166418

# Groundwater Investigation Report

**Atlantic States Cast Iron Pipe Co.**
**183 Sitgreaves Street**
**Phillipsburg, New Jersey**
**Case No. 98-08-20-1158-41**
**UST No. 0059934**

**December 2004**

**Prepared for:**
Atlantic States Cast Iron Pipe Co.
183 Sitgreaves Street
Phillipsburg, New Jersey

**Prepared by:**
Dewberry-Goodkind, Inc.
299 Webro Road
Parsippany, NJ 07054

Dewberry

(12/97) New Jersey Department of Environmental Protection

Site Remediation Program

# UST Site/Remedial Investigation Report Certification Form

**A.** Facility Name :_Atlantic States Cast Iron Pipe Company, Inc._____

Facility Street Address :_183 Sitgreaves Street_____

Municipality:___Phillipsburg_____ County :____Warren_____

Block:__2100_____Lot(s):__1_____Telephone Number : _908-454-1161__

**B.** Owner (RP)'s Name:_ Same As Above_____

Street Address:_____ City :_____

State: _____Zip:_____ Telephone Number : _____

**C.** (Check as appropriate)

☐ Site Investigation Report (SIR) $500 Fee

X Remedial Investigation Report (RIR) $1000 Fee

**D.** (Complete all that apply)

- Assigned Case Manager :___David S. Rubin
- UST Registration Number :___0059934_____ (7 digits)
- Incident Report Number __98 – 08 – 20 – 1158 – 41 __ (10 or 12 digits)
  ___–___–___–_____–
- Tank Closure Number N98__ – 1273 _____ C98__ – 1289 _____ C9__ –_____ (7 characters)

**E. Certification by the Subsurface Evaluator:**

The attached report conforms to the specific reporting requirements of N.J.A.C. 7:26E .....X [Yes] No

Name:___Lawrence G. Brunt_____ Signature: Lawrence G. Brunt UST Cert. No.:_0010125_____

Firm:_Dewberry-Goodkind, Inc._____ Firm's UST Cert. Number:___US00306_____

Firm Address:_299 Webro Road_____ City:_Parsippany_____

State:_NJ_____ Zip:_07054_____ Telephone Number : _(973) 428-4909 Ext 306_____

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)

**F. Certification by the Responsible Party(ies) of the Facility:**

The following certification shall be signed [according to the requirements of N.J.A.C. 7:14B-1.7(b)]as follows:

1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, federal or other public agency by either a principal executive officer or ranking elected Official.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Name (Print or Type): _____Title: _____

Signature: _____

Company Name: _____Date: _____

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## EXECUTIVE SUMMARY

In August 2004, Atlantic States Cast Iron Pipe Co. (ASCIP) initiated groundwater investigation activities to evaluate the potential impacts from the past operation of the former underground paint storage tanks that were closed in-place at its Philipsburg facility in August 1998. The investigation activities included the installation of an unconsolidated monitoring well downgradient of the former tanks and the collection of two rounds of groundwater samples for analysis for base neutral and volatile organic compounds.

The monitoring well was installed on August 14 and 22 2004. The well was installed on two consecutive weekends due to access constraints associated with facility operations. The well was installed on the exterior of the manufacturing building within approximately 20 feet downgradient of the former underground storage tank (UST) area. The well was installed to a depth of 57 feet below grade. Approximately two weeks following well installation, the first ground water sampling event was completed on September 20, 2004. Approximately 30 days later, the second sampling event was completed on October 21, 2004.

Groundwater samples were collected from the monitoring well and analyzed for base neutral and volatile organic compounds, based on the constituents of the paint previously stored in the USTs. Base neutral compounds were undetected in both sampling events. Analysis for volatile organic compounds identified five chlorinated compounds. The compounds included: chloroform, cis-1,2-dichloroethene, trans-1,2-dichloroethene, tetrachloroethene (PCE) and trichloroethene (TCE). Three of the compounds, cis-1,2-dichloroethene, PCE and TCE, were detected at concentrations above the New Jersey Department of Environmental Protection's (NJDEP) groundwater quality standards (GWQS). None of the compounds associated with the paint, such as asphalt, mineral spirits, VM&P naphtha, and xylenes, were detected in the groundwater.

Previous soil sampling during the August 1999 Remedial Investigation identified TCE and PCE in the soil around the former USTs at concentrations above the NJDEP Impact to Groundwater Soil Cleanup Criteria (IGWSCC). Soil concentrations above the IGWSCC were detected in five samples at a depth of 11-11.5 feet below grade. Analysis of two soil samples at a depth of 13-13.5 feet below grade for vertical delineation identified concentrations below the IGWSCC. In addition, the collection of horizontal delineation samples in August 2000 and May 2003 from depths ranging from 11.5-12 feet below grade to 14-14.5 feet below grade identified undetected concentrations of volatile organic compounds. Given the location and inaccessibility of the impacted soils beneath the manufacturing building, institutional and engineering controls were proposed to address the residual contamination based on the results of the previous delineation activities.

The recent groundwater investigation activities did not identify any impacts associated with the paint stored in the former USTs. None of the compounds associated with the paint, such as asphalt, mineral spirits, VM&P naphtha, and xylenes, were detected in the groundwater; only chlorinated organic contaminants were detected. As acknowledged by the NJDEP in its January 8, 1999 letter, these compounds are not associated with the former USTs. In its letter, the NJDEP outlined the option of issuing a No Further Action letter that addresses only the former USTs, and addressing the "non-UST" contamination separately. Accordingly, ASCIP requests NJDEP to issue a No Further

Action approval for the former USTs, following which, ASCIP will submit a Deed Notice to address the residual petroleum hydrocarbon contamination (concentrations greater than 10,000 mg/kg) in the soil located beneath the building floor.

Since three chlorinated volatile organic compounds (cis-1,2-dichloroethene, PCE and TCE) that are not associated with the former USTs were detected at concentrations above the GWQS during both sampling events, ASCIP plans to conduct investigation activities to identify and if feasible, determine the potential source of these contaminants in the groundwater. The investigation activities will be performed separately from the former USTs in accordance with the NJDEP's letter dated January 8, 1999. The initial activities will include a review of facility records to determine if these compounds were used at the facility during previous manufacturing operations. In addition, a receptor evaluation consisting of a well search will be performed to identify potential offsite sources of contamination. This information will be submitted to the NJDEP under separate cover.

## 1.0 INTRODUCTION

Atlantic States Cast Iron Pipe Co. (ASCIP) manufactures cast iron pipe at its Phillipsburg, New Jersey facility. As part of the manufacturing operations, the pipe is painted with an asphalt coating. The coating formerly consisted of oxidized asphalt with mineral spirits, xylenes and/or VM&P naptha. The facility now uses a water-based paint.

Prior to 1998, the asphalt paint was stored in two USTs, a 6,000 gallon and 8,000 gallon, located beneath the manufacturing building within the painting area. In August 1998, ASCIP installed an aboveground paint storage system and closed the two USTs. Based on the location and inaccessibility of the USTs, the only alternative was to close the tanks in-place..

Initial soil sampling performed during the closure activities identified a small amount of paint product and petroleum hydrocarbons and volatile organic compounds (xylenes) at concentrations above the NJDEP soil cleanup criteria. Delineation soil sampling subsequently was implemented in 1999, 2000 and 2003 to determine the extent of the residual impacts. During the sampling, chlorinated solvents, PCE and TCE, were identified in the soil at concentrations above the NJDEP IGWSCC. The delineation sampling, however, determined the horizontal extent of the impacts and identified a vertical clean zone at a depth of approximately 13-13.5 feet below grade.

ASCIP proposed institutional and engineering controls to address the residual soil contamination based on its location and inaccessibility. Due to the presence of the contamination, the NJDEP required a groundwater investigation to evaluate the potential impacts to the underlying groundwater. After discussion and agreement was reached with NJDEP concerning the location of the well, ASCIP installed the monitoring well in August 2004 and collected two rounds of samples in September and October 2004. The results of the sampling were undetected for base neutral compounds and the volatile organic compounds associated with the paint. Chlorinated volatile organic compounds, however, were detected at concentrations above the GWQS. The specific compounds included cis-1,2-dichloroethene, PCE and TCE. The results of the groundwater investigation are presented in this report.

The investigation activities were conducted in accordance with the NJDEP's Technical Requirements for Site Remediation N.J.A.C. 7-26E and the Field Sampling Procedures Manual (1992). Based on the findings, ASCIP is requesting a No Further Action approval for the former USTs, following which, ASCIP will submit a Deed Notice to address the residual petroleum hydrocarbon contamination (concentrations greater than 10,000 mg/kg) in the soil located beneath the building floor. ASCIP proposes to conduct investigation activities to identify and if feasible, determine the potential source of the chlorinated organic contaminants in the groundwater. The investigation activities will be performed separately from the former USTs in accordance with the NJDEP's letter dated January 8, 1999. The initial activities will include a review of facility records to determine if these compounds were used at the facility during previous manufacturing operations. In addition, a receptor evaluation consisting of a well search will be performed to identify potential offsite sources of contamination. This information will be submitted to the NJDEP under separate cover.

## 2.0 BACKGROUND

### 2.1 Physical Setting and Site History

The ASCIP facility is located at 183 Sitgreaves Street in Phillipsburg, New Jersey. The subject property encompasses approximately 21.8 acres in a commercial and industrial area of Phillipsburg. The site is identified as Block 2001, Lot1 in the local tax records. The site is bordered by Sitgreaves Street to the southwest, Stockton Street to the west, Center Street to the east and a main rail line to the north. The site location is shown on Figure 1.

Iron pipe has been manufactured at the facility since 1856. The facility includes a foundry, outdoor storage areas, warehouse, carpenter shop, machine shop, storage buildings, and an office building. The majority of the site is paved with asphalt and/or concrete. In general, the topography at the property is flat to gently sloping. The topography of the overall Phillipsburg area slopes toward the Delaware River. A site plan is provided as Figure 2.

### 2.2 Area of Environmental Concern

#### 2.2.1 Former Paint Underground Storage Tanks

In August 1998, two asphalt paint USTs, a 6,000 gallon and an 8,000 gallon, were closed in accordance with NJDEP regulations. The tanks were previously used to store asphalt paint consisting of oxidized asphalt with mineral spirits, xylenes and/or VM&P naptha. The asphalt paint was used for coating the iron pipe manufactured at the facility. The USTs were located beneath the manufacturing building within the painting area. Based on the location of the USTs, the tanks were closed in-place with NJDEP approval. During the closure activities, a hardened layer of paint was identified in the bottom of the 8,000 gallon UST. Based on the presence of this material, sampling was not performed through the bottom of the tank. Sampling beneath the 6,000 gallon UST identified a small amount of paint product at two locations. In addition, petroleum hydrocarbons were identified above 10,000 mg/kg at one location and xylenes were detected at 21.1 mg/kg and 37.7 mg/kg above 10 mg/kg (the previous cleanup criteria) at two locations. Based on these findings, additional delineation activities were performed around both USTs. It is important to note that the current IGWSCC is 67 mg/kg and the initial concentrations are below the current criteria.

In August 1999, remedial investigation activities were performed around the USTs. Eight samples were collected from six borings installed around the tanks. Six samples (S-1 through S-6) were collected at a depth of 11-11.5 feet below grade. Two vertical delineation samples (S-2A and S-5A) were collected at a depth of 13-13.5 feet. Petroleum hydrocarbons were detected in three samples from a depth of 11-11.5 feet at concentrations above 10,000 mg/kg, the Total Organic Contaminant Cap. Volatile organic compounds also were detected in the samples from 11-11.5 feet at concentrations above the NJDEP IGWSCC. The compounds included total xylenes, PCE and TCE. The greatest concentrations were detected at sample location S-5. Analysis of a sample (S-5A) collected from this boring at a greater depth identified volatile organic and petroleum hydrocarbon concentrations below the IGWSCC. Similarly, the analysis of vertical delineation sample S-2A was undetected for volatile organic compounds, and the petroleum hydrocarbon concentration was only

42.2 mg/kg. The samples at 13-13.5 feet confirmed the vertical delineation of the contaminants. However, additional horizontal delineation activities were required.

Accordingly, additional horizontal delineation samples were collected in August 2000 and May 2003. The sampling in 2000 and 2003 identified petroleum hydrocarbon concentrations ranging from undetected to 67.2 mg/kg. Volatile organic compounds were undetected in all samples. These results confirmed the extent of the impacted soil. Based on these results, ASCIP proposed the use of institutional and engineering controls to address the residual soil contamination.

Following the review of the delineation results and proposed institutional and engineering controls to address the soil contamination, the NJDEP requested the installation and sampling of a monitoring well to assess any potential impacts to the underlying groundwater. The results of the groundwater investigation are presented in this report.

### 2.3 Geology and Hydrogeology

The soils in the general area of the facility are described as glacial drift modified by the Delaware River, and reworked into a stratified deposit of sand, gravel, cobbles and boulders. The specific soils encountered during the monitoring well installation activities included fine to coarse sands with gravel and some cobbles. The bedrock in the area of ASCIP is mapped as the Allentown Dolomite; dolomite, and less abundant quartzite and shale (New Jersey Geological Survey CD Series CD00-1, Bedrock Geology and Topographic Base Maps of New Jersey). Groundwater at the site is located in the overburden material at a depth of approximately 46 to 48 feet below grade. Overall groundwater flow in the area is toward the Delaware River to the south and southwest.

## 3.0 TECHNICAL OVERVIEW

In August 2004, groundwater remedial investigation activities were initiated at the ASCIP site in Phillipsburg, New Jersey, to evaluate the potential impacts of the former asphalt paint USTs on the underlying groundwater. Based on the presence of residual soil contamination in the vicinity of the former USTs, an unconsolidated monitoring well was installed downgradient of the former USTs and sampled to evaluate the underlying groundwater quality. The well was installed on the exterior of the manufacturing building within approximately 20 feet downgradient of the former UST area.. The well was installed to a depth of 57 feet below grade. Approximately two weeks following well installation, groundwater monitoring was initiated.

The first ground water sampling event was completed on September 20, 2004, and the second sampling event was completed on October 21, 2004. Upon collection, all samples were placed in laboratory-supplied sample bottles, labeled and packaged in ice-filled coolers. Sample coolers were shipped via courier to Accutest Laboratories (NJDEP-certification #12129) of Dayton, New Jersey; under chain-of-custody protocol. Based on the constituents of the asphalt paint stored in the USTs, the groundwater samples were analyzed for base neutral compounds and volatile organic compounds. The sampling and analysis followed the NJDEP's Technical Requirements for Site Remediation and the Field Sampling Procedures Manual (1992).

The laboratory analyses were completed within the proper holding times. Method detection limits were achieved and all applicable precision and accuracy criteria were met. Based on these criteria, the data for the investigation and remedial activities are reliable. Laboratory quality assurance/quality control can be found with the laboratory deliverables provided in Appendix A. In addition, computer disks containing the Electronic Disk Deliverables are included with the laboratory deliverables in Appendix A.

## 4.0 GROUNDWATER INVESTIGATION

To evaluate the potential impacts of the former asphalt paint USTs, groundwater remedial investigation activities were implemented at the ASCIP site. Based on the presence of residual soil contamination in the vicinity of the former USTs, an unconsolidated monitoring well was installed downgradient of the former USTs and sampled during two events to evaluate groundwater quality.

### 4.1 Monitoring Well Installation

In accordance with the proposed delineation activities and the NJDEP letter dated August 25, 2003, an unconsolidated monitoring well, MW-1, was installed on the exterior of the manufacturing building in the immediate vicinity of the paint area and downgradient of the former USTs. The well was installed to a depth of 57 feet below grade using a combination of air rotary and hollow stem auger drilling techniques. Due to site constraints and access issues, the monitoring well was installed over two consecutive weekends.

The well installation activities were initiated on August 14, 2004 using air rotary drilling methods. This technique was used due to the potential for encountering cobbles, boulders and bedrock in this area of Phillipsburg. However, boulders and bedrock were not encountered in this area. Rather, fine to coarse sands with gravel and some cobbles were encountered. These materials created sloughing conditions in the borehole requiring the advancement of steel casing to maintain the borehole. Due to running sand entering the steel casing, the monitoring well could not be completed on August 14 with this drilling technique. The driller had to remobilize to the site on August 22. At that time, hollow stem auger drilling techniques were used to complete the monitoring well installation.

The monitoring well was constructed according to NJDEP Installation and Design Specifications for Monitoring Wells in Unconsolidated Aquifers. The lithology of the unconsolidated materials was determined based on split-spoon samples and visual examination of the drill cuttings. In addition, the soil samples and cuttings were visually examined for signs of contamination and field screened with a photoionization detector (PID). No staining, odors or elevated PID readings were identified during the installation activities.

To install the well, a 6-inch borehole was advanced to 57 feet below ground surface. Upon completion, a 20-foot long section of 2-inch ID, schedule 40, 0.020-inch slotted PVC well screen attached to a section of 2-inch ID, schedule 40 PVC riser was installed.

The screen was set so that it extended above and below the water table. Clean gravel pack was placed in the annular space to a level one foot above the slotted screen. A minimum of 6-inches of bentonite slurry was placed above the gravel pack. The remainder of the annulus was filled with cement and bentonite slurry to ground surface. The well was finished with a steel manhole set into a 2-foot square concrete pad, flush with the ground surface. The monitoring well location is illustrated on Figure 3.

The monitoring well was subsequently surveyed by a licensed New Jersey Surveyor.

Boring logs, monitoring well certification forms A and B, and well permits are provided in Appendix B.

## 4.2 Groundwater Sampling

Groundwater sampling was initiated approximately two weeks after the well installation. Samples were collected during two events. The second event was performed approximately 30 days after the initial sampling. The samples were analyzed for base neutral compounds and volatile organic compounds based on the constituents of the asphalt paint previously stored in the USTs.

### 4.2.1 Groundwater Elevations and Flow

On September 20 and October 21, 2004, water level and free product measurements were collected from monitoring well MW-1. After removal of the well cap, the well was allowed to equilibrate to atmospheric pressure before recording water level and product measurements. The measurements were made from the top of the inner well casing to the top of the water table, using an electronic interface probe and water level indicator. No free product was identified in the well. The groundwater level data including reference elevations and measured water levels is provided in Table 1.

Groundwater is present in an unconsolidated, saturated zone at a depth of approximately 46 to 48 feet below ground surface (bgs). Based on the regional topography, it is anticipated that groundwater flows to the south or southwest towards the Delaware River.

### 4.2.2 Sample Collection

A groundwater sample was collected from monitoring well MW-1 on September 20 and October 21, 2004 and analyzed for base neutral compounds and volatile organic compounds. Prior to collecting the groundwater sample, the headspace in the well was screened for total volatile organic compounds using a photoionization detector (PID). A minimum of three well volumes was then purged from the monitoring well. The well was purged following the NJDEP Field Sampling Procedures Manual. Field measurements for pH, temperature, and dissolved oxygen (DO) were collected prior to, during, and after purging activities. The monitoring well was purged using a submersible pump with dedicated tubing. The field measurements are summarized in Table 2.

After recovery of the water levels and within two hours of the completion of purging, the well was sampled with a dedicated disposable bailer. The groundwater sample was collected by slowly lowering the bailer into the well until it was completely submerged. The bailer was then retrieved slowly in order not to disturb the sample. The sample was transferred to the bottles provided by the laboratory, sealed, and placed in a cooler at 4° C to ensure preservation. The groundwater and trip blank samples were subsequently submitted to Accutest Laboratories (NJDEP-certification #12129) of Dayton, New Jersey; under chain-of-custody protocol for analysis for base neutral and volatile organic compounds.

### 4.2.3 Analytical Results

Base neutral compounds were undetected in the monitoring well during both events. Analysis for volatile organic compounds identified five chlorinated compounds. The compounds included:

- Chloroform at 1.5 ug/l and 1.4 ug/l,
- Cis-1,2-dichloroethene at 159 ug/l and 220 ug/l,
- Trans-1,2-dichloroethene at 1.7 ug/l and 1.5 ug/l,
- Tetrachloroethene (PCE) at 19.3 ug/l and 26.4 ug/l and
- Trichloroethene (TCE) at 2.5 ug/l and 2.6 ug/l.

Three of the compounds, cis-1,2-dichloroethene, PCE and TCE, were detected at concentrations above the NJDEP's GWQS. None of the compounds associated with the paint, such as asphalt, mineral spirits, VM&P naphtha, and xylenes, were detected in the groundwater. Further, cis-1,2-dichloroethene and trans-1,2-dichloroethene are likely breakdown products. The sampling results are summarized in Table 3 and the monitoring well location is illustrated on Figure 3. Complete laboratory data including the Electronic Data Deliverables are provided in Appendix A.

### 4.2.4 Conclusions and Recommendations

The groundwater investigation activities did not identify any impacts associated with the paint stored in the former USTs. None of the compounds associated with the paint, such as asphalt, mineral spirits, VM&P naphtha, and xylenes, were detected in the groundwater; only chlorinated organic contaminants were detected. As acknowledged by the NJDEP in its January 8, 1999 letter (see Appendix C), these compounds are not associated with the former USTs. In its letter, the NJDEP outlined the option of issuing a No Further Action letter that addresses only the former USTs, and addressing the "non-UST" contamination separately. Therefore, accordingly, ASCIP requests NJDEP to issue a No Further Action approval for the former USTs, following which, ASCIP will submit a Deed Notice to address the residual petroleum hydrocarbon contamination (concentrations greater than 10,000 mg/kg) in the soil located beneath the building floor.

Since three chlorinated volatile organic compounds (cis-1,2-dichloroethene, PCE and TCE) that are not associated with the former USTs were detected at concentrations above the GWQS during both sampling events, ASCIP plans to conduct investigation activities to identify and if feasible, determine the potential source of these contaminants in the groundwater. The investigation activities will be performed separately from the former USTs in accordance with the NJDEP's letter dated January 8, 1999. The initial activities will include a review of facility records to determine if these compounds were used at the facility during previous manufacturing operations. In addition, a receptor evaluation consisting of a well search will be performed to identify potential offsite sources of contamination. This information will be submitted to the NJDEP under separate cover.

**Table 1**
**Groundwater Levels and Elevations**
**Atlantic States Cast Iron Pipe Co.**
**Phillipsburg, New Jersey**

**September 20, 2004**

| Well Designation | Reference Point Elevation (ft, msl) | Depth to Ground Water (Feet) | Depth to NAPL (feet) | NAPL Thickness (feet) | Ground Water Elevation (ft, msl) | Corrected Ground Water Elevation (ft, msl) |
|---|---|---|---|---|---|---|
| | | | | | | |
| MW-1 | 211.43 | 46.03 | ND | ND | 165.40 | 165.40 |
| | | | | | | |

(1) NA = not applicable.
(2) ND = not detected.
(3) Corrected Groundwater Elevation = (Specific Gravity x Product Thickness) plus the uncorrected groundwater elevation.

**October 21, 2004**

| Well Designation | Reference Point Elevation (ft, msl) | Depth to Ground Water (Feet) | Depth to NAPL (feet) | NAPL Thickness (feet) | Ground Water Elevation (ft, msl) | Corrected Ground Water Elevation (ft, msl) |
|---|---|---|---|---|---|---|
| | | | | | | |
| MW-1 | 211.43 | 48.2 | ND | ND | 163.23 | 163.23 |
| | | | | | | |

(1) NA = not applicable.
(2) ND = not detected.
(3) Corrected Groundwater Elevation = (Specific Gravity x Product Thickness) plus the uncorrected groundwater elevation.

Table 2
Monitoring Well Purge Data
Atlantic States Cast Iron Pipe Co.
Phillipsburg, New Jersey

SAMPLING DATES: 9/20/04 and 10/21/04

Site Name/Location: Atlantic States Cast Iron Pipe Co.

**PRE-PURGE INFORMATION**

| Well No. or Name | Time | Total Depth (ft) | Depth To Water (ft) | Water Column (ft) | Multi-plier | Est. Purge Vol.(gal) | PID (ppm) | Depth to Prod. (ft) | Prod. Thick. (ft) |
|---|---|---|---|---|---|---|---|---|---|
| 9/20/2004 MW-1 | 10:55 | 54.30 | 46.03 | 8.27 | | 4 | 19.5 | | ND |
| 10/21/2004 MW-1 | 11:30 | 54.30 | 48.20 | 6.10 | | 3 | 0.4 | | ND |

**PRE-PURGE**

| Temp (°C) | pH (su) | Measured Cond. (umhos/cm) | Corrected Cond. (umhos/cm) | Salinity (ppt) | Eh (mV) | D.O. (ppm) |
|---|---|---|---|---|---|---|
| 19.5 | 6.67 | 664.00 | | | | 7.9 |
| 14.7 | 6.87 | 915.00 | | | | 9.4 |

**PURGING INFORMATION**

| Well No. or Name | Pump Intake Depth (ft | Time Pump On | Time Pump Off | Flow Rate per Volume (gpm) 1st | 2nd & 3rd | Total Purge Vol. (gal) | Pump Type | Water Conditions |
|---|---|---|---|---|---|---|---|---|
| 9/20/2004 MW-1 | 52 | 11:52 | 12:00 | 0.6 | 0.6 | 4.5 | Submersible | Turbid |
| 10/21/2004 MW-1 | 52.5 | 11:46 | 11:52 | 0.5 | 0.5 | 3 | Submersible | Turbid |

**POST-PURGE**

| Temp (°C) | pH (su) | Measured Cond. (umhos/cm) | Corrected Cond. (umhos/cm) | Salinity (ppt) | Eh (mV) | D.O. (ppm) |
|---|---|---|---|---|---|---|
| 17.0 | 6.82 | 684.00 | | | | 8.4 |
| 15.4 | 7.07 | 1060.00 | | | | 8.7 |

**SAMPLING INFORMATION**

| Well No. or Name | 80% Recov. (ft) | Depth To Water (ft | Sample Time | Comments |
|---|---|---|---|---|
| 9/20/2004 MW-1 | | 45.90 | 12:40 | Turbid |
| 10/21/2004 MW-1 | | 48.33 | 12:05 | Turbid |

**POST-SAMPLE**

| Temp (°C) | pH (su) | Measured Cond. (umhos/cm) | Corrected Cond. (umhos/cm) | Salinity (ppt) | Eh (mV) | D.O. (ppm) |
|---|---|---|---|---|---|---|
| 19.5 | 6.75 | 679.00 | | | | 8.1 |
| 15.2 | 7.05 | 1060.00 | | | | 9.0 |

Table 3
Groundwater Sampling Results
September 20 and October 21, 2004
Atlantic States Cast Iron Pipe Co.
Phillipsburg, New Jersey

| Sample ID | New Jersey Ground Water Quality Criteria | MW-1 | | MW-1 | | Trip Blank | | Trip Blank | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample Number | | N78399-1 | | N81296-1 | | N78399-2 | | N81296-2 | |
| Sampling Date | | 9/20/04 | | 10/21/04 | | 9/20/04 | | 10/21/04 | |
| Matrix | | Water | | Water | | Water | | Water | |
| Dilution Factor | | 1.0 | | 1.0 | | 1.0 | | 1.0 | |
| Units | ppb | Concentration ppb | RL | Concentration ppb | RL | Concentration ppb | RL | Concentration ppb | RL |
| VOLATILE COMPOUNDS | | | | | | | | | |
| Acetone | 700 | ND | 10 | ND | 10 | ND | 10 | ND | 10 |
| Benzene | 1 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Bromodichloromethane | 1 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Bromoform | 4 | ND | 4 | ND | 4 | ND | 4 | ND | 4 |
| Bromomethane | 10 | ND | 2 | ND | 2 | ND | 2 | ND | 2 |
| 2-Butanone (MEK) | 300 | ND | 10 | ND | 10 | ND | 10 | ND | 10 |
| Carbon disulfide | NA | ND | 2 | ND | 2 | ND | 2 | ND | 2 |
| Carbon tetrachloride | 2 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Chlorobenzene | 4 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Chloroethane | NA | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Chloroform | 6 | 1.5 | 1 | 1.4 | 1 | ND | 1 | ND | 1 |
| Chloromethane | 30 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Dibromochloromethane | 10 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| 1,1-Dichloroethane | 70 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| 1,2-Dichloroethane | 2 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| 1,1-Dichloroethene | 2 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| cis-1,2-Dichloroethene | 10 | **159** | 1 | **220*** | 5 | ND | 1 | ND | 1 |
| trans-1,2-Dichloroethene | 100 | 1.7 | 1 | 1.5 | 1 | ND | 1 | ND | 1 |
| 1,2-Dichloropropane | 1 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| cis-1,3-Dichloropropene | NA | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| trans-1,3-Dichloropropene | NA | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Ethylbenzene | 700 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| 2-Hexanone | NA | ND | 5 | ND | 5 | ND | 5 | ND | 5 |
| 4-Methyl-2-pentanone(MIBK) | 400 | ND | 5 | ND | 5 | ND | 5 | ND | 5 |
| Methylene chloride | 2 | ND | 2 | ND | 2 | ND | 2 | ND | 2 |
| Styrene | 100 | ND | 5 | ND | 5 | ND | 5 | ND | 5 |
| 1,1,2,2-Tetrachloroethane | 2 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Tetrachloroethene | 1 | **19.3** | 1 | **26.4** | 1 | ND | 1 | ND | 1 |
| Toluene | 1000 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| 1,1,1-Trichloroethane | 30 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| 1,1,2-Trichloroethane | 3 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Trichloroethene | 1 | **2.5** | 1 | **2.6** | 1 | ND | 1 | ND | 1 |
| Vinyl chloride | 5 | ND | 1 | ND | 1 | ND | 1 | ND | 1 |
| Xylene (total) | 40 | ND | 1 | ND | 1 | ND | | ND | 1 |
| Total Targeted Compounds | | 184 | | 251.9 | | ND | | ND | |
| Total Non-Targeted Peaks | | ND | | ND | | ND | | ND | |

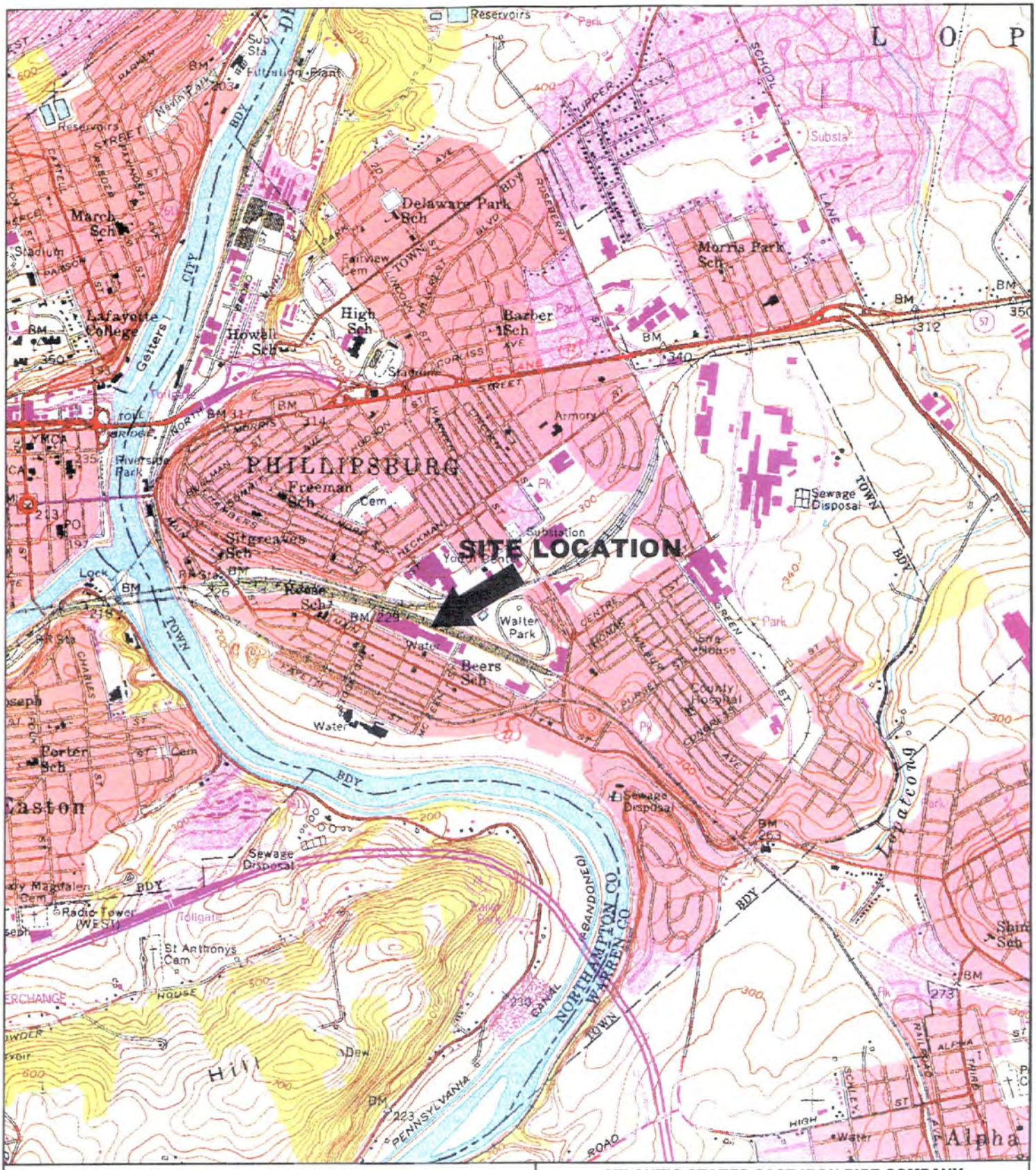
Qualifiers
ND The compound was not detected at the indicated concentration.
Concentrations exceeding the GWQC are shaded and in bold.
NA - Not Applicable
RL- Reporting Limit
* Result is from the second run which had a dilution factor of 5.

Table 3
Groundwater Sampling Results
September 20 and October 21, 2004
Atlantic States Cast Iron Pipe Co.
Phillipsburg, New Jersey

| Sample ID | New Jersey | MW-1 | | MW-1 | | Trip Blank | | Trip Blank | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample Number | Ground Water | N78399-1 | | N81296-1 | | N78399-2 | | 377928 | |
| Sampling Date | Quality | 9/20/04 | | 10/21/04 | | 9/20/04 | | 10/21/04 | |
| Matrix | Criteria | Water | | Water | | Water | | Water | |
| Dilution Factor | | 1.0 | | 1.0 | | 1.0 | | 1.0 | |
| Units | ppb | Concentration ppb | RL | Concentration ppb | RL | Concentration ppb | RL | Concentration ppb | RL |
| BASE NEUTRAL COMPOUNDS | | | | | | | | | |
| Acenaphthene | 400 | ND | 5.7 | ND | 2 | - | - | - | - |
| Acenaphthylene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Anthracene | 2000 | ND | 5.7 | ND | 2 | - | - | - | - |
| Benzo(a)anthracene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Benzo(a)pyrene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Benzo(b)fluoranthene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Benzo(g,h,i)perylene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Benzo(k)fluoranthene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| 4-Bromophenyl phenyl ether | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Butyl benzyl phthalate | 100 | ND | 5.7 | ND | 2 | - | - | - | - |
| 2-Chloronaphthalene | 2000 | ND | 5.7 | ND | 5 | - | - | - | - |
| 4-Chloroaniline | NA | ND | 5.7 | ND | 5 | - | - | - | - |
| Carbazole | NA | ND | 11.0 | ND | 2 | - | - | - | - |
| Chrysene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| bis(2-Chloroethoxy)methane | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| bis(2-Chloroethyl)ether | 10 | ND | 5.7 | ND | 2 | - | - | - | - |
| bis(2-Chloroisopropyl)ether | 300 | ND | 5.7 | ND | 2 | - | - | - | - |
| 4-Chlorophenyl phenyl ether | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| 1,2-Dichlorobenzene | 600 | ND | 5.7 | ND | 2 | - | - | - | - |
| 1,3-Dichlorobenzene | 600 | ND | 5.7 | ND | 2 | - | - | - | - |
| 1,4-Dichlorobenzene | 75 | ND | 5.7 | ND | 2 | - | - | - | - |
| 2,4-Dinitrotoluene | 10 | ND | 5.7 | ND | 2 | - | - | - | - |
| 2,6-Dinitrotoluene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| 3,3'-Dichlorobenzidine | 60 | ND | 11.0 | ND | 5 | - | - | - | - |
| Dibenzo(a,h)anthracene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Dibenzofuran | NA | ND | 5.7 | ND | 5 | - | - | - | - |
| Di-n-butyl phthalate | 900 | ND | 5.7 | ND | 2 | - | - | - | - |
| Di-n-octyl phthalate | 100 | ND | 5.7 | ND | 2 | - | - | - | - |
| Diethyl phthalate | 5000 | ND | 5.7 | ND | 2 | - | - | - | - |
| Dimethyl phthalate | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| bis(2-Ethylhexyl)phthalate | 30 | ND | 5.7 | ND | 2 | - | - | - | - |
| Fluoranthene | 300 | ND | 5.7 | ND | 2 | - | - | - | - |
| Fluorene | 300 | ND | 5.7 | ND | 2 | - | - | - | - |
| Hexachlorobenzene | 10 | ND | 5.7 | ND | 2 | - | - | - | - |
| Hexachlorobutadiene | 1 | ND | 5.7 | ND | 2 | - | - | - | - |
| Hexachlorocyclopentadiene | 50 | ND | 5.7 | ND | 20 | - | - | - | - |
| Hexachloroethane | 10 | ND | 5.7 | ND | 5 | - | - | - | - |
| Indeno(1,2,3-cd)pyrene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Isophorone | 100 | ND | 5.7 | ND | 2 | - | - | - | - |
| 2-Methylnaphthalene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| 2-Nitroaniline | NA | ND | 5.7 | ND | 5 | - | - | - | - |
| 3-Nitroaniline | NA | ND | 5.7 | ND | 5 | - | - | - | - |
| 4-Nitroaniline | NA | ND | 5.7 | ND | 5 | - | - | - | - |
| Naphthalene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Nitrobenzene | 10 | ND | 5.7 | ND | 2 | - | - | - | - |
| N-Nitroso-di-n-propylamine | 20 | ND | 5.7 | ND | 2 | - | - | - | - |
| N-Nitrosodiphenylamine | 20 | ND | 5.7 | ND | 5 | - | - | - | - |
| Phenanthrene | NA | ND | 5.7 | ND | 2 | - | - | - | - |
| Pyrene | 200 | ND | 5.7 | ND | 2 | - | - | - | - |
| 1,2,4-Trichlorobenzene | 9 | ND | 5.7 | ND | 2 | - | - | - | - |
| Total Targeted Compounds | | ND | | ND | | - | - | - | - |
| Total Non-Targeted Peaks | | ND | | ND | | - | - | - | - |

Qualifiers
ND The compound was not detected at the indicated concentration.
Concentrations exceeding the GWQC are shaded and in bold.
NA - Not Applicable
RL- Reporting Limit

# FIGURES




Source: USGS 7.5 Minute Topographic Quadrangle
Easton, N.J. - P.A.
Dated 1956, Photorevised 1994

N

0 1,000 2,000 4,000 Feet

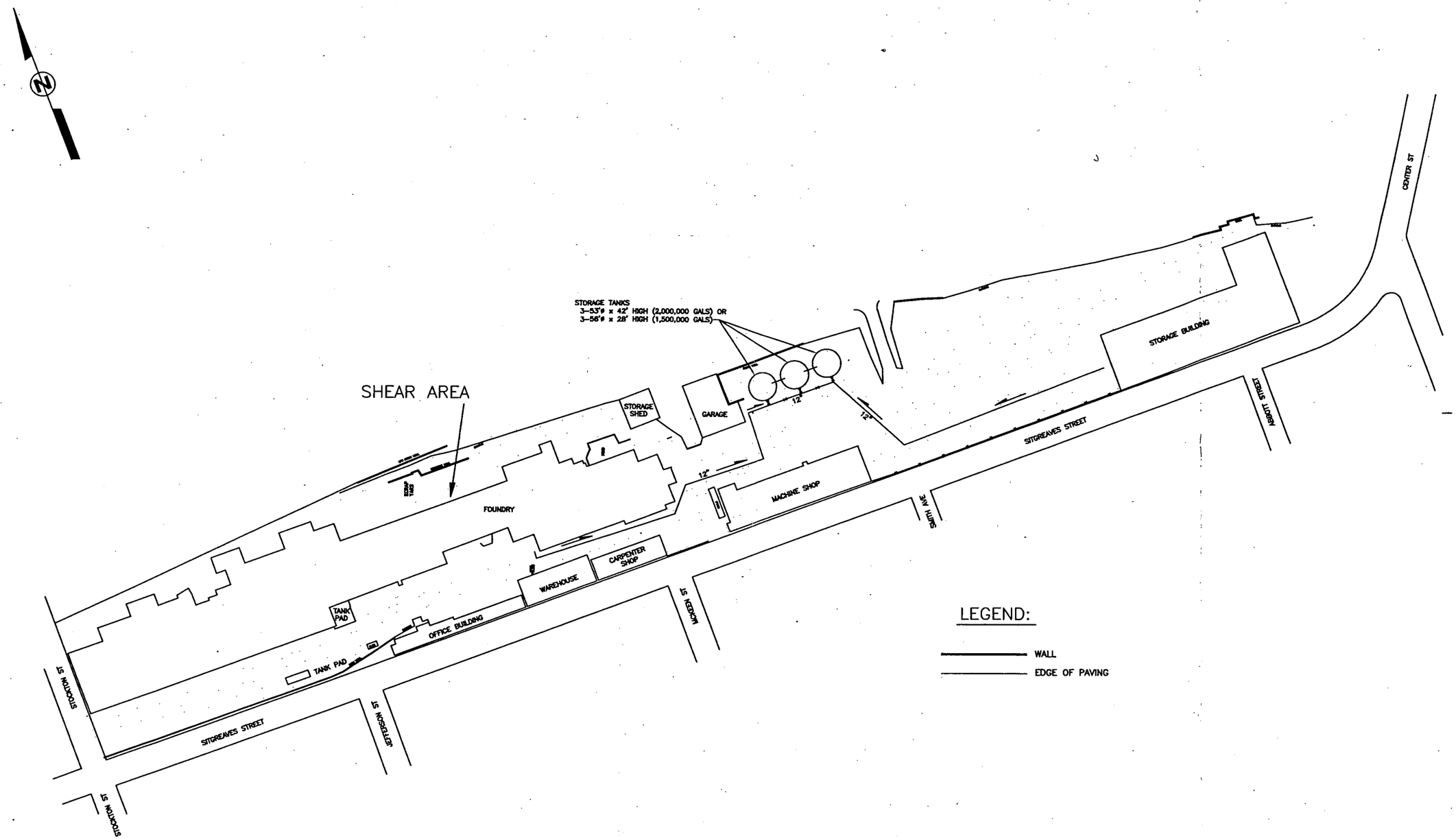
Q:\3852\Technical\GIS\USGS MAP

**ATLANTIC STATES CAST IRON PIPE COMPANY**
**PHILLIPSBURG, NEW JERSEY**

## SITE LOCATION

**SCALE: AS INDICATED** **DATE: JULY 2004**

Dewberry-Goodkind, Inc. **FIGURE 1**




0 100 200 300 400
(in feet)

Q:\3852\CAD\Envir\SitePlan.dwg

ATLANTIC STATES CAST IRON PIPE COMPANY
PHILLIPSBURG, NEW JERSEY

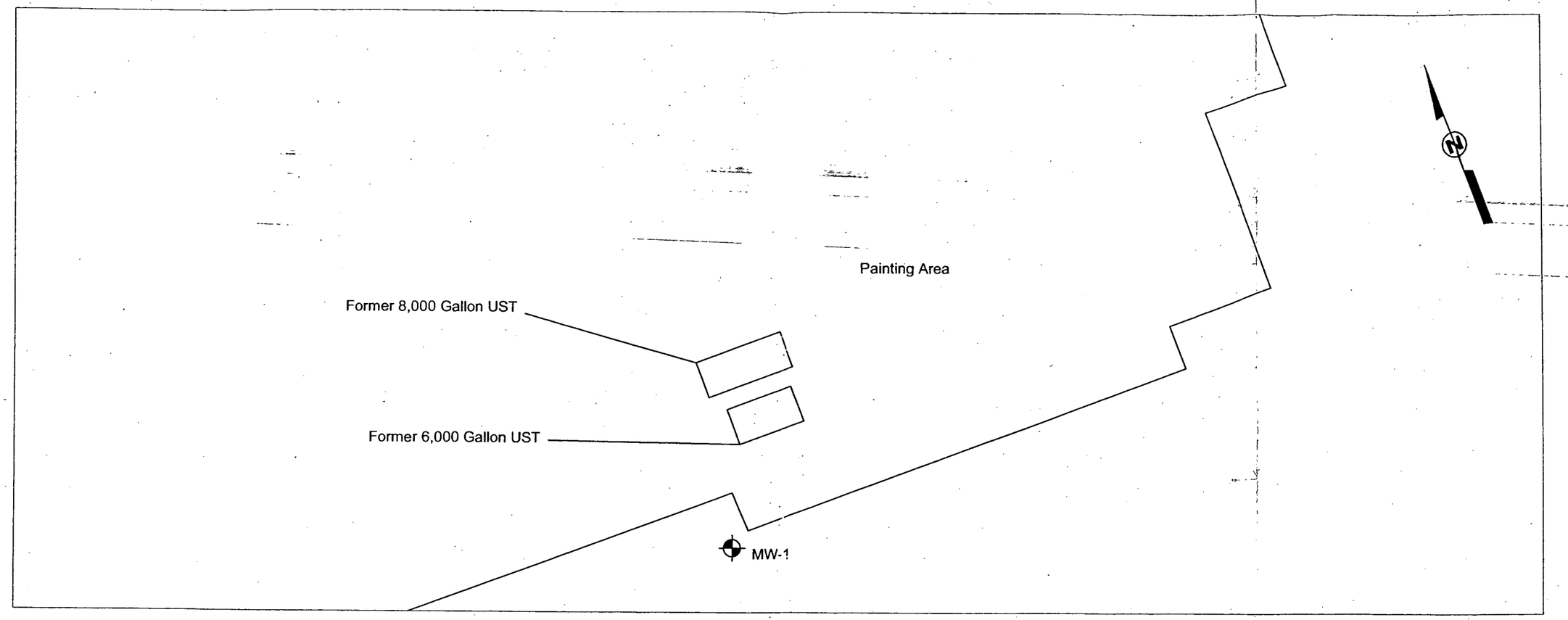
**SITE PLAN**

Scale: As Indicated

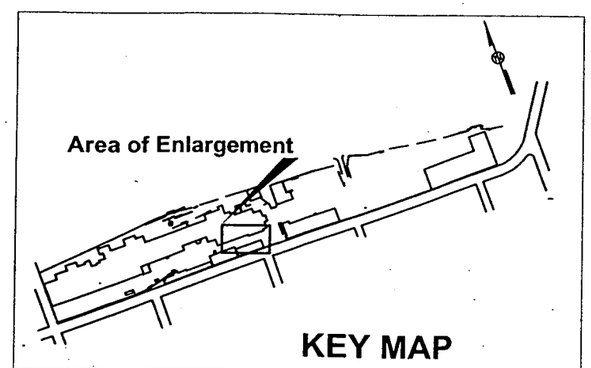
DATE: JULY 2004

Dewberry-Goodkind, Inc.

