113.6	112	115.3	114	70-130	60-140	1	0-30	
1,2-Dichloroethane	101.2	113.2	112	113.1	112	70-132	60-142	0	0-30	
1,1-Dichloroethene	99.12	131.5	133	132.7	134	70-135	59-146	1	0-30	
c-1,2-Dichloroethene	99.12	109.5	110	111.2	112	70-130	60-140	2	0-30	
t-1,2-Dichloroethene	99.12	109.4	110	109.5	110	70-130	60-140	0	0-30	
1,2-Dichloropropane	115.5	131.5	114	135.2	117	70-130	60-140	3	0-30	
c-1,3-Dichloropropene	113.5	144.7	128	147.9	130	70-130	60-140	2	0-30	
t-1,3-Dichloropropene	113.5	150.7	133	154.7	136	70-147	57-160	3	0-30	
Dichlorotetrafluoroethane	174.8	190.6	109	192.5	110	51-135	37-149	1	0-30	
1,1-Difluoroethane	67.54	73.46	109	74.84	111	70-131	60-141	2	0-30	
Ethylbenzene	108.6	134.7	124	136.4	126	70-130	60-140	1	0-30	
4-Ethyltoluene	122.9	149.2	121	151.3	123	68-130	58-140	1	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 5 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Hexachloro-1,3-Butadiene	266.6	295.6	111	295.7	111	44-146	27-163	0	0-30	
2-Hexanone	102.4	113.8	111	116.6	114	70-136	59-147	2	0-30	
Isopropanol	61.45	69.19	113	70.79	115	57-135	44-148	2	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	105.7	117	110.6	123	68-130	58-140	4	0-30	
Methylene Chloride	86.84	102.2	118	103.2	119	69-130	59-140	1	0-30	
4-Methyl-2-Pentanone	102.4	111.4	109	115.5	113	70-130	60-140	4	0-30	
Styrene	106.5	126.4	119	128.9	121	65-131	54-142	2	0-30	
1,1,2,2-Tetrachloroethane	171.6	209.3	122	211.2	123	63-130	52-141	1	0-30	
Tetrachloroethene	169.6	200.8	118	205.1	121	70-130	60-140	2	0-30	
Toluene	94.21	109.6	116	111.6	118	70-130	60-140	2	0-30	
1,1,1-Trichloroethane	136.4	159.7	117	161.6	118	70-130	60-140	1	0-30	
1,1,2-Trichloroethane	136.4	157.6	116	161.0	118	70-130	60-140	2	0-30	
Trichloroethene	134.3	152.8	114	154.3	115	70-130	60-140	1	0-30	
Trichlorofluoromethane	140.5	150.6	107	150.4	107	63-141	50-154	0	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	223.1	116	224.3	117	70-136	59-147	1	0-30	
1,2,4-Trimethylbenzene	122.9	147.9	120	149.2	121	60-132	48-144	1	0-30	
1,3,5-Trimethylbenzene	122.9	148.6	121	150.7	123	62-130	51-141	1	0-30	
Vinyl Acetate	88.03	97.87	111	98.63	112	58-130	46-142	1	0-30	
Vinyl Chloride	63.91	71.90	113	72.45	113	70-134	59-145	1	0-30	
o-Xylene	108.6	128.5	118	130.1	120	69-130	59-140	1	0-30	
p/m-Xylene	217.1	264.0	122	267.7	123	70-132	60-142	1	0-30	

Total number of LCS compounds: 56
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 6 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19173	**LCS**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 11:57**	**171007L01**
095-01-021-19173	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 12:49**	**171007L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	178.9	185.5	104	186.5	104	68-134	
1,2-Dichloroethane-d4	105.3	99.67	95	98.08	93	67-133	
Toluene-d8	102.4	99.00	97	98.13	96	70-130	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 7 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-379	**LCS**	**Air**	**GC/MS DD**	**N/A**	**09/29/17 19:43**	**170929L01**
099-15-214-379	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**09/29/17 20:32**	**170929L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	2.728	3.063	112	3.062	112	50-150	33-167	0	0-30	
1,1,2,2-Tetrachloroethane	3.433	3.492	102	3.581	104	50-150	33-167	3	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.930	103	3.920	102	50-150	33-167	0	0-30	
1,1,2-Trichloroethane	2.728	2.856	105	2.840	104	27-171	3-195	1	0-38	
1,1-Dichloroethane	2.024	2.098	104	2.084	103	50-150	33-167	1	0-30	
1,1-Dichloroethene	1.982	1.972	99	1.957	99	50-150	33-167	1	0-30	
1,2,4-Trimethylbenzene	2.458	2.303	94	2.376	97	50-150	33-167	3	0-30	
1,2-Dibromoethane	3.842	3.969	103	4.068	106	50-150	33-167	2	0-30	
Dichlorotetrafluoroethane	3.495	3.571	102	3.542	101	50-150	33-167	1	0-30	
1,2-Dichlorobenzene	3.006	2.669	89	2.734	91	50-150	33-167	2	0-30	
1,2-Dichloroethane	2.024	2.282	113	2.354	116	28-166	5-189	3	0-40	
1,2-Dichloropropane	2.311	2.424	105	2.408	104	50-150	33-167	1	0-30	
1,3,5-Trimethylbenzene	2.458	2.111	86	2.158	88	50-150	33-167	2	0-30	
1,3-Dichlorobenzene	3.006	2.746	91	2.834	94	50-150	33-167	3	0-30	
1,4-Dichlorobenzene	3.006	2.665	89	2.726	91	50-150	33-167	2	0-30	
4-Ethyltoluene	2.458	2.203	90	2.243	91	50-150	33-167	2	0-30	
Benzene	1.597	1.585	99	1.575	99	27-153	6-174	1	0-34	
Bromodichloromethane	3.350	3.725	111	3.701	110	50-150	33-167	1	0-30	
Bromomethane	1.942	1.882	97	1.856	96	50-150	33-167	1	0-30	
Carbon Tetrachloride	3.146	3.486	111	3.480	111	7-187	0-217	0	0-31	
Chlorobenzene	2.302	2.239	97	2.265	98	50-150	33-167	1	0-30	
Chloroethane	1.319	1.264	96	1.277	97	50-150	33-167	1	0-30	
Chloroform	2.441	2.559	105	2.545	104	50-150	33-167	1	0-30	
Chloromethane	1.033	1.227	119	1.204	117	50-150	33-167	2	0-30	
Dibromochloromethane	4.259	4.500	106	4.626	109	50-150	33-167	3	0-30	
Dichlorodifluoromethane	2.473	3.198	129	3.207	130	50-150	33-167	0	0-30	
Ethylbenzene	2.171	1.999	92	2.014	93	27-153	6-174	1	0-46	
Hexachloro-1,3-Butadiene	5.333	4.062	76	4.174	78	50-150	33-167	3	0-30	
Methylene Chloride	1.737	1.630	94	1.627	94	50-150	33-167	0	0-30	
Styrene	2.130	1.813	85	1.843	87	50-150	33-167	2	0-30	
Tetrachloroethene	3.391	3.247	96	3.333	98	34-154	14-174	3	0-33	
Toluene	1.884	1.731	92	1.776	94	28-154	7-175	3	0-42	
t-1,2-Dichloroethene	1.982	2.036	103	2.021	102	50-150	33-167	1	0-30	
Trichloroethene	2.687	2.716	101	2.725	101	43-139	27-155	0	0-31	
Trichlorofluoromethane	2.809	3.164	113	3.150	112	50-150	33-167	0	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 8 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Vinyl Chloride	1.278	1.407	110	1.390	109	44-140	28-156	1	0-33	
c-1,3-Dichloropropene	2.269	2.273	100	2.248	99	50-150	33-167	1	0-30	
c-1,2-Dichloroethene	1.982	2.007	101	1.980	100	35-165	13-187	1	0-35	
o-Xylene	2.171	1.902	88	1.950	90	22-160	0-183	3	0-48	
t-1,3-Dichloropropene	2.269	2.322	102	2.276	100	50-150	33-167	2	0-30	
p/m-Xylene	4.342	3.969	91	4.057	93	21-165	0-189	2	0-51	
Methyl-t-Butyl Ether (MTBE)	1.803	1.609	89	1.625	90	50-150	33-167	1	0-30	

Total number of LCS compounds: 42
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 9 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-379	**LCS**	**Air**	**GC/MS DD**	**N/A**	**09/29/17 19:43**	**170929L01**
099-15-214-379	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**09/29/17 20:32**	**170929L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,2-Dichloroethane-d4	1.053	1.194	113	1.194	113	37-163	
1,4-Bromofluorobenzene	1.789	1.701	95	1.775	99	45-153	
Toluene-d8	1.024	1.009	99	1.007	98	73-121	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 10 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-381	**LCS**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 15:12**	**171003L02**
099-15-214-381	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 16:01**	**171003L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,1,1-Trichloroethane	2.728	3.379	124	3.474	127	50-150	33-167	3	0-30	
1,1,2,2-Tetrachloroethane	3.433	3.411	99	3.511	102	50-150	33-167	3	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.783	99	3.882	101	50-150	33-167	3	0-30	
1,1,2-Trichloroethane	2.728	3.089	113	3.167	116	27-171	3-195	3	0-38	
1,1-Dichloroethane	2.024	1.933	96	1.992	98	50-150	33-167	3	0-30	
1,1-Dichloroethene	1.982	1.810	91	1.866	94	50-150	33-167	3	0-30	
1,2,4-Trimethylbenzene	2.458	2.454	100	2.450	100	50-150	33-167	0	0-30	
1,2-Dibromoethane	3.842	3.892	101	3.932	102	50-150	33-167	1	0-30	
Dichlorotetrafluoroethane	3.495	3.507	100	3.437	98	50-150	33-167	2	0-30	
1,2-Dichlorobenzene	3.006	2.938	98	2.977	99	50-150	33-167	1	0-30	
1,2-Dichloroethane	2.024	2.173	107	2.248	111	28-166	5-189	3	0-40	
1,2-Dichloropropane	2.311	2.493	108	2.561	111	50-150	33-167	3	0-30	
1,3,5-Trimethylbenzene	2.458	2.184	89	2.204	90	50-150	33-167	1	0-30	
1,3-Dichlorobenzene	3.006	3.019	100	3.069	102	50-150	33-167	2	0-30	
1,4-Dichlorobenzene	3.006	2.954	98	3.003	100	50-150	33-167	2	0-30	
4-Ethyltoluene	2.458	2.245	91	2.265	92	50-150	33-167	1	0-30	
Benzene	1.597	1.578	99	1.605	100	27-153	6-174	2	0-34	
Bromodichloromethane	3.350	3.982	119	4.105	123	50-150	33-167	3	0-30	
Bromomethane	1.942	1.815	94	1.772	91	50-150	33-167	2	0-30	
Carbon Tetrachloride	3.146	4.082	130	4.208	134	7-187	0-217	3	0-31	
Chlorobenzene	2.302	2.221	96	2.207	96	50-150	33-167	1	0-30	
Chloroethane	1.319	1.088	82	1.191	90	50-150	33-167	9	0-30	
Chloroform	2.441	2.494	102	2.539	104	50-150	33-167	2	0-30	
Chloromethane	1.033	0.8985	87	0.9648	93	50-150	33-167	7	0-30	
Dibromochloromethane	4.259	4.586	108	4.668	110	50-150	33-167	2	0-30	
Dichlorodifluoromethane	2.473	3.493	141	3.083	125	50-150	33-167	12	0-30	
Ethylbenzene	2.171	1.981	91	1.998	92	27-153	6-174	1	0-46	
Hexachloro-1,3-Butadiene	5.333	5.449	102	5.571	104	50-150	33-167	2	0-30	
Methylene Chloride	1.737	1.449	83	1.485	85	50-150	33-167	2	0-30	
Styrene	2.130	1.815	85	1.839	86	50-150	33-167	1	0-30	
Tetrachloroethene	3.391	3.457	102	3.496	103	34-154	14-174	1	0-33	
Toluene	1.884	1.632	87	1.642	87	28-154	7-175	1	0-42	
t-1,2-Dichloroethene	1.982	1.888	95	1.939	98	50-150	33-167	3	0-30	
Trichloroethene	2.687	2.994	111	3.078	115	43-139	27-155	3	0-31	
Trichlorofluoromethane	2.809	2.958	105	3.049	109	50-150	33-167	3	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 11 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Vinyl Chloride	1.278	1.246	98	1.235	97	44-140	28-156	1	0-33	
c-1,3-Dichloropropene	2.269	2.407	106	2.426	107	50-150	33-167	1	0-30	
c-1,2-Dichloroethene	1.982	1.862	94	1.908	96	35-165	13-187	2	0-35	
o-Xylene	2.171	1.911	88	1.945	90	22-160	0-183	2	0-48	
t-1,3-Dichloropropene	2.269	2.546	112	2.592	114	50-150	33-167	2	0-30	
p/m-Xylene	4.342	3.971	91	4.034	93	21-165	0-189	2	0-51	
Methyl-t-Butyl Ether (MTBE)	1.803	1.383	77	1.546	86	50-150	33-167	11	0-30	