FIGURE NO. 2




0 20 40
10 30
(in feet)




0 800 1600
400 1200
(in feet)

LEGEND:

MONITORING WELL

ATLANTIC STATES CAST IRON PIPE COMPANY
PHILLIPSBURG, NEW JERSEY

**MONITORING WELL LOCATION**

Scale: As Indicated

DATE: JULY 2004

Dewberry-Goodkind, Inc.
A Dewberry Company

FIGURE NO.
3

Q:\3852\CAD\Envir\SampLoc.dwg

# APPENDIX A

New Jersey
ACCUTEST
Laboratories

10/13/04

RECEIVED
OCT 18 2004

# Technical Report for

Dewberry

Atlantic States Cast Iron Pipe, Phillipsburg, NJ

3852

Accutest Job Number: N78399

Sampling Date: 09/20/04

Report to:

Dewberry-Goodkind, Inc.
299 Webro Road
Parsippany, NJ 08054

ATTN: Larry Brunt

Total number of pages in report: 161

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Vincent J. Pugliese
President

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Accutest Laboratories

# Sample Summary

Dewberry

Job No: N78399

Atlantic States Cast Iron Pipe, Phillipsburg, NJ
Project No: 3852

| Sample Number | Collected Date | Time By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|
| N78399-1 | 09/20/04 | 12:40 MS | 09/21/04 | AQ | Ground Water | MW-1 |
| N78399-2 | 09/20/04 | 12:40 MS | 09/21/04 | AQ | Trip Blank Water | TRIP BLANK |

ACCUTEST

# Table Of Contents
# Reduced Laboratory Data Deliverables
# For
# Non-USEPA/CLP Methods


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C. Sample Tracking Chronicle/Method References

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C. Blank Spike Summary
D. Matrix Spike/Matrix Spike Duplicate Summary
E. Tune Results Summary
F. Internal Standard Summary
G. Surrogate Recovery Results Summary
H. Calibration Summary (sorted by Instrument)
I. Initial Calibration Check Summary
Continuing Calibration Check Summary
J. Sample and Blank Chromatograms, Quant Reports, Mass Spectra, and Library Search Data

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D. Raw Data and Run Record (Hexavalent Chromium)


New Jersey • Fresh Ponds Corporate Village • Building B • 2235 Route 130 • Dayton, NJ 08810 Tel: 732.329.0200 • Fax: 732.329.3499 • http://www.accutest.com

# RESULTS

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N78399-1 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | X28398.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | 2.3 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | 0.31 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | 0.11 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | 0.17 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | 0.15 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | 2.5 | ug/l | |
| 75-15-0 | Carbon disulfide | ND | 2.0 | 0.23 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | 0.15 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | 0.23 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | 0.73 | ug/l | |
| 67-66-3 | Chloroform | 1.5 | 1.0 | 0.081 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | 0.13 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | 0.18 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.13 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.35 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.81 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 159 | 1.0 | 0.24 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | 1.7 | 1.0 | 0.17 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.11 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | 0.071 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | 0.080 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 0.73 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | 0.59 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.20 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | 0.12 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.14 | ug/l | |
| 127-18-4 | Tetrachloroethene | 19.3 | 1.0 | 0.37 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.14 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 79-01-6 | Trichloroethene | 2.5 | 1.0 | 0.13 | ug/l | |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N78399-1 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

**VOA TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.66 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | 0.17 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 97% | | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 106% | | 68-129% |
| 2037-26-5 | Toluene-D8 | 98% | | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | | 82-120% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N78399-1 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8270C SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | L023673.D | 1 | 10/04/04 | AFL | 09/27/04 | F:OP11403 | F:SL1255 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 880 ml | 1.0 ml |
| Run #2 | | |

**BN TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | 5.7 | 1.1 | ug/l | |
| 208-96-8 | Acenaphthylene | ND | 5.7 | 1.1 | ug/l | |
| 120-12-7 | Anthracene | ND | 5.7 | 1.1 | ug/l | |
| 56-55-3 | Benzo(a)anthracene | ND | 5.7 | 1.1 | ug/l | |
| 50-32-8 | Benzo(a)pyrene | ND | 5.7 | 1.1 | ug/l | |
| 205-99-2 | Benzo(b)fluoranthene | ND | 5.7 | 1.1 | ug/l | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | 5.7 | 2.3 | ug/l | |
| 207-08-9 | Benzo(k)fluoranthene | ND | 5.7 | 1.1 | ug/l | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | 5.7 | 1.1 | ug/l | |
| 85-68-7 | Butyl benzyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 100-51-6 | Benzyl Alcohol | ND | 5.7 | 1.1 | ug/l | |
| 91-58-7 | 2-Chloronaphthalene | ND | 5.7 | 1.1 | ug/l | |
| 106-47-8 | 4-Chloroaniline | ND | 11 | 3.4 | ug/l | |
| 218-01-9 | Chrysene | ND | 5.7 | 1.1 | ug/l | |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | 5.7 | 1.1 | ug/l | |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | 5.7 | 2.3 | ug/l | |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | 5.7 | 1.1 | ug/l | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | 5.7 | 1.1 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | 5.7 | 2.3 | ug/l | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | 5.7 | 2.3 | ug/l | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | 11 | 5.7 | ug/l | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | 5.7 | 2.3 | ug/l | |
| 132-64-9 | Dibenzofuran | ND | 5.7 | 1.1 | ug/l | |
| 84-74-2 | Di-n-butyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 117-84-0 | Di-n-octyl phthalate | ND | 5.7 | 2.8 | ug/l | |
| 84-66-2 | Diethyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 131-11-3 | Dimethyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | 5.7 | 2.8 | ug/l | |
| 206-44-0 | Fluoranthene | ND | 5.7 | 1.1 | ug/l | |

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value

RL = Reporting Limit B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

7

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N78399-1 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8270C SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

**BN TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 86-73-7 | Fluorene | ND | 5.7 | 1.1 | ug/l | |
| 118-74-1 | Hexachlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.7 | 2.3 | ug/l | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | 5.7 | 2.3 | ug/l | |
| 67-72-1 | Hexachloroethane | ND | 5.7 | 2.3 | ug/l | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | 5.7 | 2.3 | ug/l | |
| 78-59-1 | Isophorone | ND | 5.7 | 1.1 | ug/l | |
| 91-57-6 | 2-Methylnaphthalene | ND | 5.7 | 1.1 | ug/l | |
| 88-74-4 | 2-Nitroaniline | ND | 5.7 | 2.3 | ug/l | |
| 99-09-2 | 3-Nitroaniline | ND | 5.7 | 2.3 | ug/l | |
| 100-01-6 | 4-Nitroaniline | ND | 5.7 | 2.3 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.7 | 1.1 | ug/l | |
| 98-95-3 | Nitrobenzene | ND | 5.7 | 1.1 | ug/l | |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | 5.7 | 2.3 | ug/l | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | 5.7 | 2.3 | ug/l | |
| 85-01-8 | Phenanthrene | ND | 5.7 | 1.1 | ug/l | |
| 129-00-0 | Pyrene | ND | 5.7 | 1.1 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.7 | 1.1 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 4165-60-0 | Nitrobenzene-d5 | 72% | | 49-119% |
| 321-60-8 | 2-Fluorobiphenyl | 74% | | 45-118% |
| 1718-51-0 | Terphenyl-d14 | 77% | | 46-135% |

| CAS No. | Tentatively Identified Compounds [a] | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Semi-Volatile | | 0 | ug/l | |

(a) No TICs detected.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | N78399-2 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | X28397.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | 2.3 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | 0.31 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | 0.11 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | 0.17 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | 0.15 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | 2.5 | ug/l | |
| 75-15-0 | Carbon disulfide | ND | 2.0 | 0.23 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | 0.15 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | 0.23 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | 0.73 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | 0.081 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | 0.13 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | 0.18 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.13 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.35 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.81 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.24 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.17 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.11 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | 0.071 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | 0.080 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 0.73 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | 0.59 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.20 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | 0.12 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.14 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.37 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.14 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.13 | ug/l | |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | N78399-2 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

**VOA TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.66 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | 0.17 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 102% | | 68-129% |
| 2037-26-5 | Toluene-D8 | 97% | | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 106% | | 82-120% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST Laboratories

# CHAIN OF CUSTODY

2235 Route 130, Dayton NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #

Bottle Order Control #

Accutest Quote #

Accutest Job # N78399

**Client / Reporting Information**

Company Name: Dewberry-Goodkind, Inc.
Address: 299 WEBRO RD
City: PARSIPPANY State: NJ Zip: 07054
Project Contact: LARRY BRUNT E-mail:
Phone #: (973) 4284909 x306
Sampler's Name: MEHMET SEGILMLS

**Project Information**

Project Name: Atlantic States Cast Iron Pipe Company
Street:
City: State:
Project #:
Fax #:
Client Purchase Order #: 3852

**Requested Analysis**

| Accutest Sample # | Field ID / Point of Collection | SUMMA # / MEOH Vial # | Collection Date | Time | Sampled By | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | NaHSO4 | MEOH | ENCORE | 8260 ☐ 624 ☐ 8021 ☐ 602 ☐ PAUG ☐ BTEX ☐ MTBE ☐ TBA ☐ NAP ☐ PALG ☐ | 8260 ☐ 624 ☐ TCL ☐ PPL ☐ STARS ☐ MTBE ☐ TBA ☐ NAP ☐ +10 ☐ +15 ☐ | 8270 ☐ 625 ☐ TCL ☐ PPL ☐ STARS ☐ ABN ☐ BN ☐ PAH ☐ PADF ☐ +TICs ☐ | VO+10 | BN+15 | | | | | | | Matrix Codes: DW - Drinking Water, GW - Ground Water, WW - Water, SW - Surface Water, SO - Soil, SL - Sludge, OI - Oil, LIQ - Other Liquid, AIR - Air, SOL - Other Solid, WP - Wipe |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -1 | MW-1 | | 9/20/04 | 12:40 | MS | Aq | 4 | 3 | | | | | | | | | | | ✓ | ✓ | | | | | | | LAB USE ONLY |
| -2 | TRIP BLANK 9/20/04, 0830 | | | | | | | | | | | | | | | | | | | | | | | | | EX11, 2115 |

**Turnaround Time (Business Days)**

- ☑ Std. 15 Business Days
- ☐ 10 Day RUSH
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ Other

Approved By: / Date:

Emergency & Rush T/A data available VIA LabLink

**Data Deliverable Information**

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☐ NJ Reduced
- ☐ NJ Full
- ☐ Other _____
- ☐ FULL CLP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____

Commercial "A" = Results Only

**Comments / Remarks**

ADDED TO C.O.C. PENDING REVIEW (JM 9/21/04)

**Sample Custody must be documented below each time samples change possession, including courier delivery.**

| Relinquished by Sampler: | Date Time: | Received by: | Relinquished by: | Date Time: | Received by: |
|---|---|---|---|---|---|
| 1 | | 1 G. Rider | 2 | | 2 |
| Relinquished by: 3 [signature] | Date Time: 10:00 9/21/04 | Received by: 3 G. Rider | Relinquished by: 4 G. Rider | Date Time: 1200 9-21-04 | Received by: 4 [signature] |
| Relinquished by: 5 | Date Time: | Received by: 5 | Custody Seal # | Preserved where applicable ☐ | On Ice ☐ Cooler Temp. 4° |

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ACCUTEST®

# CHAIN OF CUSTODY

Fresh Ponds Corporate Village, Building B
2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

Accutest Job #:

Accutest Quote #:

**Client Information**

Accutest

Name: 2235 Route 130

Address: Dayton NJ 08810

City / State / Zip: Nadine Yakes

Send Report to:

Phone #: (732) 329-0200 x226

**Facility Information**

Project Name: Atlantic States

Location:

Project No.: N78399

FAX #: (732) 329-3499

**Analytical Information**

| Field ID / Point of Collection | Collection Date | Collection Time | Sampled By | Matrix | # of bottles | Preservation HCL | NaOH | HNO3 | H2So4 | None | B8270TCL+ | 0 | 0 | 0 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N78399 -1 | 9/20 | 12:40 | MS | AQ | 1 | | | | | | X | | | | | | |

**Turnaround Information**

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days *EMERGENCY*
- [X] Other 21 (Days)

Approved By:

21 Day Turnaround Hardcopy, Emergency or RUSH is FAX Data unless previously approved.

**Data Deliverable Information**

- [X] NJ Reduced
- [ ] NJ Full
- [ ] FULL CLP
- [ ] Disk Deliverable
- [ ] Other (Specify)
- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] State Forms

**Comments / Remarks**

Sample Custody must be documented below each time samples change possesion, including courier delivery.

| Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|
| 1 [signature] | 9/23/04 1700 | 1 FedX | 2 | | 2 |
| 3 | | 3 | 4 | | 4 |
| 5 | | 5 | Seal # | Preserved where applicable ☐ | On Ice ☐ |

NO EX11
K95001

12

# Accutest
# Subcontractor Order

| | | | |
|---|---|---|---|
| **Date/Time:** | 9/22/04 1:08 PM | **Sub Lab:** | Accutest |
| **Accutest Job No.** | N78399 | **Address:** | 4405 Vineland Rd Suite C-15 |
| **Client Project:** | Atlantic States | | Orlando FLA 32811 |
| **CSR:** | NMY | **Contact:** | Sample Management |
| | | **Phone:** | 407 425-6700 |

| Sample #: | Analyses |
|---|---|
| N78399 - 1 | B8270TCL+ |
| 0 | |
| 0 | |
| 0 | |
| 0 | |
| 0 | |
| 0 | |
| 0 | |
| 0 | |
| 0 | |
| Turn Around | 21 |

**Sample Managment receipt:** _____ **Date:** 9/22/04

*(Print form and sign/date. Submit this form to Login Dept. with the SUB COC.)*

e/sop_new/subform

# Internal Sample Tracking Chronicle

Accutest New Jersey

**Job No:** N78399

GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ
Project No: 3852

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| N78399-1 MW-1 | Collected: 20-SEP-04 12:40 By: MS | | Received: 21-SEP-04 By: MC | | | |
| N78399-1 | SW846 8270C | 04-OCT-04 17:00 | ME | 27-SEP-04 | MIJ | B8270TCL+ |

# GC/MS
# VOLATILES

ACCUTEST

# GC/MS Analysis Case Narrative/Conformance/Non-Conformance Summary

Fraction Volatile

| | NO | YES |
|---|---|---|
| 1. Chromatograms Labeled/Compounds Identified *(Field Samples and Method Blanks)* | | ✓ |
| 2. GC/MS Tune Meet Criteria | | ✓ |
| 3. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series. | | ✓ |
| 4. GC/MS Calibration – Initial and Continuing Calibration Meet Method Requirements | | ✓ |
| 5. GC/MS Calibration Requirements | | |
| a. Calibration Check Compounds | | ✓ |
| b. System Performance Check Compounds | | ✓ |
| 6. Blank Contamination | ✓ | |
| *If yes, the sample result is qualified with a "B".* | | |
| 7. Surrogate Recoveries Meet Criteria | | ✓ |
| *If the requirement is not met, refer to the Surrogate Summary for comment.* | | * |
| 8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria | | ✓ |
| *If the requirement is not met, refer to MS/MSD Summary for comment.* | | |
| 9. Internal Standard Area/Retention Time Shift Meet Criteria | | ✓ |
| *If the requirement is not met, refer to the Internal Standard Summary for comment.* | | |
| 10. Extraction Holding Time Met | | N/A |
| *If the holding time is not met, refer to the Sample Result page for comment.* | | |
| 11. Analysis Holding Time Met | | ✓ |
| *If the holding time is not met, refer to the Sample Result page for comment.* | | |

12. Volatile Sample Preservation – pH should be < 2. *List any non-compliant samples below:*

Additional Comments: * See footnote

QC Review Signature: [signature] Date: 10/13/04

Form: RG04
Rev. Date: 2/9/00

Case Narrative
Library Search data

The non-target compound detected in this sample were tentatively identified using a search of the NIST/EPA Mass spectral Library. This search selects certain uniqueness characteristics from the spectra of the non-target compounds and compares them to spectra of compounds that have been archived in the mass spectral Library. Compounds in the library whose spectra most closely resemble the spectra of the non-target compounds are listed in order of their "match quality" in the search results.

Interpreting library search data is subjective and dependent upon the analyst's judgement. Subjectivity increases as spectral complexity increases and the likelihood of listing a non-target compound as an unknown becomes greater.

Qualitative identifications of non-targeted compounds must be evaluated carefully to determine if their chemical and physical properties are consistent with the compound classes that can be determined by the method in use. If the chemical and physical properties of the suspect compound indicate that presence is possible, the library search data provides the basis for further investigation. The information generated via library searches of non-targeted compounds should be treated as semi-qualitative.

Quantitative values placed on tentatively identified compounds (TICs) are calculated using an assumed response factor of one (1). This assumption can cause the calculated concentration to be grossly estimated and may be high by as much as a factor of five (5) or low by as much as a factor of one thousand (1,000). The accuracy of quantitative data generated using library search procedures is unknown and should be used guardedly.

The library search may have indicated the presence of organo-silicon compounds, carbon dioxide, or aldol condensates. The organo-silicon compounds that have been identified in sample are found in components of the analytical instrumentation. They are classified as normal system artifacts. Carbon dioxide, an atmospheric component is soluble in eater and capable of being detected in purge and trap systems. Its presence is inconsequential because of its ubiquitous nature. Aldol condensates are byproducts of extraction/concentration procedures that use acetone as a solvent. They are produced under certain pH conditions, which are a function of sample matrix characteristics. None of these compounds are of sample origin and their appearance should be discounted for decision-making purpose.

# Method Blank Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VX1101-MB1 | X28394.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N78399-1, N78399-2

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | 2.3 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | 0.31 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | 0.11 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | 0.17 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | 0.15 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | 2.5 | ug/l | |
| 75-15-0 | Carbon disulfide | ND | 2.0 | 0.23 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | 0.15 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | 0.23 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | 0.73 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | 0.081 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | 0.13 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | 0.18 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.13 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.35 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.81 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.24 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.17 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.11 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | 0.071 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | 0.080 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 0.73 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | 0.59 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.20 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | 0.12 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.14 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.37 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.14 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.13 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.66 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | 0.17 | ug/l | |

# Method Blank Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VX1101-MB1 | X28394.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N78399-1, N78399-2

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | 68-129% |
| 2037-26-5 | Toluene-D8 | 97% | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 103% | 82-120% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

# Blank Spike Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VX1101-BS | X28395.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N78399-1, N78399-2

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | 50 | 57.4 | 115 | 53-153 |
| 71-43-2 | Benzene | 50 | 54.5 | 109 | 77-119 |
| 75-27-4 | Bromodichloromethane | 50 | 56.5 | 113 | 82-126 |
| 75-25-2 | Bromoform | 50 | 55.3 | 111 | 73-135 |
| 74-83-9 | Bromomethane | 50 | 61.2 | 122 | 61-138 |
| 78-93-3 | 2-Butanone (MEK) | 50 | 53.1 | 106 | 58-142 |
| 75-15-0 | Carbon disulfide | 50 | 53.1 | 106 | 60-130 |
| 56-23-5 | Carbon tetrachloride | 50 | 55.2 | 110 | 72-140 |
| 108-90-7 | Chlorobenzene | 50 | 55.7 | 111 | 81-117 |
| 75-00-3 | Chloroethane | 50 | 61.4 | 123 | 69-135 |
| 67-66-3 | Chloroform | 50 | 53.5 | 107 | 80-122 |
| 74-87-3 | Chloromethane | 50 | 65.9 | 132 | 59-132 |
| 124-48-1 | Dibromochloromethane | 50 | 57.0 | 114 | 80-125 |
| 75-34-3 | 1,1-Dichloroethane | 50 | 54.5 | 109 | 78-121 |
| 107-06-2 | 1,2-Dichloroethane | 50 | 58.4 | 117 | 66-137 |
| 75-35-4 | 1,1-Dichloroethene | 50 | 53.5 | 107 | 73-124 |
| 156-59-2 | cis-1,2-Dichloroethene | 50 | 52.3 | 105 | 76-120 |
| 156-60-5 | trans-1,2-Dichloroethene | 50 | 54.4 | 109 | 73-119 |
| 78-87-5 | 1,2-Dichloropropane | 50 | 56.0 | 112 | 82-117 |
| 10061-01-5 | cis-1,3-Dichloropropene | 50 | 58.3 | 117 | 81-120 |
| 10061-02-6 | trans-1,3-Dichloropropene | 50 | 59.2 | 118 | 81-125 |
| 100-41-4 | Ethylbenzene | 50 | 57.9 | 116 | 79-120 |
| 591-78-6 | 2-Hexanone | 50 | 57.3 | 115 | 66-140 |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | 50 | 55.9 | 112 | 70-134 |
| 75-09-2 | Methylene chloride | 50 | 54.2 | 108 | 75-122 |
| 100-42-5 | Styrene | 50 | 59.4 | 119 | 80-125 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 50 | 55.8 | 112 | 76-117 |
| 127-18-4 | Tetrachloroethene | 50 | 47.5 | 95 | 69-130 |
| 108-88-3 | Toluene | 50 | 57.1 | 114 | 81-120 |
| 71-55-6 | 1,1,1-Trichloroethane | 50 | 54.1 | 108 | 77-132 |
| 79-00-5 | 1,1,2-Trichloroethane | 50 | 55.3 | 111 | 85-117 |
| 79-01-6 | Trichloroethene | 50 | 55.3 | 111 | 83-119 |
| 75-01-4 | Vinyl chloride | 50 | 57.2 | 114 | 65-135 |
| 1330-20-7 | Xylene (total) | 150 | 172 | 115 | 81-119 |

# Blank Spike Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VX1101-BS | X28395.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N78399-1, N78399-2

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | 68-129% |
| 2037-26-5 | Toluene-D8 | 100% | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | 82-120% |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| N78365-10MS | X28404.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |
| N78365-10MSD | X28405.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |
| N78365-10 | X28411.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N78399-1, N78399-2

| CAS No. | Compound | N78365-10 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | | 50 | 22.9 | 46* [a] | 23.3 | 47 | 2 | 47-163/22 |
| 71-43-2 | Benzene | ND | | 50 | 55.7 | 111 | 53.4 | 107 | 4 | 51-138/10 |
| 75-27-4 | Bromodichloromethane | ND | | 50 | 56.9 | 114 | 54.6 | 109 | 4 | 80-128/10 |
| 75-25-2 | Bromoform | ND | | 50 | 52.1 | 104 | 50.9 | 102 | 2 | 68-137/10 |
| 74-83-9 | Bromomethane | ND | | 50 | 54.4 | 109 | 50.4 | 101 | 8 | 61-141/17 |
| 78-93-3 | 2-Butanone (MEK) | ND | | 50 | 31.0 | 62 | 31.2 | 62 | 1 | 55-149/22 |
| 75-15-0 | Carbon disulfide | ND | | 50 | 53.9 | 108 | 50.7 | 101 | 6 | 59-128/14 |
| 56-23-5 | Carbon tetrachloride | ND | | 50 | 58.6 | 117 | 55.1 | 110 | 6 | 71-143/13 |
| 108-90-7 | Chlorobenzene | ND | | 50 | 58.7 | 117 | 57.3 | 115 | 2 | 78-120/10 |
| 75-00-3 | Chloroethane | ND | | 50 | 54.7 | 109 | 50.3 | 101 | 8 | 67-139/16 |
| 67-66-3 | Chloroform | ND | | 50 | 54.7 | 109 | 51.7 | 103 | 6 | 78-126/11 |
| 74-87-3 | Chloromethane | ND | | 50 | 50.0 | 100 | 46.2 | 92 | 8 | 57-134/17 |
| 124-48-1 | Dibromochloromethane | ND | | 50 | 57.7 | 115 | 56.5 | 113 | 2 | 79-127/10 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 50 | 56.2 | 112 | 52.8 | 106 | 6 | 75-125/11 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 50 | 55.7 | 111 | 53.3 | 107 | 4 | 63-142/12 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 50 | 57.4 | 115 | 54.0 | 108 | 6 | 69-129/12 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 50 | 56.9 | 114 | 54.2 | 108 | 5 | 73-127/10 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 50 | 56.5 | 113 | 53.3 | 107 | 6 | 71-123/11 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 50 | 56.6 | 113 | 54.6 | 109 | 4 | 81-120/10 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 50 | 58.6 | 117 | 56.8 | 114 | 3 | 78-121/10 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 50 | 58.4 | 117 | 56.4 | 113 | 3 | 77-128/11 |
| 100-41-4 | Ethylbenzene | ND | | 50 | 59.6 | 119 | 57.6 | 115 | 3 | 51-142/11 |
| 591-78-6 | 2-Hexanone | ND | | 50 | 37.3 | 75 | 37.1 | 74 | 1 | 64-145/13 |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | | 50 | 43.2 | 86 | 48.4 | 97 | 11 | 66-140/12 |
| 75-09-2 | Methylene chloride | ND | | 50 | 55.5 | 111 | 52.6 | 105 | 5 | 73-126/10 |
| 100-42-5 | Styrene | ND | | 50 | 61.4 | 123 | 59.8 | 120 | 3 | 79-130/10 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 50 | 54.8 | 110 | 54.6 | 109 | 0 | 74-121/10 |
| 127-18-4 | Tetrachloroethene | ND | | 50 | 50.1 | 100 | 49.5 | 99 | 1 | 70-128/12 |
| 108-88-3 | Toluene | 0.42 | J | 50 | 59.5 | 118 | 57.0 | 113 | 4 | 49-147/10 |
| 71-55-6 | 1,1,1-Trichloroethane | 0.58 | J | 50 | 57.0 | 113 | 53.4 | 106 | 7 | 74-136/13 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 50 | 56.2 | 112 | 54.4 | 109 | 3 | 83-121/10 |
| 79-01-6 | Trichloroethene | ND | | 50 | 57.6 | 115 | 55.4 | 111 | 4 | 75-128/10 |
| 75-01-4 | Vinyl chloride | ND | | 50 | 49.9 | 100 | 46.4 | 93 | 7 | 60-141/16 |
| 1330-20-7 | Xylene (total) | ND | | 150 | 182 | 121 | 177 | 118 | 3 | 44-146/11 |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| N78365-10MS | X28404.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |
| N78365-10MSD | X28405.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |
| N78365-10 | X28411.D | 1 | 10/04/04 | DTM | n/a | n/a | VX1101 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N78399-1, N78399-2

| CAS No. | Surrogate Recoveries | MS | MSD | N78365-10 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 93% | 91% | 97% | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 90% | 87% | 105% | 68-129% |
| 2037-26-5 | Toluene-D8 | 100% | 100% | 98% | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | 100% | 104% | 82-120% |

(a) Outside control limits due to matrix interference.

# Instrument Performance Check (BFB)



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | VX1093-BFB | **Injection Date:** | 09/30/04 |
| **Lab File ID:** | X28215.D | **Injection Time:** | 17:11 |
| **Instrument ID:** | GCMSX | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | Pass/Fail |
|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 5110 | 16.0 | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 13868 | 43.4 | Pass |
| 95 | Base peak, 100% relative abundance | 31976 | 100.0 | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 2287 | 7.2 | Pass |
| 173 | Less than 2.0% of mass 174 | 62 | 0.19 (0.2) [a] | Pass |
| 174 | 50.0 - 150.0% of mass 95 | 30936 | 96.7 | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 2204 | 6.9 (7.1) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 30218 | 94.5 (97.7) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 2010 | 6.3 (6.7) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| VX1093-ICC1093 | X28216.D | 09/30/04 | 17:59 | 00:48 | Initial cal 50 |
| VX1093-IC1093 | X28217.D | 09/30/04 | 18:29 | 01:18 | Initial cal 20 |
| VX1093-IC1093 | X28218.D | 09/30/04 | 18:59 | 01:48 | Initial cal 5 |
| VX1093-IC1093 | X28219.D | 09/30/04 | 19:28 | 02:17 | Initial cal 2 |
| VX1093-IC1093 | X28220.D | 09/30/04 | 19:58 | 02:47 | Initial cal 1 |
| VX1093-IC1093 | X28221.D | 09/30/04 | 20:28 | 03:17 | Initial cal 100 |
| VX1093-IC1093 | X28222.D | 09/30/04 | 20:57 | 03:46 | Initial cal 200 |

# Instrument Performance Check (BFB)



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | VX1101-BFB | **Injection Date:** | 10/04/04 |
| **Lab File ID:** | X28391.D | **Injection Time:** | 10:17 |
| **Instrument ID:** | GCMSX | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 1756 | 15.1 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 4934 | 42.3 | | Pass |
| 95 | Base peak, 100% relative abundance | 11666 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 833 | 7.1 | | Pass |
| 173 | Less than 2.0% of mass 174 | 0 | 0.0 | (0.0) [a] | Pass |
| 174 | 50.0 - 150.0% of mass 95 | 11843 | 101.5 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 839 | 7.2 | (7.1) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 11494 | 98.5 | (97.1) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 763 | 6.5 | (6.6) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| VX1101-CC1093 | X28392.D | 10/04/04 | 10:58 | 00:41 | Continuing cal 20 |
| VX1101-MB1 | X28394.D | 10/04/04 | 12:07 | 01:50 | Method Blank |
| VX1101-BS | X28395.D | 10/04/04 | 12:46 | 02:29 | Blank Spike |
| N78399-2 | X28397.D | 10/04/04 | 14:17 | 04:00 | TRIP BLANK |
| N78399-1 | X28398.D | 10/04/04 | 14:47 | 04:30 | MW-1 |
| ZZZZZZ | X28399.D | 10/04/04 | 15:16 | 04:59 | (unrelated sample) |
| ZZZZZZ | X28400.D | 10/04/04 | 15:46 | 05:29 | (unrelated sample) |
| ZZZZZZ | X28401.D | 10/04/04 | 16:16 | 05:59 | (unrelated sample) |
| ZZZZZZ | X28402.D | 10/04/04 | 16:46 | 06:29 | (unrelated sample) |
| N78365-10MS | X28404.D | 10/04/04 | 17:49 | 07:32 | Matrix Spike |
| N78365-10MSD | X28405.D | 10/04/04 | 18:19 | 08:02 | Matrix Spike Duplicate |
| ZZZZZZ | X28407.D | 10/04/04 | 19:47 | 09:30 | (unrelated sample) |
| ZZZZZZ | X28408.D | 10/04/04 | 20:17 | 10:00 | (unrelated sample) |
| ZZZZZZ | X28409.D | 10/04/04 | 20:47 | 10:30 | (unrelated sample) |
| ZZZZZZ | X28410.D | 10/04/04 | 21:16 | 10:59 | (unrelated sample) |
| N78365-10 | X28411.D | 10/04/04 | 21:46 | 11:29 | (used for QC only; not part of job N78399) |

# Volatile Internal Standard Area Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Check Std:** | VX1101-CC1093 | **Injection Date:** | 10/04/04 |
| **Lab File ID:** | X28392.D | **Injection Time:** | 10:58 |
| **Instrument ID:** | GCMSX | **Method:** | SW846 8260B |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 121126 | 7.83 | 194803 | 10.59 | 277968 | 11.77 | 274769 | 15.98 | 176898 | 18.69 |
| Upper Limit [a] | 242252 | 8.33 | 389606 | 11.09 | 555936 | 12.27 | 549538 | 16.48 | 353796 | 19.19 |
| Lower Limit [b] | 60563 | 7.33 | 97402 | 10.09 | 138984 | 11.27 | 137385 | 15.48 | 88449 | 18.19 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| VX1101-MB1 | 128557 | 7.84 | 185688 | 10.59 | 266641 | 11.77 | 262322 | 15.98 | 172979 | 18.70 |
| VX1101-BS | 131208 | 7.84 | 178033 | 10.60 | 258403 | 11.77 | 260687 | 15.98 | 166589 | 18.70 |
| N78399-2 | 127339 | 7.84 | 178787 | 10.60 | 257597 | 11.77 | 252641 | 15.98 | 163045 | 18.70 |
| N78399-1 | 121065 | 7.84 | 165465 | 10.60 | 242013 | 11.78 | 239225 | 15.98 | 156501 | 18.70 |
| ZZZZZZ | 115023 | 7.84 | 160374 | 10.60 | 232260 | 11.78 | 231789 | 15.98 | 153466 | 18.70 |
| ZZZZZZ | 107717 | 7.84 | 156706 | 10.60 | 231688 | 11.78 | 229695 | 15.98 | 148400 | 18.70 |
| ZZZZZZ | 106770 | 7.84 | 157350 | 10.60 | 233293 | 11.78 | 230187 | 15.99 | 148517 | 18.70 |
| ZZZZZZ | 108722 | 7.84 | 155398 | 10.60 | 230560 | 11.78 | 230234 | 15.99 | 155644 | 18.70 |
| N78365-10MS | 137446 | 7.84 | 193127 | 10.60 | 277155 | 11.78 | 278738 | 15.98 | 179198 | 18.70 |
| N78365-10MSD | 155979 | 7.84 | 209690 | 10.60 | 300483 | 11.78 | 300312 | 15.98 | 190587 | 18.70 |
| ZZZZZZ | 140686 | 7.84 | 204972 | 10.60 | 291472 | 11.77 | 286127 | 15.98 | 189711 | 18.70 |
| ZZZZZZ | 124140 | 7.84 | 197638 | 10.60 | 285843 | 11.77 | 278477 | 15.98 | 180796 | 18.70 |
| ZZZZZZ | 121996 | 7.84 | 182286 | 10.60 | 262360 | 11.77 | 259129 | 15.98 | 169988 | 18.70 |
| ZZZZZZ | 112392 | 7.84 | 173130 | 10.60 | 248535 | 11.77 | 250809 | 15.98 | 162853 | 18.70 |
| N78365-10 | 124806 | 7.84 | 169390 | 10.60 | 248910 | 11.77 | 245187 | 15.98 | 160738 | 18.70 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene
**IS 4** = Chlorobenzene-D5
**IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Surrogate Recovery Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Method:** SW846 8260B **Matrix:** AQ

**Samples and QC shown here apply to the above method**

| Lab Sample ID | Lab File ID | S1 | S2 | S3 | S4 |
|---|---|---|---|---|---|
| N78399-1 | X28398.D | 97.0 | 106.0 | 98.0 | 104.0 |
| N78399-2 | X28397.D | 95.0 | 102.0 | 97.0 | 106.0 |
| N78365-10MS | X28404.D | 93.0 | 90.0 | 100.0 | 100.0 |
| N78365-10MSD | X28405.D | 91.0 | 87.0 | 100.0 | 100.0 |
| VX1101-BS | X28395.D | 94.0 | 96.0 | 100.0 | 100.0 |
| VX1101-MB1 | X28394.D | 94.0 | 96.0 | 97.0 | 103.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = Dibromofluoromethane | 79-119% |
| S2 = 1,2-Dichloroethane-D4 | 68-129% |
| S3 = Toluene-D8 | 83-118% |
| S4 = 4-Bromofluorobenzene | 82-120% |

# Initial Calibration Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VX1093-ICC1093
**Lab FileID:** X28216.D

Response Factor Report MSX

Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Sep 30 22:24:20 2004
Response via : Initial Calibration

Calibration Files
1 =X28220.D 2 =X28219.D 100 =X28221.D
50 =X28216.D 20 =X28217.D 200 =X28222.D 5 =X28218.D

| Compound | 1 | 2 | 100 | 50 | 20 | 200 | 5 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) I Tert Butyl Alcohol-d9 | ----------ISTD---------- | | | | | | | | |
| 2)M tertiary butyl al | 0.789 | 0.986 | 1.099 | 0.949 | 1.102 | 1.125 | 1.085 | 1.019 | 11.85 |
| 3) I pentafluorobenzene | ----------ISTD---------- | | | | | | | | |
| 4)M chlorodifluoromet | 0.523 | 0.583 | 0.691 | 0.615 | 0.647 | 0.670 | 0.629 | 0.623 | 9.07 |
| 5)M dichlorodifluorom | | | 0.482 | 0.455 | 0.429 | 0.469 | 0.360 | 0.439 | 11.05 |
| 6)M chloromethane | 0.687 | 0.607 | 0.691 | 0.654 | 0.669 | 0.576 | 0.624 | 0.644 | 6.67 |
| 7)M vinyl chloride | 0.679 | 0.639 | 0.654 | 0.631 | 0.650 | 0.653 | 0.629 | 0.648 | 2.65 |
| 8)M bromomethane | 0.452 | 0.475 | 0.310 | 0.464 | 0.486 | | 0.470 | 0.443 | 14.88 |
| 9)M chloroethane | 0.351 | 0.345 | 0.395 | 0.365 | 0.374 | 0.277 | 0.357 | 0.352 | 10.48 |
| 10)M trichlorofluorome | 0.606 | 0.639 | | 0.770 | 0.743 | | 0.665 | 0.685 | 10.12 |
| 11)M ethyl ether | 0.210 | 0.244 | 0.325 | 0.282 | 0.303 | 0.321 | 0.296 | 0.283 | 14.88 |
| 12)M acrolein | 0.106 | 0.111 | 0.100 | 0.098 | 0.112 | 0.079 | 0.115 | 0.103 | 11.90 |
| 13)M 1,1-dichloroethen | 0.469 | 0.451 | 0.546 | 0.474 | 0.521 | 0.523 | 0.490 | 0.496 | 6.96 |
| 14)M acetone | 0.313 | 0.383 | 0.466 | 0.413 | 0.446 | 0.390 | 0.437 | 0.407 | 12.55 |
| 15)M allyl chloride | 0.239 | 0.282 | 0.360 | 0.324 | 0.342 | 0.357 | 0.312 | 0.317 | 13.83 |
| 16)M acetonitrile | 0.057 | 0.050 | 0.061 | 0.056 | 0.063 | 0.053 | 0.030 | 0.053 | 21.12 |
| ----- Linear regression ----- Coefficient = 0.9942 | | | | | | | | | |
| Response Ratio = 0.01837 + 0.05425 *A | | | | | | | | | |
| 17)M iodomethane | 0.963 | 0.946 | 1.102 | 0.969 | 1.082 | 1.076 | 1.032 | 1.024 | 6.31 |
| 18)M iso-butyl alcohol | | 0.032 | 0.039 | 0.035 | 0.040 | 0.033 | 0.036 | 0.036 | 9.18 |
| 19)M carbon disulfide | 1.913 | 1.759 | 1.912 | 1.672 | 1.892 | 1.797 | 1.806 | 1.822 | 4.94 |
| 20)M methylene chlorid | 0.532 | 0.547 | 0.594 | 0.522 | 0.578 | 0.573 | 0.587 | 0.562 | 5.02 |
| 21)M methyl acetate | 0.231 | 0.714 | 0.515 | 0.451 | 1.326 | 0.439 | 1.229 | 0.701 | 59.85 |
| 22)M methyl tert butyl | 1.624 | 1.623 | 1.755 | 1.520 | 1.674 | 1.648 | 1.679 | 1.646 | 4.35 |
| 23)M trans-1,2-dichlor | 0.489 | 0.488 | 0.556 | 0.487 | 0.547 | 0.534 | 0.538 | 0.520 | 5.88 |
| 24)M di-isopropyl ethe | 1.585 | 1.599 | 1.772 | 1.529 | 1.658 | 1.595 | 1.607 | 1.620 | 4.73 |
| 25)M 2-butanone | | | 0.135 | 0.120 | 0.130 | 0.120 | 0.102 | 0.122 | 10.51 |
| 26)M 1,1-dichloroethan | 0.882 | 0.838 | 0.975 | 0.846 | 0.933 | 0.909 | 0.909 | 0.899 | 5.36 |
| 27)M chloroprene | 0.399 | 0.445 | 0.632 | 0.542 | 0.574 | 0.599 | 0.529 | 0.532 | 15.72 |
| 28)M acrylonitrile | 0.191 | 0.159 | 0.265 | 0.229 | 0.242 | 0.230 | 0.087 | 0.200 | 30.38 |
| ----- Linear regression ----- Coefficient = 0.9943 | | | | | | | | | |
| Response Ratio = 0.00727 + 0.23596 *A | | | | | | | | | |
| 29)M vinyl acetate | | | 1.890 | 1.652 | 1.064 | 1.685 | 0.923 | 1.443 | 29.33 |
| ----- Linear regression ----- Coefficient = 0.9934 | | | | | | | | | |
| Response Ratio = -0.08063 + 1.74604 *A | | | | | | | | | |
| 30)M ethyl tert-butyl | 1.607 | 1.648 | 1.801 | 1.550 | 1.693 | 1.704 | 1.647 | 1.664 | 4.79 |
| 31)M ethyl acetate | | | 0.093 | 0.081 | 0.049 | 0.080 | | 0.076 | 24.85 |
| ----- Quadratic regression ----- Coefficient = 0.9994 | | | | | | | | | |
| Response Ratio = -0.03200 + 0.12679 *A + -0.00968 *A^2 | | | | | | | | | |
| 32)M 2,2-dichloropropa | 0.704 | 0.670 | 0.779 | 0.716 | 0.779 | 0.723 | 0.733 | 0.729 | 5.38 |
| 33)M cis-1,2-dichloroe | 0.526 | 0.544 | 0.606 | 0.532 | 0.590 | 0.587 | 0.577 | 0.566 | 5.60 |

# Initial Calibration Summary



**Job Number:** N78399 **Sample:** VX1093-ICC1093
**Account:** GODNJP Dewberry **Lab FileID:** X28216.D
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 34)M | propionitrile | 0.064 | 0.067 | 0.099 | 0.086 | 0.092 | 0.087 | 0.040 | 0.076 | 26.93 |

----- Linear regression ----- Coefficient = 0.9955
Response Ratio = 0.00437 + 0.08902 *A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 35)M | bromochloromethan | 0.241 | 0.266 | 0.325 | 0.280 | 0.310 | 0.323 | 0.303 | 0.293 | 10.68 |
| 36)M | tetrahydrofuran | | 0.164 | 0.231 | 0.193 | 0.209 | 0.203 | 0.200 | 0.200 | 10.87 |
| 37)M | chloroform | 0.882 | 0.825 | 0.930 | 0.804 | 0.883 | 0.884 | 0.881 | 0.870 | 4.86 |
| 38)S | dibromofluorometh | 0.444 | 0.462 | 0.521 | 0.465 | 0.486 | 0.506 | 0.487 | 0.481 | 5.53 |
| 39)S | 1,2-dichloroethan | 0.485 | 0.484 | 0.532 | 0.469 | 0.484 | 0.488 | 0.495 | 0.491 | 4.02 |
| 40)M | freon 113 | 0.316 | 0.373 | 0.477 | 0.436 | 0.476 | 0.462 | 0.449 | 0.427 | 14.19 |
| 41)M | methacrylonitrile | | 0.228 | 0.392 | 0.322 | 0.331 | 0.360 | 0.175 | 0.301 | 27.47 |

----- Linear regression ----- Coefficient = 0.9968
Response Ratio = -0.01213 + 0.36853 *A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 42)M | 1,1,1-trichloroet | 0.780 | 0.720 | 0.854 | 0.739 | 0.810 | 0.804 | 0.768 | 0.782 | 5.81 |
| 43)M | Cyclohexane | 0.784 | 0.766 | 0.945 | 0.833 | 0.935 | 0.905 | 0.830 | 0.857 | 8.37 |
| 44) I | 1,4-difluorobenzene | | | | ----------ISTD---------- | | | | | |
| 45)M | Di-isobutylene | 0.918 | 0.874 | 1.170 | 1.012 | 1.114 | 1.116 | 0.971 | 1.025 | 10.90 |
| 46)M | epichlorohydrin | | 0.042 | 0.053 | 0.046 | 0.051 | 0.047 | 0.046 | 0.048 | 8.14 |
| 47)M | n-butyl alcohol | | 0.018 | 0.017 | 0.016 | 0.017 | 0.015 | 0.022 | 0.017 | 14.25 |
| 48)M | carbon tetrachlor | 0.446 | 0.438 | 0.534 | 0.473 | 0.525 | 0.507 | 0.477 | 0.485 | 7.74 |
| 49)M | 1,1-dichloroprope | 0.389 | 0.388 | 0.475 | 0.421 | 0.462 | 0.460 | 0.428 | 0.432 | 8.16 |
| 50)M | hexane | 0.290 | 0.330 | 0.397 | 0.361 | 0.404 | 0.386 | 0.377 | 0.364 | 11.16 |
| 51)M | benzene | 1.366 | 1.287 | 1.390 | 1.230 | 1.396 | 1.330 | 1.360 | 1.337 | 4.50 |
| 52)M | tert-amyl methyl | 1.097 | 1.183 | 1.205 | 1.088 | 1.231 | 1.075 | 1.200 | 1.154 | 5.62 |
| 53)M | heptane | | 0.140 | 0.178 | 0.165 | 0.181 | 0.173 | 0.162 | 0.167 | 9.00 |
| 54)M | isopropyl acetate | 0.625 | 0.464 | 0.756 | 0.657 | 0.437 | 0.679 | 0.304 | 0.560 | 28.82 |

----- Linear regression ----- Coefficient = 0.9952
Response Ratio = -0.02281 + 0.69830 *A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 55)M | 1,2-dichloroethan | 0.395 | 0.399 | 0.451 | 0.392 | 0.441 | 0.417 | 0.443 | 0.420 | 5.99 |
| 56)M | trichloroethene | 0.313 | 0.329 | 0.373 | 0.323 | 0.361 | 0.367 | 0.345 | 0.344 | 6.79 |
| 57)M | 2-nitropropane | | | | | | | | 0.000# | -1.00 |
| 58)M | 2-chloroethyl vin | 0.168 | 0.193 | 0.249 | 0.216 | 0.235 | 0.221 | 0.213 | 0.214 | 12.50 |
| 59)M | methyl methacryla | | | 0.306 | 0.262 | 0.331 | 0.286 | 0.262 | 0.289 | 10.30 |
| 60)M | 1,2-dichloropropa | 0.332 | 0.336 | 0.380 | 0.329 | 0.364 | 0.365 | 0.367 | 0.353 | 5.81 |
| 61)M | dibromomethane | 0.198 | 0.218 | 0.253 | 0.218 | 0.242 | 0.245 | 0.243 | 0.231 | 8.57 |
| 62)M | methylcyclohexane | 0.442 | 0.506 | 0.596 | 0.528 | 0.594 | 0.583 | 0.558 | 0.544 | 10.34 |
| 63)M | 1,4-dioxane | | 0.004 | 0.005 | 0.005 | 0.006 | 0.005 | 0.005 | 0.005# | 13.02 |
| 64)M | bromodichlorometh | 0.394 | 0.420 | 0.496 | 0.422 | 0.465 | 0.483 | 0.454 | 0.448 | 8.26 |
| 65)M | cis-1,3-dichlorop | 0.485 | 0.523 | 0.635 | 0.545 | 0.597 | 0.622 | 0.583 | 0.570 | 9.59 |
| 66)S | toluene-d8 (s) | 1.154 | 1.160 | 1.242 | 1.107 | 1.168 | 1.216 | 1.201 | 1.178 | 3.80 |
| 67)M | 4-methyl-2-pentan | | | 0.516 | 0.392 | 0.395 | 0.484 | 0.350 | 0.427 | 16.26 |

----- Linear regression ----- Coefficient = 0.9956
Response Ratio = -0.03603 + 0.49772 *A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 68)M | toluene | 0.765 | 0.774 | 0.897 | 0.775 | 0.859 | 0.888 | 0.829 | 0.826 | 6.82 |
| 69)M | 3-methyl-1-butano | | 0.022 | 0.028 | 0.027 | 0.031 | 0.024 | 0.028 | 0.027 | 12.57 |
| 70)M | trans-1,3-dichlor | 0.437 | 0.480 | 0.588 | 0.505 | 0.541 | 0.563 | 0.533 | 0.521 | 9.80 |
| 71)M | ethyl methacrylat | | | 0.541 | 0.464 | 0.350 | 0.511 | 0.377 | 0.449 | 18.45 |

----- Linear regression ----- Coefficient = 0.9973
Response Ratio = -0.03423 + 0.52493 *A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 72)M | 1,1,2-trichloroet | 0.252 | 0.267 | 0.305 | 0.260 | 0.287 | 0.299 | 0.294 | 0.281 | 7.36 |
| 73)M | 2-hexanone | 0.335 | 0.378 | 0.446 | 0.409 | 0.443 | 0.360 | 0.455 | 0.404 | 11.65 |
| 74) I | chlorobenzene-d5 | | | | ----------ISTD---------- | | | | | |
| 75)M | tetrachloroethene | 0.456 | 0.376 | 0.425 | 0.354 | 0.400 | 0.409 | 0.401 | 0.403 | 8.18 |
| 76)M | 1,3-dichloropropa | 0.510 | 0.533 | 0.563 | 0.502 | 0.558 | 0.522 | 0.574 | 0.537 | 5.21 |

# Initial Calibration Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VX1093-ICC1093
**Lab FileID:** X28216.D

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 77)M | butyl acetate | | 0.285 | 0.259 | 0.119 | 0.262 | 0.072 | 0.199 | 48.59 |

----- Linear regression ----- Coefficient = 0.9941
Response Ratio = -0.02350 + 0.27320 *A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 78)M | dibromochlorometh | 0.342 | 0.360 | 0.443 | 0.384 | 0.416 | 0.440 | 0.398 | 0.397 | 9.69 |
| 79)M | 1,2-dibromoethane | 0.324 | 0.336 | 0.378 | 0.334 | 0.370 | 0.367 | 0.369 | 0.354 | 6.15 |
| 80)M | chlorobenzene | 1.005 | 0.997 | 1.063 | 0.936 | 1.047 | 1.057 | 1.051 | 1.022 | 4.51 |
| 81)M | 1,1,1,2-tetrachlo | 0.363 | 0.367 | 0.429 | 0.376 | 0.414 | 0.409 | 0.399 | 0.394 | 6.52 |
| 82)M | ethylbenzene | 1.494 | 1.455 | 1.606 | 1.426 | 1.600 | 1.532 | 1.552 | 1.524 | 4.54 |
| 83)M | m,p-xylene | 0.591 | 0.592 | 0.662 | 0.588 | 0.658 | 0.632 | 0.634 | 0.622 | 5.16 |
| 84)M | o-xylene | 0.605 | 0.617 | 0.726 | 0.629 | 0.702 | 0.695 | 0.672 | 0.664 | 7.05 |
| 85)M | styrene | 0.865 | 0.909 | 1.134 | 0.999 | 1.102 | 1.084 | 1.053 | 1.021 | 9.93 |
| 86)M | bromoform | 0.287 | 0.298 | 0.386 | 0.335 | 0.361 | 0.377 | 0.341 | 0.341 | 11.03 |
| 87) I | 1,4-dichlorobenzene-d | ----------ISTD---------- | | | | | | | | |
| 88)M | isopropylbenzene | 2.049 | 2.004 | 2.405 | 2.136 | 2.322 | 2.518 | 2.162 | 2.228 | 8.59 |
| 89)S | 4-bromofluorobenz | 0.768 | 0.727 | 0.752 | 0.702 | 0.725 | 0.789 | 0.771 | 0.748 | 4.13 |
| 90)M | bromobenzene | 0.756 | 0.745 | 0.791 | 0.719 | 0.790 | 0.827 | 0.793 | 0.774 | 4.69 |
| 91)M | 1,1,2,2-tetrachlo | 0.816 | 0.848 | 0.849 | 0.761 | 0.835 | 0.846 | 0.863 | 0.831 | 4.13 |
| 92)M | trans-1,4-dichlor | | 0.146 | 0.218 | 0.191 | 0.198 | 0.209 | 0.175 | 0.190 | 13.79 |
| 93)M | 1,2,3-trichloropr | 0.964 | 1.025 | 1.104 | 0.994 | 1.072 | 1.086 | 1.074 | 1.046 | 4.97 |
| 94)M | n-propylbenzene | 2.882 | 2.733 | 2.893 | 2.641 | 2.936 | 2.960 | 2.871 | 2.845 | 4.05 |
| 95)M | 2-chlorotoluene | 2.069 | 1.967 | 2.116 | 1.894 | 2.081 | 2.122 | 2.067 | 2.045 | 4.10 |
| 96)M | 4-chlorotoluene | 1.859 | 1.842 | 1.902 | 1.716 | 1.900 | 1.957 | 1.919 | 1.871 | 4.18 |
| 97)M | 1,3,5-trimethylbe | 2.008 | 1.973 | 2.248 | 1.971 | 2.151 | 2.192 | 2.073 | 2.088 | 5.32 |
| 98)M | tert-butylbenzene | 1.777 | 1.746 | 2.106 | 1.853 | 1.973 | 2.087 | 1.835 | 1.911 | 7.61 |
| 99)M | pentachloroethane | | 0.366 | 0.420 | 0.411 | 0.443 | 0.439 | 0.400 | 0.413 | 6.84 |
| 100)M | 1,2,4-trimethylbe | 2.320 | 2.187 | 2.394 | 2.108 | 2.337 | 2.348 | 2.309 | 2.286 | 4.42 |
| 101)M | sec-butylbenzene | 2.686 | 2.573 | 2.948 | 2.608 | 2.867 | 2.873 | 2.746 | 2.757 | 5.20 |
| 102)M | 1,3-dichlorobenze | 1.561 | 1.535 | 1.571 | 1.415 | 1.571 | 1.567 | 1.613 | 1.548 | 4.06 |
| 103)M | p-isopropyltoluen | 2.301 | 2.246 | 2.589 | 2.293 | 2.518 | 2.465 | 2.388 | 2.400 | 5.35 |
| 104)M | 1,4-dichlorobenze | 1.676 | 1.640 | 1.621 | 1.448 | 1.626 | 1.604 | 1.665 | 1.612 | 4.73 |
| 105)M | 1,2-dichlorobenze | 1.519 | 1.540 | 1.582 | 1.457 | 1.604 | 1.533 | 1.607 | 1.549 | 3.46 |
| 106)M | n-butylbenzene | 2.067 | 1.984 | 2.208 | 2.011 | 2.245 | 2.063 | 2.101 | 2.097 | 4.62 |
| 107)M | 1,2-dibromo-3-chl | 0.151 | 0.168 | 0.180 | 0.170 | 0.181 | 0.162 | 0.169 | 0.169 | 6.13 |
| 108)M | 1,2,4-trichlorobe | 0.884 | 0.904 | 1.027 | 0.916 | 0.999 | 1.023 | 0.966 | 0.960 | 6.16 |
| 109)M | hexachlorobutadie | 0.425 | 0.387 | 0.408 | 0.389 | 0.444 | 0.410 | 0.405 | 0.410 | 4.85 |
| 110)M | naphthalene | 2.551 | 2.498 | 2.425 | 2.187 | 2.464 | 2.292 | 2.523 | 2.420 | 5.50 |
| 111)M | 1,2,3-trichlorobe | 0.836 | 0.839 | 0.900 | 0.808 | 0.901 | 0.910 | 0.907 | 0.872 | 4.87 |
| 112)M | hexachloroethane | | 0.328 | 0.490 | 0.434 | 0.426 | 0.468 | 0.370 | 0.419 | 14.49 |

(#) = Out of Range

MX1093.M Fri Oct 01 15:14:09 2004 MSX

# Continuing Calibration Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VX1101-CC1093
**Lab FileID:** X28392.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28392.D  Vial: 2
Acq On : 4 Oct 2004 10:58 am  Operator: DONGMEI
Sample : CC1093-20  Inst : MSX
Misc : MS4854,VX1101,W,,,,1  Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Sep 30 22:24:20 2004
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|
| 1 I | Tert Butyl Alcohol-d9 | 1.000 | 1.000 | 0.0 | 78 | -0.02 | 7.83 |
| 2 M | tertiary butyl alcohol | 1.019 | 1.168 | -14.6 | 82 | -0.02 | 7.97 |
| 3 I | pentafluorobenzene | 1.000 | 1.000 | 0.0 | 107 | 0.00 | 10.59 |
| 4 M | chlorodifluoromethane | 0.623 | 0.642 | -3.0 | 107 | 0.00 | 4.17 |
| 5 M | dichlorodifluoromethane | 0.439 | 0.404 | 8.0 | 101 | 0.00 | 4.15 |
| 6 M | chloromethane | 0.644 | 0.642 | 0.3 | 103 | -0.02 | 4.51 |
| 7 M | vinyl chloride | 0.648 | 0.612 | 5.6 | 101 | -0.02 | 4.81 |
| 8 M | bromomethane | 0.443 | 0.475 | -7.2 | 105 | 0.00 | 5.48 |
| 9 M | chloroethane | 0.352 | 0.375 | -6.5 | 107 | 0.00 | 5.66 |
| 10 M | trichlorofluoromethane | 0.685 | 0.737 | -7.6 | 107 | 0.00 | 6.13 |
| 11 M | ethyl ether | 0.283 | 0.307 | -8.5 | 109 | 0.00 | 6.60 |
| 12 M | acrolein | 0.103 | 0.101 | 1.9 | 96 | 0.00 | 6.88 |
| 13 M | 1,1-dichloroethene | 0.496 | 0.520 | -4.8 | 107 | 0.00 | 7.08 |
| 14 M | acetone | 0.407 | 0.390 | 4.2 | 94 | 0.00 | 7.13 |
| 15 M | allyl chloride | 0.317 | 0.362 | -14.2 | 113 | 0.00 | 7.67 |
| | | True | Calc. | % Drift | | | |
| 16 M | acetonitrile | 200.000 | 183.412 | 8.3 | 92 | 0.00 | 7.62 |
| | | AvgRF | CCRF | % Dev | | | |
| 17 M | iodomethane | 1.024 | 1.100 | -7.4 | 109 | 0.00 | 7.39 |
| 18 M | iso-butyl alcohol | 0.036 | 0.032 | 11.1 | 86 | 0.00 | 10.97 |
| 19 M | carbon disulfide | 1.822 | 1.863 | -2.3 | 106 | 0.00 | 7.54 |
| 20 M | methylene chloride | 0.562 | 0.597 | -6.2 | 111 | 0.00 | 7.90 |
| 21 M | methyl acetate | 0.701 | 0.446 | 36.4# | 36# | 0.00 | 7.66 |
| 22 M | methyl tert butyl ether | 1.646 | 1.703 | -3.5 | 109 | -0.01 | 8.27 |
| 23 M | trans-1,2-dichloroethene | 0.520 | 0.550 | -5.8 | 108 | 0.00 | 8.34 |
| 24 M | di-isopropyl ether | 1.620 | 1.685 | -4.0 | 109 | 0.00 | 9.00 |
| 25 M | 2-butanone | 0.122 | 0.108 | 11.5 | 89 | 0.00 | 9.89 |
| 26 M | 1,1-dichloroethane | 0.899 | 0.957 | -6.5 | 110 | 0.00 | 9.01 |
| 27 M | chloroprene | 0.532 | 0.575 | -8.1 | 108 | 0.00 | 9.15 |
| | | True | Calc. | % Drift | | | |
| 28 M | acrylonitrile | 100.000 | 97.538 | 2.5 | 104 | 0.00 | 8.27 |
| 29 M | vinyl acetate | 20.000 | 22.805 | -14.0 | 181 | 0.00 | 9.01 |
| | | AvgRF | CCRF | % Dev | | | |
| 30 M | ethyl tert-butyl ether | 1.664 | 1.733 | -4.1 | 110 | 0.00 | 9.58 |
| | | True | Calc. | % Drift | | | |
| 31 M | ethyl acetate | 20.000 | 25.441 | -27.2# | 165 | 0.00 | 9.92 |

# Continuing Calibration Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe; Phillipsburg, NJ

**Sample:** VX1101-CC1093
**Lab FileID:** X28392.D

| | | AvgRF | CCRF | % Dev | | | |
|---|---|---|---|---|---|---|---|
| 32 M | 2,2-dichloropropane | 0.729 | 0.832 | -14.1 | 115 | 0.00 | 9.93 |
| 33 M | cis-1,2-dichloroethene | 0.566 | 0.601 | -6.2 | 110 | 0.00 | 9.93 |
| | | True | Calc. | % Drift | | | |
| 34 M | propionitrile | 200.000 | 190.478 | 4.8 | 100 | 0.00 | 9.99 |
| | | AvgRF | CCRF | % Dev | | | |
| 35 M | bromochloromethane | 0.293 | 0.320 | -9.2 | 111 | 0.00 | 10.31 |
| 36 M | tetrahydrofuran | 0.200 | 0.193 | 3.5 | 99 | 0.00 | 10.37 |
| 37 M | chloroform | 0.870 | 0.915 | -5.2 | 111 | 0.00 | 10.39 |
| 38 S | dibromofluoromethane (s) | 0.481 | 0.446 | 7.3 | 99 | 0.00 | 10.64 |
| 39 S | 1,2-dichloroethane-d4 (s) | 0.491 | 0.446 | 9.2 | 99 | 0.00 | 11.18 |
| 40 M | freon 113 | 0.427 | 0.455 | -6.6 | 103 | 0.00 | 7.06 |
| | | True | Calc. | % Drift | | | |
| 41 M | methacrylonitrile | 20.000 | 19.374 | 3.1 | 106 | 0.00 | 10.24 |
| | | AvgRF | CCRF | % Dev | | | |
| 42 M | 1,1,1-trichloroethane | 0.782 | 0.820 | -4.9 | 109 | 0.00 | 10.72 |
| 43 M | Cyclohexane | 0.857 | 0.896 | -4.6 | 103 | 0.00 | 10.82 |
| 44 I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 108 | 0.00 | 11.77 |
| 45 M | Di-isobutylene | 1.025 | 1.072 | -4.6 | 104 | 0.00 | 12.07 |
| 46 M | epichlorohydrin | 0.048 | 0.046 | 4.2 | 97 | 0.00 | 13.44 |
| 47 M | n-butyl alcohol | 0.017 | 0.013 | 23.5# | 82 | 0.00 | 11.95 |
| 48 M | carbon tetrachloride | 0.485 | 0.528 | -8.9 | 109 | 0.00 | 10.98 |
| 49 M | 1,1-dichloropropene | 0.432 | 0.471 | -9.0 | 110 | 0.00 | 10.95 |
| 50 M | hexane | 0.364 | 0.391 | -7.4 | 105 | 0.00 | 8.70 |
| 51 M | benzene | 1.337 | 1.433 | -7.2 | 111 | 0.00 | 11.28 |
| 52 M | tert-amyl methyl ether | 1.154 | 1.234 | -6.9 | 108 | 0.00 | 11.33 |
| 53 M | heptane | 0.167 | 0.184 | -10.2 | 110 | 0.00 | 11.53 |
| | | True | Calc. | % Drift | | | |
| 54 M | isopropyl acetate | 20.000 | 21.462 | -7.3 | 172 | 0.00 | 11.20 |
| | | AvgRF | CCRF | % Dev | | | |
| 55 M | 1,2-dichloroethane | 0.420 | 0.464 | -10.5 | 114 | 0.00 | 11.30 |
| 56 M | trichloroethene | 0.344 | 0.374 | -8.7 | 112 | 0.00 | 12.22 |
| 57 M | 2-nitropropane | 0.000 | 0.000# | 0.0 | 103 | 0.00 | 12.52 |
| 58 M | 2-chloroethyl vinyl ether | 0.214 | 0.235 | -9.8 | 108 | 0.00 | 13.28 |
| 59 M | methyl methacrylate | 0.289 | 0.277 | 4.2 | 90 | 0.00 | 12.60 |
| 60 M | 1,2-dichloropropane | 0.353 | 0.385 | -9.1 | 114 | 0.00 | 12.56 |
| 61 M | dibromomethane | 0.231 | 0.254 | -10.0 | 114 | 0.00 | 12.77 |
| 62 M | methylcyclohexane | 0.544 | 0.569 | -4.6 | 104 | 0.00 | 12.52 |
| 63 M | 1,4-dioxane | 0.005 | 0.004# | 20.0 | 80 | 0.00 | 12.72 |
| 64 M | bromodichloromethane | 0.448 | 0.490 | -9.4 | 114 | 0.00 | 12.95 |
| 65 M | cis-1,3-dichloropropene | 0.570 | 0.636 | -11.6 | 115 | 0.00 | 13.57 |
| 66 S | toluene-d8 (s) | 1.178 | 1.158 | 1.7 | 107 | 0.00 | 13.96 |
| | | True | Calc. | % Drift | | | |
| 67 M | 4-methyl-2-pentanone | 20.000 | 20.369 | -1.8 | 114 | 0.00 | 13.71 |
| | | AvgRF | CCRF | % Dev | | | |
| 68 M | toluene | 0.826 | 0.913 | -10.5 | 115 | 0.00 | 14.06 |
| 69 M | 3-methyl-1-butanol | 0.027 | 0.023 | 14.8 | 80 | 0.00 | 13.75 |
| 70 M | trans-1,3-dichloropropene | 0.521 | 0.579 | -11.1 | 116 | 0.00 | 14.33 |
| | | True | Calc. | % Drift | | | |

# Continuing Calibration Summary



**Job Number:** N78399
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe; Phillipsburg, NJ

**Sample:** VX1101-CC1093
**Lab FileID:** X28392.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 71 | M | ethyl methacrylate | 20.000 | 22.526 | -12.6 | 156 | 0.00 | 14.35 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 72 | M | 1,1,2-trichloroethane | 0.281 | 0.303 | -7.8 | 114 | 0.00 | 14.61 |
| 73 | M | 2-hexanone | 0.404 | 0.388 | 4.0 | 95 | 0.00 | 14.86 |
| 74 | I | chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 105 | 0.00 | 15.98 |
| 75 | M | tetrachloroethene | 0.403 | 0.394 | 2.2 | 103 | 0.00 | 14.85 |
| 76 | M | 1,3-dichloropropane | 0.537 | 0.612 | -14.0 | 115 | 0.00 | 14.85 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 77 | M | butyl acetate | 20.000 | 24.783 | -23.9# | 247 | 0.00 | 14.98 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 78 | M | dibromochloromethane | 0.397 | 0.448 | -12.8 | 113 | 0.00 | 15.20 |
| 79 | M | 1,2-dibromoethane | 0.354 | 0.391 | -10.5 | 110 | 0.00 | 15.40 |
| 80 | M | chlorobenzene | 1.022 | 1.150 | -12.5 | 115 | 0.00 | 16.02 |
| 81 | M | 1,1,1,2-tetrachloroethane | 0.394 | 0.451 | -14.5 | 114 | 0.00 | 16.10 |
| 82 | M | ethylbenzene | 1.524 | 1.732 | -13.6 | 113 | 0.00 | 16.11 |
| 83 | M | m,p-xylene | 0.622 | 0.719 | -15.6 | 114 | 0.00 | 16.25 |
| 84 | M | o-xylene | 0.664 | 0.765 | -15.2 | 114 | 0.00 | 16.78 |
| 85 | M | styrene | 1.021 | 1.193 | -16.8 | 113 | 0.00 | 16.80 |
| 86 | M | bromoform | 0.341 | 0.357 | -4.7 | 104 | 0.00 | 17.11 |
| 87 | I | 1,4-dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 100 | 0.00 | 18.69 |
| 88 | M | isopropylbenzene | 2.228 | 2.617 | -17.5 | 112 | 0.00 | 17.21 |
| 89 | S | 4-bromofluorobenzene (s) | 0.748 | 0.746 | 0.3 | 103 | 0.00 | 17.44 |
| 90 | M | bromobenzene | 0.774 | 0.891 | -15.1 | 112 | 0.00 | 17.66 |
| 91 | M | 1,1,2,2-tetrachloroethane | 0.831 | 0.886 | -6.6 | 106 | 0.00 | 17.56 |
| 92 | M | trans-1,4-dichloro-2-bute | 0.190 | 0.188 | 1.1 | 94 | 0.00 | 17.61 |
| 93 | M | 1,2,3-trichloropropane | 1.046 | 1.095 | -4.7 | 102 | 0.00 | 17.64 |
| 94 | M | n-propylbenzene | 2.845 | 3.284 | -15.4 | 112 | 0.00 | 17.68 |
| 95 | M | 2-chlorotoluene | 2.045 | 2.345 | -14.7 | 112 | 0.00 | 17.83 |
| 96 | M | 4-chlorotoluene | 1.871 | 2.156 | -15.2 | 113 | 0.00 | 17.94 |
| 97 | M | 1,3,5-trimethylbenzene | 2.088 | 2.422 | -16.0 | 112 | 0.00 | 17.85 |
| 98 | M | tert-butylbenzene | 1.911 | 2.202 | -15.2 | 111 | 0.00 | 18.23 |
| 99 | M | pentachloroethane | 0.413 | 0.564 | -36.6# | 127 | 0.00 | 18.30 |
| 100 | M | 1,2,4-trimethylbenzene | 2.286 | 2.610 | -14.2 | 111 | 0.00 | 18.27 |
| 101 | M | sec-butylbenzene | 2.757 | 3.132 | -13.6 | 109 | 0.00 | 18.45 |
| 102 | M | 1,3-dichlorobenzene | 1.548 | 1.762 | -13.8 | 112 | 0.00 | 18.63 |
| 103 | M | p-isopropyltoluene | 2.400 | 2.782 | -15.9 | 110 | 0.00 | 18.58 |
| 104 | M | 1,4-dichlorobenzene | 1.612 | 1.822 | -13.0 | 112 | 0.00 | 18.72 |
| 105 | M | 1,2-dichlorobenzene | 1.549 | 1.763 | -13.8 | 110 | 0.00 | 19.12 |
| 106 | M | n-butylbenzene | 2.097 | 2.414 | -15.1 | 107 | 0.00 | 18.99 |
| 107 | M | 1,2-dibromo-3-chloropropa | 0.169 | 0.163 | 3.6 | 90 | 0.00 | 19.89 |
| 108 | M | 1,2,4-trichlorobenzene | 0.960 | 1.042 | -8.5 | 104 | 0.00 | 20.72 |
| 109 | M | hexachlorobutadiene | 0.410 | 0.438 | -6.8 | 98 | 0.00 | 20.83 |
| 110 | M | naphthalene | 2.420 | 2.323 | 4.0 | 94 | 0.00 | 21.01 |
| 111 | M | 1,2,3-trichlorobenzene | 0.872 | 0.906 | -3.9 | 100 | 0.00 | 21.26 |
| 112 | M | hexachloroethane | 0.419 | 0.461 | -10.0 | 108 | 0.00 | 19.38 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

X28217.D MX1093.M Tue Oct 05 11:03:39 2004 MSX

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28398.D Vial: 8
Acq On : 4 Oct 2004 2:47 pm Operator: DONGMEI
Sample : N78399-1 TCL Inst : MSX
Misc : MS4661,VX1101,W,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 04 15:10:24 2004 Quant Results File: MX1093.RES

Quant Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Sep 30 22:24:20 2004
Response via : Initial Calibration
DataAcq Meth : MX1093

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.84 | 65 | 121065 | 500.00 ug/L | 0.00 |
| 3) pentafluorobenzene | 10.60 | 168 | 165465 | 50.00 ug/L | 0.00 |
| 44) 1,4-difluorobenzene | 11.78 | 114 | 242013 | 50.00 ug/L | 0.00 |
| 74) chlorobenzene-d5 | 15.98 | 117 | 239225 | 50.00 ug/L | 0.00 |
| 87) 1,4-dichlorobenzene-d4 | 18.70 | 152 | 156501 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 38) dibromofluoromethane (s) | 10.65 | 113 | 77325 | 48.53 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 79 - 119 | | Recovery = 97.06% | | |
| 39) 1,2-dichloroethane-d4 (s) | 11.18 | 65 | 85754 | 52.78 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 68 - 129 | | Recovery = 105.56% | | |
| 66) toluene-d8 (s) | 13.96 | 98 | 278957 | 48.91 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 83 - 118 | | Recovery = 97.82% | | |
| 89) 4-bromofluorobenzene (s) | 17.44 | 95 | 122181 | 52.21 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 82 - 120 | | Recovery = 104.42% | | |
| Target Compounds | | | | | Qvalue |
| 23) trans-1,2-dichloroethene | 8.35 | 96 | 2941 | 1.71 ug/L | 94 |
| 33) cis-1,2-dichloroethene | 9.93 | 96 | 298324 | 159.29 ug/L | 91 |
| 37) chloroform | 10.40 | 83 | 4204 | 1.46 ug/L | 94 |
| 56) trichloroethene | 12.23 | 95 | 4215 | 2.53 ug/L | 85 |
| 75) tetrachloroethene | 14.85 | 164 | 37288 | 19.34 ug/L | 98 |

10/5/04



(#) = qualifier out of range (m) = manual integration (+) = signals summed

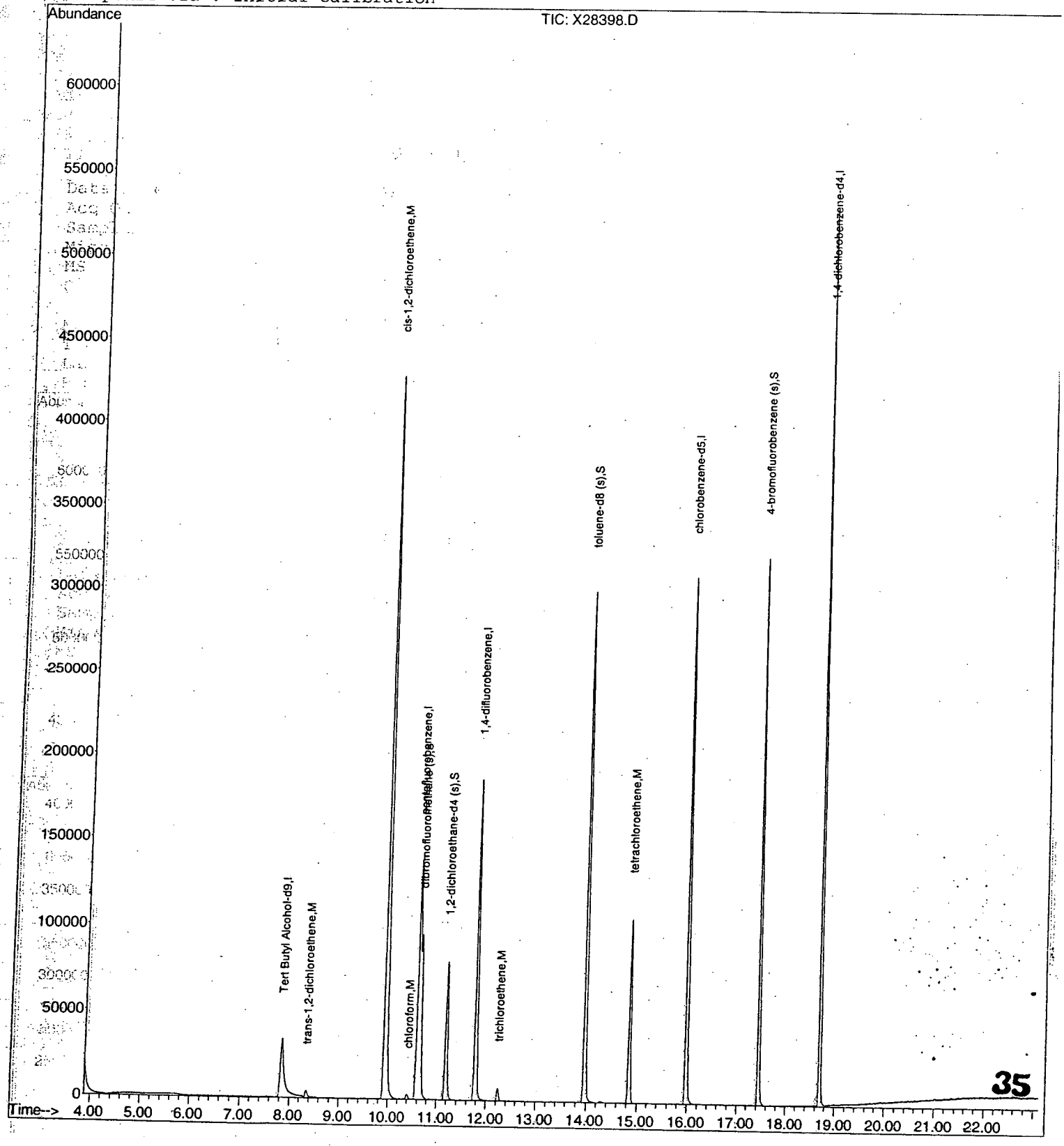
Quantitation Report (QT Reviewed)

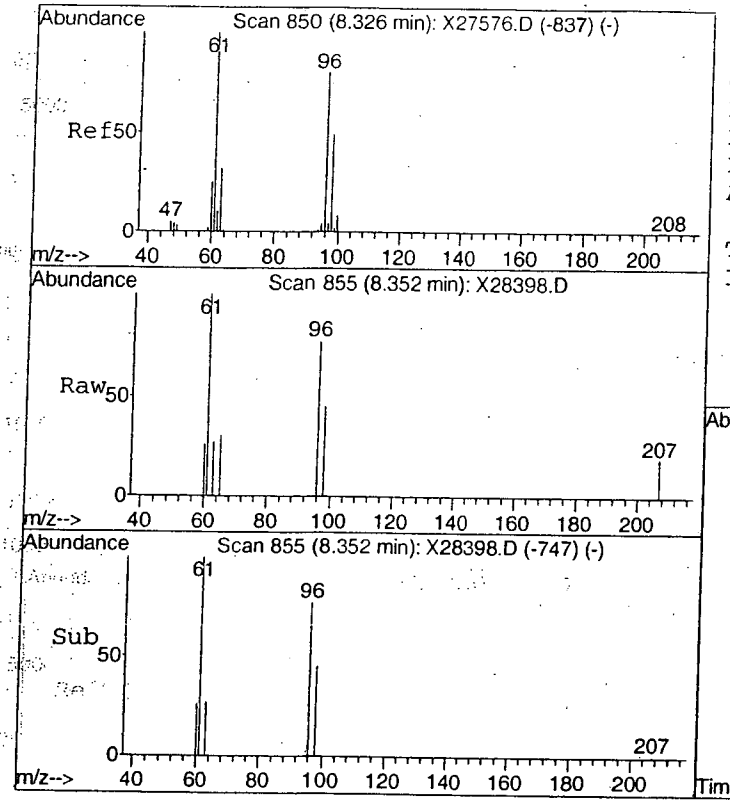
Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28398.D
Acq On : 4 Oct 2004 2:47 pm
Sample : N78399-1 TCL
Misc : MS4661,VX1101,W,,,,1
MS Integration Params: RTEINT.P
Quant Time: Oct 4 15:52 2004

Vial: 8
Operator: DONGMEI
Inst : MSX
Multiplr: 1.00

Quant Results File: MX1093.RES

Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Sep 30 22:24:20 2004
Response via : Initial Calibration

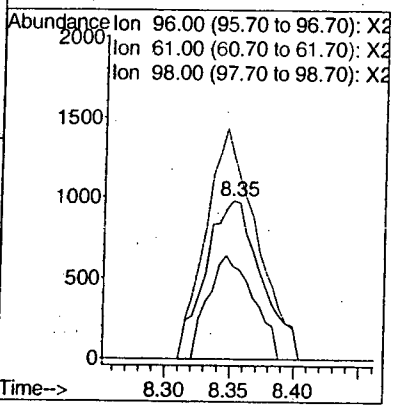


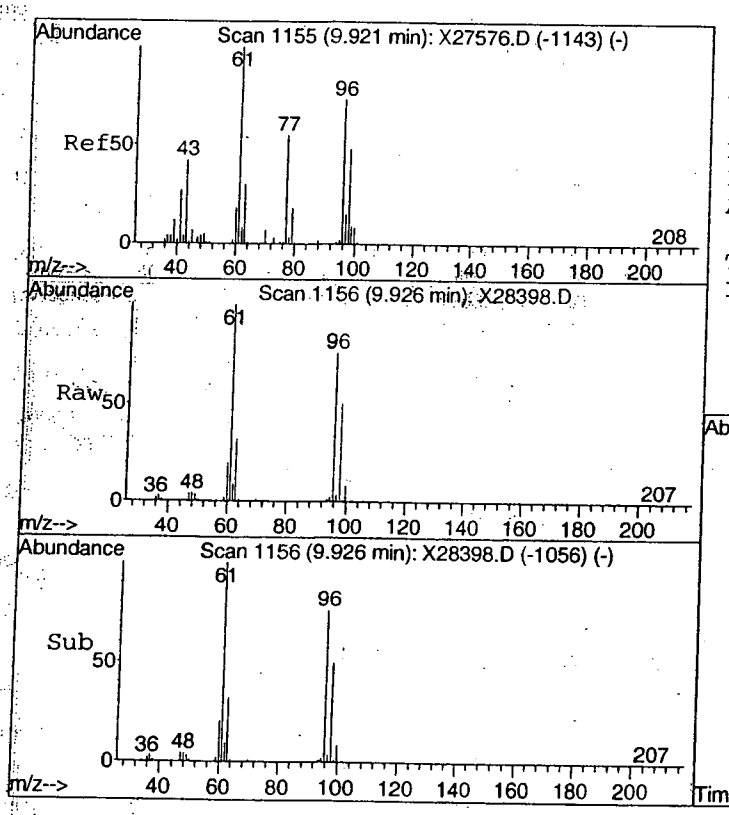



#23
trans-1,2-dichloroethene
Concen: 1.71 ug/L
RT: 8.35 min Scan# 855
Delta R.T. 0.02 min
Lab File: X28398.D
Acq: 4 Oct 2004 2:47 pm

Tgt Ion: 96 Resp: 2941

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 129.3 | 105.6 | 165.6 |
| 98 | 58.6 | 35.1 | 95.1 |

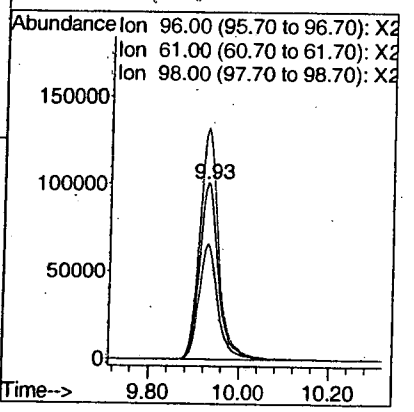


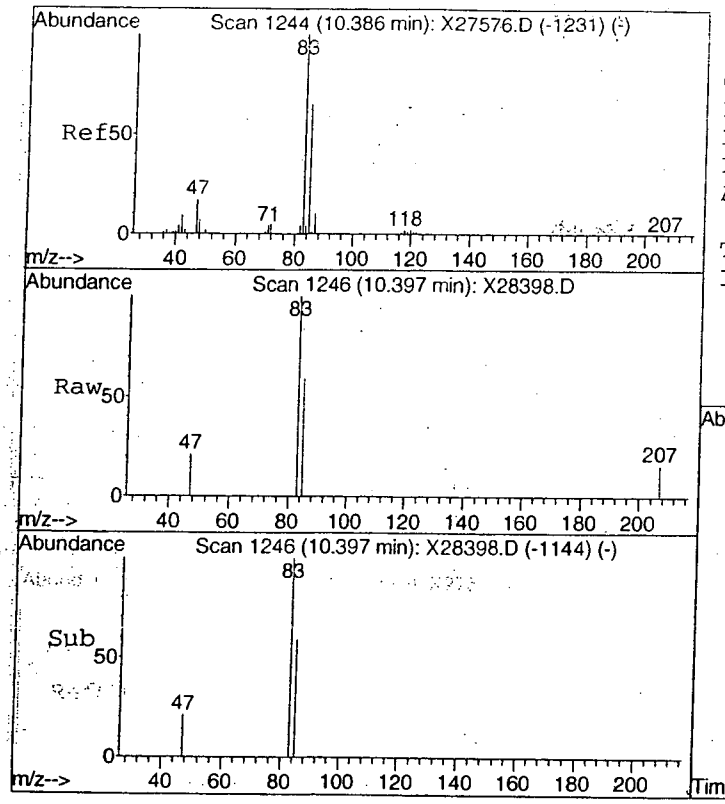




#33
cis-1,2-dichloroethene
Concen: 159.29 ug/L
RT: 9.93 min Scan# 1156
Delta R.T. -0.01 min
Lab File: X28398.D
Acq: 4 Oct 2004 2:47 pm