Total number of LCS compounds: 42
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 12 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-381	**LCS**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 15:12**	**171003L02**
099-15-214-381	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**10/03/17 16:01**	**171003L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,2-Dichloroethane-d4	1.053	1.146	109	1.158	110	37-163	
1,4-Bromofluorobenzene	1.789	1.882	105	1.924	108	45-153	
Toluene-d8	1.024	1.010	99	1.017	99	73-121	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 13 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-387	**LCS**	**Air**	**GC/MS DD**	**N/A**	**10/07/17 19:55**	**171007L01**
099-15-214-387	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**10/07/17 20:44**	**171007L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	3.842	3.291	86	3.396	88	50-150	33-167	3	0-30	
Dichlorotetrafluoroethane	3.495	3.434	98	3.692	106	50-150	33-167	7	0-30	
1,2-Dichloropropane	2.311	2.092	91	2.080	90	50-150	33-167	1	0-30	
Bromomethane	1.942	1.542	79	1.570	81	50-150	33-167	2	0-30	
c-1,3-Dichloropropene	2.269	2.095	92	2.081	92	50-150	33-167	1	0-30	
t-1,3-Dichloropropene	2.269	2.197	97	2.146	95	50-150	33-167	2	0-30	
1,1,1-Trichloroethane	2.728	3.039	111	3.055	112	50-150	33-167	1	0-30	
1,1,2,2-Tetrachloroethane	3.433	2.975	87	3.162	92	50-150	33-167	6	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.357	88	3.345	87	50-150	33-167	0	0-30	
1,1,2-Trichloroethane	2.728	2.712	99	2.721	100	27-171	3-195	0	0-38	
1,1-Dichloroethane	2.024	1.663	82	1.639	81	50-150	33-167	1	0-30	
1,1-Dichloroethene	1.982	1.623	82	1.590	80	50-150	33-167	2	0-30	
1,2,4-Trimethylbenzene	2.458	2.055	84	2.188	89	50-150	33-167	6	0-30	
1,2-Dichlorobenzene	3.006	2.349	78	2.594	86	50-150	33-167	10	0-30	
1,2-Dichloroethane	2.024	1.955	97	1.994	99	28-166	5-189	2	0-40	
1,3,5-Trimethylbenzene	2.458	1.801	73	1.951	79	50-150	33-167	8	0-30	
1,3-Dichlorobenzene	3.006	2.407	80	2.644	88	50-150	33-167	9	0-30	
1,4-Dichlorobenzene	3.006	2.299	76	2.518	84	50-150	33-167	9	0-30	
4-Ethyltoluene	2.458	1.854	75	1.974	80	50-150	33-167	6	0-30	
Benzene	1.597	1.423	89	1.413	88	27-153	6-174	1	0-34	
Bromodichloromethane	3.350	3.602	108	3.607	108	50-150	33-167	0	0-30	
Carbon Tetrachloride	3.146	3.553	113	3.570	114	7-187	0-217	0	0-31	
Chlorobenzene	2.302	1.905	83	1.948	85	50-150	33-167	2	0-30	
Chloroethane	1.319	1.030	78	1.018	77	50-150	33-167	1	0-30	
Chloroform	2.441	2.272	93	2.266	93	50-150	33-167	0	0-30	
Chloromethane	1.033	0.7215	70	0.6947	67	50-150	33-167	4	0-30	
Dibromochloromethane	4.259	3.848	90	4.069	96	50-150	33-167	6	0-30	
Dichlorodifluoromethane	2.473	2.237	90	2.153	87	50-150	33-167	4	0-30	
Ethylbenzene	2.171	1.678	77	1.758	81	27-153	6-174	5	0-46	
Hexachloro-1,3-Butadiene	5.333	3.673	69	4.878	91	50-150	33-167	28	0-30	
Methyl-t-Butyl Ether (MTBE)	1.803	1.298	72	1.353	75	50-150	33-167	4	0-30	
Methylene Chloride	1.737	1.331	77	1.317	76	50-150	33-167	1	0-30	
Tetrachloroethene	3.391	2.913	86	3.097	91	34-154	14-174	6	0-33	
Toluene	1.884	1.391	74	1.440	76	28-154	7-175	3	0-42	
Trichloroethene	2.687	2.493	93	2.496	93	43-139	27-155	0	0-31	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 14 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Trichlorofluoromethane	2.809	2.795	100	2.798	100	50-150	33-167	0	0-30	
Vinyl Chloride	1.278	0.8990	70	0.8512	67	44-140	28-156	5	0-33	
c-1,2-Dichloroethene	1.982	1.563	79	1.535	77	35-165	13-187	2	0-35	
o-Xylene	2.171	1.618	75	1.716	79	22-160	0-183	6	0-48	
p/m-Xylene	4.342	3.382	78	3.569	82	21-165	0-189	5	0-51	
t-1,2-Dichloroethene	1.982	1.574	79	1.555	78	50-150	33-167	1	0-30	
Styrene	2.130	1.526	72	1.626	76	50-150	33-167	6	0-30	

Total number of LCS compounds: 42
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 15 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-387	**LCS**	**Air**	**GC/MS DD**	**N/A**	**10/07/17 19:55**	**171007L01**
099-15-214-387	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**10/07/17 20:44**	**171007L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,2-Dichloroethane-d4	1.053	1.226	116	1.218	116	37-163	
1,4-Bromofluorobenzene	1.789	1.856	104	1.954	109	45-153	
Toluene-d8	1.024	1.049	102	1.038	101	73-121	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM
130 Robin Hill Road, Suite 100
Santa Barbara, CA 93117-3153

Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5

Date Received: 09/28/17
Work Order: 17-09-2204
Preparation: N/A
Method: EPA TO-15 SIM
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-389	**LCS**	**Air**	**GC/MS DD**	**N/A**	**10/09/17 12:01**	**171009L02**
099-15-214-389	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**10/09/17 12:49**	**171009L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	3.842	2.927	76	3.073	80	50-150	33-167	5	0-30	
Dichlorotetrafluoroethane	3.495	2.999	86	3.160	90	50-150	33-167	5	0-30	
1,2-Dichloropropane	2.311	1.988	86	1.958	85	50-150	33-167	1	0-30	
Bromomethane	1.942	1.388	71	1.406	72	50-150	33-167	1	0-30	
c-1,3-Dichloropropene	2.269	1.951	86	1.919	85	50-150	33-167	2	0-30	
t-1,3-Dichloropropene	2.269	2.031	90	1.967	87	50-150	33-167	3	0-30	
1,1,1-Trichloroethane	2.728	2.933	108	2.931	107	50-150	33-167	0	0-30	
1,1,2,2-Tetrachloroethane	3.433	2.746	80	2.922	85	50-150	33-167	6	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.072	80	3.109	81	50-150	33-167	1	0-30	
1,1,2-Trichloroethane	2.728	2.594	95	2.566	94	27-171	3-195	1	0-38	
1,1-Dichloroethane	2.024	1.528	76	1.529	76	50-150	33-167	0	0-30	
1,1-Dichloroethene	1.982	1.450	73	1.458	74	50-150	33-167	1	0-30	
1,2,4-Trimethylbenzene	2.458	1.815	74	1.905	78	50-150	33-167	5	0-30	
1,2-Dichlorobenzene	3.006	2.138	71	2.375	79	50-150	33-167	10	0-30	
1,2-Dichloroethane	2.024	1.881	93	1.873	93	28-166	5-189	0	0-40	
1,3,5-Trimethylbenzene	2.458	1.592	65	1.728	70	50-150	33-167	8	0-30	
1,3-Dichlorobenzene	3.006	2.184	73	2.407	80	50-150	33-167	10	0-30	
1,4-Dichlorobenzene	3.006	2.072	69	2.292	76	50-150	33-167	10	0-30	
4-Ethyltoluene	2.458	1.622	66	1.748	71	50-150	33-167	7	0-30	
Benzene	1.597	1.327	83	1.316	82	27-153	6-174	1	0-34	
Bromodichloromethane	3.350	3.486	104	3.443	103	50-150	33-167	1	0-30	
Carbon Tetrachloride	3.146	3.441	109	3.431	109	7-187	0-217	0	0-31	
Chlorobenzene	2.302	1.734	75	1.760	76	50-150	33-167	1	0-30	
Chloroethane	1.319	0.9506	72	0.9361	71	50-150	33-167	2	0-30	
Chloroform	2.441	2.106	86	2.117	87	50-150	33-167	1	0-30	
Chloromethane	1.033	0.6887	67	0.6775	66	50-150	33-167	2	0-30	
Dibromochloromethane	4.259	3.528	83	3.787	89	50-150	33-167	7	0-30	
Dichlorodifluoromethane	2.473	2.160	87	2.112	85	50-150	33-167	2	0-30	
Ethylbenzene	2.171	1.489	69	1.479	68	27-153	6-174	1	0-46	
Hexachloro-1,3-Butadiene	5.333	3.336	63	4.374	82	50-150	33-167	27	0-30	
Methyl-t-Butyl Ether (MTBE)	1.803	1.060	59	1.241	69	50-150	33-167	16	0-30	
Methylene Chloride	1.737	1.219	70	1.230	71	50-150	33-167	1	0-30	
Tetrachloroethene	3.391	2.680	79	2.856	84	34-154	14-174	6	0-33	
Toluene	1.884	1.229	65	1.292	69	28-154	7-175	5	0-42	
Trichloroethene	2.687	2.321	86	2.328	87	43-139	27-155	0	0-31	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 17 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Trichlorofluoromethane	2.809	2.595	92	2.644	94	50-150	33-167	2	0-30	
Vinyl Chloride	1.278	0.8476	66	0.8300	65	44-140	28-156	2	0-33	
c-1,2-Dichloroethene	1.982	1.400	71	1.400	71	35-165	13-187	0	0-35	
o-Xylene	2.171	1.443	66	1.520	70	22-160	0-183	5	0-48	
p/m-Xylene	4.342	3.023	70	3.122	72	21-165	0-189	3	0-51	
t-1,2-Dichloroethene	1.982	1.435	72	1.430	72	50-150	33-167	0	0-30	
Styrene	2.130	1.328	62	1.348	63	50-150	33-167	1	0-30	

Total number of LCS compounds: 42
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 18 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-389	**LCS**	**Air**	**GC/MS DD**	**N/A**	**10/09/17 12:01**	**171009L02**
099-15-214-389	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**10/09/17 12:49**	**171009L02**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,2-Dichloroethane-d4	1.053	1.275	121	1.269	121	37-163	
1,4-Bromofluorobenzene	1.789	1.893	106	2.001	112	45-153	
Toluene-d8	1.024	1.063	104	1.048	102	73-121	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 19 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-388	**LCS**	**Air**	**GC/MS DD**	**N/A**	**10/10/17 18:34**	**171010L01**
099-15-214-388	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**10/10/17 19:29**	**171010L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	3.842	3.143	82	3.146	82	50-150	33-167	0	0-30	
Dichlorotetrafluoroethane	3.495	3.098	89	3.165	91	50-150	33-167	2	0-30	
1,2-Dichloropropane	2.311	1.972	85	1.968	85	50-150	33-167	0	0-30	
Bromomethane	1.942	1.409	73	1.436	74	50-150	33-167	2	0-30	
c-1,3-Dichloropropene	2.269	1.928	85	1.915	84	50-150	33-167	1	0-30	
t-1,3-Dichloropropene	2.269	1.974	87	1.957	86	50-150	33-167	1	0-30	
1,1,1-Trichloroethane	2.728	2.915	107	2.925	107	50-150	33-167	0	0-30	
1,1,2,2-Tetrachloroethane	3.433	2.984	87	2.986	87	50-150	33-167	0	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3.832	3.088	81	3.143	82	50-150	33-167	2	0-30	
1,1,2-Trichloroethane	2.728	2.574	94	2.576	94	27-171	3-195	0	0-38	
1,1-Dichloroethane	2.024	1.540	76	1.546	76	50-150	33-167	0	0-30	
1,1-Dichloroethene	1.982	1.477	74	1.492	75	50-150	33-167	1	0-30	
1,2,4-Trimethylbenzene	2.458	2.012	82	2.046	83	50-150	33-167	2	0-30	
1,2-Dichlorobenzene	3.006	2.402	80	2.429	81	50-150	33-167	1	0-30	
1,2-Dichloroethane	2.024	1.869	92	1.887	93	28-166	5-189	1	0-40	
1,3,5-Trimethylbenzene	2.458	1.766	72	1.783	73	50-150	33-167	1	0-30	
1,3-Dichlorobenzene	3.006	2.433	81	2.466	82	50-150	33-167	1	0-30	
1,4-Dichlorobenzene	3.006	2.313	77	2.324	77	50-150	33-167	0	0-30	
4-Ethyltoluene	2.458	1.792	73	1.805	73	50-150	33-167	1	0-30	
Benzene	1.597	1.320	83	1.319	83	27-153	6-174	0	0-34	
Bromodichloromethane	3.350	3.443	103	3.453	103	50-150	33-167	0	0-30	
Carbon Tetrachloride	3.146	3.412	108	3.427	109	7-187	0-217	0	0-31	
Chlorobenzene	2.302	1.789	78	1.812	79	50-150	33-167	1	0-30	
Chloroethane	1.319	0.9556	72	0.9549	72	50-150	33-167	0	0-30	
Chloroform	2.441	2.124	87	2.140	88	50-150	33-167	1	0-30	
Chloromethane	1.033	0.6794	66	0.6775	66	50-150	33-167	0	0-30	
Dibromochloromethane	4.259	3.829	90	3.867	91	50-150	33-167	1	0-30	
Dichlorodifluoromethane	2.473	2.138	86	2.159	87	50-150	33-167	1	0-30	
Ethylbenzene	2.171	1.517	70	1.512	70	27-153	6-174	0	0-46	
Hexachloro-1,3-Butadiene	5.333	4.401	83	4.547	85	50-150	33-167	3	0-30	
Methyl-t-Butyl Ether (MTBE)	1.803	1.223	68	1.070	59	50-150	33-167	13	0-30	
Methylene Chloride	1.737	1.234	71	1.246	72	50-150	33-167	1	0-30	
Tetrachloroethene	3.391	2.881	85	2.918	86	34-154	14-174	1	0-33	
Toluene	1.884	1.318	70	1.321	70	28-154	7-175	0	0-42	
Trichloroethene	2.687	2.323	86	2.330	87	43-139	27-155	0	0-31	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 20 of 21

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Trichlorofluoromethane	2.809	2.612	93	2.666	95	50-150	33-167	2	0-30	
Vinyl Chloride	1.278	0.8303	65	0.8315	65	44-140	28-156	0	0-33	
c-1,2-Dichloroethene	1.982	1.413	71	1.416	71	35-165	13-187	0	0-35	
o-Xylene	2.171	1.564	72	1.563	72	22-160	0-183	0	0-48	
p/m-Xylene	4.342	3.214	74	3.216	74	21-165	0-189	0	0-51	
t-1,2-Dichloroethene	1.982	1.440	73	1.445	73	50-150	33-167	0	0-30	
Styrene	2.130	1.433	67	1.423	67	50-150	33-167	1	0-30	

Total number of LCS compounds: 42
Total number of ME compounds: 0
Total number of ME compounds allowed: 2
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	09/28/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2204
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15 SIM
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 21 of 21

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-214-388	**LCS**	**Air**	**GC/MS DD**	**N/A**	**10/10/17 18:34**	**171010L01**
099-15-214-388	**LCSD**	**Air**	**GC/MS DD**	**N/A**	**10/10/17 19:29**	**171010L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,2-Dichloroethane-d4	1.053	1.263	120	1.269	120	37-163	
1,4-Bromofluorobenzene	1.789	1.985	111	1.973	110	45-153	
Toluene-d8	1.024	1.048	102	1.046	102	73-121	

RPD: Relative Percent Difference. CL: Control Limits

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Summa Canister Vacuum Summary

Work Order: 17-09-2204

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
WAS00019	-29.50 in Hg	-0.40 in Hg	D203	Summa Canister 6L
WAS00014	-29.50 in Hg	-3.40 in Hg	D073	Summa Canister 6L
WAS00017	-29.50 in Hg	-3.90 in Hg	D544	Summa Canister 6L
WAS00022	-29.50 in Hg	-4.40 in Hg	SIM091	Summa Canister 6L
WAS00028	-29.50 in Hg	-1.00 in Hg	D854	Summa Canister 6L
WAS00023	-29.50 in Hg	-7.20 in Hg	D665	Summa Canister 6L
WAS00008	-29.50 in Hg	-6.20 in Hg	D820	Summa Canister 6L
WAS00015	-29.50 in Hg	-6.40 in Hg	D756	Summa Canister 6L
WAS00016	-29.50 in Hg	-3.70 in Hg	D474	Summa Canister 6L
WAS00012	-29.50 in Hg	-3.00 in Hg	D178	Summa Canister 6L
AAS00328	-29.50 in Hg	-5.40 in Hg	D329	Summa Canister 6L
AAS00327	-29.50 in Hg	-2.80 in Hg	D717	Summa Canister 6L
WAS00010	-29.50 in Hg	-3.60 in Hg	D459	Summa Canister 6L
WAS00018	-29.50 in Hg	-2.70 in Hg	D425	Summa Canister 6L
WAS00021	-29.50 in Hg	-4.40 in Hg	D695	Summa Canister 6L
WAS00020	-29.50 in Hg	-5.40 in Hg	D719	Summa Canister 6L
WAS00027	-29.50 in Hg	-7.00 in Hg	D221	Summa Canister 6L
WAS00013	-29.50 in Hg	-3.20 in Hg	D792	Summa Canister 6L
WAS00007	-29.50 in Hg	-5.60 in Hg	D306	Summa Canister 6L
WAS00009	-29.50 in Hg	-3.60 in Hg	D758	Summa Canister 6L
WAS00026	-29.50 in Hg	-5.80 in Hg	SLC067	Summa Canister 1L
WAS00024	-29.50 in Hg	-0.80 in Hg	LC848	Summa Canister 1L
WAS00025	-29.50 in Hg	-2.30 in Hg	LC360	Summa Canister 1L
WAS00029	-29.50 in Hg	-4.80 in Hg	D711	Summa Canister 6L
WAS00011	-29.50 in Hg	0.00 in Hg	SIM006	Summa Canister 6L

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Sample Analysis Summary Report

Work Order: 17-09-2204

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA TO-15	N/A	1087	GC/MS HH	2
EPA TO-15 SIM	N/A	460	GC/MS DD	2

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Glossary of Terms and Qualifiers

Work Order: 17-09-2204 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
- ☐ ACCUTEST (_____)
- ☑ CALSCIENCE (_____)
- ☐ TESTAMERICA (_____)
- ☐ Other (_____)

Lab Vendor # 1080777 (CalScience)

Please Check Appropriate Box:
- ☑ SGW FDG
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Julie Doane-Allmon

PlaNet Project ID: IDEA000680

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 9/28/2017

PAGE: 1 of 3

PO #: 962220

GSAP Project ID: USCH/00305

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: Del Amo Superfund Site, 20245 S. Vermont Ave., Torrance

State: CA

AECOM Project / Task Number: 60487624.2017.1.2.5

ADDRESS: 130 Robin Hill Road, Suite 100, Santa Barbara CA, 93117

EDF DELIVERABLE TO (Name, Company, Office Location): Steve Cole, AECOM, 300 S. Grand Ave., Ste. 800, LA, CA 90071

PHONE NO.: Direct: 213-996-2398

E-MAIL: steve.j.cole@aecom.com

CONSULTANT PROJECT NO.:

PROJECT CONTACT (Hardcopy or PDF Report to): Julie Doane-Allmon, Erich Weaver

TELEPHONE: 805 692 0618 or 805-692-0648

FAX: 805-964-0259

Bill To Contact E-MAIL: julie.doane-allmon@aecom.com

SAMPLER NAME(S) (Print): S. Palladino/B. Stempson/C.Eckert

LAB USE ONLY: 17-09-2204

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email results to: julie.doane-allmon@aecom.com; erich.weaver@aecom.com; steve.j.cole@aecom.com; jude.francis@aecom.com; and margaret.pittman@aecom.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	(St LAB-125) VOCs + MTBE EPA 8260B	VOC Full List EPA TO-15 SIM	TO-15	Container PID Readings or Laboratory Notes
1	WAS00019	9/27/2017	1810	air				x		1		X		-
2	WAS00014	9/27/2017	1731	air				x		1		X		
3	WAS00017	9/27/2017	1758	air				x		1		X		
4	WAS00022	9/27/2017	625	air				x		1		X		
5	WAS00028	9/27/2017	716	air				x		1		X		
6	WAS00023	9/27/2017	615	air				x		1		X		
7	WAS00008	9/27/2017	731	air				x		1		X		
8	WAS00015	9/27/2017	715	air				x		1		X		
9	WAS00016	9/27/2017	716	air				x		1		X		
10	WAS00012	9/27/2017	621	air				x		1		X		

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature] ECI	9/28/17	1235
Rudy N	[signature]	9/28/17	1420

Version: 11Dec15

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Shell Oil Products US Chain Of Custody Record

AECOM

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Lab Vendor # 1080777 (CalScience)

Please Check Appropriate Box:
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- ☐ SHELL PIPELINE
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Print Bill To Contact Name: Julie Doane-Allmon

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DATE: 9/28/2017

PAGE: 2 of 3

PO #: 962220

GSAP Project ID: USCH/00305

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: Del Amo Superfund Site, 20245 S. Vermont Ave., Torrance

State: CA

AECOM Project / Task Number: 60487624.2017.1.2.5

ADDRESS: 130 Robin Hill Road, Suite 100, Santa Barbara CA, 93117

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PHONE NO.: Direct: 213-996-2398

E-MAIL: steve.j.cole@aecom.com

CONSULTANT PROJECT NO.:

PROJECT CONTACT (Hardcopy or PDF Report to): Julie Doane-Allmon, Erich Weaver

TELEPHONE: 805 692 0618 or 805-692-0648

FAX: 805-964-0259

Bill To Contact E-MAIL: julie.doane-allmon@aecom.com

SAMPLER NAME(S) (Print): S. Palladino/B. Stempson/C.Eckert

LAB USE ONLY: 2204

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
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- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
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REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	(SI LAB-125) VOCs + MTBE EPA 8260B	VOC Full List EPA TO-15 SIM	TO-15	Container PID Readings or Laboratory Notes
11	AAS00328	9/27/2017	505	air				x		1		X		
12	AAS00327	9/27/2017	535	air				x		1		X		
13	WAS00010	9/27/2017	635	air				x		1		X		
14	WAS00018	9/27/2017	720	air				x		1		X		
15	WAS00021	9/27/2017	623	air				x		1		X		
16	WAS00020	9/27/2017	722	air				x		1		X		
17	WAS00027	9/27/2017	715	air				x		1		X		
18	WAS00013	9/27/2017	631	air				x		1		X		
19	WAS00007	9/27/2017	735	air				x		1		X		
20	WAS00009	9/27/2017	617	air				x		1		X		

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	9/28/17	1235
[signature]	[signature]	9/28/17	1420

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Shell Oil Products US Chain Of Custody Record

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SAMPLER NAME(S) (Print): S. Palladino/B. Stempson/C.Eckert

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DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
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- ☐ STATE REIMBURSEMENT RATE APPLIES
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- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	(SL LAB-125) VOCs + MTBE EPA 8260B	VOC Full List EPA TO-15 SIM	TO-15	Container PID Readings or Laboratory Notes
21	WAS00026	9/27/2017	1412	air				x		1			X	
22	WAS00024	9/27/2017	1347	air				x		1			X	
23	WAS00025	9/27/2017	1402	air				x		1			X	
24	WAS00029	9/27/2017	805	air				x		1		X		
25	WAS00011	9/27/2017	1735	air				x		1		X		

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	Rudy [signature] ECI	9/28/17	1235
Rudy [signature]	[signature]	9/28/17	1420

Version: 11Dec15

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WORK ORDER NUMBER: 17-09-2204

SAMPLE RECEIPT CHECKLIST

COOLER 0 OF 0

CLIENT: AECOM

DATE: 09 / 28 / 2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): _____°C (w/ CF): _____°C; ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☑ Air ☐ Filter Checked by: 676

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☐ Not Present ☑ N/A Checked by: 676

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 300

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: **(Trip Blank Lot Number: _____)**

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☑ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, Labeled/Checked by: 300

s = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH Reviewed by: 876

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Work Order Number: 17-09-2359

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Work Order Narrative

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/29/17. They were assigned to Work Order 17-09-2359.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2359
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		PO Number:	92793
		Date/Time Received:	09/29/17 13:40
		Number of Containers:	7
Attn:	Julie Doane-Allmon		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
VSS01323	17-09-2359-1	09/29/17 08:35	1	Air
VSS01324	17-09-2359-2	09/29/17 09:19	1	Air
VSS01327	17-09-2359-3	09/29/17 10:09	1	Air
VSS01325	17-09-2359-4	09/29/17 11:02	1	Air
VSS01328	17-09-2359-5	09/29/17 11:02	1	Air
VSS01321	17-09-2359-6	09/29/17 00:00	1	Air
VSS01326	17-09-2359-7	09/29/17 12:56	1	Air

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QC Association Summary

Work Order: 17-09-2359

Client Sample ID	Method Name	Type	Ext Name	Instrument	MS/MSD/SDP	LCS/LCSD
VSS01323	EPA TO-15 Full List		N/A	GC/MS HH		171010L01
VSS01324	EPA TO-15 Full List		N/A	GC/MS HH		171007L01
VSS01324	EPA TO-15 Full List	R	N/A	GC/MS HH		171010L01
VSS01327	EPA TO-15 Full List		N/A	GC/MS HH		171007L01
VSS01327	EPA TO-15 Full List	R	N/A	GC/MS HH		171010L01
VSS01325	EPA TO-15 Full List		N/A	GC/MS HH		171007L01
VSS01325	EPA TO-15 Full List	R	N/A	GC/MS HH		171010L01
VSS01328	EPA TO-15 Full List		N/A	GC/MS HH		171007L01
VSS01328	EPA TO-15 Full List	R	N/A	GC/MS HH		171010L01
VSS01321	EPA TO-15 Full List		N/A	GC/MS HH		171010L01
VSS01326	EPA TO-15 Full List		N/A	GC/MS HH		171010L01

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2359
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		Received:	09/29/17
Attn:	Julie Doane-Allmon		Page 1 of 3

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
VSS01323 (17-09-2359-1)						
Acetone	14		4.8	ug/m3	EPA TO-15	N/A
Chloroform	0.88	J	0.53*	ug/m3	EPA TO-15	N/A
Chloromethane	0.57	J	0.30*	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	3.4		2.5	ug/m3	EPA TO-15	N/A
Isopropanol	4.8	J	2.6*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	85		3.5	ug/m3	EPA TO-15	N/A
Toluene	3.2		1.9	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	67		2.8	ug/m3	EPA TO-15	N/A
Trichloroethene	7.6		2.7	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	8.1		5.7	ug/m3	EPA TO-15	N/A
VSS01324 (17-09-2359-2)						
Chloroform	34		24	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	12	J	10*	ug/m3	EPA TO-15	N/A
1,1-Dichloroethane	5.2	J	3.9*	ug/m3	EPA TO-15	N/A
1,1-Dichloroethene	17	J	3.6*	ug/m3	EPA TO-15	N/A
c-1,2-Dichloroethene	240		20	ug/m3	EPA TO-15	N/A
t-1,2-Dichloroethene	120		20	ug/m3	EPA TO-15	N/A
Tetrachloroethene	12000		340	ug/m3	EPA TO-15	N/A
Trichloroethene	17000		270	ug/m3	EPA TO-15	N/A
VSS01327 (17-09-2359-3)						
Acetone	63		48	ug/m3	EPA TO-15	N/A
Benzene	28		16	ug/m3	EPA TO-15	N/A
Chloroform	250		24	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	47		25	ug/m3	EPA TO-15	N/A
Tetrachloroethene	110000		3400	ug/m3	EPA TO-15	N/A
1,1,1-Trichloroethane	31		27	ug/m3	EPA TO-15	N/A
Trichloroethene	82000		2700	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	130		56	ug/m3	EPA TO-15	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	57	J	49*	ug/m3	EPA TO-15	N/A