Tgt Ion: 96 Resp: 298324

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 131.1 | 115.3 | 175.3 |
| 98 | 65.3 | 33.7 | 93.7 |

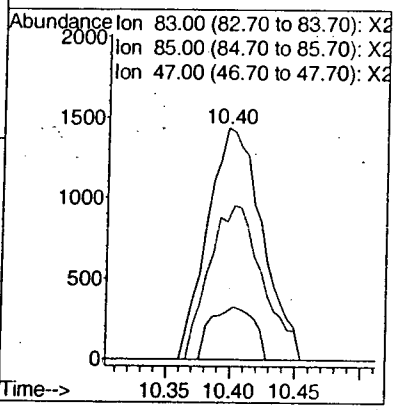


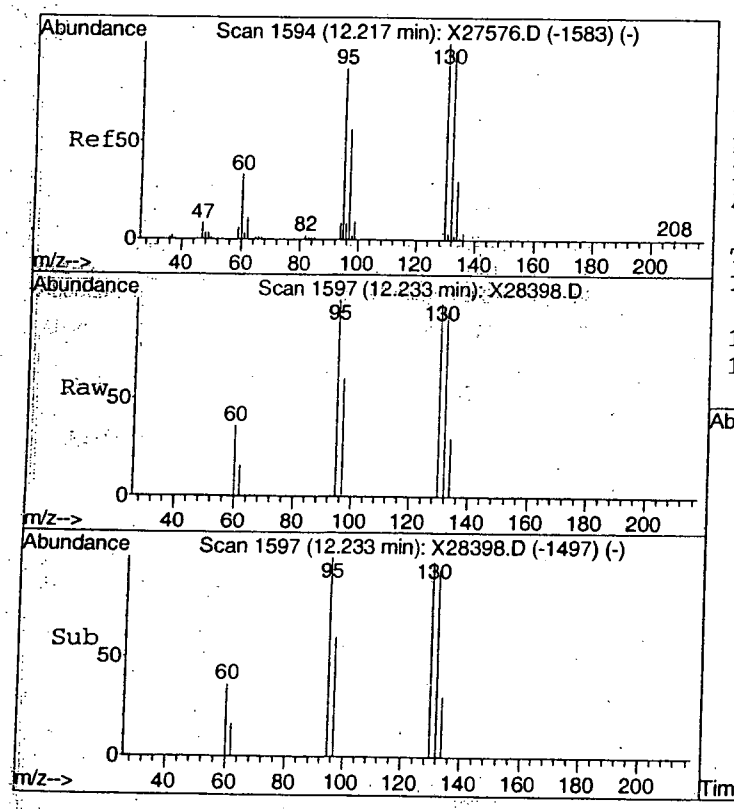



#37
chloroform
Concen: 1.46 ug/L
RT: 10.40 min Scan# 1246
Delta R.T. 0.01 min
Lab File: X28398.D
Acq: 4 Oct 2004 2:47 pm

Tgt Ion: 83 Resp: 4204

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 59.2 | 34.8 | 94.8 |
| 47 | 20.5 | 0.0 | 51.7 |

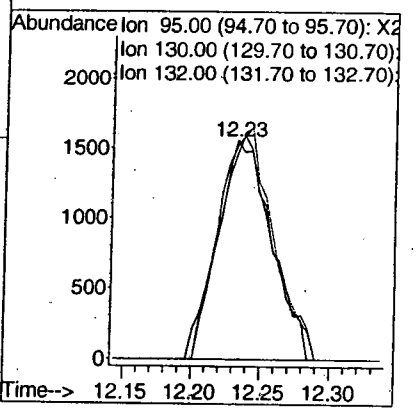


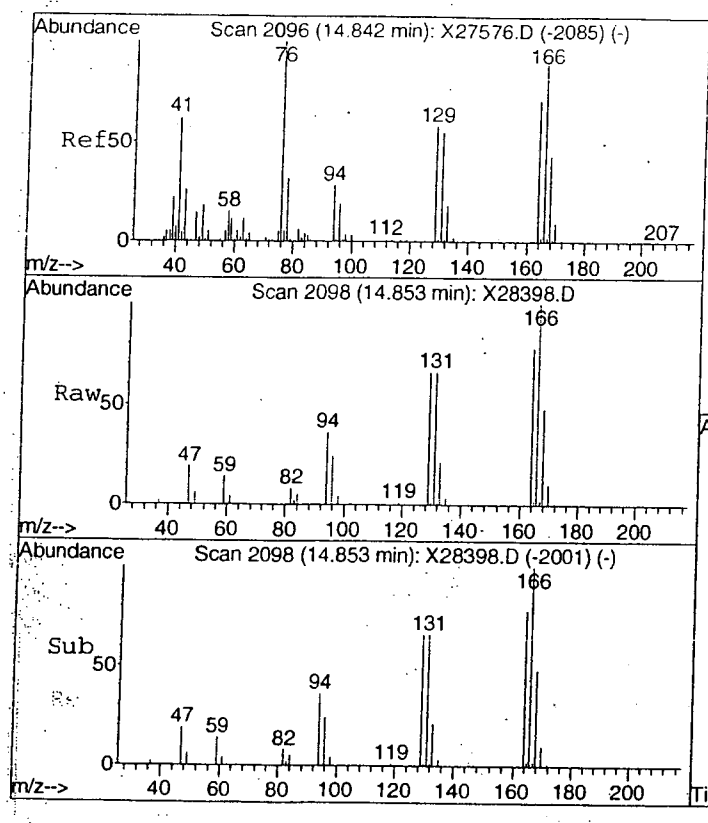




#56
trichloroethene
Concen: 2.53 ug/L
RT: 12.23 min Scan# 1597
Delta R.T. 0.01 min
Lab File: X28398.D
Acq: 4 Oct 2004 2:47 pm

Tgt Ion: 95 Resp: 4215

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 97.6 | 83.5 | 143.5 |
| 132 | 94.1 | 79.5 | 139.5 |

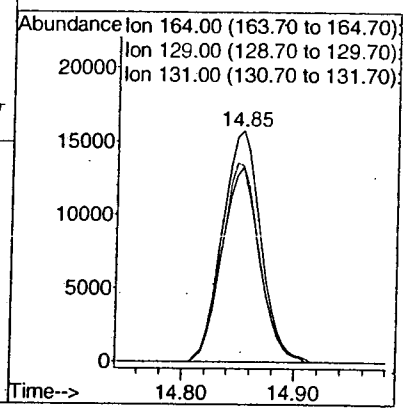





#75
tetrachloroethene
Concen: 19.34 ug/L
RT: 14.85 min Scan# 2098
Delta R.T. 0.01 min
Lab File: X28398.D
Acq: 4 Oct 2004 2:47 pm

Tgt Ion:164 Resp: 37288

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 129 | 85.0 | 56.9 | 116.9 |
| 131 | 84.4 | 53.2 | 113.2 |



LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28398.D
Acq On : 4 Oct 2004 2:47 pm
Sample : N78399-1 TCL
Misc : MS4661,VX1101,W,,,,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DONGMEI
Inst : MSX
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Smoothing : ON
Sampling : 1
Start Thrs: 0.06
Stop Thrs : 0.04

Filtering: 5
Min Area: 100 Area counts
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.429 | 100 | 105 | 108 | rBV | 402 | 578 | 0.05% | 0.010% |
| 2 | 4.476 | 111 | 114 | 119 | rVV2 | 509 | 828 | 0.07% | 0.014% |
| 3 | 4.523 | 119 | 123 | 126 | rVV2 | 576 | 815 | 0.06% | 0.014% |
| 4 | 4.565 | 126 | 131 | 133 | rVV | 634 | 898 | 0.07% | 0.015% |
| 5 | 4.607 | 136 | 139 | 143 | rVV2 | 515 | 820 | 0.07% | 0.014% |
| 6 | 4.643 | 143 | 146 | 151 | rVV2 | 473 | 849 | 0.07% | 0.014% |
| 7 | 4.717 | 151 | 160 | 163 | rVV2 | 446 | 1317 | 0.10% | 0.022% |
| 8 | 4.764 | 168 | 169 | 174 | rVB | 502 | 642 | 0.05% | 0.011% |
| 9 | 4.821 | 174 | 180 | 183 | rBV2 | 584 | 1189 | 0.09% | 0.020% |
| 10 | 4.847 | 183 | 185 | 189 | rBV | 505 | 708 | 0.06% | 0.012% |
| 11 | 4.973 | 204 | 209 | 212 | rBV2 | 595 | 1009 | 0.08% | 0.017% |
| 12 | 5.004 | 212 | 215 | 220 | rVB | 411 | 695 | 0.06% | 0.012% |
| 13 | 5.057 | 220 | 225 | 227 | rBV2 | 337 | 448 | 0.04% | 0.007% |
| 14 | 5.376 | 283 | 286 | 291 | rVV2 | 319 | 498 | 0.04% | 0.008% |
| 15 | 5.465 | 299 | 303 | 306 | rVV2 | 393 | 680 | 0.05% | 0.011% |
| 16 | 5.527 | 310 | 315 | 317 | rVV | 483 | 565 | 0.04% | 0.009% |
| 17 | 5.595 | 323 | 328 | 329 | rVV2 | 428 | 559 | 0.04% | 0.009% |
| 18 | 5.611 | 329 | 331 | 334 | rVV2 | 506 | 639 | 0.05% | 0.011% |
| 19 | 5.642 | 334 | 337 | 339 | rVV | 598 | 724 | 0.06% | 0.012% |
| 20 | 5.674 | 341 | 343 | 347 | rVV2 | 606 | 850 | 0.07% | 0.014% |
| 21 | 5.700 | 347 | 348 | 354 | rVV | 774 | 1018 | 0.08% | 0.017% |
| 22 | 5.747 | 354 | 357 | 364 | rVV2 | 591 | 1032 | 0.08% | 0.017% |
| 23 | 6.401 | 479 | 482 | 485 | rVB2 | 334 | 475 | 0.04% | 0.008% |
| 24 | 6.427 | 485 | 487 | 491 | rBV2 | 312 | 523 | 0.04% | 0.009% |
| 25 | 6.464 | 491 | 494 | 498 | rVV2 | 351 | 620 | 0.05% | 0.010% |
| 26 | 6.490 | 498 | 499 | 505 | rVV2 | 326 | 570 | 0.05% | 0.009% |
| 27 | 6.558 | 510 | 512 | 516 | rVV | 322 | 477 | 0.04% | 0.008% |
| 28 | 6.589 | 516 | 518 | 523 | rVB | 325 | 494 | 0.04% | 0.008% |
| 29 | 6.783 | 551 | 555 | 558 | rBV2 | 292 | 428 | 0.03% | 0.007% |
| 30 | 7.164 | 626 | 628 | 634 | rBV | 249 | 478 | 0.04% | 0.008% |
| 31 | 7.253 | 643 | 645 | 649 | rVB | 446 | 568 | 0.05% | 0.009% |
| 32 | 7.290 | 649 | 652 | 654 | rBV | 512 | 476 | 0.04% | 0.008% |
| 33 | 7.844 | 741 | 758 | 793 | rBV | 33789 | 179723 | 14.30% | 2.979% |
| 34 | 8.069 | 800 | 801 | 808 | rVB2 | 900 | 1052 | 0.08% | 0.017% |
| 35 | 8.153 | 816 | 817 | 825 | rVV2 | 336 | 478 | 0.04% | 0.008% |
| 36 | 8.200 | 825 | 826 | 833 | rVB3 | 620 | 729 | 0.06% | 0.012% |
| 37 | 8.346 | 845 | 854 | 868 | rVB3 | 3841 | 11323 | 0.90% | 0.188% |
| 38 | 8.467 | 874 | 877 | 886 | rVB2 | 397 | 759 | 0.06% | 0.013% |
| 39 | 9.926 | 1141 | 1156 | 1191 | rBV | 427734 | 1256825 | 100.00% | 20.831% |
| 40 | 10.402 | 1237 | 1247 | 1258 | rVB2 | 2686 | 7984 | 0.64% | 0.132% |

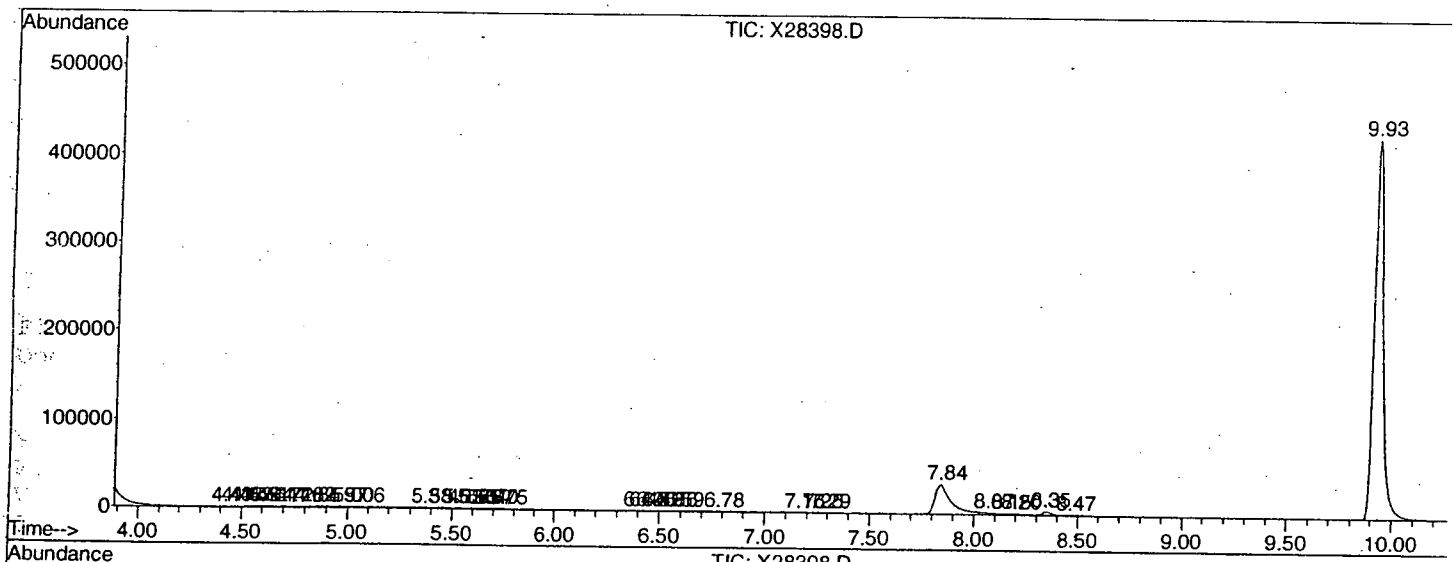
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41 | 10.595 | 1272 | 1284 | 1290 | rBV | 138207 | 407342 | 32.41% | 6.751% |
| 42 | 10.643 | 1290 | 1293 | 1322 | rVB2 | 95864 | 246092 | 19.58% | 4.079% |
| 43 | 11.181 | 1385 | 1396 | 1426 | rBB | 80319 | 228793 | 18.20% | 3.792% |
| 44 | 11.777 | 1498 | 1510 | 1549 | rBB | 186401 | 512506 | 40.78% | 8.494% |
| 45 | 12.238 | 1589 | 1598 | 1609 | rBB2 | 7307 | 18656 | 1.48% | 0.309% |
| 46 | 13.964 | 1917 | 1928 | 1961 | rBB | 300025 | 719281 | 57.23% | 11.922% |
| 47 | 14.288 | 1984 | 1990 | 1995 | rBB2 | 737 | 1394 | 0.11% | 0.023% |
| 48 | 14.340 | 1995 | 2000 | 2003 | rBB | 269 | 434 | 0.03% | 0.007% |
| 49 | 14.853 | 2088 | 2098 | 2113 | rBB | 106159 | 247234 | 19.67% | 4.098% |
| 50 | 15.983 | 2304 | 2314 | 2342 | rBB | 309141 | 667928 | 53.14% | 11.070% |
| 51 | 17.442 | 2584 | 2593 | 2614 | rBB | 321284 | 589742 | 46.92% | 9.775% |
| 52 | 18.117 | 2713 | 2722 | 2724 | rBV | 222 | 631 | 0.05% | 0.010% |
| 53 | 18.289 | 2747 | 2755 | 2760 | rVV2 | 273 | 438 | 0.03% | 0.007% |
| 54 | 18.587 | 2806 | 2812 | 2817 | rBV | 382 | 551 | 0.04% | 0.009% |
| 55 | 18.697 | 2821 | 2833 | 2854 | rBV | 529886 | 873557 | 69.51% | 14.479% |
| 56 | 19.011 | 2888 | 2893 | 2895 | rVB | 743 | 993 | 0.08% | 0.016% |
| 57 | 19.053 | 2899 | 2901 | 2905 | rBV2 | 340 | 460 | 0.04% | 0.008% |
| 58 | 19.110 | 2909 | 2912 | 2916 | rBV2 | 512 | 828 | 0.07% | 0.014% |
| 59 | 19.147 | 2916 | 2919 | 2924 | rBV2 | 350 | 538 | 0.04% | 0.009% |
| 60 | 19.199 | 2926 | 2929 | 2936 | rBV3 | 466 | 805 | 0.06% | 0.013% |
| 61 | 19.257 | 2936 | 2940 | 2943 | rBV2 | 390 | 596 | 0.05% | 0.010% |
| 62 | 19.288 | 2943 | 2946 | 2950 | rVB2 | 419 | 653 | 0.05% | 0.011% |
| 63 | 19.335 | 2950 | 2955 | 2957 | rBV2 | 353 | 502 | 0.04% | 0.008% |
| 64 | 19.513 | 2985 | 2989 | 2992 | rBV2 | 464 | 582 | 0.05% | 0.010% |
| 65 | 19.550 | 2992 | 2996 | 3003 | rBV4 | 333 | 794 | 0.06% | 0.013% |
| 66 | 19.628 | 3008 | 3011 | 3015 | rVB | 602 | 690 | 0.05% | 0.011% |
| 67 | 19.659 | 3015 | 3017 | 3020 | rBV3 | 628 | 730 | 0.06% | 0.012% |
| 68 | 19.691 | 3022 | 3023 | 3029 | rVV2 | 428 | 588 | 0.05% | 0.010% |
| 69 | 19.733 | 3029 | 3031 | 3034 | rVB2 | 702 | 559 | 0.04% | 0.009% |
| 70 | 19.806 | 3039 | 3045 | 3046 | rBV3 | 889 | 1101 | 0.09% | 0.018% |
| 71 | 19.816 | 3046 | 3047 | 3050 | rVB | 594 | 468 | 0.04% | 0.008% |
| 72 | 19.863 | 3055 | 3056 | 3059 | rBV2 | 610 | 472 | 0.04% | 0.008% |
| 73 | 19.921 | 3062 | 3067 | 3070 | rBV4 | 683 | 1051 | 0.08% | 0.017% |
| 74 | 19.942 | 3070 | 3071 | 3078 | rVB3 | 909 | 929 | 0.07% | 0.015% |
| 75 | 20.026 | 3080 | 3087 | 3088 | rVB3 | 626 | 1026 | 0.08% | 0.017% |
| 76 | 20.067 | 3092 | 3095 | 3099 | rVB3 | 596 | 854 | 0.07% | 0.014% |
| 77 | 20.099 | 3099 | 3101 | 3103 | rBV | 642 | 521 | 0.04% | 0.009% |
| 78 | 20.120 | 3103 | 3105 | 3112 | rBV3 | 630 | 706 | 0.06% | 0.012% |
| 79 | 20.250 | 3129 | 3130 | 3135 | rBV5 | 518 | 610 | 0.05% | 0.010% |
| 80 | 20.287 | 3135 | 3137 | 3142 | rVB4 | 551 | 691 | 0.05% | 0.011% |
| 81 | 20.475 | 3171 | 3173 | 3181 | rVV5 | 575 | 1212 | 0.10% | 0.020% |
| 82 | 20.528 | 3181 | 3183 | 3186 | rVB3 | 564 | 457 | 0.04% | 0.008% |
| 83 | 20.549 | 3186 | 3187 | 3193 | rBV5 | 492 | 632 | 0.05% | 0.010% |
| 84 | 20.627 | 3198 | 3202 | 3206 | rVB4 | 665 | 830 | 0.07% | 0.014% |
| 85 | 20.700 | 3215 | 3216 | 3220 | rVV4 | 408 | 483 | 0.04% | 0.008% |
| 86 | 20.726 | 3220 | 3221 | 3225 | rVV2 | 708 | 473 | 0.04% | 0.008% |
| 87 | 20.763 | 3226 | 3228 | 3233 | rVB3 | 495 | 640 | 0.05% | 0.011% |
| 88 | 20.862 | 3243 | 3247 | 3260 | rBV7 | 619 | 1258 | 0.10% | 0.021% |
| 89 | 20.946 | 3260 | 3263 | 3267 | rBV4 | 454 | 751 | 0.06% | 0.012% |
| 90 | 20.983 | 3267 | 3270 | 3274 | rVV2 | 464 | 468 | 0.04% | 0.008% |
| 91 | 21.030 | 3274 | 3279 | 3284 | rVB3 | 985 | 1835 | 0.15% | 0.030% |
| 92 | 21.072 | 3284 | 3287 | 3290 | rBV2 | 753 | 650 | 0.05% | 0.011% |
| 93 | 21.197 | 3306 | 3311 | 3313 | rBV3 | 653 | 712 | 0.06% | 0.012% |
| 94 | 21.244 | 3319 | 3320 | 3324 | rBV2 | 487 | 479 | 0.04% | 0.008% |
| 95 | 21.375 | 3335 | 3345 | 3355 | rBV8 | 772 | 1811 | 0.14% | 0.030% |
| 96 | 21.485 | 3363 | 3366 | 3368 | rVB4 | 742 | 616 | 0.05% | 0.010% |
| 97 | 21.506 | 3368 | 3370 | 3375 | rBV3 | 683 | 774 | 0.06% | 0.013% |
| 98 | 21.736 | 3409 | 3414 | 3427 | rBV7 | 967 | 3287 | 0.26% | 0.054% |

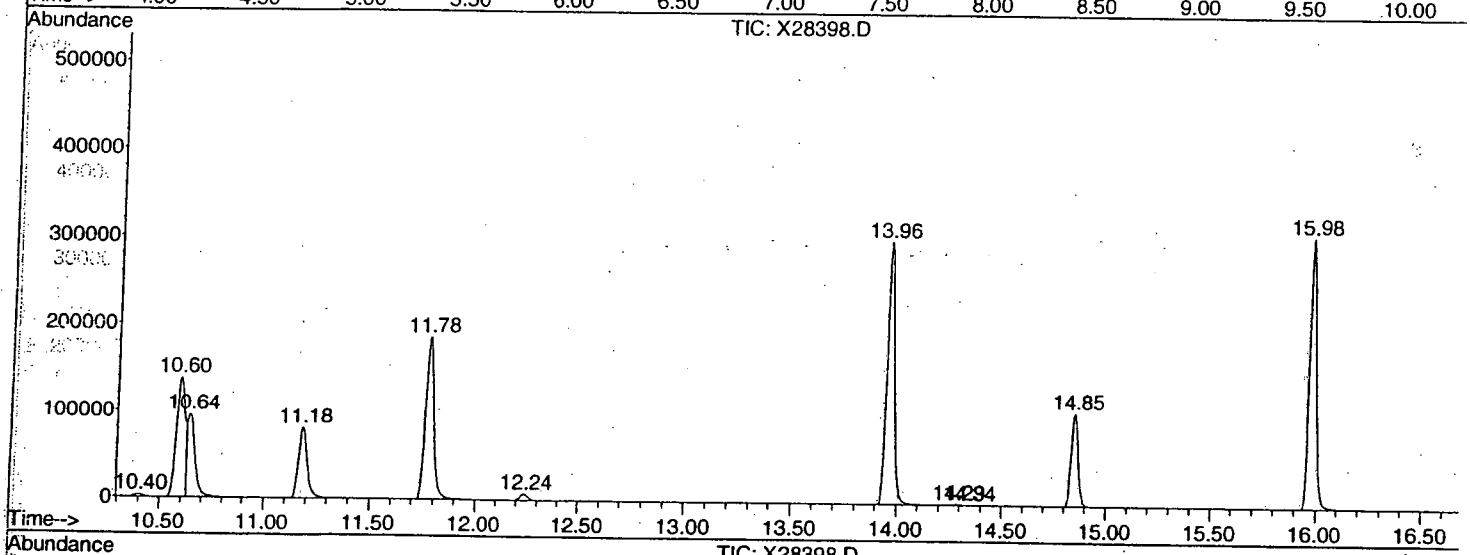
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39 | 22.348 | 3528 | 3531 | 3536 | rVB3 | 507 | 518 | 0.04% | 0.009% |
| 30 | 22.698 | 3596 | 3598 | 3612 | rVB5 | 998 | 1916 | 0.15% | 0.032% |

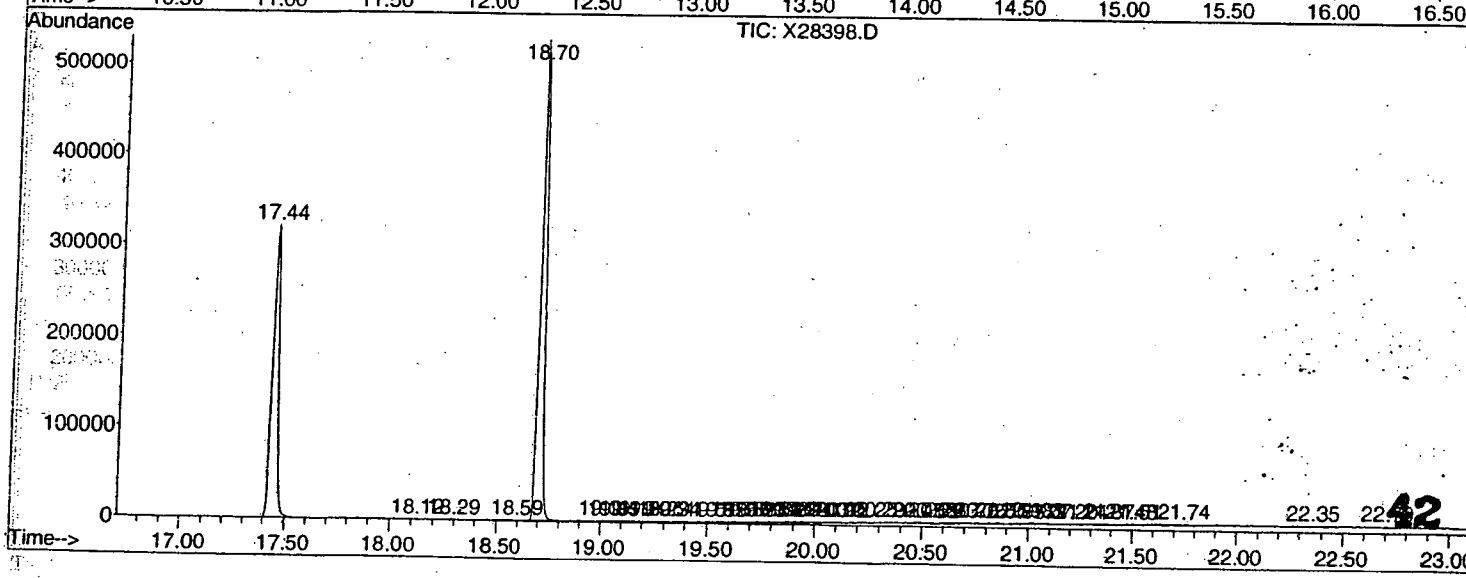
Sum of corrected areas: 6033471

LSC Report - Integrated Chromatogram

File : C:\MSDCHEM\1\DATA\A-VX1101\X28398.D
Operator : DONGMEI
Acquired : 4 Oct 2004 2:47 pm using AcqMethod MX1093
Instrument : MSX
Sample Name: N78399-1 TCL
Misc Info : MS4661,VX1101,W,,,,1
Vial Number: 8
Quant File :MX1093.RES (RTE Integrator)



Tentatively Identified Compound (LSC) summary

Operator ID: DONGMEI  Date Acquired: 4 Oct 2004  2:47 pm
Data File: C:\MSDCHEM\1\DATA\A-VX1101\X28398.D
Name: N78399-1  TCL
Misc: MS4661,VX1101,W,,,,1
Method: C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title: SW-846 Method 8260
Library Searched: C:\DATABASE\NBS75K.L

| TIC | Top Hit name | RT | EstConc | Units | Response | --Internal Standard--- # | RT | Resp | Conc |
|---|---|---|---|---|---|---|---|---|---|

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28397.D Vial: 7
Acq On : 4 Oct 2004 2:17 pm Operator: DONGMEI
Sample : N78399-2 TCL Inst : MSX
Misc : MS4661,VX1101,W,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 04 14:40:42 2004 Quant Results File: MX1093.RES

Quant Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Sep 30 22:24:20 2004
Response via : Initial Calibration
DataAcq Meth : MX1093

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.84 | 65 | 127339 | 500.00 ug/L | -0.01 |
| 3) pentafluorobenzene | 10.60 | 168 | 178787 | 50.00 ug/L | 0.00 |
| 44) 1,4-difluorobenzene | 11.77 | 114 | 257597 | 50.00 ug/L | 0.00 |
| 74) chlorobenzene-d5 | 15.98 | 117 | 252641 | 50.00 ug/L | 0.00 |
| 87) 1,4-dichlorobenzene-d4 | 18.70 | 152 | 163045 | 50.00 ug/L | 0.00 |

System Monitoring Compounds

| | | | | | |
|---|---|---|---|---|---|
| 38) dibromofluoromethane (s) | 10.64 | 113 | 81544 | 47.36 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 79 - 119 | | Recovery = 94.72% | | |
| 39) 1,2-dichloroethane-d4 (s) | 11.18 | 65 | 89742 | 51.12 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 68 - 129 | | Recovery = 102.24% | | |
| 66) toluene-d8 (s) | 13.96 | 98 | 295559 | 48.69 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 83 - 118 | | Recovery = 97.38% | | |
| 89) 4-bromofluorobenzene (s) | 17.44 | 95 | 129139 | 52.97 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 82 - 120 | | Recovery = 105.94% | | |

Target Compounds Qvalue

10/5/04



(#) = qualifier out of range (m) = manual int

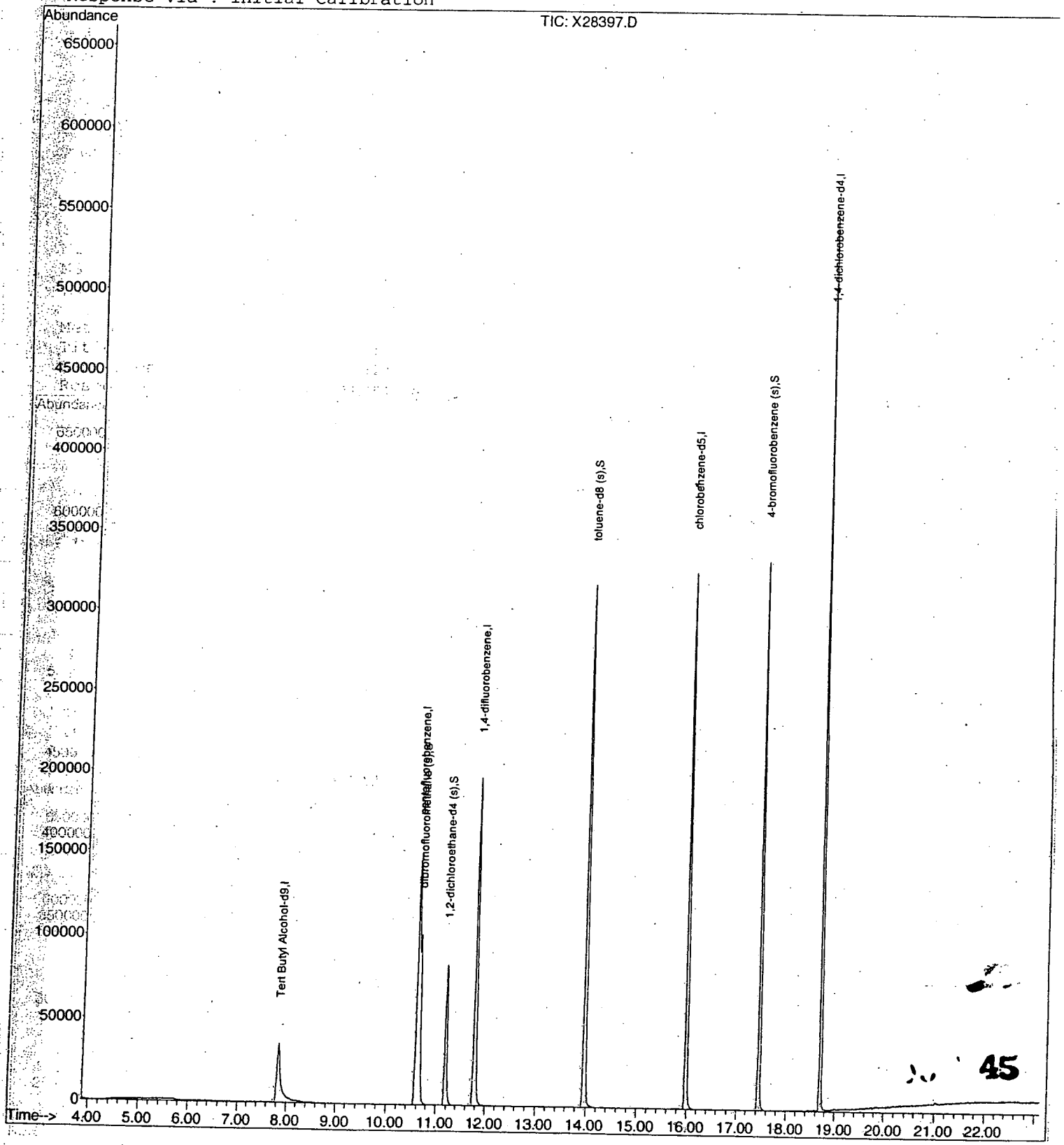
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28397.D
Acq On : 4 Oct 2004 2:17 pm
Sample : N78399-2 TCL
Misc : MS4661,VX1101,W,,,,1
MS Integration Params: RTEINT.P
Quant Time: Oct 4 15:52 2004

Vial: 7
Operator: DONGMEI
Inst : MSX
Multiplr: 1.00

Quant Results File: MX1093.RES

Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Sep 30 22:24:20 2004
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28397.D
Acq On : 4 Oct 2004 2:17 pm
Sample : N78399-2 TCL
Misc : MS4661,VX1101,W,,,,1
MS Integration Params: LSCINT.P

Vial: 7
Operator: DONGMEI
Inst : MSX
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Smoothing : ON
Sampling : 1
Start Thrs: 0.06
Stop Thrs : 0.04

Filtering: 5
Min Area: 100 Area counts
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.377 | 86 | 95 | 96 | rBV | 428 | 598 | 0.07% | 0.013% |
| 2 | 4.429 | 99 | 105 | 109 | rVV2 | 674 | 1236 | 0.14% | 0.026% |
| 3 | 4.492 | 112 | 117 | 118 | rVV2 | 615 | 861 | 0.10% | 0.018% |
| 4 | 4.508 | 118 | 120 | 123 | rVV | 691 | 737 | 0.08% | 0.015% |
| 5 | 4.528 | 123 | 124 | 126 | rVV | 723 | 522 | 0.06% | 0.011% |
| 6 | 4.565 | 126 | 131 | 132 | rVV3 | 662 | 945 | 0.10% | 0.020% |
| 7 | 4.581 | 132 | 134 | 137 | rVV2 | 724 | 919 | 0.10% | 0.019% |
| 8 | 4.607 | 137 | 139 | 141 | rVV2 | 674 | 701 | 0.08% | 0.015% |
| 9 | 4.638 | 143 | 145 | 148 | rVV2 | 645 | 916 | 0.10% | 0.019% |
| 10 | 4.670 | 148 | 151 | 154 | rVV2 | 687 | 1093 | 0.12% | 0.023% |
| 11 | 4.696 | 154 | 156 | 158 | rVV2 | 650 | 653 | 0.07% | 0.014% |
| 12 | 4.711 | 158 | 159 | 162 | rVV2 | 595 | 543 | 0.06% | 0.011% |
| 13 | 4.759 | 162 | 168 | 169 | rVV2 | 684 | 1123 | 0.12% | 0.024% |
| 14 | 4.779 | 169 | 172 | 175 | rVV2 | 625 | 905 | 0.10% | 0.019% |
| 15 | 4.806 | 175 | 177 | 180 | rVV2 | 673 | 823 | 0.09% | 0.017% |
| 16 | 4.847 | 183 | 185 | 187 | rVV | 551 | 600 | 0.07% | 0.013% |
| 17 | 4.895 | 190 | 194 | 201 | rVV2 | 655 | 1724 | 0.19% | 0.036% |
| 18 | 4.963 | 204 | 207 | 211 | rVV3 | 534 | 955 | 0.11% | 0.020% |
| 19 | 5.004 | 213 | 215 | 218 | rVV2 | 530 | 615 | 0.07% | 0.013% |
| 20 | 5.041 | 218 | 222 | 224 | rVV2 | 508 | 800 | 0.09% | 0.017% |
| 21 | 5.057 | 224 | 225 | 233 | rVV2 | 425 | 1030 | 0.11% | 0.022% |
| 22 | 5.130 | 237 | 239 | 242 | rVV | 363 | 507 | 0.06% | 0.011% |
| 23 | 5.208 | 253 | 254 | 259 | rVV3 | 373 | 559 | 0.06% | 0.012% |
| 24 | 5.303 | 268 | 272 | 276 | rVB2 | 488 | 623 | 0.07% | 0.013% |
| 25 | 5.365 | 280 | 284 | 287 | rVB3 | 490 | 832 | 0.09% | 0.017% |
| 26 | 5.454 | 300 | 301 | 305 | rVV | 1203 | 1704 | 0.19% | 0.036% |
| 27 | 5.496 | 305 | 309 | 318 | rVV3 | 1203 | 4439 | 0.49% | 0.093% |
| 28 | 5.548 | 318 | 319 | 323 | rVV2 | 1178 | 1682 | 0.19% | 0.035% |
| 29 | 5.585 | 323 | 326 | 328 | rVV2 | 1229 | 1602 | 0.18% | 0.034% |
| 30 | 5.601 | 328 | 329 | 332 | rVV | 1174 | 1291 | 0.14% | 0.027% |
| 31 | 5.653 | 332 | 339 | 341 | rVV | 1166 | 3078 | 0.34% | 0.065% |
| 32 | 5.674 | 341 | 343 | 347 | rVV2 | 1160 | 1973 | 0.22% | 0.041% |
| 33 | 5.731 | 347 | 354 | 360 | rVV3 | 1172 | 4062 | 0.45% | 0.085% |
| 34 | 5.768 | 360 | 361 | 367 | rVV2 | 725 | 1351 | 0.15% | 0.028% |
| 35 | 5.815 | 367 | 370 | 381 | rVV2 | 571 | 2138 | 0.24% | 0.045% |
| 36 | 5.878 | 381 | 382 | 385 | rVV | 489 | 512 | 0.06% | 0.011% |
| 37 | 5.899 | 385 | 386 | 394 | rVV | 481 | 1179 | 0.13% | 0.025% |
| 38 | 6.118 | 424 | 428 | 432 | rVV2 | 389 | 796 | 0.09% | 0.017% |
| 39 | 6.317 | 465 | 466 | 471 | rVV2 | 375 | 516 | 0.06% | 0.011% |
| 40 | 6.563 | 505 | 513 | 520 | rVV2 | 275 | 760 | 0.08% | 0.016% |