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* MDL is shown

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2359
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		Received:	09/29/17
Attn:	Julie Doane-Allmon		Page 2 of 3

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
VSS01325 (17-09-2359-4)						
Acetone	140		48	ug/m3	EPA TO-15	N/A
Benzene	42		16	ug/m3	EPA TO-15	N/A
Chloroform	370		24	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	100		25	ug/m3	EPA TO-15	N/A
1,1-Dichloroethene	350		20	ug/m3	EPA TO-15	N/A
c-1,2-Dichloroethene	69		20	ug/m3	EPA TO-15	N/A
t-1,2-Dichloroethene	70		20	ug/m3	EPA TO-15	N/A
Isopropanol	87	J	26*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	230000		3400	ug/m3	EPA TO-15	N/A
Trichloroethene	130000		2700	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	400		56	ug/m3	EPA TO-15	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	140		110	ug/m3	EPA TO-15	N/A
VSS01328 (17-09-2359-5)						
Acetone	150		48	ug/m3	EPA TO-15	N/A
Benzene	38		16	ug/m3	EPA TO-15	N/A
Chloroform	350		24	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	100		25	ug/m3	EPA TO-15	N/A
1,1-Dichloroethene	330		20	ug/m3	EPA TO-15	N/A
c-1,2-Dichloroethene	67		20	ug/m3	EPA TO-15	N/A
t-1,2-Dichloroethene	68		20	ug/m3	EPA TO-15	N/A
Isopropanol	82	J	26*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	190000		3400	ug/m3	EPA TO-15	N/A
Trichloroethene	110000		2700	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	380		56	ug/m3	EPA TO-15	N/A
1,1,2-Trichloro-1,2,2-Trifluoroethane	130		110	ug/m3	EPA TO-15	N/A

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* MDL is shown

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-09-2359
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		Received:	09/29/17
Attn:	Julie Doane-Allmon		Page 3 of 3

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
VSS01321 (17-09-2359-6)						
Acetone	54		4.8	ug/m3	EPA TO-15	N/A
Benzene	0.97	J	0.27*	ug/m3	EPA TO-15	N/A
2-Butanone	5.3		4.4	ug/m3	EPA TO-15	N/A
Carbon Disulfide	2.9	J	2.3*	ug/m3	EPA TO-15	N/A
Chloroethane	3.6		1.3	ug/m3	EPA TO-15	N/A
Chloroform	3.3		2.4	ug/m3	EPA TO-15	N/A
Chloromethane	0.88	J	0.30*	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	4.0		2.5	ug/m3	EPA TO-15	N/A
1,1-Dichloroethane	0.47	J	0.39*	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	44		5.4	ug/m3	EPA TO-15	N/A
Isopropanol	7.4	J	2.6*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	30		3.4	ug/m3	EPA TO-15	N/A
Toluene	3.8		1.9	ug/m3	EPA TO-15	N/A
Trichloroethene	1.8	J	0.61*	ug/m3	EPA TO-15	N/A
Trichlorofluoromethane	8.5		5.6	ug/m3	EPA TO-15	N/A
VSS01326 (17-09-2359-7)						
Acetone	140		4.8	ug/m3	EPA TO-15	N/A
Benzene	4.3		1.6	ug/m3	EPA TO-15	N/A
Bromomethane	1.2	J	1.0*	ug/m3	EPA TO-15	N/A
2-Butanone	10		4.4	ug/m3	EPA TO-15	N/A
Chloroform	2.3	J	0.52*	ug/m3	EPA TO-15	N/A
Chloromethane	1.7		1.0	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	3.2		2.5	ug/m3	EPA TO-15	N/A
Ethylbenzene	7.3		2.2	ug/m3	EPA TO-15	N/A
4-Ethyltoluene	2.5		2.5	ug/m3	EPA TO-15	N/A
Isopropanol	16		12	ug/m3	EPA TO-15	N/A
Tetrachloroethene	27		3.4	ug/m3	EPA TO-15	N/A
Toluene	12		1.9	ug/m3	EPA TO-15	N/A
Trichloroethene	2.3	J	0.61*	ug/m3	EPA TO-15	N/A
1,2,4-Trimethylbenzene	6.3	J	5.0*	ug/m3	EPA TO-15	N/A
o-Xylene	5.5		2.2	ug/m3	EPA TO-15	N/A
p/m-Xylene	19		8.7	ug/m3	EPA TO-15	N/A

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 1 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01323	**17-09-2359-1-A**	**09/29/17 08:35**	**Air**	**GC/MS HH**	**N/A**	**10/11/17 00:33**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.02	
Acetone	14	4.8	2.7	1.02	
Benzene	ND	1.6	0.28	1.02	
Benzyl Chloride	ND	7.9	2.4	1.02	
Bromodichloromethane	ND	3.4	0.64	1.02	
Bromoform	ND	5.3	3.2	1.02	
Bromomethane	ND	2.0	1.0	1.02	
2-Butanone	ND	4.5	2.1	1.02	
n-Butylbenzene	ND	2.8	1.8	1.02	
sec-Butylbenzene	ND	2.8	1.4	1.02	
tert-Butylbenzene	ND	2.8	1.4	1.02	
Carbon Disulfide	ND	6.4	2.4	1.02	
Carbon Tetrachloride	ND	3.2	0.63	1.02	
Chlorobenzene	ND	2.3	0.47	1.02	
Chloroethane	ND	1.3	0.88	1.02	
Chloroform	0.88	2.5	0.53	1.02	J
Chloromethane	0.57	1.1	0.30	1.02	J
Dibromochloromethane	ND	4.3	0.98	1.02	
1,2-Dibromoethane	ND	3.9	1.2	1.02	
1,2-Dichlorobenzene	ND	3.1	1.7	1.02	
1,3-Dichlorobenzene	ND	3.1	1.9	1.02	
1,4-Dichlorobenzene	ND	3.1	1.7	1.02	
Dichlorodifluoromethane	3.4	2.5	1.1	1.02	
1,1-Dichloroethane	ND	2.1	0.40	1.02	
1,2-Dichloroethane	ND	2.1	0.55	1.02	
1,1-Dichloroethene	ND	2.0	0.37	1.02	
c-1,2-Dichloroethene	ND	2.0	1.1	1.02	
t-1,2-Dichloroethene	ND	2.0	0.97	1.02	
1,2-Dichloropropane	ND	2.4	0.38	1.02	
c-1,3-Dichloropropene	ND	2.3	1.3	1.02	
t-1,3-Dichloropropene	ND	4.6	1.2	1.02	
Dichlorotetrafluoroethane	ND	14	6.0	1.02	
1,1-Difluoroethane	ND	5.5	3.0	1.02	
Ethylbenzene	ND	2.2	1.7	1.02	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 2 of 22

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	2.5	1.7	1.02	
Hexachloro-1,3-Butadiene	ND	16	13	1.02	
2-Hexanone	ND	6.3	3.4	1.02	
Isopropanol	4.8	13	2.6	1.02	J
Methyl-t-Butyl Ether (MTBE)	ND	7.4	2.5	1.02	
Methylene Chloride	ND	18	3.9	1.02	
4-Methyl-2-Pentanone	ND	6.3	4.2	1.02	
Styrene	ND	6.5	1.6	1.02	
1,1,2,2-Tetrachloroethane	ND	7.0	2.7	1.02	
Tetrachloroethene	85	3.5	0.75	1.02	
Toluene	3.2	1.9	1.4	1.02	
1,1,1-Trichloroethane	67	2.8	0.62	1.02	
1,1,2-Trichloroethane	ND	2.8	0.64	1.02	
Trichloroethene	7.6	2.7	0.62	1.02	
Trichlorofluoromethane	8.1	5.7	4.7	1.02	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	5.0	1.02	
1,2,4-Trimethylbenzene	ND	7.5	5.1	1.02	
1,3,5-Trimethylbenzene	ND	2.5	1.9	1.02	
Vinyl Acetate	ND	7.2	3.7	1.02	
Vinyl Chloride	ND	1.3	0.36	1.02	
o-Xylene	ND	2.2	1.4	1.02	
p/m-Xylene	ND	8.9	3.5	1.02	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	100	68-134	
1,2-Dichloroethane-d4	98	67-133	
Toluene-d8	95	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 3 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01324	**17-09-2359-2-A**	**09/29/17 09:19**	**Air**	**GC/MS HH**	**N/A**	**10/08/17 02:31**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	150	110	10.0	
Acetone	ND	48	26	10.0	
Benzene	ND	16	2.7	10.0	
Benzyl Chloride	ND	78	24	10.0	
Bromodichloromethane	ND	34	6.3	10.0	
Bromoform	ND	52	31	10.0	
Bromomethane	ND	19	10	10.0	
2-Butanone	ND	44	21	10.0	
n-Butylbenzene	ND	27	18	10.0	
sec-Butylbenzene	ND	27	14	10.0	
tert-Butylbenzene	ND	27	14	10.0	
Carbon Disulfide	ND	62	23	10.0	
Carbon Tetrachloride	ND	31	6.1	10.0	
Chlorobenzene	ND	23	4.6	10.0	
Chloroethane	ND	13	8.6	10.0	
Chloroform	34	24	5.2	10.0	
Chloromethane	ND	10	3.0	10.0	
Dibromochloromethane	ND	43	9.6	10.0	
1,2-Dibromoethane	ND	38	12	10.0	
1,2-Dichlorobenzene	ND	30	17	10.0	
1,3-Dichlorobenzene	ND	30	18	10.0	
1,4-Dichlorobenzene	ND	30	17	10.0	
Dichlorodifluoromethane	12	25	10	10.0	J
1,1-Dichloroethane	5.2	20	3.9	10.0	J
1,2-Dichloroethane	ND	20	5.4	10.0	
1,1-Dichloroethene	17	20	3.6	10.0	J
c-1,2-Dichloroethene	240	20	11	10.0	
t-1,2-Dichloroethene	120	20	9.5	10.0	
1,2-Dichloropropane	ND	23	3.8	10.0	
c-1,3-Dichloropropene	ND	23	12	10.0	
t-1,3-Dichloropropene	ND	45	11	10.0	
Dichlorotetrafluoroethane	ND	140	59	10.0	
1,1-Difluoroethane	ND	54	29	10.0	
Ethylbenzene	ND	22	17	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 4 of 22

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	25	16	10.0	
Hexachloro-1,3-Butadiene	ND	160	130	10.0	
2-Hexanone	ND	61	33	10.0	
Isopropanol	ND	120	26	10.0	
Methyl-t-Butyl Ether (MTBE)	ND	72	24	10.0	
Methylene Chloride	ND	170	38	10.0	
4-Methyl-2-Pentanone	ND	61	41	10.0	
Styrene	ND	64	15	10.0	
1,1,2,2-Tetrachloroethane	ND	69	27	10.0	
Toluene	ND	19	14	10.0	
1,1,1-Trichloroethane	ND	27	6.1	10.0	
1,1,2-Trichloroethane	ND	27	6.3	10.0	
Trichlorofluoromethane	ND	56	46	10.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	110	49	10.0	
1,2,4-Trimethylbenzene	ND	74	50	10.0	
1,3,5-Trimethylbenzene	ND	25	18	10.0	
Vinyl Acetate	ND	70	36	10.0	
Vinyl Chloride	ND	13	3.5	10.0	
o-Xylene	ND	22	14	10.0	
p/m-Xylene	ND	87	34	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	110	68-134	
1,2-Dichloroethane-d4	96	67-133	
Toluene-d8	91	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 5 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01324	**17-09-2359-2-A**	**09/29/17 09:19**	**Air**	**GC/MS HH**	**N/A**	**10/11/17 03:13**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	12000	340	74	100	
Trichloroethene	17000	270	61	100	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	104	68-134	
1,2-Dichloroethane-d4	98	67-133	
Toluene-d8	96	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 6 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01327	**17-09-2359-3-A**	**09/29/17 10:09**	**Air**	**GC/MS HH**	**N/A**	**10/08/17 03:21**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	150	110	10.0	
Acetone	63	48	26	10.0	
Benzene	28	16	2.7	10.0	
Benzyl Chloride	ND	78	24	10.0	
Bromodichloromethane	ND	34	6.3	10.0	
Bromoform	ND	52	31	10.0	
Bromomethane	ND	19	10	10.0	
2-Butanone	ND	44	21	10.0	
n-Butylbenzene	ND	27	18	10.0	
sec-Butylbenzene	ND	27	14	10.0	
tert-Butylbenzene	ND	27	14	10.0	
Carbon Disulfide	ND	62	23	10.0	
Carbon Tetrachloride	ND	31	6.1	10.0	
Chlorobenzene	ND	23	4.6	10.0	
Chloroethane	ND	13	8.6	10.0	
Chloroform	250	24	5.2	10.0	
Chloromethane	ND	10	3.0	10.0	
Dibromochloromethane	ND	43	9.6	10.0	
1,2-Dibromoethane	ND	38	12	10.0	
1,2-Dichlorobenzene	ND	30	17	10.0	
1,3-Dichlorobenzene	ND	30	18	10.0	
1,4-Dichlorobenzene	ND	30	17	10.0	
Dichlorodifluoromethane	47	25	10	10.0	
1,1-Dichloroethane	ND	20	3.9	10.0	
1,2-Dichloroethane	ND	20	5.4	10.0	
1,1-Dichloroethene	ND	20	3.6	10.0	
c-1,2-Dichloroethene	ND	20	11	10.0	
t-1,2-Dichloroethene	ND	20	9.5	10.0	
1,2-Dichloropropane	ND	23	3.8	10.0	
c-1,3-Dichloropropene	ND	23	12	10.0	
t-1,3-Dichloropropene	ND	45	11	10.0	
Dichlorotetrafluoroethane	ND	140	59	10.0	
1,1-Difluoroethane	ND	54	29	10.0	
Ethylbenzene	ND	22	17	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 7 of 22

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	25	16	10.0	
Hexachloro-1,3-Butadiene	ND	160	130	10.0	
2-Hexanone	ND	61	33	10.0	
Isopropanol	ND	120	26	10.0	
Methyl-t-Butyl Ether (MTBE)	ND	72	24	10.0	
Methylene Chloride	ND	170	38	10.0	
4-Methyl-2-Pentanone	ND	61	41	10.0	
Styrene	ND	64	15	10.0	
1,1,2,2-Tetrachloroethane	ND	69	27	10.0	
Toluene	ND	19	14	10.0	
1,1,1-Trichloroethane	31	27	6.1	10.0	
1,1,2-Trichloroethane	ND	27	6.3	10.0	
Trichlorofluoromethane	130	56	46	10.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	57	110	49	10.0	J
1,2,4-Trimethylbenzene	ND	74	50	10.0	
1,3,5-Trimethylbenzene	ND	25	18	10.0	
Vinyl Acetate	ND	70	36	10.0	
Vinyl Chloride	ND	13	3.5	10.0	
o-Xylene	ND	22	14	10.0	
p/m-Xylene	ND	87	34	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	111	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	92	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 8 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01327	**17-09-2359-3-A**	**09/29/17 10:09**	**Air**	**GC/MS HH**	**N/A**	**10/11/17 04:03**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	110000	3400	740	1000	
Trichloroethene	82000	2700	610	1000	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	104	68-134	
1,2-Dichloroethane-d4	100	67-133	
Toluene-d8	100	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 9 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01325	**17-09-2359-4-A**	**09/29/17 11:02**	**Air**	**GC/MS HH**	**N/A**	**10/08/17 04:10**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	150	110	10.0	
Acetone	140	48	26	10.0	
Benzene	42	16	2.7	10.0	
Benzyl Chloride	ND	78	24	10.0	
Bromodichloromethane	ND	34	6.3	10.0	
Bromoform	ND	52	31	10.0	
Bromomethane	ND	19	10	10.0	
2-Butanone	ND	44	21	10.0	
n-Butylbenzene	ND	27	18	10.0	
sec-Butylbenzene	ND	27	14	10.0	
tert-Butylbenzene	ND	27	14	10.0	
Carbon Disulfide	ND	62	23	10.0	
Carbon Tetrachloride	ND	31	6.1	10.0	
Chlorobenzene	ND	23	4.6	10.0	
Chloroethane	ND	13	8.6	10.0	
Chloroform	370	24	5.2	10.0	
Chloromethane	ND	10	3.0	10.0	
Dibromochloromethane	ND	43	9.6	10.0	
1,2-Dibromoethane	ND	38	12	10.0	
1,2-Dichlorobenzene	ND	30	17	10.0	
1,3-Dichlorobenzene	ND	30	18	10.0	
1,4-Dichlorobenzene	ND	30	17	10.0	
Dichlorodifluoromethane	100	25	10	10.0	
1,1-Dichloroethane	ND	20	3.9	10.0	
1,2-Dichloroethane	ND	20	5.4	10.0	
1,1-Dichloroethene	350	20	3.6	10.0	
c-1,2-Dichloroethene	69	20	11	10.0	
t-1,2-Dichloroethene	70	20	9.5	10.0	
1,2-Dichloropropane	ND	23	3.8	10.0	
c-1,3-Dichloropropene	ND	23	12	10.0	
t-1,3-Dichloropropene	ND	45	11	10.0	
Dichlorotetrafluoroethane	ND	140	59	10.0	
1,1-Difluoroethane	ND	54	29	10.0	
Ethylbenzene	ND	22	17	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 10 of 22

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	25	16	10.0	
Hexachloro-1,3-Butadiene	ND	160	130	10.0	
2-Hexanone	ND	61	33	10.0	
Isopropanol	87	120	26	10.0	J
Methyl-t-Butyl Ether (MTBE)	ND	72	24	10.0	
Methylene Chloride	ND	170	38	10.0	
4-Methyl-2-Pentanone	ND	61	41	10.0	
Styrene	ND	64	15	10.0	
1,1,2,2-Tetrachloroethane	ND	69	27	10.0	
Toluene	ND	19	14	10.0	
1,1,1-Trichloroethane	ND	27	6.1	10.0	
1,1,2-Trichloroethane	ND	27	6.3	10.0	
Trichlorofluoromethane	400	56	46	10.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	140	110	49	10.0	
1,2,4-Trimethylbenzene	ND	74	50	10.0	
1,3,5-Trimethylbenzene	ND	25	18	10.0	
Vinyl Acetate	ND	70	36	10.0	
Vinyl Chloride	ND	13	3.5	10.0	
o-Xylene	ND	22	14	10.0	
p/m-Xylene	ND	87	34	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	114	68-134	
1,2-Dichloroethane-d4	98	67-133	
Toluene-d8	91	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 11 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01325	**17-09-2359-4-A**	**09/29/17 11:02**	**Air**	**GC/MS HH**	**N/A**	**10/11/17 04:51**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	230000	3400	740	1000	
Trichloroethene	130000	2700	610	1000	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	105	68-134	
1,2-Dichloroethane-d4	102	67-133	
Toluene-d8	99	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 12 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01328	**17-09-2359-5-A**	**09/29/17 11:02**	**Air**	**GC/MS HH**	**N/A**	**10/08/17 05:00**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	150	110	10.0	
Acetone	150	48	26	10.0	
Benzene	38	16	2.7	10.0	
Benzyl Chloride	ND	78	24	10.0	
Bromodichloromethane	ND	34	6.3	10.0	
Bromoform	ND	52	31	10.0	
Bromomethane	ND	19	10	10.0	
2-Butanone	ND	44	21	10.0	
n-Butylbenzene	ND	27	18	10.0	
sec-Butylbenzene	ND	27	14	10.0	
tert-Butylbenzene	ND	27	14	10.0	
Carbon Disulfide	ND	62	23	10.0	
Carbon Tetrachloride	ND	31	6.1	10.0	
Chlorobenzene	ND	23	4.6	10.0	
Chloroethane	ND	13	8.6	10.0	
Chloroform	350	24	5.2	10.0	
Chloromethane	ND	10	3.0	10.0	
Dibromochloromethane	ND	43	9.6	10.0	
1,2-Dibromoethane	ND	38	12	10.0	
1,2-Dichlorobenzene	ND	30	17	10.0	
1,3-Dichlorobenzene	ND	30	18	10.0	
1,4-Dichlorobenzene	ND	30	17	10.0	
Dichlorodifluoromethane	100	25	10	10.0	
1,1-Dichloroethane	ND	20	3.9	10.0	
1,2-Dichloroethane	ND	20	5.4	10.0	
1,1-Dichloroethene	330	20	3.6	10.0	
c-1,2-Dichloroethene	67	20	11	10.0	
t-1,2-Dichloroethene	68	20	9.5	10.0	
1,2-Dichloropropane	ND	23	3.8	10.0	
c-1,3-Dichloropropene	ND	23	12	10.0	
t-1,3-Dichloropropene	ND	45	11	10.0	
Dichlorotetrafluoroethane	ND	140	59	10.0	
1,1-Difluoroethane	ND	54	29	10.0	
Ethylbenzene	ND	22	17	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 13 of 22

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	25	16	10.0	
Hexachloro-1,3-Butadiene	ND	160	130	10.0	
2-Hexanone	ND	61	33	10.0	
Isopropanol	82	120	26	10.0	J
Methyl-t-Butyl Ether (MTBE)	ND	72	24	10.0	
Methylene Chloride	ND	170	38	10.0	
4-Methyl-2-Pentanone	ND	61	41	10.0	
Styrene	ND	64	15	10.0	
1,1,2,2-Tetrachloroethane	ND	69	27	10.0	
Toluene	ND	19	14	10.0	
1,1,1-Trichloroethane	ND	27	6.1	10.0	
1,1,2-Trichloroethane	ND	27	6.3	10.0	
Trichlorofluoromethane	380	56	46	10.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	130	110	49	10.0	
1,2,4-Trimethylbenzene	ND	74	50	10.0	
1,3,5-Trimethylbenzene	ND	25	18	10.0	
Vinyl Acetate	ND	70	36	10.0	
Vinyl Chloride	ND	13	3.5	10.0	
o-Xylene	ND	22	14	10.0	
p/m-Xylene	ND	87	34	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	111	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	93	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 14 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01328	**17-09-2359-5-A**	**09/29/17 11:02**	**Air**	**GC/MS HH**	**N/A**	**10/11/17 05:39**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Tetrachloroethene	190000	3400	740	1000	
Trichloroethene	110000	2700	610	1000	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	104	68-134	
1,2-Dichloroethane-d4	101	67-133	
Toluene-d8	99	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01321	**17-09-2359-6-A**	**09/29/17 00:00**	**Air**	**GC/MS HH**	**N/A**	**10/11/17 01:26**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	54	4.8	2.6	1.00	
Benzene	0.97	1.6	0.27	1.00	J
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	5.3	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	2.9	6.2	2.3	1.00	J
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	3.6	1.3	0.86	1.00	
Chloroform	3.3	2.4	0.52	1.00	
Chloromethane	0.88	1.0	0.30	1.00	J
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	4.0	2.5	1.0	1.00	
1,1-Dichloroethane	0.47	2.0	0.39	1.00	J
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	44	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 16 of 22

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	7.4	12	2.6	1.00	J
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	30	3.4	0.74	1.00	
Toluene	3.8	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	1.8	2.7	0.61	1.00	J
Trichlorofluoromethane	8.5	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	97	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 17 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01326	**17-09-2359-7-A**	**09/29/17 12:56**	**Air**	**GC/MS HH**	**N/A**	**10/11/17 02:22**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	140	4.8	2.6	1.00	
Benzene	4.3	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	1.2	1.9	1.0	1.00	J
2-Butanone	10	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	2.3	2.4	0.52	1.00	J
Chloromethane	1.7	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	3.2	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	7.3	2.2	1.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 18 of 22

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	2.5	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	16	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	27	3.4	0.74	1.00	
Toluene	12	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	2.3	2.7	0.61	1.00	J
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	6.3	7.4	5.0	1.00	J
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	5.5	2.2	1.4	1.00	
p/m-Xylene	19	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	68-134	
1,2-Dichloroethane-d4	96	67-133	
Toluene-d8	94	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 19 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19173**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 15:02**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	ND	4.8	2.6	1.00	
Benzene	ND	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	ND	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 20 of 22

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	ND	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Toluene	ND	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	68-134	
1,2-Dichloroethane-d4	96	67-133	
Toluene-d8	98	70-130	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 21 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19186**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**10/10/17 22:49**	**171010L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	ND	4.8	2.6	1.00	
Benzene	ND	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	ND	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 22 of 22