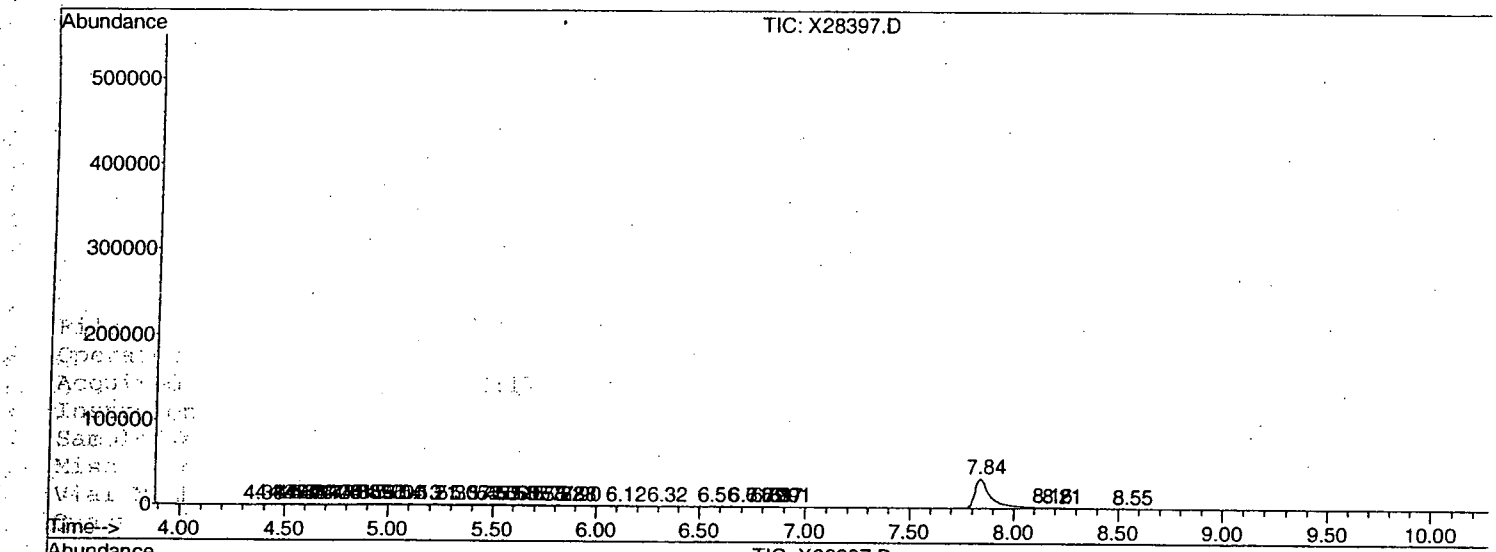
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41 | 6.709 | 538 | 541 | 546 | rVB2 | 472 | 723 | 0.08% | 0.015% |
| 42 | 6.788 | 551 | 556 | 559 | rBB | 443 | 510 | 0.06% | 0.011% |
| 43 | 6.814 | 559 | 561 | 565 | rBV | 455 | 595 | 0.07% | 0.013% |
| 44 | 6.866 | 569 | 571 | 574 | rBV2 | 431 | 503 | 0.06% | 0.011% |
| 45 | 6.908 | 574 | 579 | 580 | rVB | 404 | 552 | 0.06% | 0.012% |
| 46 | 7.839 | 742 | 757 | 799 | rBV | 35206 | 192614 | 21.28% | 4.050% |
| 47 | 8.158 | 815 | 818 | 821 | rVV2 | 551 | 520 | 0.06% | 0.011% |
| 48 | 8.205 | 825 | 827 | 837 | rVB3 | 796 | 1774 | 0.20% | 0.037% |
| 49 | 8.545 | 889 | 892 | 900 | rVB | 463 | 784 | 0.09% | 0.016% |
| 50 | 10.596 | 1271 | 1284 | 1290 | rBV | 146349 | 446257 | 49.29% | 9.384% |
| 51 | 10.643 | 1290 | 1293 | 1322 | rVB | 101955 | 248304 | 27.43% | 5.221% |
| 52 | 11.181 | 1385 | 1396 | 1427 | rBB2 | 83921 | 240345 | 26.55% | 5.054% |
| 53 | 11.772 | 1498 | 1509 | 1554 | rBB | 197618 | 541184 | 59.78% | 11.380% |
| 54 | 13.964 | 1917 | 1928 | 1967 | rBB | 317769 | 756975 | 83.62% | 15.918% |
| 55 | 14.335 | 1992 | 1999 | 2005 | rBB | 351 | 831 | 0.09% | 0.017% |
| 56 | 15.983 | 2304 | 2314 | 2342 | rBB | 325982 | 700416 | 77.37% | 14.728% |
| 57 | 17.442 | 2583 | 2593 | 2616 | rBB | 333814 | 621526 | 68.65% | 13.069% |
| 58 | 18.462 | 2782 | 2788 | 2793 | rBV2 | 462 | 661 | 0.07% | 0.014% |
| 59 | 18.593 | 2805 | 2813 | 2815 | rBV | 539 | 656 | 0.07% | 0.014% |
| 60 | 18.697 | 2821 | 2833 | 2852 | rBV | 550973 | 905309 | 100.00% | 19.037% |
| 61 | 19.006 | 2883 | 2892 | 2897 | rBV4 | 976 | 2321 | 0.26% | 0.049% |
| 62 | 19.105 | 2908 | 2911 | 2913 | rBV | 505 | 501 | 0.06% | 0.011% |
| 63 | 19.283 | 2942 | 2945 | 2950 | rVB2 | 337 | 576 | 0.06% | 0.012% |
| 64 | 19.325 | 2950 | 2953 | 2959 | rBV3 | 490 | 976 | 0.11% | 0.021% |
| 65 | 19.377 | 2959 | 2963 | 2971 | rVB2 | 358 | 642 | 0.07% | 0.013% |
| 66 | 19.440 | 2971 | 2975 | 2978 | rBV | 506 | 522 | 0.06% | 0.011% |
| 67 | 19.471 | 2978 | 2981 | 2988 | rBV2 | 449 | 999 | 0.11% | 0.021% |
| 68 | 19.592 | 2999 | 3004 | 3006 | rVB3 | 644 | 729 | 0.08% | 0.015% |
| 69 | 19.654 | 3011 | 3016 | 3019 | rBV3 | 791 | 932 | 0.10% | 0.020% |
| 70 | 19.759 | 3031 | 3036 | 3038 | rVB4 | 1001 | 1558 | 0.17% | 0.033% |
| 71 | 19.775 | 3038 | 3039 | 3043 | rBV4 | 829 | 1001 | 0.11% | 0.021% |
| 72 | 19.827 | 3046 | 3049 | 3056 | rVV5 | 577 | 1168 | 0.13% | 0.025% |
| 73 | 19.905 | 3061 | 3064 | 3065 | rVB2 | 662 | 577 | 0.06% | 0.012% |
| 74 | 19.916 | 3065 | 3066 | 3071 | rBV3 | 728 | 1021 | 0.11% | 0.021% |
| 75 | 20.031 | 3087 | 3088 | 3092 | rVB3 | 581 | 520 | 0.06% | 0.011% |
| 76 | 20.078 | 3095 | 3097 | 3100 | rBV2 | 584 | 645 | 0.07% | 0.014% |
| 77 | 20.115 | 3100 | 3104 | 3107 | rVB3 | 461 | 563 | 0.06% | 0.012% |
| 78 | 20.261 | 3128 | 3132 | 3134 | rBV3 | 609 | 735 | 0.08% | 0.015% |
| 79 | 20.376 | 3145 | 3154 | 3157 | rBV5 | 389 | 732 | 0.08% | 0.015% |
| 80 | 20.470 | 3170 | 3172 | 3180 | rBV4 | 493 | 709 | 0.08% | 0.015% |
| 81 | 20.564 | 3188 | 3190 | 3193 | rVB4 | 630 | 658 | 0.07% | 0.014% |
| 82 | 20.591 | 3193 | 3195 | 3199 | rBV3 | 736 | 535 | 0.06% | 0.011% |
| 83 | 20.727 | 3219 | 3221 | 3231 | rVV6 | 577 | 728 | 0.08% | 0.015% |
| 84 | 20.852 | 3231 | 3245 | 3246 | rBV5 | 452 | 1473 | 0.16% | 0.031% |
| 85 | 21.025 | 3272 | 3278 | 3294 | rBV3 | 1701 | 6179 | 0.68% | 0.130% |
| 86 | 21.124 | 3294 | 3297 | 3299 | rBV3 | 616 | 591 | 0.07% | 0.012% |
| 87 | 21.171 | 3305 | 3306 | 3311 | rBV4 | 672 | 776 | 0.09% | 0.016% |
| 88 | 21.229 | 3311 | 3317 | 3323 | rVV7 | 656 | 1667 | 0.18% | 0.035% |
| 89 | 21.270 | 3323 | 3325 | 3329 | rVV4 | 588 | 730 | 0.08% | 0.015% |
| 90 | 21.422 | 3340 | 3354 | 3359 | rBV9 | 735 | 3024 | 0.33% | 0.064% |
| 91 | 21.637 | 3392 | 3395 | 3400 | rBV4 | 677 | 1169 | 0.13% | 0.025% |
| 92 | 21.699 | 3401 | 3407 | 3415 | rVB6 | 769 | 2029 | 0.22% | 0.043% |
| 93 | 21.746 | 3415 | 3416 | 3421 | rBV3 | 790 | 1129 | 0.12% | 0.024% |
| 94 | 21.830 | 3430 | 3432 | 3435 | rVB4 | 849 | 821 | 0.09% | 0.017% |
| 95 | 21.888 | 3442 | 3443 | 3448 | rVB4 | 720 | 853 | 0.09% | 0.018% |
| 96 | 21.935 | 3448 | 3452 | 3461 | rBV3 | 904 | 1644 | 0.18% | 0.035% |
| 97 | 22.055 | 3472 | 3475 | 3497 | rVB8 | 732 | 2313 | 0.26% | 0.049% |
| 98 | 22.374 | 3535 | 3536 | 3543 | rVB5 | 817 | 870 | 0.10% | 0.018% |

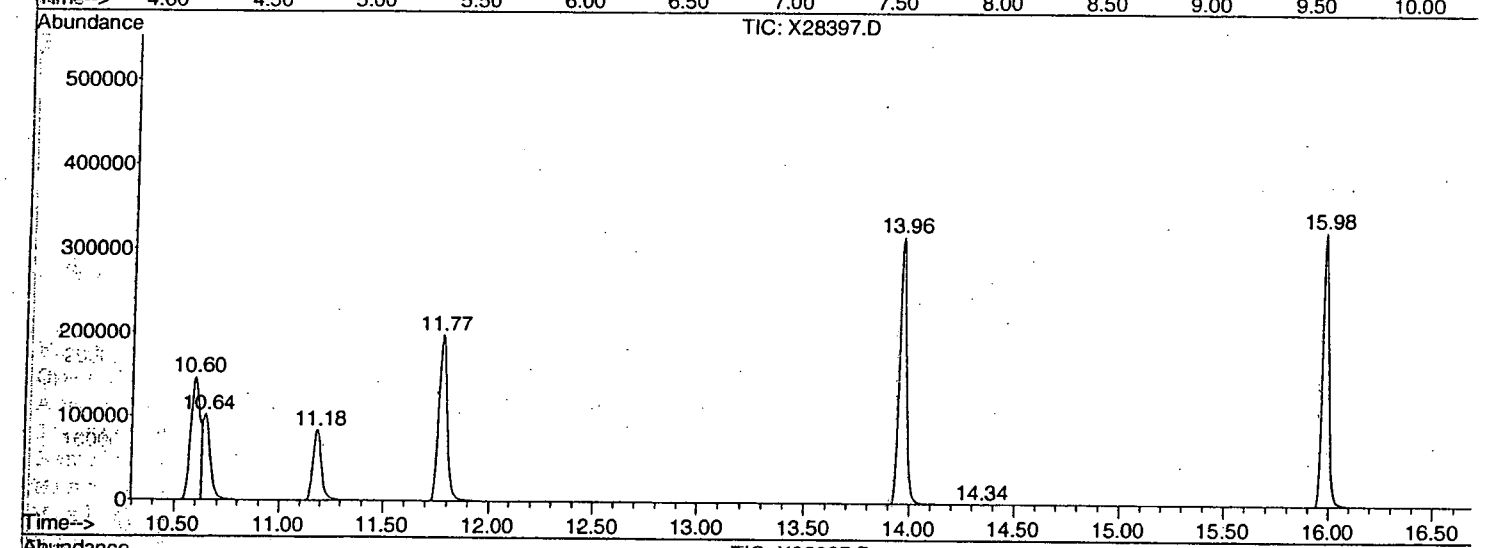
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 99 | 22.526 | 3564 | 3565 | 3577 | rBV6 | 696 | 1455 | 0.16% | 0.031% |
| 00 | 22.928 | 3639 | 3642 | 3644 | rVB3 | 775 | 593 | 0.07% | 0.012% |

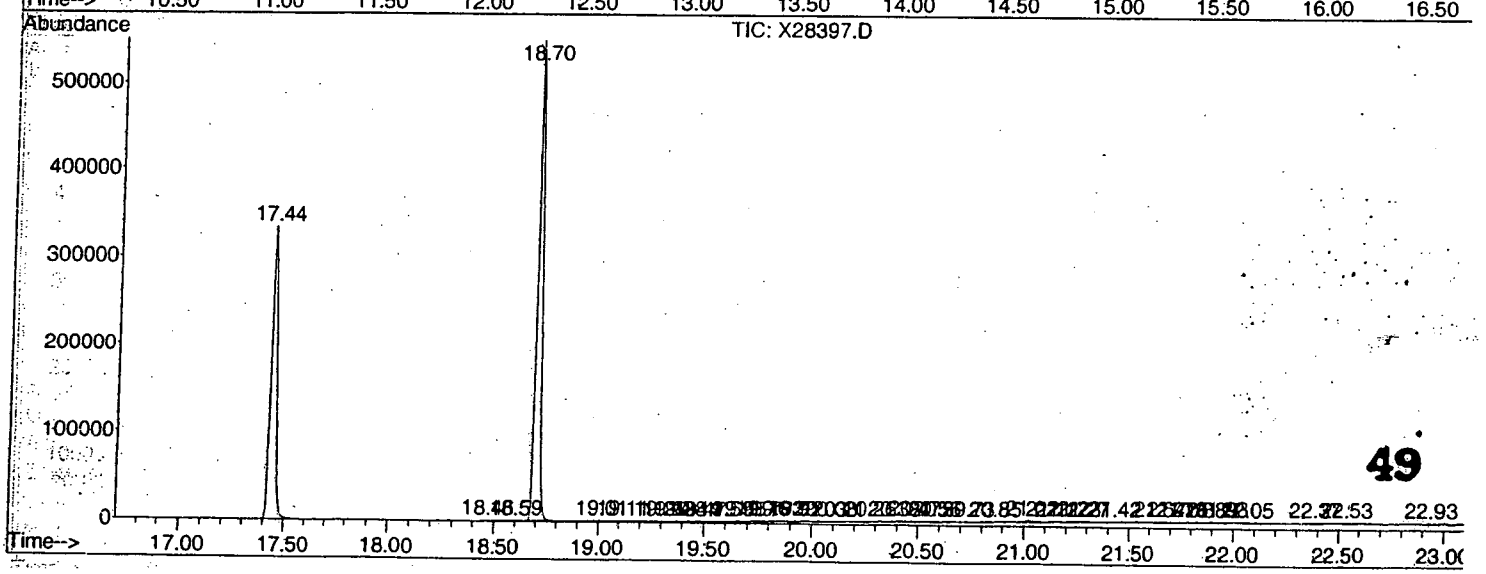
Sum of corrected areas: 4755606

LSC Report - Integrated Chromatogram

File : C:\MSDCHEM\1\DATA\A-VX1101\X28397.D
Operator : DONGMEI
Acquired : 4 Oct 2004 2:17 pm using AcqMethod MX1093
Instrument : MSX
Sample Name: N78399-2 TCL
Misc Info : MS4661,VX1101,W,,,,1
Vial Number: 7
Quant File :MX1093.RES (RTE Integrator)



Tentatively Identified Compound (LSC) summary

Operator ID: DONGMEI  Date Acquired: 4 Oct 2004  2:17 pm
Data File: C:\MSDCHEM\1\DATA\A-VX1101\X28397.D
ame: N78399-2  TCL
isc: MS4661,VX1101,W,,,,1
Method: C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title: SW-846 Method 8260
ibrary Searched: C:\DATABASE\NBS75K.L

| TIC | Top Hit name | RT | EstConc | Units | Response | --Internal Standard--- # | RT | Resp | Conc |
|---|---|---|---|---|---|---|---|---|---|

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28394.D Vial: 4
Acq On : 4 Oct 2004 12:07 pm Operator: DONGMEI
Sample : MB1 Inst : MSX
Misc : MS5014,VX1101,W,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 04 12:30:24 2004 Quant Results File: MX1093.RES

Quant Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Sep 30 22:24:20 2004
Response via : Initial Calibration
DataAcq Meth : MX1093

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 60) Tert Butyl Alcohol-d9 | 7.84 | 65 | 128557 | 500.00 ug/L | -0.01 |
| 3) pentafluorobenzene | 10.59 | 168 | 185688 | 50.00 ug/L | 0.00 |
| 70) 1,4-difluorobenzene | 11.77 | 114 | 266641 | 50.00 ug/L | 0.00 |
| 94) chlorobenzene-d5 | 15.98 | 117 | 262322 | 50.00 ug/L | 0.00 |
| 97) 1,4-dichlorobenzene-d4 | 18.70 | 152 | 172979 | 50.00 ug/L | 0.00 |

System Monitoring Compounds

| | | | | | |
|---|---|---|---|---|---|
| 38) dibromofluoromethane (s) | 10.64 | 113 | 84437 | 47.22 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 79 - 119 | | Recovery = 94.44% | | |
| 39) 1,2-dichloroethane-d4 (s) | 11.18 | 65 | 87465 | 47.97 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 68 - 129 | | Recovery = 95.94% | | |
| 66) toluene-d8 (s) | 13.96 | 98 | 303820 | 48.35 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 83 - 118 | | Recovery = 96.70% | | |
| 89) 4-bromofluorobenzene (s) | 17.44 | 95 | 133526 | 51.62 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 82 - 120 | | Recovery = 103.24% | | |

Target Compounds Qvalue

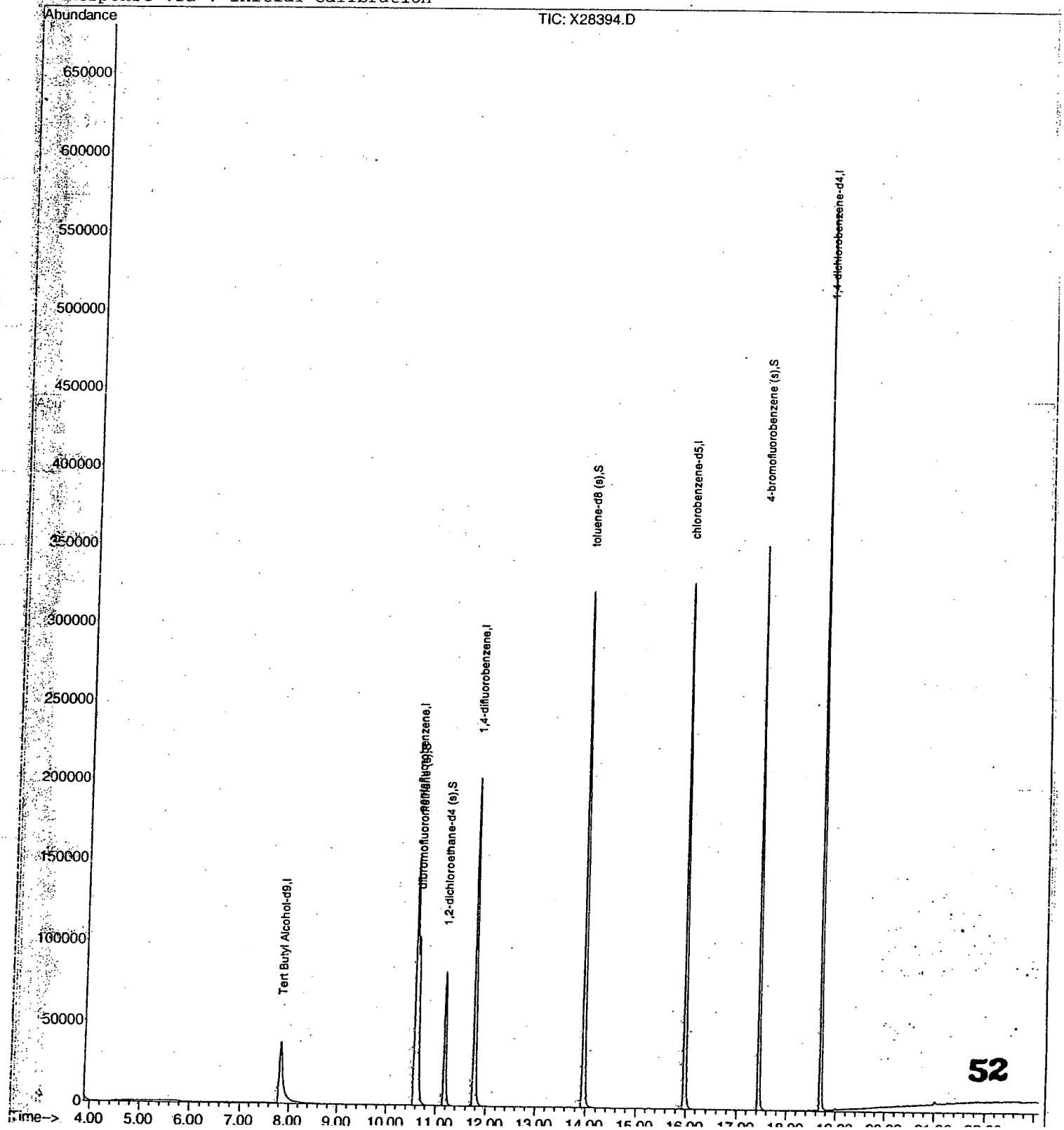
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28394.D
Acq On : 4 Oct 2004 12:07 pm
Sample : MB1
Misc : MS5014,VX1101,W,,,,1
MS Integration Params: RTEINT.P
Quant Time: Oct 5 10:51 2004

Vial: 4
Operator: DONGMEI
Inst : MSX
Multiplr: 1.00

Quant Results File: MX1093.RES

Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Sep 30 22:24:20 2004
Response via : Initial Calibration

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LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\A-VX1101\X28394.D  Vial: 4
Acq On : 4 Oct 2004 12:07 pm  Operator: DONGMEI
Sample : MB1  Inst : MSX
Misc : MS5014,VX1101,W,,,,1  Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title : SW-846 Method 8260
Smoothing : ON  Filtering: 5
Sampling : 1  Min Area: 100 Area counts
Start Thrs: 0.06  Max Peaks: 100
Stop Thrs : 0.04  Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.120 | 42 | 46 | 52 | rVV | 295 | 376 | 0.04% | 0.008% |
| 2 | 4.168 | 52 | 55 | 62 | rVV | 269 | 343 | 0.04% | 0.007% |
| 3 | 4.408 | 97 | 101 | 103 | rBV | 392 | 400 | 0.04% | 0.008% |
| 4 | 4.434 | 103 | 106 | 107 | rVV | 454 | 427 | 0.04% | 0.009% |
| 5 | 4.487 | 107 | 116 | 120 | rVV2 | 600 | 1637 | 0.17% | 0.034% |
| 6 | 4.523 | 122 | 123 | 126 | rVV2 | 615 | 527 | 0.06% | 0.011% |
| 7 | 4.544 | 126 | 127 | 129 | rVV | 602 | 441 | 0.05% | 0.009% |
| 8 | 4.565 | 129 | 131 | 137 | rVV2 | 526 | 848 | 0.09% | 0.017% |
| 9 | 4.675 | 148 | 152 | 153 | rVV | 345 | 381 | 0.04% | 0.008% |
| 10 | 4.696 | 154 | 156 | 159 | rVV | 277 | 333 | 0.04% | 0.007% |
| 11 | 4.738 | 159 | 164 | 167 | rVB2 | 296 | 465 | 0.05% | 0.010% |
| 12 | 5.140 | 238 | 241 | 250 | rVB2 | 319 | 748 | 0.08% | 0.015% |
| 13 | 5.214 | 250 | 255 | 257 | rBV3 | 272 | 370 | 0.04% | 0.008% |
| 14 | 5.418 | 290 | 294 | 295 | rBV | 326 | 353 | 0.04% | 0.007% |
| 15 | 5.658 | 337 | 340 | 347 | rVV2 | 454 | 701 | 0.07% | 0.014% |
| 16 | 5.705 | 347 | 349 | 352 | rVV2 | 485 | 529 | 0.06% | 0.011% |
| 17 | 5.737 | 352 | 355 | 390 | rVB2 | 722 | 3564 | 0.38% | 0.073% |
| 18 | 6.270 | 451 | 457 | 467 | rVB2 | 168 | 386 | 0.04% | 0.008% |
| 19 | 6.615 | 520 | 523 | 525 | rBV | 324 | 439 | 0.05% | 0.009% |
| 20 | 6.689 | 536 | 537 | 547 | rVB | 268 | 629 | 0.07% | 0.013% |
| 21 | 6.746 | 547 | 548 | 557 | rVB2 | 313 | 730 | 0.08% | 0.015% |
| 22 | 7.044 | 599 | 605 | 607 | rVV | 318 | 452 | 0.05% | 0.009% |
| 23 | 7.107 | 616 | 617 | 622 | rVV | 299 | 363 | 0.04% | 0.007% |
| 24 | 7.248 | 641 | 644 | 650 | rVB2 | 263 | 442 | 0.05% | 0.009% |
| 25 | 7.300 | 650 | 654 | 659 | rBV2 | 280 | 383 | 0.04% | 0.008% |
| 26 | 7.551 | 700 | 702 | 707 | rBV | 268 | 346 | 0.04% | 0.007% |
| 27 | 7.839 | 743 | 757 | 811 | rBV | 37901 | 202987 | 21.38% | 4.175% |
| 28 | 8.216 | 826 | 829 | 838 | rVB2 | 470 | 577 | 0.06% | 0.012% |
| 29 | 8.273 | 838 | 840 | 852 | rVB2 | 253 | 476 | 0.05% | 0.010% |
| 30 | 8.346 | 852 | 854 | 866 | rVB2 | 389 | 440 | 0.05% | 0.009% |
| 31 | 8.503 | 882 | 884 | 886 | rVB2 | 460 | 363 | 0.04% | 0.007% |
| 32 | 10.590 | 1270 | 1283 | 1289 | rBV | 151511 | 441599 | 46.52% | 9.083% |
| 33 | 10.637 | 1289 | 1292 | 1323 | rVB | 104098 | 270082 | 28.45% | 5.555% |
| 34 | 10.878 | 1332 | 1338 | 1342 | rVB | 225 | 512 | 0.05% | 0.011% |
| 35 | 11.176 | 1385 | 1395 | 1425 | rBB | 82320 | 237891 | 25.06% | 4.893% |
| 36 | 11.772 | 1497 | 1509 | 1549 | rBV | 202372 | 551308 | 58.08% | 11.340% |
| 37 | 13.959 | 1916 | 1927 | 1964 | rBB | 321657 | 769759 | 81.09% | 15.834% |
| 38 | 15.841 | 2284 | 2287 | 2292 | rBB | 315 | 390 | 0.04% | 0.008% |
| 39 | 15.977 | 2303 | 2313 | 2346 | rBB | 327312 | 716065 | 75.44% | 14.729% |
| 40 | 17.437 | 2583 | 2592 | 2615 | rBB | 351638 | 643279 | 67.77% | 13.232% |

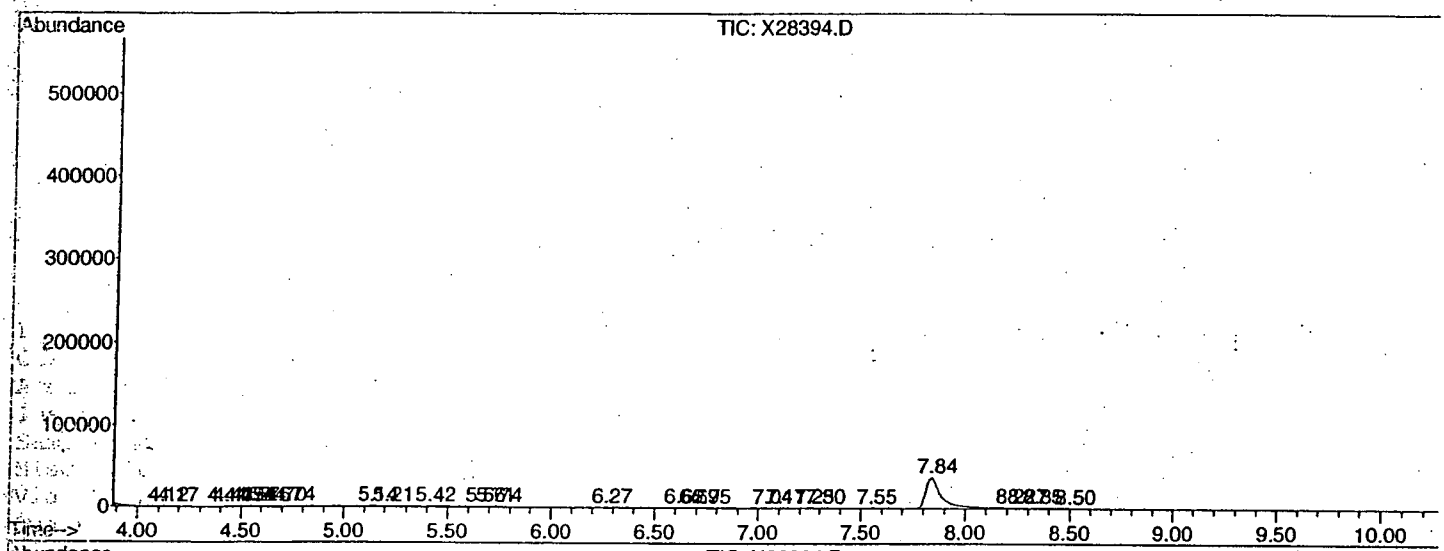
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41 | 17.693 | 2638 | 2641 | 2647 | rBB | 325 | 514 | 0.05% | 0.011% |
| 42 | 18.085 | 2709 | 2716 | 2717 | rBB | 233 | 471 | 0.05% | 0.010% |
| 43 | 18.101 | 2717 | 2719 | 2722 | rBV | 221 | 325 | 0.03% | 0.007% |
| 44 | 18.294 | 2749 | 2756 | 2759 | rBV | 323 | 517 | 0.05% | 0.011% |
| 45 | 18.457 | 2780 | 2787 | 2791 | rBV2 | 528 | 797 | 0.08% | 0.016% |
| 46 | 18.587 | 2804 | 2812 | 2817 | rBV2 | 461 | 844 | 0.09% | 0.017% |
| 47 | 18.697 | 2823 | 2833 | 2856 | rBV | 566358 | 949209 | 100.00% | 19.525% |
| 48 | 18.870 | 2860 | 2866 | 2868 | rBV | 519 | 399 | 0.04% | 0.008% |
| 49 | 18.964 | 2881 | 2884 | 2887 | rVB | 359 | 406 | 0.04% | 0.008% |
| 50 | 19.000 | 2887 | 2891 | 2897 | rBV3 | 1376 | 2295 | 0.24% | 0.047% |
| 51 | 19.063 | 2897 | 2903 | 2905 | rBV | 498 | 639 | 0.07% | 0.013% |
| 52 | 19.152 | 2916 | 2920 | 2921 | rVB2 | 567 | 463 | 0.05% | 0.010% |
| 53 | 19.173 | 2921 | 2924 | 2927 | rBV3 | 580 | 699 | 0.07% | 0.014% |
| 54 | 19.204 | 2927 | 2930 | 2932 | rVB | 516 | 514 | 0.05% | 0.011% |
| 55 | 19.241 | 2935 | 2937 | 2941 | rBV2 | 507 | 545 | 0.06% | 0.011% |
| 56 | 19.330 | 2953 | 2954 | 2961 | rBV2 | 535 | 793 | 0.08% | 0.016% |
| 57 | 19.372 | 2961 | 2962 | 2965 | rBV3 | 742 | 561 | 0.06% | 0.012% |
| 58 | 19.419 | 2965 | 2971 | 2973 | rVB4 | 698 | 798 | 0.08% | 0.016% |
| 59 | 19.450 | 2973 | 2977 | 2979 | rBV2 | 675 | 710 | 0.07% | 0.015% |
| 60 | 19.476 | 2979 | 2982 | 2987 | rBV2 | 365 | 570 | 0.06% | 0.012% |
| 61 | 19.524 | 2987 | 2991 | 2992 | rVB | 418 | 428 | 0.05% | 0.009% |
| 62 | 19.544 | 2992 | 2995 | 2997 | rBV | 442 | 504 | 0.05% | 0.010% |
| 63 | 19.560 | 2997 | 2998 | 3001 | rBV2 | 539 | 334 | 0.04% | 0.007% |
| 64 | 19.597 | 3001 | 3005 | 3007 | rVB3 | 870 | 987 | 0.10% | 0.020% |
| 65 | 19.628 | 3007 | 3011 | 3014 | rBV3 | 748 | 1200 | 0.13% | 0.025% |
| 66 | 19.649 | 3014 | 3015 | 3018 | rBV2 | 446 | 442 | 0.05% | 0.009% |
| 67 | 19.707 | 3021 | 3026 | 3028 | rBV4 | 681 | 761 | 0.08% | 0.016% |
| 68 | 19.764 | 3028 | 3037 | 3040 | rBV3 | 726 | 1459 | 0.15% | 0.030% |
| 69 | 19.801 | 3040 | 3044 | 3046 | rBV3 | 365 | 550 | 0.06% | 0.011% |
| 70 | 19.843 | 3046 | 3052 | 3054 | rVB3 | 602 | 990 | 0.10% | 0.020% |
| 71 | 19.858 | 3054 | 3055 | 3060 | rBV2 | 480 | 488 | 0.05% | 0.010% |
| 72 | 19.911 | 3062 | 3065 | 3066 | rBV2 | 745 | 655 | 0.07% | 0.013% |
| 73 | 19.984 | 3076 | 3079 | 3082 | rBV2 | 576 | 709 | 0.07% | 0.015% |
| 74 | 20.015 | 3082 | 3085 | 3089 | rVB3 | 737 | 1003 | 0.11% | 0.021% |
| 75 | 20.057 | 3089 | 3093 | 3095 | rVB3 | 657 | 811 | 0.09% | 0.017% |
| 76 | 20.099 | 3095 | 3101 | 3106 | rBV3 | 865 | 2155 | 0.23% | 0.044% |
| 77 | 20.135 | 3106 | 3108 | 3111 | rVB3 | 511 | 420 | 0.04% | 0.009% |
| 78 | 20.177 | 3111 | 3116 | 3119 | rBV4 | 709 | 1230 | 0.13% | 0.025% |
| 79 | 20.214 | 3121 | 3123 | 3128 | rVB5 | 544 | 762 | 0.08% | 0.016% |
| 80 | 20.266 | 3128 | 3133 | 3135 | rBV2 | 794 | 1162 | 0.12% | 0.024% |
| 81 | 20.293 | 3136 | 3138 | 3140 | rBV3 | 395 | 334 | 0.04% | 0.007% |
| 82 | 20.439 | 3164 | 3166 | 3170 | rBV3 | 748 | 970 | 0.10% | 0.020% |
| 83 | 20.575 | 3190 | 3192 | 3198 | rBV3 | 575 | 1055 | 0.11% | 0.022% |
| 84 | 20.695 | 3213 | 3215 | 3218 | rBV2 | 486 | 483 | 0.05% | 0.010% |
| 85 | 20.726 | 3218 | 3221 | 3238 | rVB9 | 877 | 1999 | 0.21% | 0.041% |
| 86 | 20.831 | 3238 | 3241 | 3243 | rBV4 | 480 | 586 | 0.06% | 0.012% |
| 87 | 21.025 | 3270 | 3278 | 3300 | rBV3 | 2349 | 8345 | 0.88% | 0.172% |
| 88 | 21.234 | 3315 | 3318 | 3321 | rBV4 | 429 | 502 | 0.05% | 0.010% |
| 89 | 21.260 | 3321 | 3323 | 3330 | rVB5 | 1185 | 1547 | 0.16% | 0.032% |
| 90 | 21.317 | 3331 | 3334 | 3341 | rBV6 | 740 | 1107 | 0.12% | 0.023% |
| 91 | 21.365 | 3341 | 3343 | 3350 | rVV4 | 719 | 705 | 0.07% | 0.015% |
| 92 | 21.532 | 3357 | 3375 | 3378 | rBV7 | 485 | 1847 | 0.19% | 0.038% |
| 93 | 21.621 | 3386 | 3392 | 3395 | rBV5 | 461 | 355 | 0.04% | 0.007% |
| 94 | 21.710 | 3407 | 3409 | 3413 | rBV5 | 588 | 908 | 0.10% | 0.019% |
| 95 | 22.055 | 3472 | 3475 | 3483 | rBV6 | 734 | 894 | 0.09% | 0.018% |
| 96 | 22.107 | 3483 | 3485 | 3495 | rVB4 | 823 | 1051 | 0.11% | 0.022% |
| 97 | 22.180 | 3496 | 3499 | 3509 | rVB5 | 635 | 1607 | 0.17% | 0.033% |
| 98 | 22.238 | 3509 | 3510 | 3535 | rBV6 | 818 | 2877 | 0.30% | 0.059% |

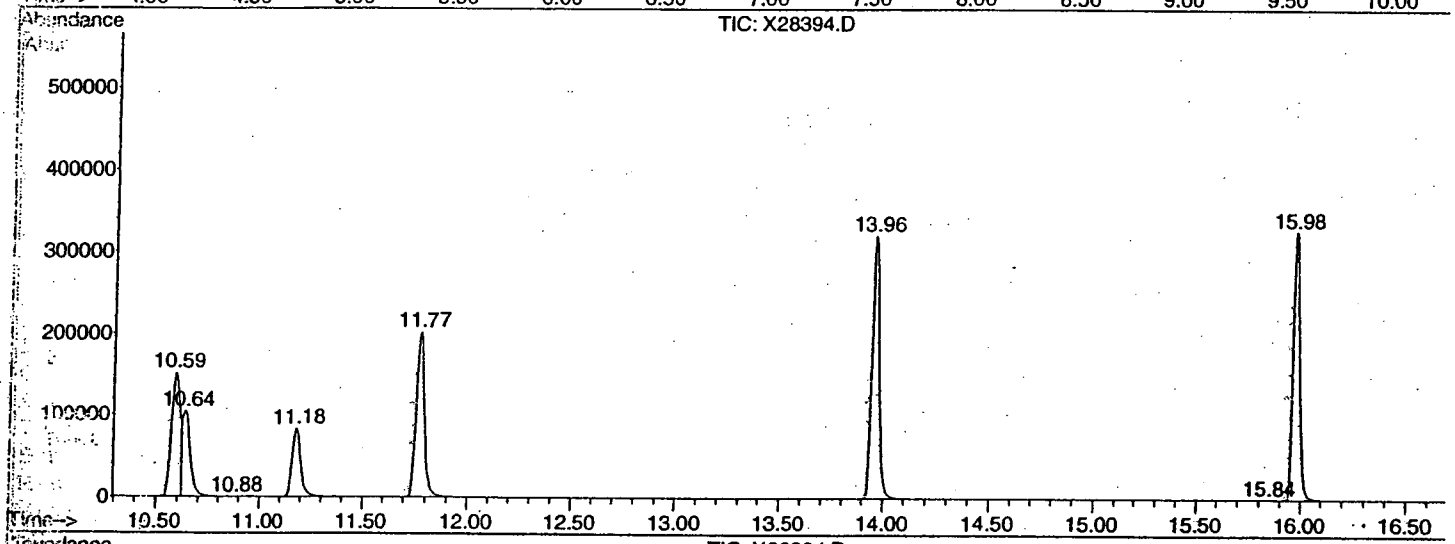
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 99 | 22.489 | 3553 | 3558 | 3569 | rBV7 | 683 | 2095 | 0.22% | 0.043% |
| 00 | 22.892 | 3630 | 3635 | 3642 | rBV5 | 464 | 833 | 0.09% | 0.017% |

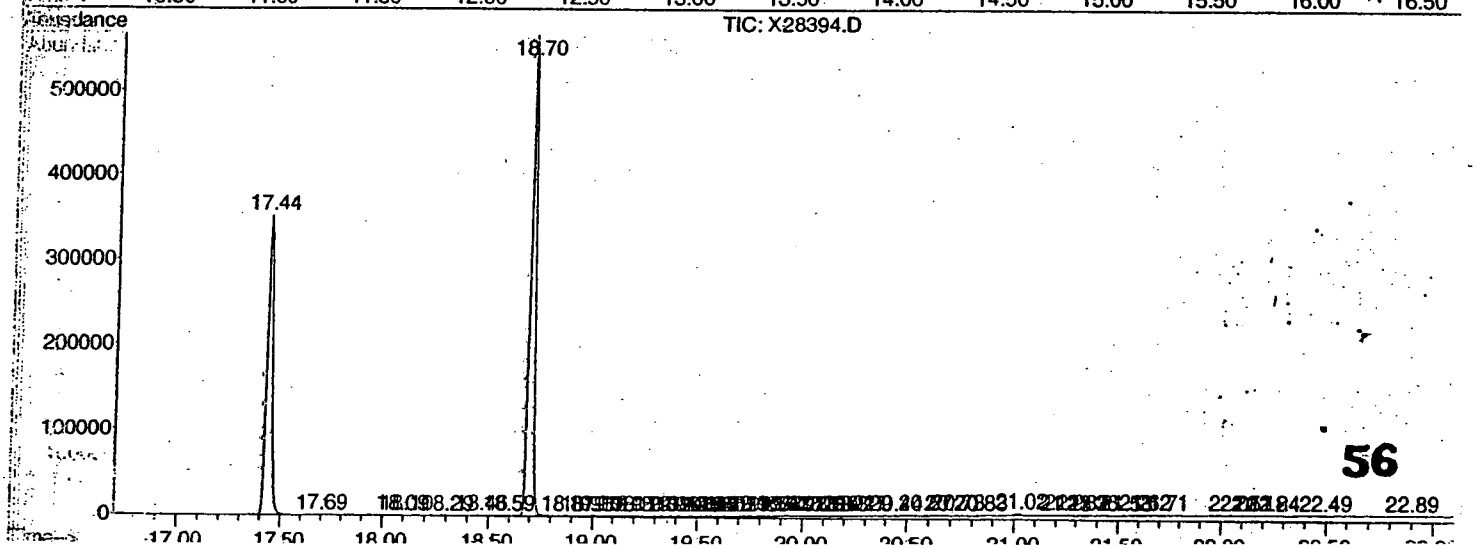
Sum of corrected areas: 4861560

LSC Report - Integrated Chromatogram

File : C:\MSDCHEM\1\DATA\A-VX1101\X28394.D
Operator : DONGMEI
Acquired : 4 Oct 2004 12:07 pm using AcqMethod MX1093
Instrument : MSX
Sample Name: MB1
Misc Info : MS5014,VX1101,W,,,,1
Vial Number: 4
Quant File :MX1093.RES (RTE Integrator)



Tentatively Identified Compound (LSC) summary

Operator ID: DONGMEI  Date Acquired: 4 Oct 2004 12:07 pm
Data File: C:\MSDCHEM\1\DATA\A-VX1101\X28394.D
Name: MB1
Misc: MS5014,VX1101,W,,,,1
Method: C:\MSDCHEM\1\METHODS\MX1093.M (RTE Integrator)
Title: SW-846 Method 8260
Library Searched: C:\DATABASE\NBS75K.L

| TIC Top Hit name | RT | EstConc | Units | Response | --Internal Standard--- # | RT | Resp | Conc |
|---|---|---|---|---|---|---|---|---|

# SUBCONTRACT DATA

# SECTION 2

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# FULL LABORATORY DATA DELIVERABLES


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4. **SAMPLE RECEIPT FORM**
5. **CUSTODY DOCUMENTATION**
6. **RESULTS SUMMARY**
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# SECTION 3

# SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Accutest New Jersey **Job No:** N78399

**Site:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ **Report Date** 10/11/2004 1:24:32

1 Sample was collected on 09/20/2004 and were received at Accutest on 09/21/2004 properly preserved and intact. These Samples received an Accutest job number of N78399.A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

## Extractables by GCMS By Method SW846 8270C

**Matrix:** AQ **Batch ID:** OP11403

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) N78365-10MS, N78365-10MSD were used as the QC samples indicated.