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	ND	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	ND	3.4	0.74	1.00	
Toluene	ND	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	ND	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	101	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19173	**LCS**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 11:57**	**171007L01**
095-01-021-19173	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**10/07/17 12:49**	**171007L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	223.8	121	226.2	122	31-151	11-171	1	0-30	
Acetone	59.39	65.58	110	65.25	110	67-133	56-144	1	0-30	
Benzene	79.87	89.90	113	91.71	115	70-130	60-140	2	0-30	
Benzyl Chloride	129.4	166.6	129	169.4	131	38-158	18-178	2	0-30	
Bromodichloromethane	167.5	193.6	116	198.2	118	70-130	60-140	2	0-30	
Bromoform	258.4	336.0	130	341.4	132	63-147	49-161	2	0-30	
Bromomethane	97.08	102.8	106	102.7	106	70-139	58-150	0	0-30	
2-Butanone	73.73	81.09	110	82.22	112	66-132	55-143	1	0-30	
n-Butylbenzene	137.2	159.2	116	160.5	117	50-150	33-167	1	0-30	
sec-Butylbenzene	137.2	163.5	119	165.1	120	50-150	33-167	1	0-30	
tert-Butylbenzene	137.2	166.1	121	167.7	122	50-150	33-167	1	0-30	
Carbon Disulfide	77.85	94.71	122	95.06	122	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	183.2	116	187.3	119	70-136	59-147	2	0-30	
Chlorobenzene	115.1	140.3	122	142.3	124	70-130	60-140	1	0-30	
Chloroethane	65.96	72.26	110	72.44	110	65-149	51-163	0	0-30	
Chloroform	122.1	134.1	110	135.2	111	70-130	60-140	1	0-30	
Chloromethane	51.63	58.31	113	58.72	114	69-141	57-153	1	0-30	
Dibromochloromethane	213.0	267.5	126	270.7	127	70-138	59-149	1	0-30	
1,2-Dibromoethane	192.1	232.7	121	237.6	124	70-133	60-144	2	0-30	
1,2-Dichlorobenzene	150.3	176.9	118	179.4	119	48-138	33-153	1	0-30	
1,3-Dichlorobenzene	150.3	181.0	120	183.9	122	56-134	43-147	2	0-30	
1,4-Dichlorobenzene	150.3	178.6	119	180.7	120	52-136	38-150	1	0-30	
Dichlorodifluoromethane	123.6	139.2	113	138.3	112	67-139	55-151	1	0-30	
1,1-Dichloroethane	101.2	113.6	112	115.3	114	70-130	60-140	1	0-30	
1,2-Dichloroethane	101.2	113.2	112	113.1	112	70-132	60-142	0	0-30	
1,1-Dichloroethene	99.12	131.5	133	132.7	134	70-135	59-146	1	0-30	
c-1,2-Dichloroethene	99.12	109.5	110	111.2	112	70-130	60-140	2	0-30	
t-1,2-Dichloroethene	99.12	109.4	110	109.5	110	70-130	60-140	0	0-30	
1,2-Dichloropropane	115.5	131.5	114	135.2	117	70-130	60-140	3	0-30	
c-1,3-Dichloropropene	113.5	144.7	128	147.9	130	70-130	60-140	2	0-30	
t-1,3-Dichloropropene	113.5	150.7	133	154.7	136	70-147	57-160	3	0-30	
Dichlorotetrafluoroethane	174.8	190.6	109	192.5	110	51-135	37-149	1	0-30	
1,1-Difluoroethane	67.54	73.46	109	74.84	111	70-131	60-141	2	0-30	
Ethylbenzene	108.6	134.7	124	136.4	126	70-130	60-140	1	0-30	
4-Ethyltoluene	122.9	149.2	121	151.3	123	68-130	58-140	1	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 2 of 4

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Hexachloro-1,3-Butadiene	266.6	295.6	111	295.7	111	44-146	27-163	0	0-30	
2-Hexanone	102.4	113.8	111	116.6	114	70-136	59-147	2	0-30	
Isopropanol	61.45	69.19	113	70.79	115	57-135	44-148	2	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	105.7	117	110.6	123	68-130	58-140	4	0-30	
Methylene Chloride	86.84	102.2	118	103.2	119	69-130	59-140	1	0-30	
4-Methyl-2-Pentanone	102.4	111.4	109	115.5	113	70-130	60-140	4	0-30	
Styrene	106.5	126.4	119	128.9	121	65-131	54-142	2	0-30	
1,1,2,2-Tetrachloroethane	171.6	209.3	122	211.2	123	63-130	52-141	1	0-30	
Tetrachloroethene	169.6	200.8	118	205.1	121	70-130	60-140	2	0-30	
Toluene	94.21	109.6	116	111.6	118	70-130	60-140	2	0-30	
1,1,1-Trichloroethane	136.4	159.7	117	161.6	118	70-130	60-140	1	0-30	
1,1,2-Trichloroethane	136.4	157.6	116	161.0	118	70-130	60-140	2	0-30	
Trichloroethene	134.3	152.8	114	154.3	115	70-130	60-140	1	0-30	
Trichlorofluoromethane	140.5	150.6	107	150.4	107	63-141	50-154	0	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	223.1	116	224.3	117	70-136	59-147	1	0-30	
1,2,4-Trimethylbenzene	122.9	147.9	120	149.2	121	60-132	48-144	1	0-30	
1,3,5-Trimethylbenzene	122.9	148.6	121	150.7	123	62-130	51-141	1	0-30	
Vinyl Acetate	88.03	97.87	111	98.63	112	58-130	46-142	1	0-30	
Vinyl Chloride	63.91	71.90	113	72.45	113	70-134	59-145	1	0-30	
o-Xylene	108.6	128.5	118	130.1	120	69-130	59-140	1	0-30	
p/m-Xylene	217.1	264.0	122	267.7	123	70-132	60-142	1	0-30	

Total number of LCS compounds: 56
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM
130 Robin Hill Road, Suite 100
Santa Barbara, CA 93117-3153

Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5

Date Received: 09/29/17
Work Order: 17-09-2359
Preparation: N/A
Method: EPA TO-15

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19186	**LCS**	**Air**	**GC/MS HH**	**N/A**	**10/10/17 18:36**	**171010L01**
095-01-021-19186	**LCSD**	**Air**	**GC/MS HH**	**N/A**	**10/10/17 19:27**	**171010L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	195.2	105	195.0	105	31-151	11-171	0	0-30	
Acetone	59.39	54.43	92	56.82	96	67-133	56-144	4	0-30	
Benzene	79.87	82.62	103	83.20	104	70-130	60-140	1	0-30	
Benzyl Chloride	129.4	154.7	120	154.5	119	38-158	18-178	0	0-30	
Bromodichloromethane	167.5	166.3	99	167.7	100	70-130	60-140	1	0-30	
Bromoform	258.4	268.5	104	270.3	105	63-147	49-161	1	0-30	
Bromomethane	97.08	83.14	86	84.36	87	70-139	58-150	1	0-30	
2-Butanone	73.73	75.07	102	75.32	102	66-132	55-143	0	0-30	
n-Butylbenzene	137.2	136.3	99	136.8	100	50-150	33-167	0	0-30	
sec-Butylbenzene	137.2	142.5	104	143.0	104	50-150	33-167	0	0-30	
tert-Butylbenzene	137.2	134.2	98	134.8	98	50-150	33-167	0	0-30	
Carbon Disulfide	77.85	80.59	104	80.83	104	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	150.2	96	151.4	96	70-136	59-147	1	0-30	
Chlorobenzene	115.1	118.2	103	119.4	104	70-130	60-140	1	0-30	
Chloroethane	65.96	57.53	87	60.21	91	65-149	51-163	5	0-30	
Chloroform	122.1	118.9	97	119.1	98	70-130	60-140	0	0-30	
Chloromethane	51.63	49.37	96	48.20	93	69-141	57-153	2	0-30	
Dibromochloromethane	213.0	210.9	99	212.4	100	70-138	59-149	1	0-30	
1,2-Dibromoethane	192.1	194.3	101	196.2	102	70-133	60-144	1	0-30	
1,2-Dichlorobenzene	150.3	151.2	101	150.6	100	48-138	33-153	0	0-30	
1,3-Dichlorobenzene	150.3	152.9	102	153.9	102	56-134	43-147	1	0-30	
1,4-Dichlorobenzene	150.3	154.5	103	154.6	103	52-136	38-150	0	0-30	
Dichlorodifluoromethane	123.6	113.0	91	114.1	92	67-139	55-151	1	0-30	
1,1-Dichloroethane	101.2	102.3	101	102.9	102	70-130	60-140	1	0-30	
1,2-Dichloroethane	101.2	97.01	96	97.74	97	70-132	60-142	1	0-30	
1,1-Dichloroethene	99.12	97.79	99	97.65	99	70-135	59-146	0	0-30	
c-1,2-Dichloroethene	99.12	104.8	106	104.8	106	70-130	60-140	0	0-30	
t-1,2-Dichloroethene	99.12	100.8	102	102.9	104	70-130	60-140	2	0-30	
1,2-Dichloropropane	115.5	120.2	104	121.2	105	70-130	60-140	1	0-30	
c-1,3-Dichloropropene	113.5	133.1	117	133.8	118	70-130	60-140	1	0-30	
t-1,3-Dichloropropene	113.5	136.4	120	138.4	122	70-147	57-160	1	0-30	
Dichlorotetrafluoroethane	174.8	158.3	91	157.6	90	51-135	37-149	0	0-30	
1,1-Difluoroethane	67.54	64.31	95	65.16	96	70-131	60-141	1	0-30	
Ethylbenzene	108.6	116.0	107	116.7	108	70-130	60-140	1	0-30	
4-Ethyltoluene	122.9	131.4	107	132.0	107	68-130	58-140	0	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	09/29/17
130 Robin Hill Road, Suite 100		Work Order:	17-09-2359
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 4 of 4

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Hexachloro-1,3-Butadiene	266.6	243.4	91	246.1	92	44-146	27-163	1	0-30	
2-Hexanone	102.4	103.5	101	103.5	101	70-136	59-147	0	0-30	
Isopropanol	61.45	56.05	91	57.32	93	57-135	44-148	2	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	107.0	119	108.0	120	68-130	58-140	1	0-30	
Methylene Chloride	86.84	85.05	98	85.12	98	69-130	59-140	0	0-30	
4-Methyl-2-Pentanone	102.4	105.7	103	105.6	103	70-130	60-140	0	0-30	
Styrene	106.5	108.2	102	108.7	102	65-131	54-142	0	0-30	
1,1,2,2-Tetrachloroethane	171.6	174.1	101	175.4	102	63-130	52-141	1	0-30	
Tetrachloroethene	169.6	167.4	99	167.3	99	70-130	60-140	0	0-30	
Toluene	94.21	94.32	100	94.85	101	70-130	60-140	1	0-30	
1,1,1-Trichloroethane	136.4	138.9	102	139.9	103	70-130	60-140	1	0-30	
1,1,2-Trichloroethane	136.4	141.5	104	143.6	105	70-130	60-140	2	0-30	
Trichloroethene	134.3	134.8	100	136.3	101	70-130	60-140	1	0-30	
Trichlorofluoromethane	140.5	105.4	75	108.0	77	63-141	50-154	2	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	187.0	98	187.2	98	70-136	59-147	0	0-30	
1,2,4-Trimethylbenzene	122.9	124.3	101	124.8	102	60-132	48-144	0	0-30	
1,3,5-Trimethylbenzene	122.9	129.0	105	129.2	105	62-130	51-141	0	0-30	
Vinyl Acetate	88.03	92.50	105	92.49	105	58-130	46-142	0	0-30	
Vinyl Chloride	63.91	60.70	95	59.48	93	70-134	59-145	2	0-30	
o-Xylene	108.6	106.3	98	107.0	99	69-130	59-140	1	0-30	
p/m-Xylene	217.1	221.9	102	223.9	103	70-132	60-142	1	0-30	

Total number of LCS compounds: 56
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

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Summa Canister Vacuum Summary

Work Order: 17-09-2359

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
VSS01323	-29.50 in Hg	-3.80 in Hg	LC119	Summa Canister 1L
VSS01324	-29.50 in Hg	-4.40 in Hg	LC019	Summa Canister 1L
VSS01327	-29.50 in Hg	-3.60 in Hg	LC065	Summa Canister 1L
VSS01325	-29.50 in Hg	-6.40 in Hg	LC235	Summa Canister 1L
VSS01328	-29.50 in Hg	-5.80 in Hg	LC008	Summa Canister 1L
VSS01321	-29.50 in Hg	-5.40 in Hg	LC1067	Summa Canister 1L
VSS01326	-29.50 in Hg	-4.60 in Hg	LC053	Summa Canister 1L

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Sample Analysis Summary Report

Work Order: 17-09-2359

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA TO-15	N/A	1087	GC/MS HH	2

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Glossary of Terms and Qualifiers

Work Order: 17-09-2359 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
- ☐ ACCUTEST (_____)
- ☑ CALSCIENCE (_____)
- ☐ TESTAMERICA (_____)
- ☐ Other (_____)

Lab Vendor # 1080777 (CalScience)

Please Check Appropriate Box:
☑ SGW FDG | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL
☐ MOTIVA SD&CM | ☐ CONSULTANT | ☐ LUBES
☐ SHELL PIPELINE | ☐ OTHER _____

Print Bill To Contact Name: Julie Doane-Allmon
PO # 962220
PlaNet Project ID IDEA000680
GSAP Project ID USCH/00305
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 9/29/2017
PAGE: 1 of 1

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: Del Amo Superfund Site, 20245 S. Vermont Ave., Torrance
State: CA
AECOM Project / Task Number: 60487624.2017.1.2.5

ADDRESS: 130 Robin Hill Road, Suite 100, Santa Barbara CA, 93117
PROJECT CONTACT (Hardcopy or PDF Report to): Julie Doane-Allmon, Erich Weaver
TELEPHONE: 805 692 0618 or 805-692-0648
FAX: 805-964-0259
Bill To Contact E-MAIL: julie.doane-allmon@aecom.com

EDF DELIVERABLE TO (Name, Company, Office Location): Steve Cole, AECOM, 300 S. Grand Ave., Ste. 800, LA, CA 90071
PHONE NO.: Direct: 213-996-2398
E-MAIL: steve.j.cole@aecom.com
CONSULTANT PROJECT NO.:
SAMPLER NAME(S) (Print): S. Palladino/B. Stempson/C.Eckert
LAB USE ONLY: 17-09-2359

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email results to: julie.doane-allmon@aecom.com; erich.weaver@aecom.com; steve.j.cole@aecom.com; jude.francis@aecom.com; and margaret.pittman@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	(SL LAB-125) VOCs + MTBE EPA 8260B	VOC Full List EPA TO-15 SIM	TO-15 VOCs Full List + MTBE	Container PID Readings or Laboratory Notes
1	VSS01323	9/29/2017	835	air				x		1			X	
2	VSS01324	9/29/2017	919	air				x		1			X	
3	VSS01327	9/29/2017	1009	air				x		1			X	
4	VSS01325	9/29/2017	1102	air				x		1			X	
5	VSS01328	9/29/2017	1102	air				x		1			X	
6	VSS01321	9/29/2017	1340	air				x		1			X	
7	VSS01326	9/29/2017	1256	air				x		1			X	
~~8~~ 9	9/29/17													