MS/MSD Recoveries for Fluoranthene, Phenanthrene, Pyrene are outside control limits due to matrix interference. For method performance in clean matrix refer to Blank Spike.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

Svetlana Izosimova, QAO

Date: Oct. 11, 2004

# SECTION 4

# ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: N78399

Client: AIWJ Project: Atlantic Shores

Date Received: 09/24/04 Time Received: 09/24/04 - 900

# of Coolers Received: 1 Cooler Temperatures: 3.4°

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number:

| | | | |
|---|---|---|---|
| Cooler Custody Seals Intact ? | (Yes) | No | |
| Chain of Custody Provided ? | (Yes) | No | |
| COC Match Bottle Label ID's ? | (Yes) | No | |
| Sample Labels Present on all bottles ? | (Yes) | No | |
| All Analyses Marked On COC ? | (Yes) | No | |
| Are All Bottles Intact ? | (Yes) | No | |
| Samples Preserved Correctly ? | (Yes) | No | |
| Correct Number of Containers Used ? | (Yes) | No | |
| Sufficient Sample Volume ? | (Yes) | No | |
| Trip Blank Provided ? | Yes | (No) | |
| Trip Blank on COC ? | Yes | (No) | |
| Trip Blank Intact ? | Yes | No | (N/A) |
| Trip Blank Matrix ? | Soil | Water | (N/A) |
| Number of Encores ? | 0 | | |
| Number of Soil Field Kits ? | 0 | | |

Summary of Comments:

Signature: [signature] Date: 09/24/04

Review Signature:

ASBD/HW 05/11/03

# SECTION 5

ACCUTEST®

# CHAIN OF CUSTODY

Fresh Ponds Corporate Village, Building B
2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

Accutest Job #: K26943 9-24-04 5FC

Accutest Quote #:

99

| Client Information | | Facility Information | |
|---|---|---|---|
| Accutest | | | |
| Name: 2235 Route 130 | | Project Name: Atlantic States | |
| Address: Dayton NJ 08810 | | Location: | |
| City: Nadine Yakes | State: | Zip: | Project No.: N78399 |
| Send Report to: | | | |
| Phone #: (732) 329-0200 x226 | | FAX #: (732) 329-3499 | |

Analytical Information

N78399

| Field ID / Point of Collection | Collection Date | Collection Time | Sampled By | Matrix | # of bottles | Preservation HCL | NaOH | HNO3 | H2So4 | None | B8270TCL+ | 0 | 0 | 0 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N78399 -1 | 9/20 | 12:40 | MS | AQ | 1 | | | | | | X | | | | | | |

**Turnaround Information**

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days *EMERGENCY*
- [X] Other 21 (Days)

Approved By:

21 Day Turnaround Hardcopy, Emergency or RUSH is FAX Data unless previously approved.

**Data Deliverable Information**

- [X] NJ Reduced
- [ ] NJ Full
- [ ] FULL CLP
- [ ] Disk Deliverable
- [ ] Other (Specify)
- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] State Forms

**Comments / Remarks**

Sample Custody must be documented below each time samples change possesion, including courier delivery.

| Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|
| 1 [signature] | 9/23/04 1700 | 1 FdX | 2 FX | 9-24-04 9:00 | 2 [signature] |
| 3 | | 3 | 4 | | 4 |
| 5 | | 5 | Seal # | Preserved where applicable ☐ | On Ice ☐ |

3.4

NO EX11
K950C1

# SECTION 6

# Sample Summary

Accutest New Jersey

**Job No:** N78399

GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ
Project No: 3852

| Sample Number | Collected Date | Time By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|
| N78399-1 | 09/20/04 | 12:40 MS | 09/21/04 | AQ | Ground Water | MW-1 |
| N78399-2 | 09/20/04 | 12:40 MS | 09/21/04 | AQ | Trip Blank Water | TRIP BLANK |

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N78399-1 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8270C SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | L023673.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 880 ml | 1.0 ml |
| Run #2 | | |

**BN TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | 5.7 | 1.1 | ug/l | |
| 208-96-8 | Acenaphthylene | ND | 5.7 | 1.1 | ug/l | |
| 120-12-7 | Anthracene | ND | 5.7 | 1.1 | ug/l | |
| 56-55-3 | Benzo(a)anthracene | ND | 5.7 | 1.1 | ug/l | |
| 50-32-8 | Benzo(a)pyrene | ND | 5.7 | 1.1 | ug/l | |
| 205-99-2 | Benzo(b)fluoranthene | ND | 5.7 | 1.1 | ug/l | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | 5.7 | 2.3 | ug/l | |
| 207-08-9 | Benzo(k)fluoranthene | ND | 5.7 | 1.1 | ug/l | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | 5.7 | 1.1 | ug/l | |
| 85-68-7 | Butyl benzyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 100-51-6 | Benzyl Alcohol | ND | 5.7 | 1.1 | ug/l | |
| 91-58-7 | 2-Chloronaphthalene | ND | 5.7 | 1.1 | ug/l | |
| 106-47-8 | 4-Chloroaniline | ND | 11 | 3.4 | ug/l | |
| 218-01-9 | Chrysene | ND | 5.7 | 1.1 | ug/l | |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | 5.7 | 1.1 | ug/l | |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | 5.7 | 2.3 | ug/l | |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | 5.7 | 1.1 | ug/l | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | 5.7 | 1.1 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | 5.7 | 2.3 | ug/l | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | 5.7 | 2.3 | ug/l | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | 11 | 5.7 | ug/l | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | 5.7 | 2.3 | ug/l | |
| 132-64-9 | Dibenzofuran | ND | 5.7 | 1.1 | ug/l | |
| 84-74-2 | Di-n-butyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 117-84-0 | Di-n-octyl phthalate | ND | 5.7 | 2.8 | ug/l | |
| 84-66-2 | Diethyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 131-11-3 | Dimethyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | 5.7 | 2.8 | ug/l | |
| 206-44-0 | Fluoranthene | ND | 5.7 | 1.1 | ug/l | |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N78399-1 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8270C SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

**BN TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 86-73-7 | Fluorene | ND | 5.7 | 1.1 | ug/l | |
| 118-74-1 | Hexachlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.7 | 2.3 | ug/l | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | 5.7 | 2.3 | ug/l | |
| 67-72-1 | Hexachloroethane | ND | 5.7 | 2.3 | ug/l | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | 5.7 | 2.3 | ug/l | |
| 78-59-1 | Isophorone | ND | 5.7 | 1.1 | ug/l | |
| 91-57-6 | 2-Methylnaphthalene | ND | 5.7 | 1.1 | ug/l | |
| 88-74-4 | 2-Nitroaniline | ND | 5.7 | 2.3 | ug/l | |
| 99-09-2 | 3-Nitroaniline | ND | 5.7 | 2.3 | ug/l | |
| 100-01-6 | 4-Nitroaniline | ND | 5.7 | 2.3 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.7 | 1.1 | ug/l | |
| 98-95-3 | Nitrobenzene | ND | 5.7 | 1.1 | ug/l | |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | 5.7 | 2.3 | ug/l | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | 5.7 | 2.3 | ug/l | |
| 85-01-8 | Phenanthrene | ND | 5.7 | 1.1 | ug/l | |
| 129-00-0 | Pyrene | ND | 5.7 | 1.1 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.7 | 1.1 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 4165-60-0 | Nitrobenzene-d5 | 72% | | 49-119% |
| 321-60-8 | 2-Fluorobiphenyl | 74% | | 45-118% |
| 1718-51-0 | Terphenyl-d14 | 77% | | 46-135% |

| CAS No. | Tentatively Identified Compounds [a] | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Semi-Volatile | | 0 | ug/l | |

(a) No TICs detected.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# SECTION 7

# *SAMPLE RESULT REPORT OF ANALYSIS*

*SVOC.01*

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N78399-1 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8270C SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | L023673.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 880 ml | 1.0 ml |
| Run #2 | | |

**BN TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | 5.7 | 1.1 | ug/l | |
| 208-96-8 | Acenaphthylene | ND | 5.7 | 1.1 | ug/l | |
| 120-12-7 | Anthracene | ND | 5.7 | 1.1 | ug/l | |
| 56-55-3 | Benzo(a)anthracene | ND | 5.7 | 1.1 | ug/l | |
| 50-32-8 | Benzo(a)pyrene | ND | 5.7 | 1.1 | ug/l | |
| 205-99-2 | Benzo(b)fluoranthene | ND | 5.7 | 1.1 | ug/l | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | 5.7 | 2.3 | ug/l | |
| 207-08-9 | Benzo(k)fluoranthene | ND | 5.7 | 1.1 | ug/l | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | 5.7 | 1.1 | ug/l | |
| 85-68-7 | Butyl benzyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 100-51-6 | Benzyl Alcohol | ND | 5.7 | 1.1 | ug/l | |
| 91-58-7 | 2-Chloronaphthalene | ND | 5.7 | 1.1 | ug/l | |
| 106-47-8 | 4-Chloroaniline | ND | 11 | 3.4 | ug/l | |
| 218-01-9 | Chrysene | ND | 5.7 | 1.1 | ug/l | |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | 5.7 | 1.1 | ug/l | |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | 5.7 | 2.3 | ug/l | |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | 5.7 | 1.1 | ug/l | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | 5.7 | 1.1 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | 5.7 | 2.3 | ug/l | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | 5.7 | 2.3 | ug/l | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | 11 | 5.7 | ug/l | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | 5.7 | 2.3 | ug/l | |
| 132-64-9 | Dibenzofuran | ND | 5.7 | 1.1 | ug/l | |
| 84-74-2 | Di-n-butyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 117-84-0 | Di-n-octyl phthalate | ND | 5.7 | 2.8 | ug/l | |
| 84-66-2 | Diethyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 131-11-3 | Dimethyl phthalate | ND | 5.7 | 2.3 | ug/l | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | 5.7 | 2.8 | ug/l | |
| 206-44-0 | Fluoranthene | ND | 5.7 | 1.1 | ug/l | |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N78399-1 | **Date Sampled:** | 09/20/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 09/21/04 |
| **Method:** | SW846 8270C SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

**BN TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 86-73-7 | Fluorene | ND | 5.7 | 1.1 | ug/l | |
| 118-74-1 | Hexachlorobenzene | ND | 5.7 | 1.1 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.7 | 2.3 | ug/l | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | 5.7 | 2.3 | ug/l | |
| 67-72-1 | Hexachloroethane | ND | 5.7 | 2.3 | ug/l | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | 5.7 | 2.3 | ug/l | |
| 78-59-1 | Isophorone | ND | 5.7 | 1.1 | ug/l | |
| 91-57-6 | 2-Methylnaphthalene | ND | 5.7 | 1.1 | ug/l | |
| 88-74-4 | 2-Nitroaniline | ND | 5.7 | 2.3 | ug/l | |
| 99-09-2 | 3-Nitroaniline | ND | 5.7 | 2.3 | ug/l | |
| 100-01-6 | 4-Nitroaniline | ND | 5.7 | 2.3 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.7 | 1.1 | ug/l | |
| 98-95-3 | Nitrobenzene | ND | 5.7 | 1.1 | ug/l | |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | 5.7 | 2.3 | ug/l | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | 5.7 | 2.3 | ug/l | |
| 85-01-8 | Phenanthrene | ND | 5.7 | 1.1 | ug/l | |
| 129-00-0 | Pyrene | ND | 5.7 | 1.1 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.7 | 1.1 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 4165-60-0 | Nitrobenzene-d5 | 72% | | 49-119% |
| 321-60-8 | 2-Fluorobiphenyl | 74% | | 45-118% |
| 1718-51-0 | Terphenyl-d14 | 77% | | 46-135% |

| CAS No. | Tentatively Identified Compounds [a] | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Semi-Volatile | | 0 | ug/l | |

(a) No TICs detected.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023673.D
Acq On : 4 Oct 2004 5:00 pm
Sample : n78399-1
Misc : op11403,sl1255,880,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:21 2004

Vial: 11
Operator: marke
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

BM 10/5/4

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.89 | 152 | 246555 | 40.00 ppm | -0.06 |
| 22) Naphthalene-d8 | 6.03 | 136 | 908433 | 40.00 ppm | -0.08 |
| 41) Acenaphthene-d10 | 8.33 | 164 | 458438 | 40.00 ppm | -0.10 |
| 63) Phenanthrene-d10 | 10.79 | 188 | 745123 | 40.00 ppm | -0.11 |
| 77) Chrysene-d12 | 15.73 | 240 | 589159 | 40.00 ppm | -0.12 |
| 86) Perylene-d12 | 18.25 | 264 | 514240 | 40.00 ppm | -0.12 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 7) 2-Fluorophenol | 3.98 | 112 | 245871 | 34.53 ppm | -0.05 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 34.53% | | |
| 9) Phenol-d5 | 4.68 | 99 | 184610 | 22.55 ppm | -0.05 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 22.55% | | |
| 23) Nitrobenzene-d5 | 5.37 | 82 | 274699 | 35.78 ppm | -0.08 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 71.56% | | |
| 45) 2-Fluorobiphenyl | 7.35 | 172 | 587499 | 37.08 ppm | -0.10 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 74.16% | | |
| 67) 2,4,6-Tribromophenol | 9.64 | 330 | 138723 | 85.67 ppm | -0.11 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 85.67% | | |
| 80) Terphenyl-d14 | 13.83 | 244 | 533762 | 38.63 ppm | -0.11 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 77.26% | | |

Target Compounds Qvalue

75

(#) = qualifier out of range (m) = manual integration

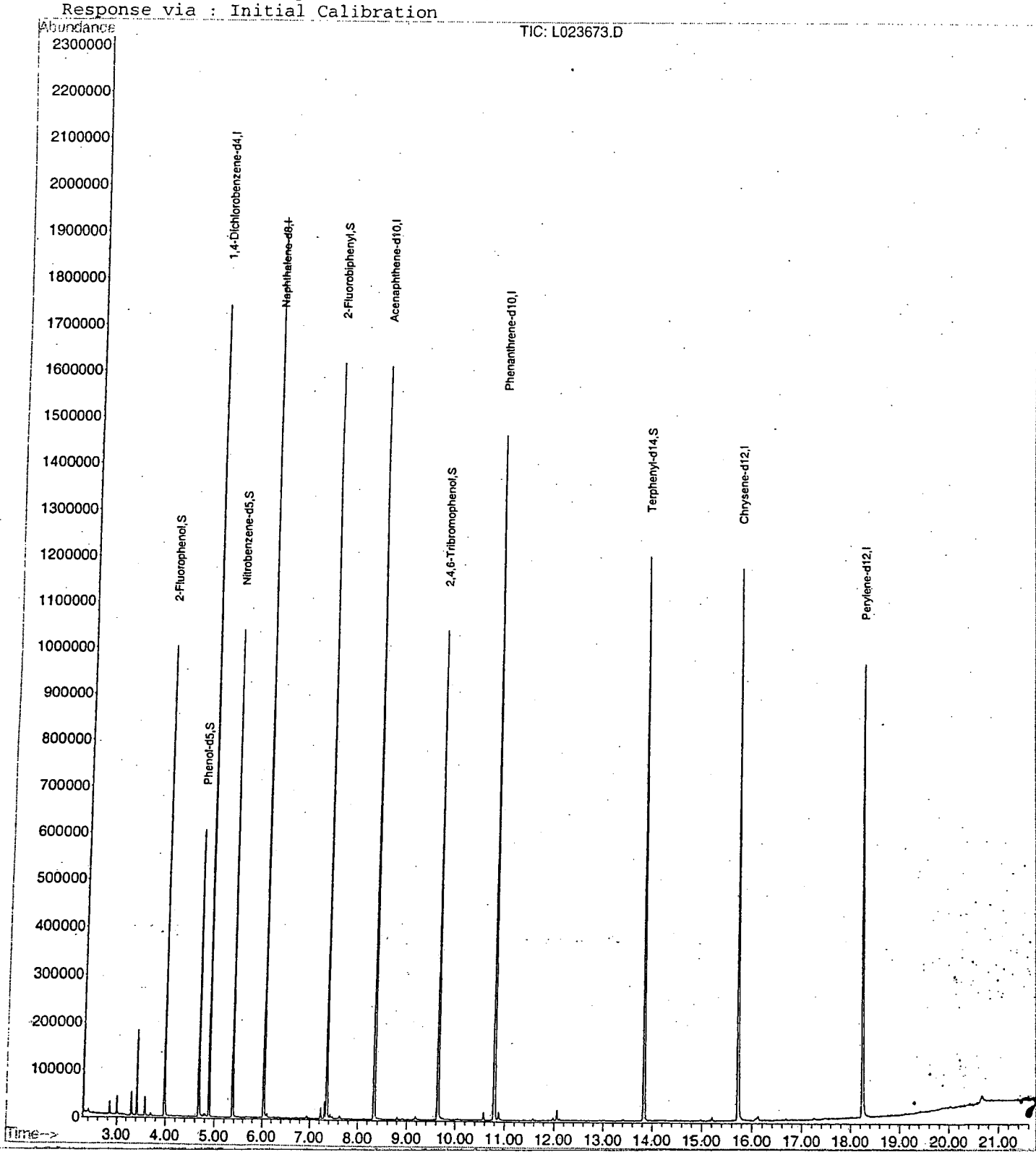
Quantitation Report

Data File : C:\HPCHEM\1\DATA\100404\L023673.D
Acq On : 4 Oct 2004 5:00 pm
Sample : n78399-1
Misc : op11403,sl1255,880,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:21 2004

Vial: 11
Operator: marke
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration

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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\100404\L023673.D
Acq On : 4 Oct 2004 5:00 pm
Sample : n78399-1
Misc : op11403,sl1255,880,,,1,1,water
MS Integration Params: LSCINT.P
Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Library : C:\DATABASE\NIST98.L

Vial: 11
Operator: marke
Inst : MSBNA02
Multiplr: 1.00

Rm 10/5/4

No Library Search Compounds Detected

**********
L023673.D 8270C.M Tue Oct 05 12:50:51 2004

# *SURROGATE RECOVERIES SUMMARY*

*SVOC.02*

# Semivolatile Surrogate Recovery Summary



**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Method:** SW846 8270C **Matrix:** AQ

**Samples and QC shown here apply to the above method**

| Lab Sample ID | Lab File ID | S1 | S2 | S3 |
|---|---|---|---|---|
| N78399-1 | L023673.D | 72.0 | 74.0 | 77.0 |
| OP11403-BS | L023665.D | 74.0 | 77.0 | 91.0 |
| OP11403-MB | L023666.D | 69.0 | 70.0 | 88.0 |
| OP11403-MS | L023670.D | 77.0 | 81.0 | 91.0 |
| OP11403-MSD | L023671.D | 76.0 | 78.0 | 89.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = Nitrobenzene-d5 | 49-119% |
| S2 = 2-Fluorobiphenyl | 45-118% |
| S3 = Terphenyl-d14 | 46-135% |

# *METHOD BLANK SUMMARY*

*SVOC.03*

# Method Blank Summary



**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP11403-MB | L023666.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N78399-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | 5.0 | 1.0 | ug/l | |
| 208-96-8 | Acenaphthylene | ND | 5.0 | 1.0 | ug/l | |
| 120-12-7 | Anthracene | ND | 5.0 | 1.0 | ug/l | |
| 56-55-3 | Benzo(a)anthracene | ND | 5.0 | 1.0 | ug/l | |
| 50-32-8 | Benzo(a)pyrene | ND | 5.0 | 1.0 | ug/l | |
| 205-99-2 | Benzo(b)fluoranthene | ND | 5.0 | 1.0 | ug/l | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | 5.0 | 2.0 | ug/l | |
| 207-08-9 | Benzo(k)fluoranthene | ND | 5.0 | 1.0 | ug/l | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | 5.0 | 1.0 | ug/l | |
| 85-68-7 | Butyl benzyl phthalate | ND | 5.0 | 2.0 | ug/l | |
| 100-51-6 | Benzyl Alcohol | ND | 5.0 | 1.0 | ug/l | |
| 91-58-7 | 2-Chloronaphthalene | ND | 5.0 | 1.0 | ug/l | |
| 106-47-8 | 4-Chloroaniline | ND | 10 | 3.0 | ug/l | |
| 218-01-9 | Chrysene | ND | 5.0 | 1.0 | ug/l | |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | 5.0 | 1.0 | ug/l | |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | 5.0 | 2.0 | ug/l | |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | 5.0 | 1.0 | ug/l | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | 5.0 | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 5.0 | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 5.0 | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 5.0 | 1.0 | ug/l | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | 5.0 | 2.0 | ug/l | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | 5.0 | 2.0 | ug/l | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | 10 | 5.0 | ug/l | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | 5.0 | 2.0 | ug/l | |
| 132-64-9 | Dibenzofuran | ND | 5.0 | 1.0 | ug/l | |
| 84-74-2 | Di-n-butyl phthalate | ND | 5.0 | 2.0 | ug/l | |
| 117-84-0 | Di-n-octyl phthalate | ND | 5.0 | 2.5 | ug/l | |
| 84-66-2 | Diethyl phthalate | ND | 5.0 | 2.0 | ug/l | |
| 131-11-3 | Dimethyl phthalate | ND | 5.0 | 2.0 | ug/l | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | 5.0 | 2.5 | ug/l | |
| 206-44-0 | Fluoranthene | ND | 5.0 | 1.0 | ug/l | |
| 86-73-7 | Fluorene | ND | 5.0 | 1.0 | ug/l | |
| 118-74-1 | Hexachlorobenzene | ND | 5.0 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | 2.0 | ug/l | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | 5.0 | 2.0 | ug/l | |

# Method Blank Summary



**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP11403-MB | L023666.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N78399-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-72-1 | Hexachloroethane | ND | 5.0 | 2.0 | ug/l | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | 5.0 | 2.0 | ug/l | |
| 78-59-1 | Isophorone | ND | 5.0 | 1.0 | ug/l | |
| 91-57-6 | 2-Methylnaphthalene | ND | 5.0 | 1.0 | ug/l | |
| 88-74-4 | 2-Nitroaniline | ND | 5.0 | 2.0 | ug/l | |
| 99-09-2 | 3-Nitroaniline | ND | 5.0 | 2.0 | ug/l | |
| 100-01-6 | 4-Nitroaniline | ND | 5.0 | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | 1.0 | ug/l | |
| 98-95-3 | Nitrobenzene | ND | 5.0 | 1.0 | ug/l | |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | 5.0 | 2.0 | ug/l | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | 5.0 | 2.0 | ug/l | |
| 85-01-8 | Phenanthrene | ND | 5.0 | 1.0 | ug/l | |
| 129-00-0 | Pyrene | ND | 5.0 | 1.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 367-12-4 | 2-Fluorophenol | 32% | 19-90% |
| 4165-62-2 | Phenol-d5 | 21% | 10-68% |
| 118-79-6 | 2,4,6-Tribromophenol | 77% | 36-137% |
| 4165-60-0 | Nitrobenzene-d5 | 69% | 49-119% |
| 321-60-8 | 2-Fluorobiphenyl | 70% | 45-118% |
| 1718-51-0 | Terphenyl-d14 | 88% | 46-135% |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023666.D Vial: 4
Acq On : 4 Oct 2004 1:22 pm Operator: marke
Sample : op11403-mb Inst : MSBNA02
Misc : op11403,sl1255,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:10 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

SM 10/5/04

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.89 | 152 | 222641 | 40.00 ppm | -0.06 |
| 22) Naphthalene-d8 | 6.03 | 136 | 822511 | 40.00 ppm | -0.08 |
| 41) Acenaphthene-d10 | 8.33 | 164 | 423241 | 40.00 ppm | -0.10 |
| 63) Phenanthrene-d10 | 10.79 | 188 | 689198 | 40.00 ppm | -0.11 |
| 77) Chrysene-d12 | 15.73 | 240 | 530248 | 40.00 ppm | -0.12 |
| 86) Perylene-d12 | 18.25 | 264 | 483970 | 40.00 ppm | -0.12 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 7) 2-Fluorophenol | 3.98 | 112 | 208078 | 32.36 ppm | -0.05 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 32.36% | | |
| 9) Phenol-d5 | 4.67 | 99 | 153027 | 20.70 ppm | -0.06 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 20.70% | | |
| 23) Nitrobenzene-d5 | 5.37 | 82 | 241019 | 34.67 ppm | -0.07 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 69.34% | | |
| 45) 2-Fluorobiphenyl | 7.35 | 172 | 510885 | 34.93 ppm | -0.10 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 69.86% | | |
| 67) 2,4,6-Tribromophenol | 9.64 | 330 | 115682 | 77.24 ppm | -0.12 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 77.24% | | |
| 80) Terphenyl-d14 | 13.83 | 244 | 544542 | 43.79 ppm | -0.11 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 87.58% | | |

Target Compounds Qvalue

83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT• Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023666.D Vial: 4
Acq On : 4 Oct 2004 1:22 pm Operator: marke
Sample : op11403-mb Inst : MSBNA02
Misc : op11403,sl1255,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:10 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

SM 10/5/04

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.89 | 152 | 222641 | 40.00 | ppm | -0.06 |
| 22) Naphthalene-d8 | 6.03 | 136 | 822511 | 40.00 | ppm | -0.08 |
| 41) Acenaphthene-d10 | 8.33 | 164 | 423241 | 40.00 | ppm | -0.10 |
| 63) Phenanthrene-d10 | 10.79 | 188 | 689198 | 40.00 | ppm | -0.11 |
| 77) Chrysene-d12 | 15.73 | 240 | 530248 | 40.00 | ppm | -0.12 |
| 86) Perylene-d12 | 18.25 | 264 | 483970 | 40.00 | ppm | -0.12 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 7) 2-Fluorophenol | 3.98 | 112 | 208078 | 32.36 | ppm | -0.05 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 32.36% | | | |
| 9) Phenol-d5 | 4.67 | 99 | 153027 | 20.70 | ppm | -0.06 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 20.70% | | | |
| 23) Nitrobenzene-d5 | 5.37 | 82 | 241019 | 34.67 | ppm | -0.07 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 69.34% | | | |
| 45) 2-Fluorobiphenyl | 7.35 | 172 | 510885 | 34.93 | ppm | -0.10 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 69.86% | | | |
| 67) 2,4,6-Tribromophenol | 9.64 | 330 | 115682 | 77.24 | ppm | -0.12 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 77.24% | | | |
| 80) Terphenyl-d14 | 13.83 | 244 | 544542 | 43.79 | ppm | -0.11 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 87.58% | | | |

Target Compounds Qvalue

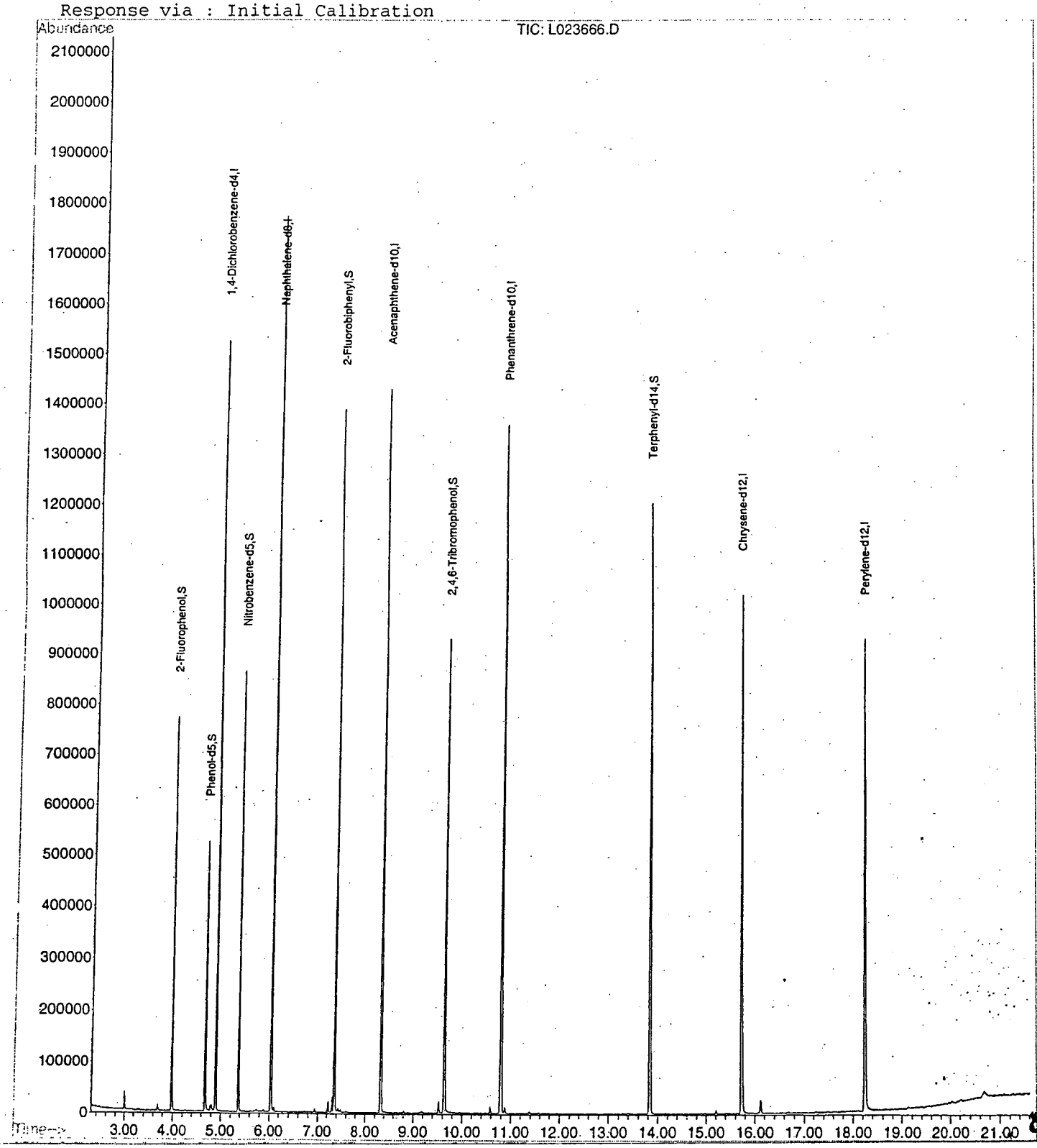
84

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\100404\L023666.D  Vial: 4
Acq On : 4 Oct 2004 1:22 pm  Operator: marke
Sample : op11403-mb  Inst : MSBNA02
Misc : op11403,sl1255,1000,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:10 2004  Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration



# *BLANK SPIKE SUMMARY*

*SVOC.04*

# Blank Spike Summary



**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP11403-BS | L023665.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N78399-1

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | 50 | 39.7 | 79 | 62-101 |
| 208-96-8 | Acenaphthylene | 50 | 39.7 | 79 | 65-113 |
| 120-12-7 | Anthracene | 50 | 44.4 | 89 | 69-107 |
| 56-55-3 | Benzo(a)anthracene | 50 | 45.0 | 90 | 68-106 |
| 50-32-8 | Benzo(a)pyrene | 50 | 45.7 | 91 | 70-114 |
| 205-99-2 | Benzo(b)fluoranthene | 50 | 45.5 | 91 | 68-110 |
| 191-24-2 | Benzo(g,h,i)perylene | 50 | 47.8 | 96 | 63-115 |
| 207-08-9 | Benzo(k)fluoranthene | 50 | 47.1 | 94 | 68-112 |
| 101-55-3 | 4-Bromophenyl phenyl ether | 50 | 44.7 | 89 | 73-103 |
| 85-68-7 | Butyl benzyl phthalate | 50 | 45.4 | 91 | 69-108 |
| 100-51-6 | Benzyl Alcohol | 50 | 27.4 | 55 | 34-104 |
| 91-58-7 | 2-Chloronaphthalene | 50 | 37.8 | 76 | 64-102 |
| 106-47-8 | 4-Chloroaniline | 50 | 34.8 | 70 | 57-104 |
| 218-01-9 | Chrysene | 50 | 46.6 | 93 | 68-103 |
| 111-91-1 | bis(2-Chloroethoxy)methane | 50 | 36.0 | 72 | 57-103 |
| 111-44-4 | bis(2-Chloroethyl)ether | 50 | 36.7 | 73 | 64-106 |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 50 | 37.6 | 75 | 52-120 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 50 | 41.0 | 82 | 71-104 |
| 95-50-1 | 1,2-Dichlorobenzene | 50 | 32.9 | 66 | 62-100 |
| 541-73-1 | 1,3-Dichlorobenzene | 50 | 31.3 | 63 | 59-99 |
| 106-46-7 | 1,4-Dichlorobenzene | 50 | 32.3 | 65 | 60-101 |
| 121-14-2 | 2,4-Dinitrotoluene | 50 | 39.1 | 78 | 65-111 |
| 606-20-2 | 2,6-Dinitrotoluene | 50 | 38.7 | 77 | 77-111 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 50 | 41.0 | 82 | 42-110 |
| 53-70-3 | Dibenzo(a,h)anthracene | 50 | 50.5 | 101 | 62-115 |
| 132-64-9 | Dibenzofuran | 50 | 39.2 | 78 | 69-104 |
| 84-74-2 | Di-n-butyl phthalate | 50 | 45.5 | 91 | 68-109 |
| 117-84-0 | Di-n-octyl phthalate | 50 | 49.4 | 99 | 63-120 |
| 84-66-2 | Diethyl phthalate | 50 | 41.9 | 84 | 64-110 |
| 131-11-3 | Dimethyl phthalate | 50 | 41.0 | 82 | 44-120 |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 50 | 46.2 | 92 | 64-115 |
| 206-44-0 | Fluoranthene | 50 | 45.8 | 92 | 68-111 |
| 86-73-7 | Fluorene | 50 | 39.5 | 79 | 66-105 |
| 118-74-1 | Hexachlorobenzene | 50 | 43.6 | 87 | 69-103 |
| 87-68-3 | Hexachlorobutadiene | 50 | 33.1 | 66 | 55-90 |
| 77-47-4 | Hexachlorocyclopentadiene | 50 | 20.6 | 41 | 26-95 |

# Blank Spike Summary



**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP11403-BS | L023665.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N78399-1

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 67-72-1 | Hexachloroethane | 50 | 30.9 | 62 | 59-104 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 50 | 45.8 | 92 | 63-118 |
| 78-59-1 | Isophorone | 50 | 35.5 | 71 | 64-107 |
| 91-57-6 | 2-Methylnaphthalene | 50 | 36.8 | 74 | 66-100 |
| 88-74-4 | 2-Nitroaniline | 50 | 37.3 | 75 | 65-111 |
| 99-09-2 | 3-Nitroaniline | 50 | 38.6 | 77 | 61-106 |
| 100-01-6 | 4-Nitroaniline | 50 | 39.1 | 78 | 60-113 |
| 91-20-3 | Naphthalene | 50 | 36.6 | 73 | 62-101 |
| 98-95-3 | Nitrobenzene | 50 | 37.1 | 74 | 61-106 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 50 | 36.2 | 72 | 64-109 |
| 86-30-6 | N-Nitrosodiphenylamine | 50 | 44.1 | 88 | 69-114 |
| 85-01-8 | Phenanthrene | 50 | 45.2 | 90 | 68-104 |
| 129-00-0 | Pyrene | 50 | 46.4 | 93 | 64-105 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 50 | 34.6 | 69 | 64-101 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 367-12-4 | 2-Fluorophenol | 39% | 19-90% |
| 4165-62-2 | Phenol-d5 | 27% | 10-68% |
| 118-79-6 | 2,4,6-Tribromophenol | 86% | 36-137% |
| 4165-60-0 | Nitrobenzene-d5 | 74% | 49-119% |
| 321-60-8 | 2-Fluorobiphenyl | 77% | 45-118% |
| 1718-51-0 | Terphenyl-d14 | 91% | 46-135% |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023665.D Vial: 3
Acq On : 4 Oct 2004 12:51 pm Operator: marke
Sample : op11403-bs Inst : MSBNA02
Misc : op11403,sl1255,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:09 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

Dm 10/5/4

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.89 | 152 | 226541 | 40.00 | ppm | -0.07 |
| 22) Naphthalene-d8 | 6.04 | 136 | 857733 | 40.00 | ppm | -0.08 |
| 41) Acenaphthene-d10 | 8.33 | 164 | 438061 | 40.00 | ppm | -0.10 |
| 63) Phenanthrene-d10 | 10.80 | 188 | 711667 | 40.00 | ppm | -0.11 |
| 77) Chrysene-d12 | 15.74 | 240 | 537719 | 40.00 | ppm | -0.11 |
| 86) Perylene-d12 | 18.25 | 264 | 472166 | 40.00 | ppm | -0.12 |
| **System Monitoring Compounds** | | | | | | |
| 7) 2-Fluorophenol | 3.98 | 112 | 256361 | 39.18 | ppm | -0.05 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 39.18% | | | |
| 9) Phenol-d5 | 4.68 | 99 | 203078 | 27.00 | ppm | -0.06 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 27.00% | | | |
| 23) Nitrobenzene-d5 | 5.37 | 82 | 268047 | 36.98 | ppm | -0.08 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 73.96% | | | |
| 45) 2-Fluorobiphenyl | 7.36 | 172 | 584830 | 38.63 | ppm | -0.09 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 77.26% | | | |
| 67) 2,4,6-Tribromophenol | 9.64 | 330 | 132537 | 85.70 | ppm | -0.11 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 85.70% | | | |
| 80) Terphenyl-d14 | 13.84 | 244 | 572389 | 45.39 | ppm | -0.11 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 90.78% | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.48 | 88 | 48538 | 19.47 | ppm | 95 |
| 3) N-nitrosodimethylamine | 2.82 | 42 | 79861 | 21.47 | ppm | 93 |
| 4) Pyridine | 2.83 | 79 | 131967 | 17.94 | ppm | 90 |
| 5) Benzaldehyde | 4.56 | 106 | 160912 | 37.84 | ppm | 98 |
| 6) Aniline | 4.67 | 93 | 203130 | 20.51 | ppm | 85 |
| 8) bis(2-Chloroethyl)ether | 4.71 | 93 | 234682 | 36.70 | ppm | 96 |
| 10) Phenol | 4.68 | 94 | 122772 | 14.43 | ppm | 84 |
| 11) 2-Chlorophenol | 4.77 | 128 | 258232 | 33.44 | ppm | 98 |
| 12) 1,3-Dichlorobenzene | 4.86 | 146 | 267643 | 31.33 | ppm | 99 |
| 13) 1,4-Dichlorobenzene | 4.90 | 146 | 269600 | 32.27 | ppm | 98 |
| 14) 1,2-Dichlorobenzene | 5.05 | 146 | 263517 | 32.89 | ppm | 99 |
| 15) Benzyl alcohol | 5.02 | 108 | 138674 | 27.35 | ppm | 99 |
| 16) bis(2-chloroisopropyl)ethe | 5.14 | 45 | 375942 | 37.57 | ppm | 96 |
| 17) 2-Methylphenol | 5.14 | 108 | 183716 | 27.71 | ppm | 92 |
| 18) Acetophenone | 5.24 | 105 | 355834 | 35.71 | ppm | 99 |
| 19) Hexachloroethane | 5.31 | 117 | 91879 | 30.90 | ppm | 93 |
| 20) N-Nitroso-di-n-propylamine | 5.26 | 70 | 174681 | 36.22 | ppm | 96 |
| 21) 3&4-Methylphenol | 5.26 | 108 | 350741 | 49.32 | ppm | 94 |
| 24) Nitrobenzene | 5.39 | 77 | 259515 | 37.09 | ppm | 95 |
| 25) Isophorone | 5.59 | 82 | 468820 | 35.51 | ppm | 98 |
| 26) 2-Nitrophenol | 5.68 | 139 | 167166 | 37.18 | ppm | 94 |
| 27) 2,4-Dimethylphenol | 5.72 | 107 | 214197 | 31.30 | ppm | 99 |
| 28) bis(2-Chloroethoxy)methane | 5.80 | 93 | 279971 | 36.03 | ppm | 97 |
| 29) Benzoic Acid | 5.81 | 105 | 32805 | 5.64 | ppm | 98 |
| 30) 2,4-Dichlorophenol | 5.92 | 162 | 244330 | 37.80 | ppm | 98 |
| 31) 1,2,4-Trichlorobenzene | 5.99 | 180 | 230101 | 34.60 | ppm | 99 |
| 32) Naphthalene | 6.06 | 128 | 741549 | 36.64 | ppm | 98 |
| 33) 4-Chloroaniline | 6.14 | 127 | 323728 | 34.84 | ppm | 98 |
| 34) 2,6-Dichlorophenol | 6.15 | 162 | 231388 | 37.54 | ppm | 96 |
| 35) Hexachlorobutadiene | 6.25 | 225 | 106669 | 33.13 | ppm | 98 |
| 36) Caprolactam | 6.48 | 113 | 26149 | 8.93 | ppm | 96 |
| 37) 4-Chloro-3-methylphenol | 6.71 | 107 | 228546 | 36.12 | ppm | 94 |
| 38) 2-Methylnaphthalene | 6.84 | 142 | 543448 | 36.78 | ppm | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023665.D Vial: 3
Acq On : 4 Oct 2004 12:51 pm Operator: marke
Sample : op11403-bs Inst : MSBNA02
Misc : op11403,sl1255,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:09 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

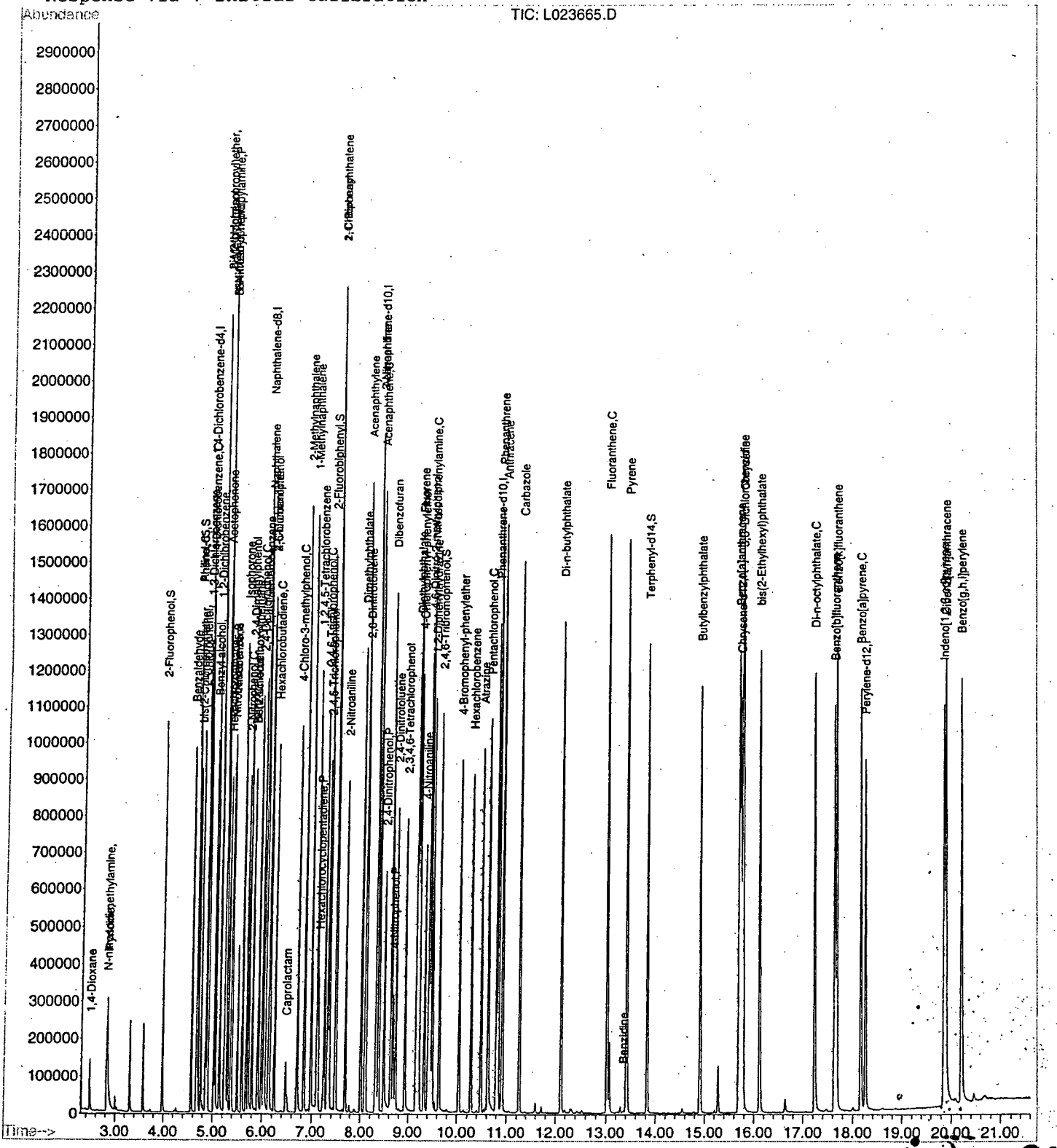
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) 1-Methylnaphthalene | 6.98 | 142 | 529471 | 37.05 | ppm | | 97 |
| 40) 1,2,4,5-Tetrachlorobenzene | 7.11 | 216 | 239527 | 36.96 | ppm | | 99 |
| 42) Hexachlorocyclopentadiene | 7.14 | 237 | 55813 | 20.56 | ppm | | 99 |
| 43) 2,4,6-Trichlorophenol | 7.26 | 196 | 178131 | 39.30 | ppm | | 99 |
| 44) 2,4,5-Trichlorophenol | 7.32 | 196 | 181422 | 37.63 | ppm | | 99 |
| 46) 1,1'-Biphenyl | 7.47 | 154 | 655344 | 37.98 | ppm | | 100 |
| 47) 2-Chloronaphthalene | 7.49 | 162 | 498604 | 37.78 | ppm | | 98 |
| 48) 2-Nitroaniline | 7.69 | 65 | 156567 | 37.26 | ppm | | 98 |
| 49) Acenaphthylene | 8.09 | 152 | 879665 | 39.71 | ppm | | 99 |
| 50) Dimethylphthalate | 8.01 | 163 | 663224 | 40.96 | ppm | | 98 |
| 51) 2,6-Dinitrotoluene | 8.11 | 165 | 150081 | 38.72 | ppm | | 98 |
| 52) Acenaphthene | 8.38 | 153 | 527802 | 39.71 | ppm | | 97 |
| 53) 3-Nitroaniline | 8.32 | 138 | 180158 | 38.58 | ppm | | 98 |
| 54) 2,4-Dinitrophenol | 8.49 | 184 | 129648 | 51.57 | ppm | | 98 |
| 55) Dibenzofuran | 8.63 | 168 | 752967 | 39.20 | ppm | | 92 |
| 56) 2,4-Dinitrotoluene | 8.73 | 165 | 210263 | 39.08 | ppm | | 95 |
| 57) 4-Nitrophenol | 8.67 | 109 | 47588 | 22.90 | ppm | # | 77 |
| 58) 2,3,4,6-Tetrachlorophenol | 8.93 | 232 | 123012 | 33.71 | ppm | | 99 |
| 59) Fluorene | 9.19 | 166 | 610912 | 39.46 | ppm | | 99 |
| 60) 4-Chlorophenyl-phenylether | 9.22 | 204 | 283344 | 41.00 | ppm | | 100 |
| 61) Diethylphthalate | 9.17 | 149 | 663638 | 41.87 | ppm | | 97 |
| 62) 4-Nitroaniline | 9.33 | 138 | 194063 | 39.13 | ppm | | 96 |
| 64) 4,6-Dinitro-2-methylphenol | 9.41 | 198 | 272199 | 93.03 | ppm | # | 37 |
| 65) n-Nitrosodiphenylamine | 9.45 | 169 | 463014 | 44.06 | ppm | | 95 |
| 66) 1,2-Diphenylhydrazine | 9.48 | 77 | 530890 | 43.08 | ppm | | 96 |
| 68) 4-Bromophenyl-phenylether | 10.05 | 248 | 160739 | 44.71 | ppm | | 96 |
| 69) Hexachlorobenzene | 10.28 | 284 | 159013 | 43.57 | ppm | | 99 |
| 70) Atrazine | 10.48 | 200 | 156021 | 38.17 | ppm | | 96 |
| 71) Pentachlorophenol | 10.63 | 266 | 166606 | 82.44 | ppm | | 98 |
| 72) Phenanthrene | 10.84 | 178 | 905325 | 45.15 | ppm | | 99 |
| 73) Anthracene | 10.92 | 178 | 915321 | 44.44 | ppm | | 99 |
| 74) Carbazole | 11.26 | 167 | 924359 | 45.31 | ppm | | 100 |
| 75) Di-n-butylphthalate | 12.11 | 149 | 1087333 | 45.52 | ppm | | 99 |
| 76) Fluoranthene | 13.02 | 202 | 953827 | 45.78 | ppm | | 99 |
| 78) Benzidine | 13.35 | 184 | 4426 | 0.33 | ppm | | 96 |
| 79) Pyrene | 13.42 | 202 | 995008 | 46.39 | ppm | | 99 |
| 81) Butylbenzylphthalate | 14.91 | 149 | 473374 | 45.37 | ppm | | 97 |
| 82) 3,3'-Dichlorobenzidine | 15.77 | 252 | 249636 | 41.00 | ppm | | 99 |
| 83) Benzo[a]anthracene | 15.71 | 228 | 805334 | 45.04 | ppm | | 99 |
| 84) Chrysene | 15.78 | 228 | 742212 | 46.62 | ppm | | 99 |
| 85) bis(2-Ethylhexyl)phthalate | 16.12 | 149 | 638756 | 46.22 | ppm | | 100 |
| 87) Di-n-octylphthalate | 17.24 | 149 | 1083412 | 49.40 | ppm | | 99 |
| 88) Benzo[b]fluoranthene | 17.64 | 252 | 722964 | 45.47 | ppm | | 99 |
| 89) Benzo[k]fluoranthene | 17.68 | 252 | 685572 | 47.08 | ppm | | 98 |
| 90) Benzo[a]pyrene | 18.16 | 252 | 674941 | 45.67 | ppm | | 100 |
| 91) Indeno[1,2,3-cd]pyrene | 19.86 | 276 | 716906 | 45.77 | ppm | | 100 |
| 92) Dibenz[a,h]anthracene | 19.90 | 278 | 736909 | 50.48 | ppm | | 99 |
| 93) Benzo[g,h,i]perylene | 20.22 | 276 | 761612 | 47.84 | ppm | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\100404\L023665.D  Vial: 3
Acq On : 4 Oct 2004 12:51 pm  Operator: marke
Sample : op11403-bs  Inst : MSBNA02
Misc : op11403,sl1255,1,000,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:09 2004  Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration



# *MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY*

*SVOC.05*

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP11403-MS | L023670.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |
| OP11403-MSD | L023671.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |
| N78365-10 | L023669.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N78399-1

| CAS No. | Compound | N78365-10 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | 17.2 | | 109 | 97.3 | 74 | 94.5 | 71 | 3 | 55-103/20 |
| 208-96-8 | Acenaphthylene | 3.8 | J | 109 | 92.9 | 82 | 92.3 | 81 | 1 | 55-113/20 |
| 120-12-7 | Anthracene | 20.9 | | 109 | 104 | 76 | 104 | 76 | 0 | 66-105/14 |
| 56-55-3 | Benzo(a)anthracene | 28.2 | | 109 | 109 | 74 | 109 | 74 | 0 | 65-103/16 |
| 50-32-8 | Benzo(a)pyrene | 22.2 | | 109 | 108 | 79 | 107 | 78 | 1 | 65-113/16 |
| 205-99-2 | Benzo(b)fluoranthene | 20.9 | | 109 | 106 | 78 | 108 | 80 | 2 | 62-110/17 |
| 191-24-2 | Benzo(g,h,i)perylene | 10.9 | | 109 | 107 | 88 | 108 | 89 | 1 | 58-111/17 |
| 207-08-9 | Benzo(k)fluoranthene | 17.2 | | 109 | 113 | 88 | 106 | 82 | 6 | 63-110/17 |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | 109 | 99.3 | 91 | 98.2 | 90 | 1 | 68-102/16 |
| 85-68-7 | Butyl benzyl phthalate | ND | | 109 | 102 | 94 | 101 | 93 | 1 | 65-108/17 |
| 100-51-6 | Benzyl Alcohol | ND | | 109 | 81.2 | 75 | 76.7 | 71 | 6 | 48-106/24 |
| 91-58-7 | 2-Chloronaphthalene | ND | | 109 | 92.5 | 85 | 89.6 | 82 | 3 | 58-101/22 |
| 106-47-8 | 4-Chloroaniline | ND | | 109 | 76.9 | 71 | 74.1 | 68 | 4 | 39-101/21 |
| 218-01-9 | Chrysene | 27.3 | | 109 | 113 | 79 | 113 | 79 | 0 | 65-100/18 |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | | 109 | 84.2 | 77 | 81.0 | 75 | 4 | 49-100/24 |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | | 109 | 91.2 | 84 | 88.8 | 82 | 3 | 54-103/24 |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | | 109 | 89.5 | 82 | 87.7 | 81 | 2 | 49-109/22 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | 109 | 94.5 | 87 | 92.7 | 85 | 2 | 65-103/18 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 109 | 86.1 | 79 | 84.7 | 78 | 2 | 50-101/22 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 109 | 83.2 | 77 | 81.4 | 75 | 2 | 50-100/23 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 109 | 85.1 | 78 | 83.6 | 77 | 2 | 51-101/23 |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | 109 | 91.7 | 84 | 90.9 | 84 | 1 | 60-110/16 |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | 109 | 88.3 | 81 | 87.1 | 80 | 1 | 60-111/19 |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | | 109 | 51.2 | 47 | 48.4 | 45 | 6 | 18-112/22 |
| 53-70-3 | Dibenzo(a,h)anthracene | 2.3 | J | 109 | 110 | 99 | 113 | 102 | 3 | 57-111/20 |
| 132-64-9 | Dibenzofuran | 12.9 | | 109 | 93.8 | 74 | 91.0 | 72 | 3 | 64-102/17 |
| 84-74-2 | Di-n-butyl phthalate | ND | | 109 | 102 | 94 | 102 | 94 | 0 | 63-107/17 |
| 117-84-0 | Di-n-octyl phthalate | ND | | 109 | 111 | 102 | 108 | 99 | 3 | 58-126/23 |
| 84-66-2 | Diethyl phthalate | ND | | 109 | 96.0 | 88 | 94.6 | 87 | 1 | 59-110/18 |
| 131-11-3 | Dimethyl phthalate | ND | | 109 | 91.9 | 85 | 91.0 | 84 | 1 | 40-116/25 |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | | 109 | 103 | 95 | 103 | 95 | 0 | 55-120/22 |
| 206-44-0 | Fluoranthene | 65.7 | | 109 | 118 | 48* | 121 | 51* | 3 | 62-108/17 |
| 86-73-7 | Fluorene | 25.8 | | 109 | 97.4 | 66 | 96.5 | 65 | 1 | 60-105/17 |
| 118-74-1 | Hexachlorobenzene | ND | | 109 | 98.5 | 91 | 97.6 | 90 | 1 | 64-102/16 |
| 87-68-3 | Hexachlorobutadiene | ND | | 109 | 87.9 | 81 | 86.4 | 79 | 2 | 45-93/26 |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | 109 | 45.5 | 42 | 45.2 | 42 | 1 | 20-92/34 |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP11403-MS | L023670.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |
| OP11403-MSD | L023671.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |
| N78365-10 | L023669.D | 1 | 10/04/04 | ME | 09/27/04 | OP11403 | SL1255 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N78399-1

| CAS No. | Compound | N78365-10 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 67-72-1 | Hexachloroethane | ND | | 109 | 83.6 | 77 | 81.1 | 75 | 3 | 51-105/26 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 12.6 | | 109 | 101 | 81 | 102 | 82 | 1 | 61-111/19 |
| 78-59-1 | Isophorone | ND | | 109 | 82.1 | 76 | 79.7 | 73 | 3 | 59-103/23 |
| 91-57-6 | 2-Methylnaphthalene | 41.8 | | 109 | 112 | 65 | 111 | 64 | 1 | 56-100/23 |
| 88-74-4 | 2-Nitroaniline | ND | | 109 | 88.1 | 81 | 87.4 | 80 | 1 | 61-107/18 |
| 99-09-2 | 3-Nitroaniline | ND | | 109 | 90.6 | 83 | 87.6 | 81 | 3 | 47-107/26 |
| 100-01-6 | 4-Nitroaniline | ND | | 109 | 91.3 | 84 | 91.2 | 84 | 0 | 48-119/21 |
| 91-20-3 | Naphthalene | 10.1 | | 109 | 92.6 | 76 | 92.0 | 75 | 1 | 52-102/23 |
| 98-95-3 | Nitrobenzene | ND | | 109 | 89.4 | 82 | 86.5 | 80 | 3 | 51-103/25 |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | | 109 | 83.3 | 77 | 80.5 | 74 | 3 | 57-103/24 |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | 109 | 104 | 91 | 103 | 90 | 1 | 62-112/16 |
| 85-01-8 | Phenanthrene | 59.2 | | 109 | 116 | 52* | 118 | 54* | 2 | 64-103/15 |
| 129-00-0 | Pyrene | 51.4 | | 109 | 114 | 58* | 116 | 59 | 2 | 59-107/21 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 109 | 88.3 | 81 | 86.9 | 80 | 2 | 54-102/24 |

| CAS No. | Surrogate Recoveries | MS | MSD | N78365-10 | Limits |
|---|---|---|---|---|---|
| 367-12-4 | 2-Fluorophenol | 55% | 54% | 35% | 19-90% |
| 4165-62-2 | Phenol-d5 | 42% | 42% | 24% | 10-68% |
| 118-79-6 | 2,4,6-Tribromophenol | 90% | 90% | 90% | 36-137% |
| 4165-60-0 | Nitrobenzene-d5 | 77% | 76% | 71% | 49-119% |
| 321-60-8 | 2-Fluorobiphenyl | 81% | 78% | 73% | 45-118% |
| 1718-51-0 | Terphenyl-d14 | 91% | 89% | 83% | 46-135% |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023670.D
Acq On : 4 Oct 2004 3:26 pm
Sample : op11403-ms
Misc : op11403,sl1255,460,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:19 2004

Vial: 8
Operator: marke
Inst : MSBNA02
Multiplr: 1.00
Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

SPM 10/5/4

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.89 | 152 | 231014 | 40.00 | ppm | -0.06 |
| 22) Naphthalene-d8 | 6.03 | 136 | 879640 | 40.00 | ppm | -0.08 |
| 41) Acenaphthene-d10 | 8.33 | 164 | 446906 | 40.00 | ppm | -0.10 |
| 63) Phenanthrene-d10 | 10.80 | 188 | 750538 | 40.00 | ppm | -0.11 |
| 77) Chrysene-d12 | 15.74 | 240 | 578069 | 40.00 | ppm | -0.11 |
| 86) Perylene-d12 | 18.26 | 264 | 516134 | 40.00 | ppm | -0.11 |
| **System Monitoring Compounds** | | | | | | |
| 7) 2-Fluorophenol | 3.98 | 112 | 368337 | 55.21 | ppm | -0.05 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 55.21% | | | |
| 9) Phenol-d5 | 4.68 | 99 | 323047 | 42.12 | ppm | -0.05 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 42.12% | | | |
| 23) Nitrobenzene-d5 | 5.37 | 82 | 286654 | 38.56 | ppm | -0.07 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 77.12% | | | |
| 45) 2-Fluorobiphenyl | 7.35 | 172 | 627713 | 40.64 | ppm | -0.10 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 81.28% | | | |
| 67) 2,4,6-Tribromophenol | 9.64 | 330 | 146344 | 89.72 | ppm | -0.11 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 89.72% | | | |
| 80) Terphenyl-d14 | 13.84 | 244 | 617387 | 45.54 | ppm | -0.11 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 91.08% | | | |

| Target Compounds | | | | | | | Qvalue |
|---|---|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.48 | 88 | 66032 | 25.97 | ppm | | 96 |
| 3) N-nitrosodimethylamine | 2.82 | 42 | 106786 | 28.15 | ppm | | 97 |
| 4) Pyridine | 2.83 | 79 | 121678 | 16.22 | ppm | | 98 |
| 5) Benzaldehyde | 4.57 | 106 | 176228 | 40.64 | ppm | | 100 |
| 6) Aniline | 4.67 | 93 | 202818 | 20.08 | ppm | | 79 |
| 8) bis(2-Chloroethyl)ether | 4.71 | 93 | 273516 | 41.94 | ppm | | 97 |
| 10) Phenol | 4.69 | 94 | 204681 | 23.60 | ppm | | 97 |
| 11) 2-Chlorophenol | 4.77 | 128 | 303152 | 38.49 | ppm | | 98 |
| 12) 1,3-Dichlorobenzene | 4.86 | 146 | 333357 | 38.27 | ppm | | 98 |
| 13) 1,4-Dichlorobenzene | 4.90 | 146 | 333554 | 39.16 | ppm | | 97 |
| 14) 1,2-Dichlorobenzene | 5.06 | 146 | 323456 | 39.59 | ppm | | 99 |
| 15) Benzyl alcohol | 5.03 | 108 | 193151 | 37.36 | ppm | | 97 |
| 16) bis(2-chloroisopropyl)ethe | 5.14 | 45 | 419965 | 41.16 | ppm | | 93 |
| 17) 2-Methylphenol | 5.14 | 108 | 236174 | 34.93 | ppm | # | 74 |
| 18) Acetophenone | 5.24 | 105 | 387680 | 38.16 | ppm | | 98 |
| 19) Hexachloroethane | 5.31 | 117 | 116658 | 38.47 | ppm | | 97 |
| 20) N-Nitroso-di-n-propylamine | 5.26 | 70 | 188406 | 38.31 | ppm | | 96 |
| 21) 3&4-Methylphenol | 5.26 | 108 | 475451 | 65.57 | ppm | | 95 |
| 24) Nitrobenzene | 5.39 | 77 | 295000 | 41.11 | ppm | | 96 |
| 25) Isophorone | 5.60 | 82 | 511039 | 37.75 | ppm | | 99 |
| 26) 2-Nitrophenol | 5.68 | 139 | 191970 | 41.64 | ppm | | 98 |
| 27) 2,4-Dimethylphenol | 5.72 | 107 | 267613 | 38.13 | ppm | | 100 |
| 28) bis(2-Chloroethoxy)methane | 5.80 | 93 | 308845 | 38.75 | ppm | | 96 |
| 29) Benzoic Acid | 5.84 | 105 | 161985 | 27.15 | ppm | | 98 |
| 30) 2,4-Dichlorophenol | 5.92 | 162 | 280895 | 42.38 | ppm | | 100 |
| 31) 1,2,4-Trichlorobenzene | 5.99 | 180 | 276852 | 40.60 | ppm | | 98 |
| 32) Naphthalene | 6.06 | 128 | 884219 | 42.61 | ppm | | 99 |
| 33) 4-Chloroaniline | 6.14 | 127 | 336932 | 35.36 | ppm | | 99 |
| 34) 2,6-Dichlorophenol | 6.15 | 162 | 262065 | 41.46 | ppm | | 97 |
| 35) Hexachlorobutadiene | 6.25 | 225 | 133531 | 40.45 | ppm | | 99 |
| 36) Caprolactam | 6.49 | 113 | 40240m | 13.39 | ppm | | |
| 37) 4-Chloro-3-methylphenol | 6.71 | 107 | 273144 | 42.09 | ppm | | 94 |
| 38) 2-Methylnaphthalene | 6.85 | 142 | 783122 | 51.69 | ppm | | 99 |

95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023670.D Vial: 8
Acq On : 4 Oct 2004 3:26 pm Operator: marke
Sample : op11403-ms Inst : MSBNA02
Misc : op11403,sl1255,460,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:19 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) 1-Methylnaphthalene | 6.99 | 142 | 738771 | 50.41 | ppm | | 97 |
| 40) 1,2,4,5-Tetrachlorobenzene | 7.11 | 216 | 272389 | 40.98 | ppm | | 98 |
| 42) Hexachlorocyclopentadiene | 7.14 | 237 | 58081 | 20.91 | ppm | | 99 |
| 43) 2,4,6-Trichlorophenol | 7.26 | 196 | 199225 | 43.09 | ppm | | 99 |
| 44) 2,4,5-Trichlorophenol | 7.32 | 196 | 211221 | 42.94 | ppm | | 97 |
| 46) 1,1'-Biphenyl | 7.48 | 154 | 743452 | 42.23 | ppm | | 99 |
| 47) 2-Chloronaphthalene | 7.49 | 162 | 572978 | 42.56 | ppm | | 98 |
| 48) 2-Nitroaniline | 7.69 | 65 | 173662 | 40.51 | ppm | | 98 |
| 49) Acenaphthylene | 8.10 | 152 | 966207 | 42.75 | ppm | | 99 |
| 50) Dimethylphthalate | 8.02 | 163 | 698346 | 42.27 | ppm | | 99 |
| 51) 2,6-Dinitrotoluene | 8.11 | 165 | 160572 | 40.60 | ppm | | 99 |
| 52) Acenaphthene | 8.38 | 153 | 606609 | 44.74 | ppm | | 97 |
| 53) 3-Nitroaniline | 8.33 | 138 | 198501 | 41.66 | ppm | | 97 |
| 54) 2,4-Dinitrophenol | 8.50 | 184 | 200560 | 78.20 | ppm | | 97 |
| 55) Dibenzofuran | 8.64 | 168 | 845622 | 43.15 | ppm | | 91 |
| 56) 2,4-Dinitrotoluene | 8.73 | 165 | 231476 | 42.17 | ppm | | 94 |
| 57) 4-Nitrophenol | 8.68 | 109 | 86265 | 40.68 | ppm | | 87 |
| 58) 2,3,4,6-Tetrachlorophenol | 8.93 | 232 | 143651 | 38.59 | ppm | | 99 |
| 59) Fluorene | 9.20 | 166 | 707728 | 44.81 | ppm | | 97 |
| 60) 4-Chlorophenyl-phenylether | 9.22 | 204 | 306432 | 43.46 | ppm | | 99 |
| 61) Diethylphthalate | 9.17 | 149 | 714098 | 44.16 | ppm | | 97 |
| 62) 4-Nitroaniline | 9.34 | 138 | 212460 | 41.99 | ppm | | 96 |
| 64) 4,6-Dinitro-2-methylphenol | 9.42 | 198 | 307311 | 99.59 | ppm | # | 40 |
| 65) n-Nitrosodiphenylamine | 9.45 | 169 | 527639 | 47.61 | ppm | | 100 |
| 66) 1,2-Diphenylhydrazine | 9.49 | 77 | 583193 | 44.87 | ppm | | 98 |
| 68) 4-Bromophenyl-phenylether | 10.05 | 248 | 173187 | 45.68 | ppm | | 98 |
| 69) Hexachlorobenzene | 10.28 | 284 | 174392 | 45.31 | ppm | | 98 |
| 70) Atrazine | 10.49 | 200 | 171642 | 39.82 | ppm | | 95 |
| 71) Pentachlorophenol | 10.63 | 266 | 201190 | 94.40 | ppm | | 98 |
| 72) Phenanthrene | 10.84 | 178 | 1133169 | 53.59 | ppm | | 99 |
| 73) Anthracene | 10.92 | 178 | 1042831 | 48.01 | ppm | | 99 |
| 74) Carbazole | 11.26 | 167 | 1057170 | 49.13 | ppm | | 100 |
| 75) Di-n-butylphthalate | 12.11 | 149 | 1177440 | 46.74 | ppm | | 99 |
| 76) Fluoranthene | 13.02 | 202 | 1193256 | 54.30 | ppm | | 99 |
| 79) Pyrene | 13.42 | 202 | 1212288 | 52.57 | ppm | | 99 |
| 81) Butylbenzylphthalate | 14.91 | 149 | 525523 | 46.85 | ppm | | 99 |
| 82) 3,3'-Dichlorobenzidine | 15.77 | 252 | 154145 | 23.55 | ppm | | 99 |
| 83) Benzo[a]anthracene | 15.71 | 228 | 961895 | 50.05 | ppm | | 99 |
| 84) Chrysene | 15.79 | 228 | 887428 | 51.85 | ppm | | 100 |
| 85) bis(2-Ethylhexyl)phthalate | 16.13 | 149 | 707082 | 47.60 | ppm | | 99 |
| 87) Di-n-octylphthalate | 17.24 | 149 | 1218543 | 50.83 | ppm | | 99 |
| 88) Benzo[b]fluoranthene | 17.65 | 252 | 846121 | 48.68 | ppm | | 100 |
| 89) Benzo[k]fluoranthene | 17.69 | 252 | 826396 | 51.91 | ppm | | 99 |
| 90) Benzo[a]pyrene | 18.16 | 252 | 799279 | 49.48 | ppm | | 100 |
| 91) Indeno[1,2,3-cd]pyrene | 19.87 | 276 | 796852 | 46.54 | ppm | | 99 |
| 92) Dibenz[a,h]anthracene | 19.91 | 278 | 804514 | 50.41 | ppm | | 98 |
| 93) Benzo[g,h,i]perylene | 20.22 | 276 | 854073 | 49.08 | ppm | | 99 |

96

(#) = qualifier out of range (m) = manual integration

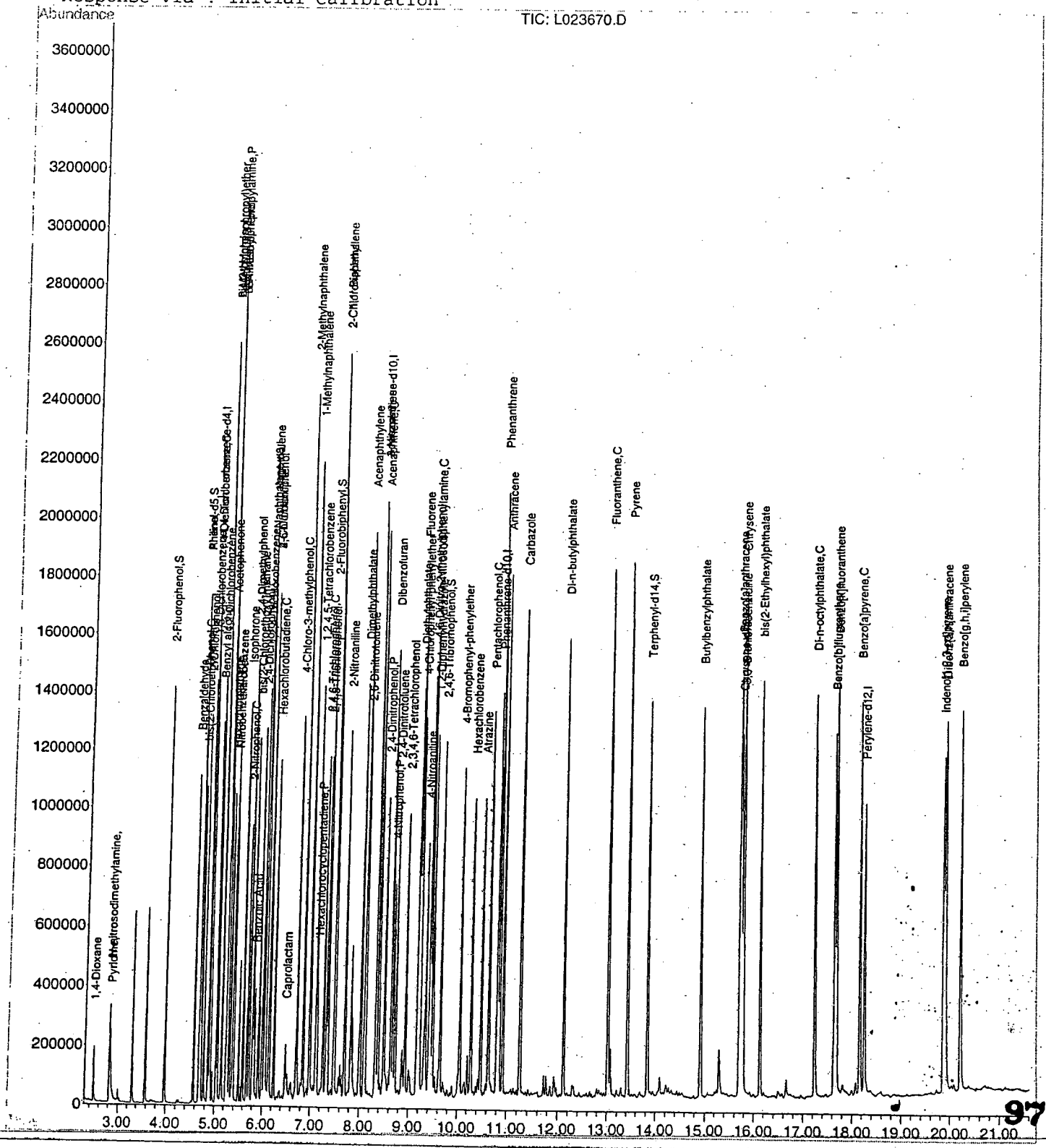
Quantitation Report

Data File : C:\HPCHEM\1\DATA\100404\L023670.D
Acq On : 4 Oct 2004 3:26 pm
Sample : op11403-ms
Misc : op11403,sl1255,460,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:19 2004

Vial: 8
Operator: marke
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration

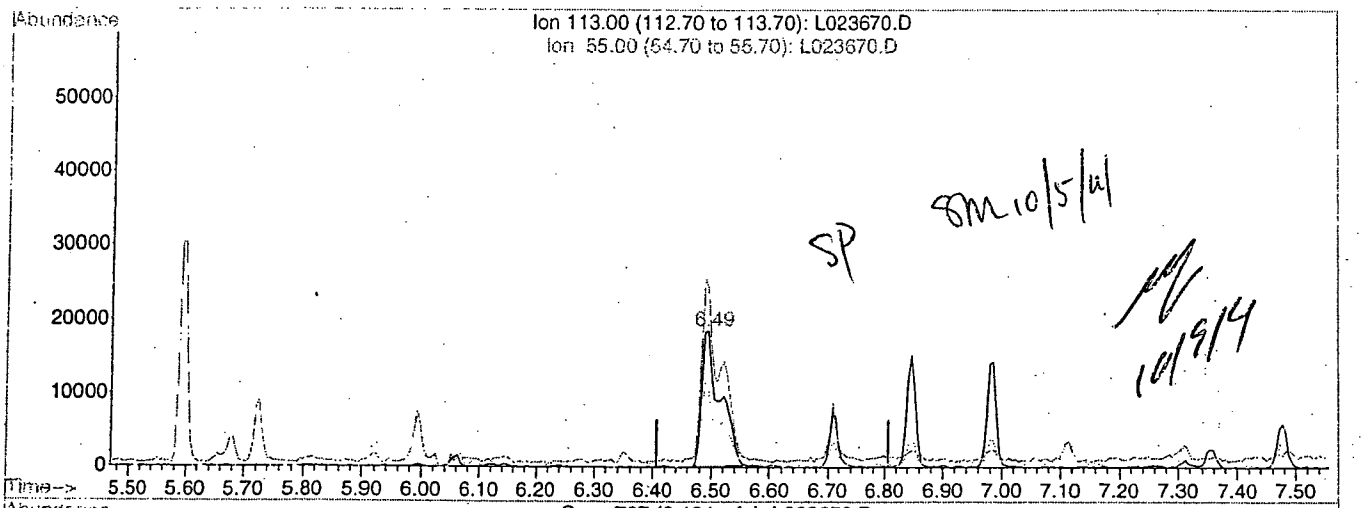


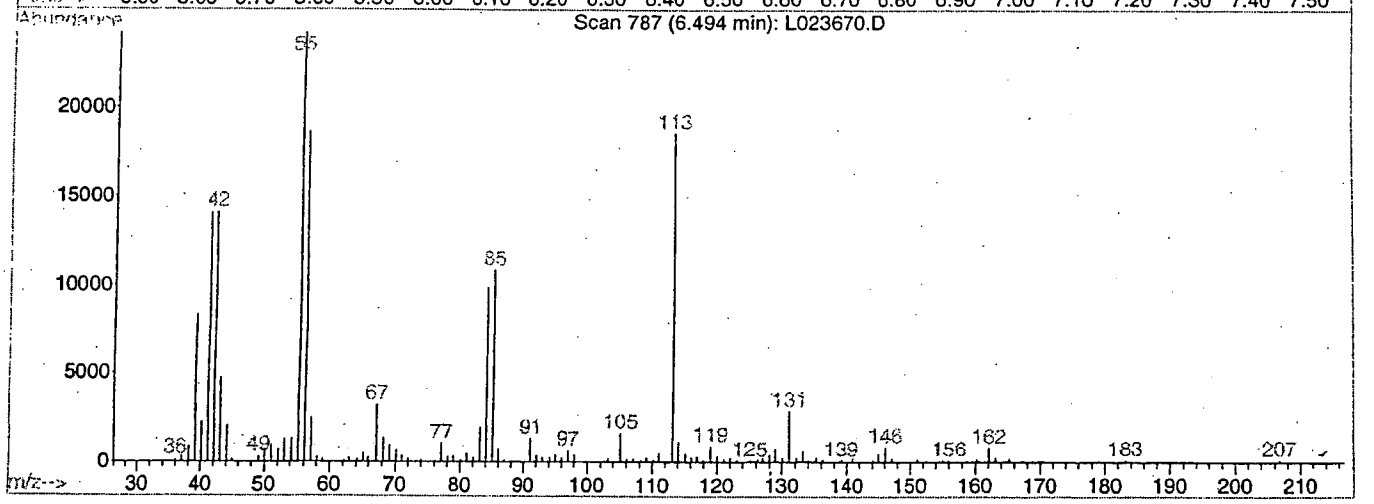

97

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\100404\L023670.D  Vial: 8
Acq On : 4 Oct 2004 3:26 pm  Operator: marke
Sample : op11403-ms  Inst : MSBNA02
Misc : op11403,sl1255,460,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:19 2004  Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Multiple Level Calibration




TIC: L023670.D

(36) Caprolactam

6.49min 13.39ppm m

response 40240

| Ion | Exp% | Act% |
|---|---|---|
| 113.00 | 100 | 100 |
| 55.00 | 138.70 | 130.39 |
| 85.00 | 59.20 | 58.73 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023671.D Vial: 9
Acq On : 4 Oct 2004 3:58 pm Operator: marke
Sample : op11403-msd Inst : MSBNA02
Misc : op11403,sl1255,460,,,1,1;water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:20 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

BM 10/5/4

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.89 | 152 | 222295 | 40.00 ppm | -0.07 |
| 22) Naphthalene-d8 | 6.04 | 136 | 828509 | 40.00 ppm | -0.08 |
| 41) Acenaphthene-d10 | 8.33 | 164 | 424876 | 40.00 ppm | -0.10 |
| 63) Phenanthrene-d10 | 10.80 | 188 | 707222 | 40.00 ppm | -0.10 |
| 77) Chrysene-d12 | 15.74 | 240 | 549666 | 40.00 ppm | -0.11 |
| 86) Perylene-d12 | 18.25 | 264 | 494867 | 40.00 ppm | -0.11 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 7) 2-Fluorophenol | 3.98 | 112 | 346520 | 53.98 ppm | -0.05 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 53.98% | | |
| 9) Phenol-d5 | 4.68 | 99 | 309660 | 41.95 ppm | -0.06 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 41.95% | | |
| 23) Nitrobenzene-d5 | 5.38 | 82 | 266761 | 38.10 ppm | -0.07 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 76.20% | | |
| 45) 2-Fluorobiphenyl | 7.36 | 172 | 574036 | 39.09 ppm | -0.09 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 78.18% | | |
| 67) 2,4,6-Tribromophenol | 9.64 | 330 | 138450 | 90.08 ppm | -0.11 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 90.08% | | |
| 80) Terphenyl-d14 | 13.84 | 244 | 571181 | 44.31 ppm | -0.11 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 88.62% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.48 | 88 | 62297 | 25.46 ppm | 99 |
| 3) N-nitrosodimethylamine | 2.82 | 42 | 101426 | 27.78 ppm | 98 |
| 4) Pyridine | 2.83 | 79 | 150864 | 20.90 ppm | 98 |
| 5) Benzaldehyde | 4.56 | 106 | 155175 | 37.18 ppm | 97 |
| 6) Aniline | 4.68 | 93 | 190029 | 19.56 ppm | 76 |
| 8) bis(2-Chloroethyl)ether | 4.71 | 93 | 256484 | 40.87 ppm | 95 |
| 10) Phenol | 4.69 | 94 | 192957 | 23.12 ppm | 99 |
| 11) 2-Chlorophenol | 4.77 | 128 | 280137 | 36.97 ppm | 96 |
| 12) 1,3-Dichlorobenzene | 4.86 | 146 | 313744 | 37.43 ppm | 99 |
| 13) 1,4-Dichlorobenzene | 4.90 | 146 | 315176 | 38.45 ppm | 97 |
| 14) 1,2-Dichlorobenzene | 5.05 | 146 | 306300 | 38.96 ppm | 98 |
| 15) Benzyl alcohol | 5.02 | 108 | 175615 | 35.30 ppm | 94 |
| 16) bis(2-chloroisopropyl)ethe | 5.14 | 45 | 396027 | 40.34 ppm | 93 |
| 17) 2-Methylphenol | 5.14 | 108 | 220110 | 33.83 ppm | 92 |
| 18) Acetophenone | 5.24 | 105 | 361330 | 36.96 ppm | 98 |
| 19) Hexachloroethane | 5.31 | 117 | 108826 | 37.30 ppm | 93 |
| 20) N-Nitroso-di-n-propylamine | 5.26 | 70 | 175295 | 37.04 ppm | 93 |
| 21) 3&4-Methylphenol | 5.26 | 108 | 442406 | 63.40 ppm | 97 |
| 24) Nitrobenzene | 5.39 | 77 | 268873 | 39.78 ppm | 100 |
| 25) Isophorone | 5.59 | 82 | 467714 | 36.68 ppm | 98 |
| 26) 2-Nitrophenol | 5.68 | 139 | 176223 | 40.58 ppm | 99 |
| 27) 2,4-Dimethylphenol | 5.72 | 107 | 249631 | 37.76 ppm | 97 |
| 28) bis(2-Chloroethoxy)methane | 5.80 | 93 | 279827 | 37.28 ppm | 98 |
| 29) Benzoic Acid | 5.83 | 105 | 148355 | 26.40 ppm | 98 |
| 30) 2,4-Dichlorophenol | 5.92 | 162 | 257796 | 41.29 ppm | 99 |
| 31) 1,2,4-Trichlorobenzene | 5.99 | 180 | 256756 | 39.98 ppm | 96 |
| 32) Naphthalene | 6.06 | 128 | 827004 | 42.31 ppm | 99 |
| 33) 4-Chloroaniline | 6.14 | 127 | 305726 | 34.07 ppm | 98 |
| 34) 2,6-Dichlorophenol | 6.15 | 162 | 239425 | 40.22 ppm | 97 |
| 35) Hexachlorobutadiene | 6.25 | 225 | 123607 | 39.75 ppm | 99 |
| 36) Caprolactam | 6.49 | 113 | 39421m | 13.93 ppm | |
| 37) 4-Chloro-3-methylphenol | 6.71 | 107 | 250833 | 41.04 ppm | 98 |
| 38) 2-Methylnaphthalene | 6.84 | 142 | 728910 | 51.08 ppm | 99 |

99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023671.D Vial: 9
Acq On : 4 Oct 2004 3:58 pm Operator: marke
Sample : op11403-msd Inst : MSBNA02
Misc : op11403,sl1255,460,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:20 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) 1-Methylnaphthalene | 6.98 | 142 | 675234 | 48.92 | ppm | | 97 |
| 40) 1,2,4,5-Tetrachlorobenzene | 7.11 | 216 | 249904 | 39.92 | ppm | | 98 |
| 42) Hexachlorocyclopentadiene | 7.14 | 237 | 54891 | 20.80 | ppm | | 98 |
| 43) 2,4,6-Trichlorophenol | 7.26 | 196 | 182512 | 41.52 | ppm | | 99 |
| 44) 2,4,5-Trichlorophenol | 7.32 | 196 | 193366 | 41.35 | ppm | | 99 |
| 46) 1,1'-Biphenyl | 7.47 | 154 | 682896 | 40.80 | ppm | | 100 |
| 47) 2-Chloronaphthalene | 7.49 | 162 | 527472 | 41.21 | ppm | | 99 |
| 48) 2-Nitroaniline | 7.69 | 65 | 163773 | 40.19 | ppm | | 96 |
| 49) Acenaphthylene | 8.09 | 152 | 912469 | 42.46 | ppm | | 99 |
| 50) Dimethylphthalate | 8.01 | 163 | 657744 | 41.88 | ppm | | 99 |
| 51) 2,6-Dinitrotoluene | 8.11 | 165 | 150655 | 40.07 | ppm | | 91 |
| 52) Acenaphthene | 8.38 | 153 | 560330 | 43.47 | ppm | | 96 |
| 53) 3-Nitroaniline | 8.32 | 138 | 182488 | 40.29 | ppm | | 100 |
| 54) 2,4-Dinitrophenol | 8.49 | 184 | 182414 | 74.81 | ppm | | 98 |
| 55) Dibenzofuran | 8.63 | 168 | 779967 | 41.86 | ppm | | 92 |
| 56) 2,4-Dinitrotoluene | 8.74 | 165 | 218150 | 41.80 | ppm | | 92 |
| 57) 4-Nitrophenol | 8.68 | 109 | 84422 | 41.88 | ppm | # | 85 |
| 58) 2,3,4,6-Tetrachlorophenol | 8.93 | 232 | 137143 | 38.75 | ppm | | 97 |
| 59) Fluorene | 9.19 | 166 | 666649 | 44.39 | ppm | | 99 |
| 60) 4-Chlorophenyl-phenylether | 9.22 | 204 | 285724 | 42.62 | ppm | | 100 |
| 61) Diethylphthalate | 9.17 | 149 | 668736 | 43.50 | ppm | | 98 |
| 62) 4-Nitroaniline | 9.33 | 138 | 201810 | 41.96 | ppm | | 97 |
| 64) 4,6-Dinitro-2-methylphenol | 9.42 | 198 | 287189 | 98.77 | ppm | | 55 |
| 65) n-Nitrosodiphenylamine | 9.45 | 169 | 496937 | 47.59 | ppm | | 99 |
| 66) 1,2-Diphenylhydrazine | 9.49 | 77 | 542734 | 44.32 | ppm | | 98 |
| 68) 4-Bromophenyl-phenylether | 10.05 | 248 | 161336 | 45.16 | ppm | | 99 |
| 69) Hexachlorobenzene | 10.28 | 284 | 162831 | 44.90 | ppm | | 99 |
| 70) Atrazine | 10.49 | 200 | 159786 | 39.34 | ppm | | 98 |
| 71) Pentachlorophenol | 10.63 | 266 | 182964 | 91.11 | ppm | | 99 |
| 72) Phenanthrene | 10.84 | 178 | 1083375 | 54.37 | ppm | | 99 |
| 73) Anthracene | 10.92 | 178 | 981712 | 47.96 | ppm | | 100 |
| 74) Carbazole | 11.26 | 167 | 1002706 | 49.46 | ppm | | 99 |
| 75) Di-n-butylphthalate | 12.12 | 149 | 1113008 | 46.89 | ppm | | 99 |
| 76) Fluoranthene | 13.02 | 202 | 1148922 | 55.49 | ppm | | 99 |
| 79) Pyrene | 13.42 | 202 | 1166795 | 53.21 | ppm | | 98 |
| 81) Butylbenzylphthalate | 14.91 | 149 | 497432 | 46.64 | ppm | | 98 |
| 82) 3,3'-Dichlorobenzidine | 15.77 | 252 | 138672 | 22.28 | ppm | | 98 |
| 83) Benzo[a]anthracene | 15.71 | 228 | 915257 | 50.08 | ppm | | 99 |
| 84) Chrysene | 15.79 | 228 | 846608 | 52.02 | ppm | | 98 |
| 85) bis(2-Ethylhexyl)phthalate | 16.12 | 149 | 666176 | 47.16 | ppm | | 99 |
| 87) Di-n-octylphthalate | 17.24 | 149 | 1138936 | 49.55 | ppm | | 99 |
| 88) Benzo[b]fluoranthene | 17.65 | 252 | 831313 | 49.88 | ppm | | 100 |
| 89) Benzo[k]fluoranthene | 17.69 | 252 | 744064 | 48.75 | ppm | | 97 |
| 90) Benzo[a]pyrene | 18.16 | 252 | 761844 | 49.19 | ppm | | 100 |
| 91) Indeno[1,2,3-cd]pyrene | 19.87 | 276 | 773775 | 47.13 | ppm | | 99 |
| 92) Dibenz[a,h]anthracene | 19.91 | 278 | 792055 | 51.77 | ppm | | 99 |
| 93) Benzo[g,h,i]perylene | 20.22 | 276 | 830384 | 49.77 | ppm | | 98 |