UNIT COST | NON-UNIT COST

FIELD NOTES:
TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
B. Stempson	Danielle ecc	9/29/17	13:40

Version: 11Dec15

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WORK ORDER NUMBER: 17-09-2959

SAMPLE RECEIPT CHECKLIST

COOLER 0 OF 0

CLIENT: AECOM

DATE: 09 / 29 / 2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): _____°C (w/ CF): _____°C; ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☑ Air ☐ Filter Checked by: 689

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present (Box) ☐ N/A Checked by: 689

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 836

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: **(Trip Blank Lot Number: _____)**

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☑ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, Labeled/Checked by: 836

s = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH Reviewed by: [illegible]

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Client Project Name: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
Work Order Number: 17-10-0090

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Work Order Narrative

Work Order: 17-10-0090 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 10/03/17. They were assigned to Work Order 17-10-0090.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-10-0090
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		PO Number:	92793
		Date/Time Received:	10/03/17 11:24
		Number of Containers:	1
Attn:	Julie Doane-Allmon		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
VSS01322	17-10-0090-1	10/03/17 09:28	1	Air

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QC Association Summary

Work Order: 17-10-0090

Client Sample ID	Method Name	Type	Ext Name	Instrument	MS/MSD/SDP	LCS/LCSD
VSS01322	EPA TO-15 Full List		N/A	GC/MS OOO	*2	171007L01

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2 = Limited sample received, no MS/MSD performed

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Detections Summary

Client:	AECOM 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117-3153	Work Order:	17-10-0090
		Project Name:	Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5
		Received:	10/03/17
Attn:	Julie Doane-Allmon		Page 1 of 1

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
VSS01322 (17-10-0090-1)						
Acetone	26		7.6	ug/m3	EPA TO-15	N/A
Benzene	2.3	J	0.43*	ug/m3	EPA TO-15	N/A
2-Butanone	9.9		7.1	ug/m3	EPA TO-15	N/A
Chloroform	9.7		3.9	ug/m3	EPA TO-15	N/A
Chloromethane	1.2	J	0.47*	ug/m3	EPA TO-15	N/A
Dichlorodifluoromethane	1.8	J	1.7*	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	58		8.6	ug/m3	EPA TO-15	N/A
Ethylbenzene	2.8	J	2.7*	ug/m3	EPA TO-15	N/A
Tetrachloroethene	780		5.4	ug/m3	EPA TO-15	N/A
Toluene	15		3.0	ug/m3	EPA TO-15	N/A
Trichloroethene	100		4.3	ug/m3	EPA TO-15	N/A
o-Xylene	4.3		3.5	ug/m3	EPA TO-15	N/A
p/m-Xylene	12	J	5.5*	ug/m3	EPA TO-15	N/A

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

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Analytical Report

AECOM		Date Received:	10/03/17
130 Robin Hill Road, Suite 100		Work Order:	17-10-0090
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VSS01322	**17-10-0090-1-A**	**10/03/17 09:28**	**Air**	**GC/MS OOO**	**N/A**	**10/07/17 17:51**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	24	17	1.60	
Acetone	26	7.6	4.2	1.60	
Benzene	2.3	2.6	0.43	1.60	J
Benzyl Chloride	ND	12	3.8	1.60	
Bromodichloromethane	ND	5.4	1.0	1.60	
Bromoform	ND	8.3	5.0	1.60	
Bromomethane	ND	3.1	1.6	1.60	
2-Butanone	9.9	7.1	3.3	1.60	
n-Butylbenzene	ND	4.4	2.9	1.60	
sec-Butylbenzene	ND	4.4	2.2	1.60	
tert-Butylbenzene	ND	4.4	2.3	1.60	
Carbon Disulfide	ND	10	3.7	1.60	
Carbon Tetrachloride	ND	5.0	0.98	1.60	
Chlorobenzene	ND	3.7	0.74	1.60	
Chloroethane	ND	2.1	1.4	1.60	
Chloroform	9.7	3.9	0.83	1.60	
Chloromethane	1.2	1.7	0.47	1.60	J
Dibromochloromethane	ND	6.8	1.5	1.60	
1,2-Dibromoethane	ND	6.1	1.9	1.60	
1,2-Dichlorobenzene	ND	4.8	2.7	1.60	
1,3-Dichlorobenzene	ND	4.8	2.9	1.60	
1,4-Dichlorobenzene	ND	4.8	2.7	1.60	
Dichlorodifluoromethane	1.8	4.0	1.7	1.60	J
1,1-Dichloroethane	ND	3.2	0.63	1.60	
1,2-Dichloroethane	ND	3.2	0.87	1.60	
1,1-Dichloroethene	ND	3.2	0.58	1.60	
c-1,2-Dichloroethene	ND	3.2	1.8	1.60	
t-1,2-Dichloroethene	ND	3.2	1.5	1.60	
1,2-Dichloropropane	ND	3.7	0.60	1.60	
c-1,3-Dichloropropene	ND	3.6	2.0	1.60	
t-1,3-Dichloropropene	ND	7.3	1.8	1.60	
Dichlorotetrafluoroethane	ND	22	9.5	1.60	
1,1-Difluoroethane	58	8.6	4.7	1.60	
Ethylbenzene	2.8	3.5	2.7	1.60	J

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	10/03/17
130 Robin Hill Road, Suite 100		Work Order:	17-10-0090
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 2 of 4

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	3.9	2.6	1.60	
Hexachloro-1,3-Butadiene	ND	26	21	1.60	
2-Hexanone	ND	9.8	5.3	1.60	
Isopropanol	ND	20	4.1	1.60	
Methyl-t-Butyl Ether (MTBE)	ND	12	3.9	1.60	
Methylene Chloride	ND	28	6.1	1.60	
4-Methyl-2-Pentanone	ND	9.8	6.5	1.60	
Styrene	ND	10	2.5	1.60	
1,1,2,2-Tetrachloroethane	ND	11	4.2	1.60	
Tetrachloroethene	780	5.4	1.2	1.60	
Toluene	15	3.0	2.2	1.60	
1,1,1-Trichloroethane	ND	4.4	0.98	1.60	
1,1,2-Trichloroethane	ND	4.4	1.0	1.60	
Trichloroethene	100	4.3	0.97	1.60	
Trichlorofluoromethane	ND	9.0	7.4	1.60	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	18	7.8	1.60	
1,2,4-Trimethylbenzene	ND	12	8.0	1.60	
1,3,5-Trimethylbenzene	ND	3.9	3.0	1.60	
Vinyl Acetate	ND	11	5.8	1.60	
Vinyl Chloride	ND	2.0	0.56	1.60	
o-Xylene	4.3	3.5	2.2	1.60	
p/m-Xylene	12	14	5.5	1.60	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	125	68-134	
1,2-Dichloroethane-d4	93	67-133	
Toluene-d8	77	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	10/03/17
130 Robin Hill Road, Suite 100		Work Order:	17-10-0090
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-19175**	**N/A**	**Air**	**GC/MS OOO**	**N/A**	**10/07/17 17:00**	**171007L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,2,4-Trichlorobenzene	ND	15	11	1.00	
Acetone	ND	4.8	2.6	1.00	
Benzene	ND	1.6	0.27	1.00	
Benzyl Chloride	ND	7.8	2.4	1.00	
Bromodichloromethane	ND	3.4	0.63	1.00	
Bromoform	ND	5.2	3.1	1.00	
Bromomethane	ND	1.9	1.0	1.00	
2-Butanone	ND	4.4	2.1	1.00	
n-Butylbenzene	ND	2.7	1.8	1.00	
sec-Butylbenzene	ND	2.7	1.4	1.00	
tert-Butylbenzene	ND	2.7	1.4	1.00	
Carbon Disulfide	ND	6.2	2.3	1.00	
Carbon Tetrachloride	ND	3.1	0.61	1.00	
Chlorobenzene	ND	2.3	0.46	1.00	
Chloroethane	ND	1.3	0.86	1.00	
Chloroform	ND	2.4	0.52	1.00	
Chloromethane	ND	1.0	0.30	1.00	
Dibromochloromethane	ND	4.3	0.96	1.00	
1,2-Dibromoethane	ND	3.8	1.2	1.00	
1,2-Dichlorobenzene	ND	3.0	1.7	1.00	
1,3-Dichlorobenzene	ND	3.0	1.8	1.00	
1,4-Dichlorobenzene	ND	3.0	1.7	1.00	
Dichlorodifluoromethane	ND	2.5	1.0	1.00	
1,1-Dichloroethane	ND	2.0	0.39	1.00	
1,2-Dichloroethane	ND	2.0	0.54	1.00	
1,1-Dichloroethene	ND	2.0	0.36	1.00	
c-1,2-Dichloroethene	ND	2.0	1.1	1.00	
t-1,2-Dichloroethene	ND	2.0	0.95	1.00	
1,2-Dichloropropane	ND	2.3	0.38	1.00	
c-1,3-Dichloropropene	ND	2.3	1.2	1.00	
t-1,3-Dichloropropene	ND	4.5	1.1	1.00	
Dichlorotetrafluoroethane	ND	14	5.9	1.00	
1,1-Difluoroethane	ND	5.4	2.9	1.00	
Ethylbenzene	ND	2.2	1.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

AECOM		Date Received:	10/03/17
130 Robin Hill Road, Suite 100		Work Order:	17-10-0090
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/m3
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 4 of 4

Parameter	Result	RL	MDL	DF	Qualifiers
4-Ethyltoluene	ND	2.5	1.6	1.00	
Hexachloro-1,3-Butadiene	ND	16	13	1.00	
2-Hexanone	ND	6.1	3.3	1.00	
Isopropanol	ND	12	2.6	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	2.4	1.00	
Methylene Chloride	ND	17	3.8	1.00	
4-Methyl-2-Pentanone	ND	6.1	4.1	1.00	
Styrene	ND	6.4	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	6.9	2.7	1.00	
Tetrachloroethene	ND	3.4	0.74	1.00	
Toluene	ND	1.9	1.4	1.00	
1,1,1-Trichloroethane	ND	2.7	0.61	1.00	
1,1,2-Trichloroethane	ND	2.7	0.63	1.00	
Trichloroethene	ND	2.7	0.61	1.00	
Trichlorofluoromethane	ND	5.6	4.6	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	4.9	1.00	
1,2,4-Trimethylbenzene	ND	7.4	5.0	1.00	
1,3,5-Trimethylbenzene	ND	2.5	1.8	1.00	
Vinyl Acetate	ND	7.0	3.6	1.00	
Vinyl Chloride	ND	1.3	0.35	1.00	
o-Xylene	ND	2.2	1.4	1.00	
p/m-Xylene	ND	8.7	3.4	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	68-134	
1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	102	70-130	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - LCS/LCSD

AECOM
130 Robin Hill Road, Suite 100
Santa Barbara, CA 93117-3153

Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5

Date Received: 10/03/17
Work Order: 17-10-0090
Preparation: N/A
Method: EPA TO-15

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19175	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**10/07/17 13:34**	**171007L01**
095-01-021-19175	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**10/07/17 14:28**	**171007L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
1,2,4-Trichlorobenzene	185.5	217.1	117	219.7	118	31-151	11-171	1	0-30	
Acetone	59.39	52.45	88	49.90	84	67-133	56-144	5	0-30	
Benzene	79.87	93.08	117	93.07	117	70-130	60-140	0	0-30	
Benzyl Chloride	129.4	157.0	121	160.2	124	38-158	18-178	2	0-30	
Bromodichloromethane	167.5	185.3	111	189.3	113	70-130	60-140	2	0-30	
Bromoform	258.4	296.7	115	296.3	115	63-147	49-161	0	0-30	
Bromomethane	97.08	78.21	81	80.95	83	70-139	58-150	3	0-30	
2-Butanone	73.73	69.84	95	68.53	93	66-132	55-143	2	0-30	
n-Butylbenzene	137.2	156.3	114	157.3	115	50-150	33-167	1	0-30	
sec-Butylbenzene	137.2	148.5	108	148.8	108	50-150	33-167	0	0-30	
tert-Butylbenzene	137.2	147.0	107	148.3	108	50-150	33-167	1	0-30	
Carbon Disulfide	77.85	92.21	118	92.50	119	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	162.9	104	166.3	106	70-136	59-147	2	0-30	
Chlorobenzene	115.1	133.0	116	132.0	115	70-130	60-140	1	0-30	
Chloroethane	65.96	57.60	87	58.79	89	65-149	51-163	2	0-30	
Chloroform	122.1	134.4	110	135.2	111	70-130	60-140	1	0-30	
Chloromethane	51.63	44.76	87	46.60	90	69-141	57-153	4	0-30	
Dibromochloromethane	213.0	237.1	111	239.6	113	70-138	59-149	1	0-30	
1,2-Dibromoethane	192.1	226.7	118	226.8	118	70-133	60-144	0	0-30	
1,2-Dichlorobenzene	150.3	172.2	115	172.4	115	48-138	33-153	0	0-30	
1,3-Dichlorobenzene	150.3	171.6	114	171.1	114	56-134	43-147	0	0-30	
1,4-Dichlorobenzene	150.3	171.2	114	169.4	113	52-136	38-150	1	0-30	
Dichlorodifluoromethane	123.6	124.3	101	132.1	107	67-139	55-151	6	0-30	
1,1-Dichloroethane	101.2	106.7	105	106.3	105	70-130	60-140	0	0-30	
1,2-Dichloroethane	101.2	100.5	99	101.8	101	70-132	60-142	1	0-30	
1,1-Dichloroethene	99.12	102.9	104	103.7	105	70-135	59-146	1	0-30	
c-1,2-Dichloroethene	99.12	112.4	113	112.2	113	70-130	60-140	0	0-30	
t-1,2-Dichloroethene	99.12	112.6	114	111.2	112	70-130	60-140	1	0-30	
1,2-Dichloropropane	115.5	124.7	108	125.2	108	70-130	60-140	0	0-30	
c-1,3-Dichloropropene	113.5	141.0	124	142.5	126	70-130	60-140	1	0-30	
t-1,3-Dichloropropene	113.5	143.5	126	145.5	128	70-147	57-160	1	0-30	
Dichlorotetrafluoroethane	174.8	143.1	82	149.0	85	51-135	37-149	4	0-30	
1,1-Difluoroethane	67.54	64.63	96	64.87	96	70-131	60-141	0	0-30	
Ethylbenzene	108.6	127.9	118	127.9	118	70-130	60-140	0	0-30	
4-Ethyltoluene	122.9	139.3	113	139.6	114	68-130	58-140	0	0-30	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

AECOM		Date Received:	10/03/17
130 Robin Hill Road, Suite 100		Work Order:	17-10-0090
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 2 of 3

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Hexachloro-1,3-Butadiene	266.6	294.0	110	293.0	110	44-146	27-163	0	0-30	
2-Hexanone	102.4	109.3	107	105.3	103	70-136	59-147	4	0-30	
Isopropanol	61.45	58.21	95	53.16	87	57-135	44-148	9	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	103.0	114	103.1	114	68-130	58-140	0	0-30	
Methylene Chloride	86.84	101.0	116	99.87	115	69-130	59-140	1	0-30	
4-Methyl-2-Pentanone	102.4	104.4	102	105.8	103	70-130	60-140	1	0-30	
Styrene	106.5	118.6	111	117.7	110	65-131	54-142	1	0-30	
1,1,2,2-Tetrachloroethane	171.6	211.8	123	210.2	122	63-130	52-141	1	0-30	
Tetrachloroethene	169.6	194.6	115	195.7	115	70-130	60-140	1	0-30	
Toluene	94.21	107.5	114	107.2	114	70-130	60-140	0	0-30	
1,1,1-Trichloroethane	136.4	143.1	105	145.2	106	70-130	60-140	1	0-30	
1,1,2-Trichloroethane	136.4	161.7	119	163.7	120	70-130	60-140	1	0-30	
Trichloroethene	134.3	151.6	113	154.6	115	70-130	60-140	2	0-30	
Trichlorofluoromethane	140.5	126.7	90	154.7	110	63-141	50-154	20	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	206.4	108	209.4	109	70-136	59-147	1	0-30	
1,2,4-Trimethylbenzene	122.9	142.9	116	143.3	117	60-132	48-144	0	0-30	
1,3,5-Trimethylbenzene	122.9	141.8	115	141.4	115	62-130	51-141	0	0-30	
Vinyl Acetate	88.03	82.44	94	82.26	93	58-130	46-142	0	0-30	
Vinyl Chloride	63.91	57.01	89	59.43	93	70-134	59-145	4	0-30	
o-Xylene	108.6	123.2	113	123.5	114	69-130	59-140	0	0-30	
p/m-Xylene	217.1	253.9	117	255.0	117	70-132	60-142	0	0-30	

Total number of LCS compounds: 56
Total number of ME compounds: 0
Total number of ME compounds allowed: 3
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

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LCS/LCSD - Surrogate

AECOM		Date Received:	10/03/17
130 Robin Hill Road, Suite 100		Work Order:	17-10-0090
Santa Barbara, CA 93117-3153		Preparation:	N/A
		Method:	EPA TO-15
Project: Del Amo Superfund Site, Los Angeles / 60487624.2017.1.2.5			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-19175	**LCS**	**Air**	**GC/MS OOO**	**N/A**	**10/07/17 13:34**	**171007L01**
095-01-021-19175	**LCSD**	**Air**	**GC/MS OOO**	**N/A**	**10/07/17 14:28**	**171007L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
1,4-Bromofluorobenzene	178.9	181.7	102	179.3	100	68-134	
1,2-Dichloroethane-d4	105.3	100.2	95	100.6	96	67-133	
Toluene-d8	102.4	105.9	103	107.6	105	70-130	

RPD: Relative Percent Difference. CL: Control Limits

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Summa Canister Vacuum Summary

Work Order: 17-10-0090

Sample Name	Vacuum Out	Vacuum In	Equipment	Description
VSS01322	-29.50 in Hg	-3.80 in Hg	LC272	Summa Canister 1L

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Sample Analysis Summary Report

Work Order: 17-10-0090

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA TO-15	N/A	1087	GC/MS OOO	2

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Glossary of Terms and Qualifiers

Work Order: 17-10-0090 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
- ☐ ACCUTEST ( )
- ☑ CALSCIENCE ( )
- ☐ TESTAMERICA ( )
- ☐ Other ( )

Lab Vendor # 1080777 (CalScience)

Please Check Appropriate Box:
- ☑ SGW FDG
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER

Print Bill To Contact Name: Julie Doane-Allmon

PlaNet Project ID: IDEA000680

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10/3/2017

PAGE: 1 of 1

PO #: 962220

GSAP Project ID: USCH/00305

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: Del Amo Superfund Site, 20245 S. Vermont Ave., Torrance

State: CA

AECOM Project / Task Number: 60487624.2017.1.2.5

ADDRESS: 130 Robin Hill Road, Suite 100, Santa Barbara CA, 93117

EDF DELIVERABLE TO (Name, Company, Office Location): Steve Cole, AECOM, 300 S. Grand Ave., Ste. 800, LA, CA 90071

PHONE NO.: Direct: 213-996-2398

E-MAIL: steve.j.cole@aecom.com

CONSULTANT PROJECT NO.:

PROJECT CONTACT (Hardcopy or PDF Report to): Julie Doane-Allmon, Erich Weaver

SAMPLER NAME(S) (Print): S. Palladino/B. Stempson/C.Eckert

LAB USE ONLY: 17-10-0090

TELEPHONE: 805 692 0618 or 805-692-0648

FAX: 805-964-0259

Bill To Contact E-MAIL: julie.doane-allmon@aecom.com

TURNAROUND TIME (CALENDAR DAYS):
- ☑ STANDARD (14 DAY)
- ☐ 5 DAYS
- ☐ 3 DAYS
- ☐ 2 DAYS
- ☐ 24 HOURS
- ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email results to: julie.doane-allmon@aecom.com; erich.weaver@aecom.com; steve.j.cole@aecom.com; jude.francis@aecom.com; and margaret.pittman@aecom.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	UNIT COST: (SI LAB-125) VOCs + MTBE EPA 8260B	VOC Full List EPA TO-15 SIM	TO-15 - VOCs Full List +MTBE	NON-UNIT COST	FIELD NOTES: Container PID Readings or Laboratory Notes
1	VSS01322	10/3/2017	928	air				x		1			X		

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
B. Stempson / [signature]	[signature]	10/3/17	1124
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 11Dec15

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WORK ORDER NUMBER: 17-10-0090

SAMPLE RECEIPT CHECKLIST

COOLER 0 OF 0

CLIENT: AECOM

DATE: 10/03/2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.4°C); Temperature (w/o CF): _____°C (w/ CF): _____°C; ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☑ Air ☐ Filter Checked by: 836

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☐ Not Present	☑ N/A	Checked by: 836
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☑
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: **(Trip Blank Lot Number: _____)**

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9) ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☑ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☑ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 836

Reviewed by: TD

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ATTACHMENT 2

SUB-SLAB VAPOR FIELD DATA FORMS

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: ~~9~~ 10/3/17 **Time:** 0928

2 **Sample Location:** SGL0936 **Height:** NA

Sample ID: V5501322

Duplicate ID: NA

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
0921	0926	1.0	~~0.0~~ 0.2	0.0

Helium concentration inside chamber: 43.8 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC272	SGM429	-30	-5	0928	0933

NOTES: Can No. LC 272
Flow Controller SGM 429

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 9/29/17 **Time:** 0815

3 **Sample Location:** SGL0937 **Height:**

Sample ID: VS501323

Duplicate ID:

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
0828	0832	1.0	0.0	0.0

Helium concentration inside chamber: 50.3 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC119	SGM411	>-30.0	-5.0	0835	0840

NOTES:

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Vel Amo

Date: 09/29/17 **Time:** 0900

5 **Sample Location:** SGL0938 **Height:**

Sample ID: VS501324

Duplicate ID:

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
0913	0918	1.0	1.2	0.0

Helium concentration inside chamber: 52.6 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC019	SGM409	-30.0	-5.0	0919	0924

NOTES:

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 9/29/17 **Time:** 0945

11 **Sample Location:** SGL0941 **Height:**

Sample ID: VS501327

Duplicate ID:

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
1001	1005	1.0	8.3	0.0

Helium concentration inside chamber: 55.2 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC065	SGM339	-30.0	-5.0	1009	1014

NOTES:

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 9/29/17 **Time:** 1035

7 **Sample Location:** SGL0939 **Height:**

Sample ID: VS501325

Duplicate ID: VS501328

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
1055	1100	1.0	17.5	0.0

Helium concentration inside chamber: 55.8 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC235	SGM458	-30.0	-5.0	1102	1113
LC008	SGM458	-30.0	-5.0	1102	1113

NOTES:

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 9/29/17 **Time:** 1230

10 **Sample Location:** SGL0940 **Height:**

Sample ID: V5501326

Duplicate ID:

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
1249	1253	1.0	11.9	0.0

Helium concentration inside chamber: 51.3 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC053	SGM430	-30.0	-5.0	1256	1301

NOTES:

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 9/29/17 **Time:** 1315

1 **Sample Location:** SGL0935 **Height:**

Sample ID: V5501321

Duplicate ID:

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
1334	1339	1.0	4.2	0.0

Helium concentration inside chamber: 54.9 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC1067	SGM141	-30.0	-5.0	1340	1345

NOTES:

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 3/7/18 **Time:** 0730

Sample Location: SGL0936 **Height:** subslab

Sample ID: VS501335

Duplicate ID: N/A

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
0739	0743	1.0	1.8	0

Helium concentration inside chamber: 32.1 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC190	SGM409	-30	-5	0747	0752

NOTES: Shut-in test - downstream component held -30 inHg for > 1 min.

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 3/7/18 **Time:** 0815

Sample Location: ~~VSS01336~~ CRE SGL0937 **Height:** SGL-SLAB

Sample ID: VSS01336

Duplicate ID: N/A

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
0831	0835	1.0	2.3	0
				CRE

Helium concentration inside chamber: 34.0 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC838	SGM166	-30	-5	0839	0849
					CRE

NOTES: Shut-in test - downstream components held -30 in Hg for over 1 min.
Split sample taken for EPA.

CRE

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 3/7/18 **Time:** 0910

Sample Location: SGL0938 **Height:** Sub-Slab

Sample ID: VS501337

Duplicate ID: N/A

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
0931	0935	1.0	1.7	0

CRE

Helium concentration inside chamber: 34.3 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC1239	SGM003	-30	-5	0937	0947

CRE

NOTES: Shut-in test - downstream components held -30 inHg for over 1 min.
Split sample taken for EPA

CRE

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 3/7/18 **Time:** 1015

Sample Location: SGL0941 **Height:** 5 ft-bgs

Sample ID: V5501340

Duplicate ID: N/A

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
1046	1052	1.0	2.7	0
				CRB

Helium concentration inside chamber: 35.9 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC975	SGM420	-30	-5	1055	1104
					CRB

NOTES: Shut-in test - downstream components held -30 inHg for > 1 min
Split sample taken for EPA.

CRB

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 3/7/18 **Time:** 1200

Sample Location: SGL0935 **Height:** 5ft-bgs

Sample ID: VS501334

Duplicate ID: N/A

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
1217	1221	1.0	2.8	0

Helium concentration inside chamber: 33.7 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC911	SGM315	-30	-5	1223	1228

NOTES: Shut-in test - downstream components held -30 inHg for >1 min.

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 3/7/18 **Time:** 1300

Sample Location: SGL0940 **Height:** sub-slab

Sample ID: V5501339

Duplicate ID: N/A

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
1321	1325	1.0	1.9	0
				CRE

Helium concentration inside chamber: 35.1 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
LC117	SGM235	-30	-5	1337	1343
					CRE

NOTES: Shut-in test — downstream components held -30 mHg for >1 min.

CRE

APPENDIX C
Air/Soil Vapor Sampling Field Data Sheet

Project Name: Del Amo

Date: 3/7/18 **Time:** 1410

Sample Location: SGL0939 **Height:** sub-slab

Sample ID: V5501338

Duplicate ID: V5501341

PURGE AND LEAK CHECK DATA

Starting Purge Time	Ending Purge Time	Volume Removed (liters)	VOC Concentration (ppm)	Helium Concentration (ppm)
1427	1432	1.0	8.1	0

CZE

Helium concentration inside chamber: 34.2 %

Flow rate set by flow controller: 200 ml/min

SAMPLING DATA

	Summa Canister ID	Flow Controller ID	Starting Pressure (in Hg)	Ending Pressure (in Hg)	Start Sampling Time	Ending Sampling Time
Primary:	LC1146	5GM290	-30	-5	1433	1445
Duplicate:	LC1007	5GM290	-30	-5	1434	1446

NOTES: shut-in test — downstream components held -30 in Hg for over 1 min.

CZE