100

(#) = qualifier out of range (m) = manual integration

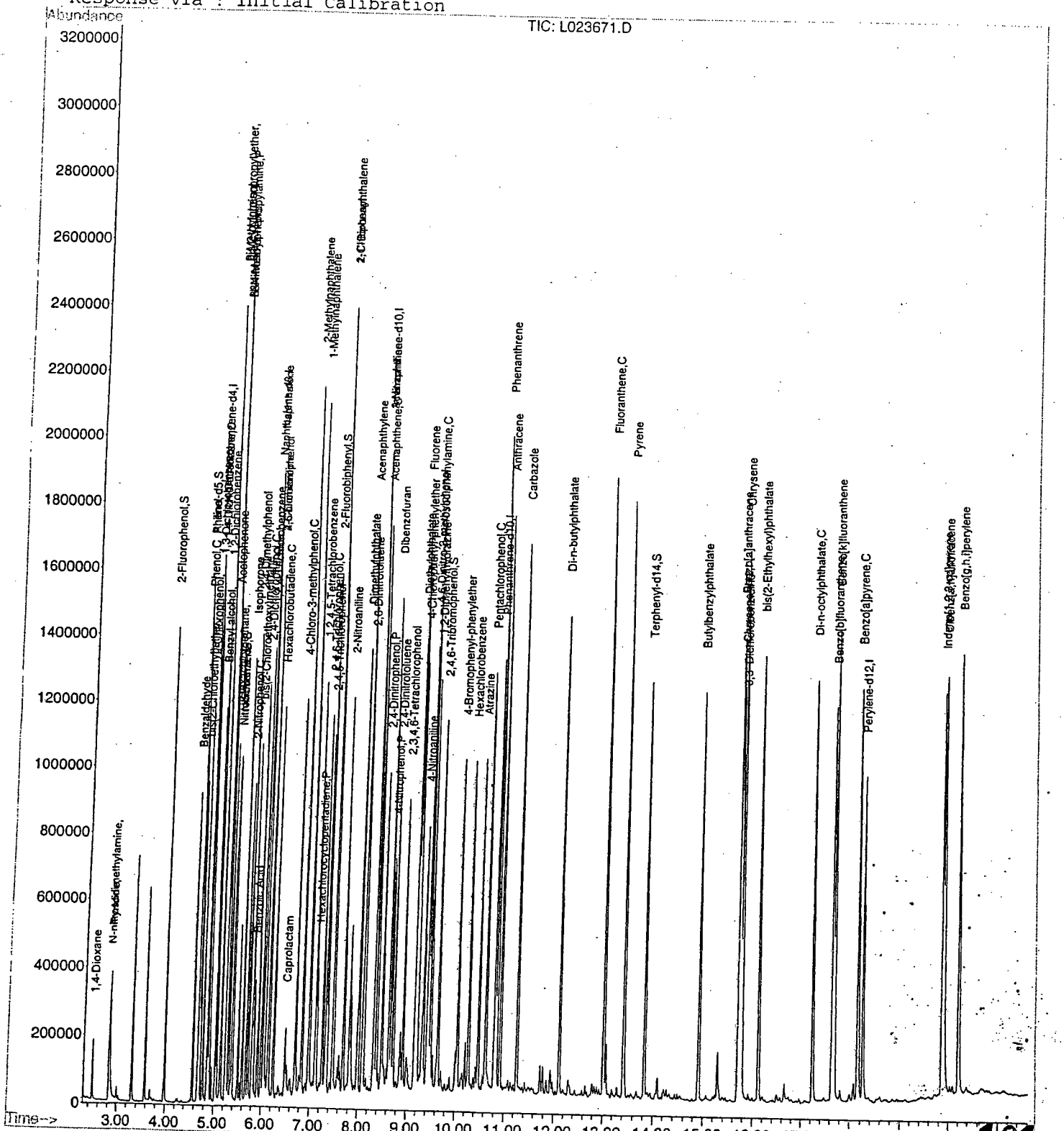
Quantitation Report

Data File : C:\HPCHEM\1\DATA\100404\L023671.D
Acq On : 4 Oct 2004 3:58 pm
Sample : op11403-msd
Misc : op11403,sl1255,460,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:20 2004

Vial: 9
Operator: marke
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration



Quantitation Report (Qedit)

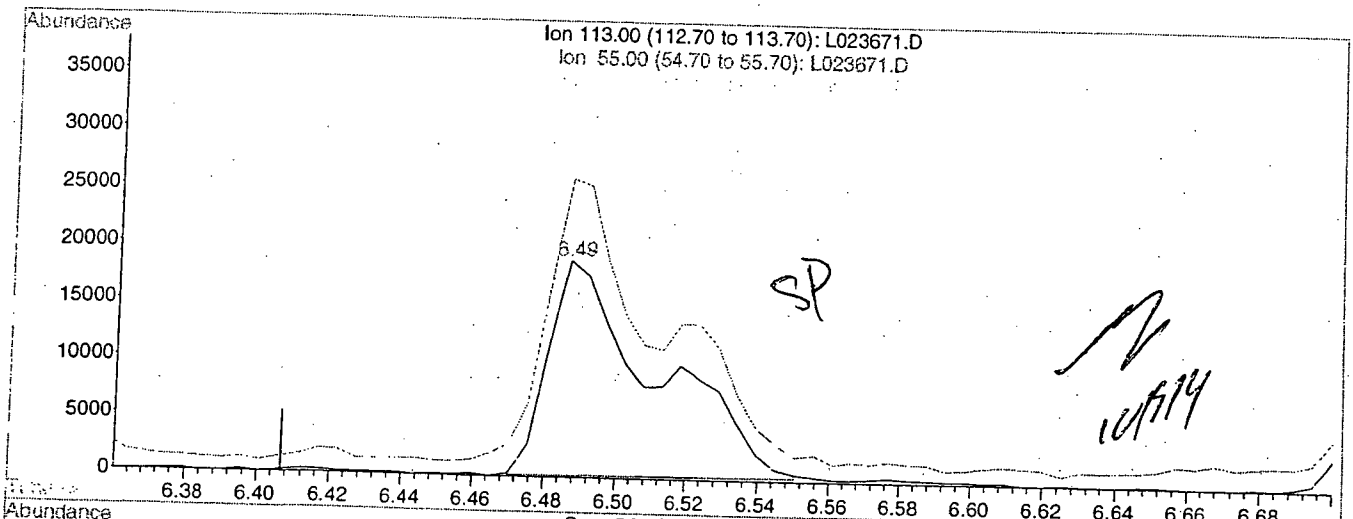
Data File : C:\HPCHEM\1\DATA\100404\L023671.D
Acq On : 4 Oct 2004 3:58 pm
Sample : op11403-msd
Misc : op11403,sl1255,460,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Oct 5 9:20 2004

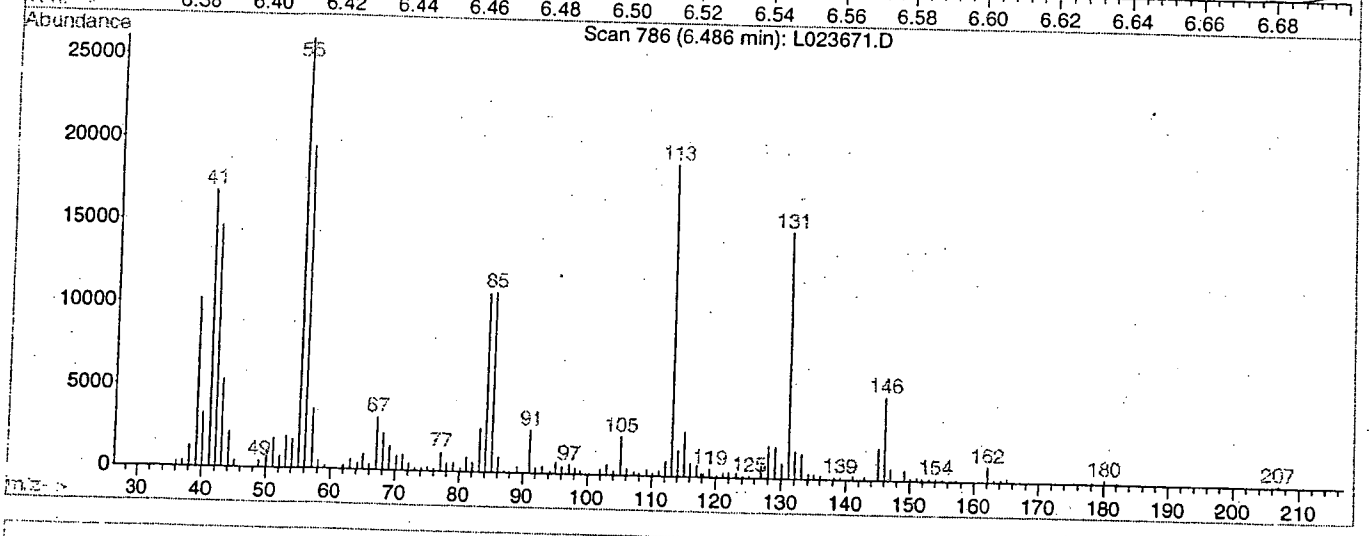
Vial: 9
Operator: marke
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Multiple Level Calibration

SM 10/5/04




TIC: L023671.D

(36) Caprolactam

6.49min 13.93ppm m

response 39421

| Ion | Exp% | Act% |
|---|---|---|
| 113.00 | 100 | 100 |
| 55.00 | 138.70 | 137.52 |
| 85.00 | 59.20 | 57.90 |
| 0.00 | 0.00 | 0.00 |

# SAMPLE DUPLICATE SUMMARY

SVOC.06

*NOT APPLICABLE TO THIS REPORT*

# INSTRUMENT PERFORMANCE CHECK (DFTPP)

SVOC.07

# Instrument Performance Check (DFTPP)

**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** SL1251-DFTPP
**Lab File ID:** L023582.D
**Instrument ID:** GCMSL
**Injection Date:** 09/29/04
**Injection Time:** 13:54

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | Pass/Fail |
|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 137720 | 36.7 | Pass |
| 68 | Less than 2.0% of mass 69 | 0 | 0.0 (0.0) [a] | Pass |
| 69 | Mass 69 relative abundance | 127370 | 33.9 | Pass |
| 70 | Less than 2.0% of mass 69 | 566 | 0.15 (0.44) [a] | Pass |
| 127 | 40.0 - 60.0% of mass 198 | 173147 | 46.1 | Pass |
| 197 | Less than 1.0% of mass 198 | 0 | 0.0 | Pass |
| 198 | Base peak, 100% relative abundance | 375573 | 100.0 | Pass |
| 199 | 5.0 - 9.0% of mass 198 | 25925 | 6.9 | Pass |
| 275 | 10.0 - 30.0% of mass 198 | 76187 | 20.3 | Pass |
| 365 | 1.0 - 100.0% of mass 198 | 6693 | 1.8 | Pass |
| 441 | Present, but less than mass 443 | 35586 | 9.5 (73.6) [b] | Pass |
| 442 | 40.0 - 100.0% of mass 198 | 247672 | 65.9 | Pass |
| 443 | 17.0 - 23.0% of mass 442 | 48340 | 12.9 (19.5) [c] | Pass |

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| SL1251-ICC1251 | L023583.D | 09/29/04 | 14:14 | 00:20 | Initial cal 75 |
| SL1251-IC1251 | L023584.D | 09/29/04 | 14:45 | 00:51 | Initial cal 5 |
| SL1251-IC1251 | L023585.D | 09/29/04 | 15:17 | 01:23 | Initial cal 25 |
| SL1251-IC1251 | L023586.D | 09/29/04 | 15:48 | 01:54 | Initial cal 50 |
| SL1251-IC1251 | L023587.D | 09/29/04 | 16:20 | 02:26 | Initial cal 100 |
| SL1251-IC1251 | L023588.D | 09/29/04 | 16:52 | 02:58 | Initial cal 125 |
| SL1251-ICV1251 | L023589.D | 09/29/04 | 17:23 | 03:29 | Initial cal verification 50 |
| OP11402-BS | L023590.D | 09/29/04 | 17:54 | 04:00 | Blank Spike |
| OP11402-MB | L023591.D | 09/29/04 | 18:26 | 04:32 | Method Blank |
| ZZZZZZ | L023592.D | 09/29/04 | 18:56 | 05:02 | (unrelated sample) |
| ZZZZZZ | L023593.D | 09/29/04 | 19:27 | 05:33 | (unrelated sample) |
| ZZZZZZ | L023594.D | 09/29/04 | 19:58 | 06:04 | (unrelated sample) |
| ZZZZZZ | L023595.D | 09/29/04 | 20:29 | 06:35 | (unrelated sample) |
| ZZZZZZ | L023596.D | 09/29/04 | 20:59 | 07:05 | (unrelated sample) |
| ZZZZZZ | L023597.D | 09/29/04 | 21:30 | 07:36 | (unrelated sample) |
| ZZZZZZ | L023598.D | 09/29/04 | 22:00 | 08:06 | (unrelated sample) |
| ZZZZZZ | L023599.D | 09/29/04 | 22:30 | 08:36 | (unrelated sample) |
| ZZZZZZ | L023600.D | 09/29/04 | 23:00 | 09:06 | (unrelated sample) |
| ZZZZZZ | L023601.D | 09/29/04 | 23:30 | 09:36 | (unrelated sample) |

# Instrument Performance Check (DFTPP)

**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** SL1251-DFTPP
**Lab File ID:** L023582.D
**Instrument ID:** GCMSL

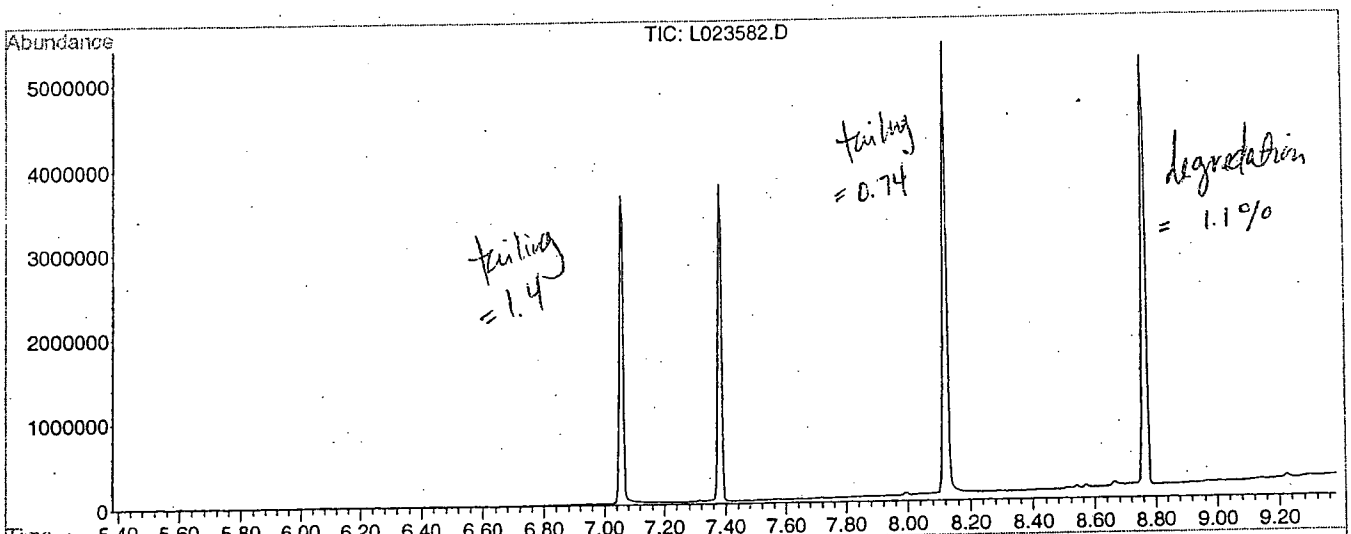
**Injection Date:** 09/29/04
**Injection Time:** 13:54

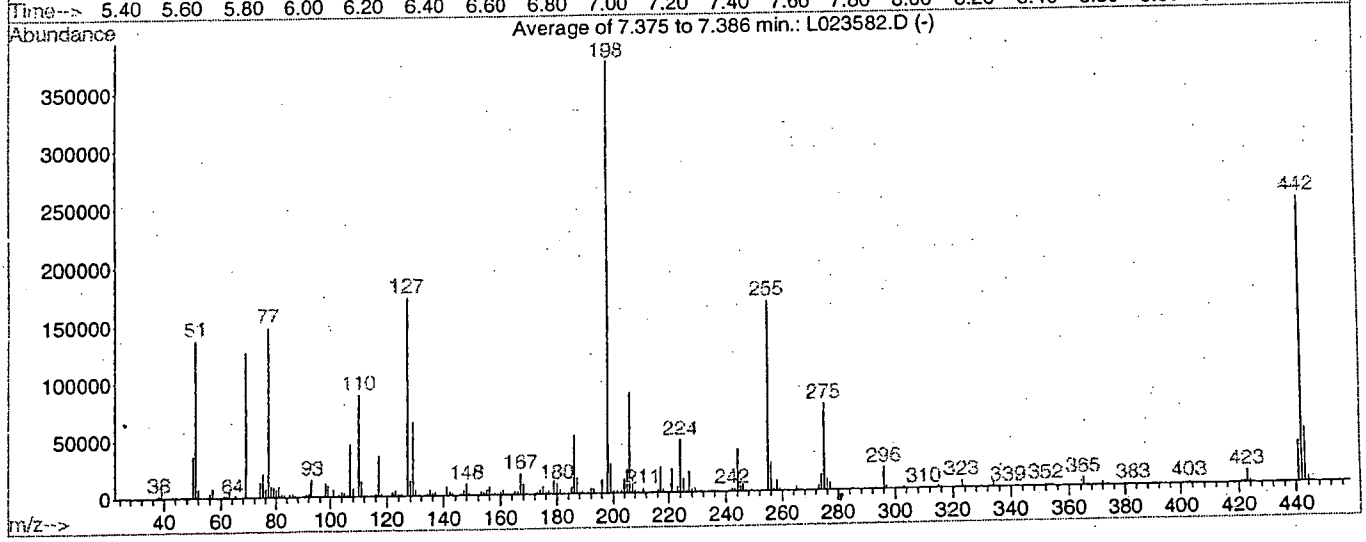
| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| ZZZZZZ | L023602.D | 09/30/04 | 00:00 | 10:06 | (unrelated sample) |
| N77905-10 | L023603.D | 09/30/04 | 00:30 | 10:36 | (used for QC only; not part of job N78399) |
| OP11402-MS | L023604.D | 09/30/04 | 01:00 | 11:06 | Matrix Spike |
| OP11402-MSD | L023605.D | 09/30/04 | 01:30 | 11:36 | Matrix Spike Duplicate |

SW-846 Method 8270

Data File : C:\HPCHEM\1\DATA\092904\L023582.D
Acq On : 29 Sep 2004 1:54 pm
Sample : dftpp
Misc : op11351,sl1251,970,,,1,1,water
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : Tune Evaluation

Vial: 1
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00




AutoFind: Scans 615, 616, 617; Background Corrected with Scan 601

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 36.7 | 137720 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 33.9 | 127370 | PASS |
| 70 | 69 | 0.00 | 2 | 0.4 | 566 | PASS |
| 127 | 198 | 40 | 60 | 46.1 | 173147 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 375573 | PASS |
| 199 | 198 | 5 | 9 | 6.9 | 25925 | PASS |
| 275 | 198 | 10 | 30 | 20.3 | 76187 | PASS |
| 365 | 198 | 1 | 100 | 1.8 | 6693 | PASS |
| 441 | 443 | 0.01 | 100 | 73.6 | 35586 | PASS |
| 442 | 198 | 40 | 100 | 65.9 | 247672 | PASS |
| 443 | 442 | 17 | 23 | 19.5 | 48340 | PASS |

# Instrument Performance Check (DFTPP)

**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** SL1255-DFTPP
**Lab File ID:** L023663.D
**Instrument ID:** GCMSL

**Injection Date:** 10/04/04
**Injection Time:** 12:01

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 99421 | 34.2 | | Pass |
| 68 | Less than 2.0% of mass 69 | 0 | 0.0 | (0.0) [a] | Pass |
| 69 | Mass 69 relative abundance | 92176 | 31.8 | | Pass |
| 70 | Less than 2.0% of mass 69 | 455 | 0.16 | (0.49) [a] | Pass |
| 127 | 40.0 - 60.0% of mass 198 | 130823 | 45.1 | | Pass |
| 197 | Less than 1.0% of mass 198 | 0 | 0.0 | | Pass |
| 198 | Base peak, 100% relative abundance | 290312 | 100.0 | | Pass |
| 199 | 5.0 - 9.0% of mass 198 | 19984 | 6.9 | | Pass |
| 275 | 10.0 - 30.0% of mass 198 | 59973 | 20.7 | | Pass |
| 365 | 1.0 - 100.0% of mass 198 | 5964 | 2.1 | | Pass |
| 441 | Present, but less than mass 443 | 33544 | 11.6 | (75.3) [b] | Pass |
| 442 | 40.0 - 100.0% of mass 198 | 225289 | 77.6 | | Pass |
| 443 | 17.0 - 23.0% of mass 442 | 44533 | 15.3 | (19.8) [c] | Pass |

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

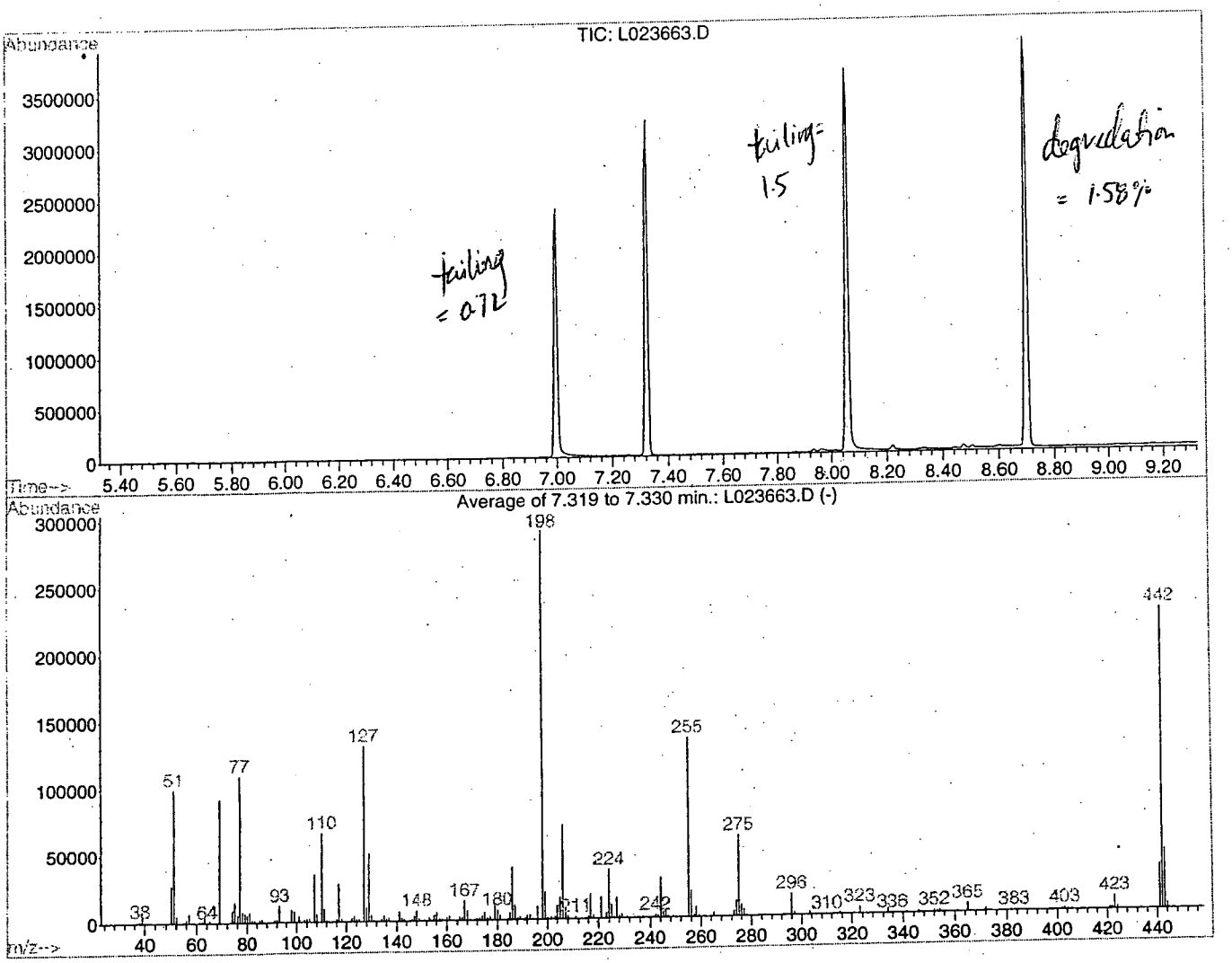
| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| SL1255-CC1251 | L023664.D | 10/04/04 | 12:20 | 00:19 | Continuing cal 75 |
| OP11403-BS | L023665.D | 10/04/04 | 12:51 | 00:50 | Blank Spike |
| OP11403-MB | L023666.D | 10/04/04 | 13:22 | 01:21 | Method Blank |
| ZZZZZZ | L023667.D | 10/04/04 | 13:52 | 01:51 | (unrelated sample) |
| N78365-10 | L023669.D | 10/04/04 | 14:55 | 02:54 | (used for QC only; not part of job N78399) |
| OP11403-MS | L023670.D | 10/04/04 | 15:26 | 03:25 | Matrix Spike |
| OP11403-MSD | L023671.D | 10/04/04 | 15:58 | 03:57 | Matrix Spike Duplicate |
| ZZZZZZ | L023672.D | 10/04/04 | 16:29 | 04:28 | (unrelated sample) |
| N78399-1 | L023673.D | 10/04/04 | 17:00 | 04:59 | MW-1 |
| OP11381-BS | L023674.D | 10/04/04 | 17:32 | 05:31 | Blank Spike |
| OP11381-MB | L023675.D | 10/04/04 | 18:03 | 06:02 | Method Blank |
| F26800-2 | L023676.D | 10/04/04 | 18:34 | 06:33 | (used for QC only; not part of job N78399) |
| OP11381-MS | L023677.D | 10/04/04 | 19:04 | 07:03 | Matrix Spike |
| OP11381-MSD | L023678.D | 10/04/04 | 19:35 | 07:34 | Matrix Spike Duplicate |
| ZZZZZZ | L023679.D | 10/04/04 | 20:05 | 08:04 | (unrelated sample) |
| ZZZZZZ | L023680.D | 10/04/04 | 20:35 | 08:34 | (unrelated sample) |
| ZZZZZZ | L023683.D | 10/04/04 | 22:06 | 10:05 | (unrelated sample) |

SW-846 Method 8270

Data File : C:\HPCHEM\1\DATA\100404\L023663.D
Acq On : 4 Oct 2004 12:01 pm
Sample : dftpp
Misc : op11398,sl1255,1000,,,1,1,water
MS Integration Params: LSCINT.P
Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625

Vial: 1
Operator: marke
Inst : MSBNA02
Multiplr: 1.00

SM 10/5/04




AutoFind: Scans 605, 606, 607; Background Corrected with Scan 601

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 60 | 34.2 | 99421 | PASS |
| 68 | 69 | 0.00 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0.00 | 100 | 31.8 | 92176 | PASS |
| 70 | 69 | 0.00 | 2 | 0.5 | 455 | PASS |
| 127 | 198 | 40 | 60 | 45.1 | 130823 | PASS |
| 197 | 198 | 0.00 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 290312 | PASS |
| 199 | 198 | 5 | 9 | 6.9 | 19984 | PASS |
| 275 | 198 | 10 | 30 | 20.7 | 59973 | PASS |
| 365 | 198 | 1 | 100 | 2.1 | 5964 | PASS |
| 441 | 443 | 0.01 | 100 | 75.3 | 33544 | PASS |
| 442 | 198 | 40 | 100 | 77.6 | 225289 | PASS |
| 443 | 442 | 17 | 23 | 19.8 | 44533 | PASS |

# *INITIAL CALIBRATION*

*SVOC.08*

GC/MS QA-QC Check Report

ne File : C:\HPCHEM\1\DATA\092904\L023582.D
ne Time : 29 Sep 2004 1:54 pm

aily Calibration File : C:\HPCHEM\1\DATA\092904\L023583.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 297696 | 1174520 | 613300 |
| | | | | | | 1117690 | 884018 | 826938 |

SM 9/30/04

| ile | Sample | Surrogate Recovery % | | | | Internal Standard Responses | | |
|---|---|---|---|---|---|---|---|---|
| 23589.D | icv1251-50 | 0* | 0* | 0* | 0* | 299070 | 1154698 | 598905 |
| | | 0* | 0* | | | 1026386 | 816421 | 736466 |
| 023590.D | op11402-bs | 92 | 95 | 90 | 91 | 362622 | 1320414 | 676616 |
| | | 99 | 107 | | | 1104070 | 744111 | 591706 |
| 023591.D | op11402-mb | 82 | 87 | 81 | 86 | 342857 | 1235348 | 586739 |
| | | 82 | 90 | | | 885051 | 608661 | 514518 |
| 23592.D | n77748-4 | 81 | 87 | 74 | 77 | 317807 | 1184237 | 604053 |
| | | 87 | 83 | | | 985522 | 791850 | 668684 |
| 23593.D | n77748-5 | 85 | 90 | 80 | 83 | 379218 | 1409587 | 728776 |
| | | 87 | 87 | | | 1184804 | 899115 | 760625 |
| 023594.D | n77905-1 | 82 | 87 | 76 | 76 | 327994 | 1213416 | 625274 |
| | | 81 | 81 | | | 1022156 | 791331 | 662373 |
| 023595.D | n77905-2 | 73 | 78 | 69 | 69 | 370379 | 1351561 | 695679 |
| | | 73 | 75 | | | 1134086 | 868752 | 732258 |
| 23596.D | n77905-3 | 74 | 78 | 70 | 71 | 361602 | 1300377 | 663176 |
| | | 77 | 75 | | | 1082911 | 840385 | 702233 |
| 23597.D | n77905-4 | 69 | 75 | 64 | 65 | 345179 | 1263629 | 644603 |
| | | 73 | 73 | | | 1038493 | 795948 | 677354 |
| 023598.D | n77905-5 | 83 | 88 | 79 | 81 | 353952 | 1299534 | 660634 |
| | | 85 | 86 | | | 1086093 | 837013 | 714806 |
| 23599.D | n77905-6 | 74 | 78 | 68 | 70 | 362007 | 1336278 | 672710 |
| | | 76 | 74 | | | 1100486 | 829571 | 695028 |
| 23600.D | n77905-7 | 73 | 79 | 68 | 69 | 327361 | 1201125 | 625109 |
| | | 77 | 74 | | | 1018495 | 794495 | 679550 |
| 23601.D | n77905-8 | 79 | 83 | 71 | 73 | 308104 | 1150077 | 603294 |
| | | 80 | 76 | | | 988474 | 776239 | 653326 |
| 023602.D | n77905-9 | 81 | 86 | 76 | 79 | 359574 | 1319301 | 662711 |
| | | 82 | 83 | | | 1077902 | 830034 | 700480 |
| 23603.D | n77905-10 | 71 | 75 | 64 | 65 | 314895 | 1179462 | 607475 |
| | | 71 | 71 | | | 1012407 | 770899 | 653263 |
| 23604.D | op11402-ms | 73 | 77 | 67 | 70 | 326742 | 1219318 | 641100 |
| | | 77 | 76 | | | 1051535 | 784632 | 677445 |
| 23605.D | op11402-ms | 73 | 77 | 67 | 70 | 358249 | 1351872 | 709037 |
| | | 75 | 77 | | | 1194612 | 860305 | 728714 |
| 023606.D t | n77927-1,2 | 4* | 4* | 3* | 4* | 185419 | 741979 | 390785 |
| | | 3* | 3* | | | 654109 | 574091 | 569911 |
| 23607.D t | n77963-9,1 | 6* | 7* | 6* | 6* | 353367 | 1295360 | 684301 |
| | | 7* | 7* | | | 1108240 | 802747 | 665581 |
| 23608.D t | n77963-10, | 7* | 8* | 6* | 6* | 275618 | 1012453 | 547444 |
| | | 7* | 7* | | | 920506 | 787751 | 727413 |

out of time.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 8* | 8* | | | 1009659 | 849745 | 757042 |
| L023610.D t n78001-4,2 | 2* | 2* | 0* | 2* | 275506 | 1063391 | 548989 |
| | 0* | 2* | | | 950554 | 850978 | 672793 |
| L023611.D t n78001-5,1 | 5* | 5* | 4* | 4* | 225767 | 883103 | 463008 |
| | 3* | 4* | | | 814165 | 733244 | 641434 |
| )23612.D t n78001-6,2 | 1* | 1* | 1* | 1* | 270889 | 1065147 | 560922 |
| | 1* | 1* | | | 963934 | 828848 | 640253 |

t - fails 12hr time check  * - fails criteria

Created: Thu Sep 30 11:30:16 2004  MSBNA02

Response Factor Report MSBNA02

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 10:02:41 2004
Response via : Initial Calibration

8/30/04

Calibration Files
5 =L023584.D 25 =L023585.D 50 =L023586.D 75 =L023583.D
100 =L023587.D 125 =L023588.D icv =L023589.D

| Compound | 5 | 25 | 50 | 75 | 100 | 125 | icv | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) I 1,4-Dichlorobenzene-d | | | | ISTD | | | | | |
| 2) 1,4-Dioxane | 0.427 | 0.436 | 0.439 | 0.466 | 0.435 | 0.438 | | 0.440 | 3.02 |
| 3) N-nitrosodimethyl | 0.658 | 0.666 | 0.676 | 0.690 | 0.638 | 0.614 | | 0.657 | 4.18 |
| 4) Pyridine | 1.213 | 1.297 | 1.331 | 1.393 | 1.257 | 1.302 | | 1.299 | 4.74 |
| 5) Benzaldehyde | 0.958 | 1.004 | 1.026 | 0.666 | 0.479 | 0.373 | | 0.751 | ~~37.98~~ out |
| 6) Aniline | 2.015 | 1.905 | 1.691 | 1.641 | 1.491 | | | 1.749 | 12.02 |
| 7)S 2-Fluorophenol | 1.212 | 1.204 | 1.187 | 1.213 | 1.109 | 1.005 | | 1.155 | 7.21 |
| 8) bis(2-Chloroethyl | 1.167 | 1.155 | 1.135 | 1.164 | 1.100 | 1.053 | | 1.129 | 3.95 |
| 9)S Phenol-d5 | 1.518 | 1.488 | 1.350 | 1.319 | 1.225 | 1.068 | | 1.328 | 12.62 |
| 0)C Phenol | 1.679 | 1.655 | 1.522 | 1.514 | 1.401 | 1.241 | | 1.502 | 10.87 |
| 1) 2-Chlorophenol | 1.374 | 1.374 | 1.392 | 1.415 | 1.348 | 1.279 | | 1.364 | 3.43 |
| 12) 1,3-Dichlorobenze | 1.547 | 1.532 | 1.547 | 1.561 | 1.469 | 1.394 | | 1.508 | 4.28 |
| 13)C 1,4-Dichlorobenze | 1.540 | 1.529 | 1.506 | 1.498 | 1.432 | 1.347 | | 1.475 | 4.96 |
| 4) 1,2-Dichlorobenze | 1.467 | 1.456 | 1.446 | 1.449 | 1.367 | 1.302 | | 1.415 | 4.65 |
| 5) Benzyl alcohol | 0.895 | 0.867 | 0.903 | 0.944 | 0.896 | 0.866 | | 0.895 | 3.18 |
| 16) bis(2-chloroisopr | 2.055 | 1.942 | 1.817 | 1.743 | 1.634 | 1.409 | | 1.767 | 12.97 |
| 17) 2-Methylphenol | 1.196 | 1.191 | 1.201 | 1.240 | 1.152 | 1.044 | | 1.171 | 5.81 |
| 8) Acetophenone | 1.634 | 1.706 | 1.840 | 1.869 | 1.776 | 1.731 | | 1.759 | 4.98 |
| 9) Hexachloroethane | 0.538 | 0.541 | 0.536 | 0.540 | 0.508 | 0.488 | | 0.525 | 4.22 |
| 20)P N-Nitroso-di-n-pr | 0.889 | 0.880 | 0.861 | 0.874 | 0.824 | 0.781 | | 0.852 | 4.88 |
| 21) 3&4-Methylphenol | 1.275 | 1.283 | 1.287 | 1.320 | 1.231 | 1.138 | | 1.256 | 5.11 |
| 2) I Naphthalene-d8 | | | | ISTD | | | | | |
| 23)S Nitrobenzene-d5 | 0.339 | 0.340 | 0.350 | 0.350 | 0.327 | 0.323 | | 0.338 | 3.38 |
| 24) Nitrobenzene | 0.346 | 0.339 | 0.330 | 0.332 | 0.310 | 0.302 | | 0.326 | 5.23 |
| 5) Isophorone | 0.627 | 0.610 | 0.623 | 0.635 | 0.594 | 0.605 | | 0.616 | 2.48 |
| 6)C 2-Nitrophenol | 0.200 | 0.208 | 0.214 | 0.219 | 0.207 | 0.209 | | 0.210 | 3.06 |
| 27) 2,4-Dimethylpheno | 0.330 | 0.333 | 0.327 | 0.323 | 0.306 | 0.296 | | 0.319 | 4.57 |
| 28) bis(2-Chloroethox | 0.372 | 0.375 | 0.372 | 0.370 | 0.346 | 0.340 | | 0.362 | 4.22 |
| 9) Benzoic Acid | 0.214 | 0.254 | 0.282 | 0.297 | 0.286 | 0.296 | | 0.271 | 11.93 |
| 0)C 2,4-Dichloropheno | 0.298 | 0.307 | 0.312 | 0.312 | 0.293 | 0.286 | | 0.301 | 3.58 |
| 31) 1,2,4-Trichlorobe | 0.318 | 0.324 | 0.321 | 0.313 | 0.296 | 0.289 | | 0.310 | 4.62 |
| 32) Naphthalene | 1.006 | 1.001 | 0.980 | 0.938 | 0.888 | 0.849 | | 0.944 | 6.81 |
| 3) 4-Chloroaniline | 0.461 | 0.451 | 0.452 | 0.444 | 0.412 | 0.380 | | 0.433 | 7.21 |
| 4) 2,6-Dichloropheno | 0.296 | 0.297 | 0.298 | 0.292 | 0.276 | 0.264 | | 0.287 | 4.82 |
| 35)C Hexachlorobutadie | 0.158 | 0.157 | 0.154 | 0.150 | 0.141 | 0.140 | | 0.150 | 5.20 |
| 36) Caprolactam | 0.126 | 0.128 | 0.137 | 0.150 | 0.136 | 0.143 | | 0.137 | 6.62 |
| 7)C 4-Chloro-3-methyl | 0.279 | 0.298 | 0.306 | 0.312 | 0.288 | 0.287 | | 0.295 | 4.26 |
| 8) 2-Methylnaphthale | 0.708 | 0.713 | 0.722 | 0.705 | 0.660 | 0.626 | | 0.689 | 5.43 |
| 39) 1-Methylnaphthale | 0.683 | 0.690 | 0.696 | 0.680 | 0.642 | 0.607 | | 0.666 | 5.21 |
| 40) 1,2,4,5-Tetrachlo | 0.306 | 0.310 | 0.317 | 0.307 | 0.290 | 0.283 | | 0.302 | 4.28 |
| 1) I Acenaphthene-d10 | | | | ISTD | | | | | |
| 42)P Hexachlorocyclope | 0.147 | 0.240 | 0.282 | 0.288 | 0.285 | 0.299 | | 0.257 | 22.40 |
| ---- Quadratic regression ---- Coefficient = 0.9991 | | | | | | | | | |
| Response Ratio = -0.01921 + 0.28183 *A + 0.00680 *A^2 | | | | | | | | | |
| 43)C 2,4,6-Trichloroph | 0.399 | 0.401 | 0.430 | 0.432 | 0.410 | 0.411 | | 0.414 | 3.40 |
| 44) 2,4,5-Trichloroph | 0.425 | 0.438 | 0.451 | 0.461 | 0.430 | 0.436 | | 0.440 | 3.03 |
| 5)S 2-Fluorobiphenyl | 1.433 | 1.423 | 1.418 | 1.403 | 1.317 | 1.300 | | 1.382 | 4.20 |
| 6) 1,1'-Biphenyl | 1.493 | 1.596 | 1.677 | 1.619 | 1.554 | 1.516 | | 1.576 | 4.34 |
| 47) 2-Chloronaphthale | 1.273 | 1.257 | 1.239 | 1.211 | 1.145 | 1.105 | | 1.205 | 5.51 |
| 48) 2-Nitroaniline | 0.372 | 0.369 | 0.386 | 0.407 | 0.384 | 0.384 | | 0.384 | 3.45 |
| 9) Acenaphthylene | 2.110 | 2.102 | 2.087 | 2.065 | 1.926 | 1.849 | | 2.023 | 5.39 |
| 0) Dimethylphthalate | 1.496 | 1.495 | 1.506 | 1.535 | 1.421 | 1.419 | | 1.479 | 3.22 |
| 51) 2,6-Dinitrotoluen | 0.351 | 0.352 | 0.360 | 0.370 | 0.348 | 0.343 | | 0.354 | 2.77 |
| 52)C Acenaphthene | 1.256 | 1.249 | 1.257 | 1.236 | 1.165 | 1.118 | | 1.214 | 4.79 |
| 3) 3-Nitroaniline | 0.418 | 0.422 | 0.431 | 0.450 | 0.421 | 0.417 | | 0.426 | 2.91 |
| 4)P 2,4-Dinitrophenol | | 0.176 | 0.218 | 0.252 | 0.241 | 0.261 | | 0.230 | 14.82 |
| ~~5) Dibenzofuran~~ | ~~1.794~~ | ~~1.798~~ | ~~1.792~~ | ~~1.801~~ | ~~1.702~~ | ~~1.637~~ | | ~~1.754~~ | ~~3.92~~ |
| 6) 2,4-Dinitrotoluen | 0.446 | 0.478 | 0.493 | 0.531 | 0.500 | 0.499 | | 0.491 | 5.75 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 58) | 2,3,4,6-Tetrachlo | 0.309 | 0.329 | 0.336 | 0.359 | 0.331 | 0.335 | 0.333 | 4.83 |
| 59) | Fluorene | 1.473 | 1.478 | 1.449 | 1.458 | 1.363 | 1.262 | 1.414 | 6.05 |
| 60) | 4-Chlorophenyl-ph | 0.663 | 0.648 | 0.642 | 0.640 | 0.609 | 0.584 | 0.631 | 4.61 |
| 61) | Diethylphthalate | 1.522 | 1.458 | 1.481 | 1.505 | 1.403 | 1.315 | 1.447 | 5.31 |
| 62) | 4-Nitroaniline | 0.423 | 0.432 | 0.448 | 0.498 | 0.454 | 0.461 | 0.453 | 5.75 |
| 63) I | Phenanthrene-d10 | ----------ISTD---------- | | | | | | | |
| 64) | 4,6-Dinitro-2-met | 0.123 | 0.163 | 0.177 | 0.185 | 0.171 | 0.168 | 0.164 | 13.23 |
| 65)C | n-Nitrosodiphenyl | 0.625 | 0.640 | 0.620 | 0.589 | 0.546 | 0.525 | 0.591 | 7.85 |
| 66) | 1,2-Diphenylhydra | 0.726 | 0.743 | 0.721 | 0.673 | 0.626 | 0.667 | 0.693 | 6.44 |
| 67)S | 2,4,6-Tribromophe | 0.092 | 0.094 | 0.091 | 0.087 | 0.080 | 0.077 | 0.087 | 8.06 |
| 68) | 4-Bromophenyl-phe | 0.209 | 0.212 | 0.210 | 0.206 | 0.190 | 0.187 | 0.202 | 5.37 |
| 69) | Hexachlorobenzene | 0.220 | 0.221 | 0.211 | 0.205 | 0.189 | 0.185 | 0.205 | 7.62 |
| 70) | Atrazine | 0.223 | 0.234 | 0.241 | 0.239 | 0.218 | 0.223 | 0.230 | 4.23 |
| 71)C | Pentachlorophenol | 0.089 | 0.110 | 0.120 | 0.127 | 0.115 | 0.120 | 0.114 | 11.65 |

---- Linear regression ---- Coefficient = 0.9960

Response Ratio = -0.00240 + 0.12057 *A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72) | Phenanthrene | 1.233 | 1.218 | 1.154 | 1.123 | 1.039 | 0.994 | 1.127 | 8.50 |
| 73) | Anthracene | 1.257 | 1.249 | 1.194 | 1.163 | 1.063 | 1.020 | 1.158 | 8.40 |
| 74) | Carbazole | 1.216 | 1.221 | 1.163 | 1.183 | 1.066 | 1.033 | 1.147 | 6.90 |
| 75) | Di-n-butylphthala | 1.463 | 1.456 | 1.382 | 1.364 | 1.230 | 1.161 | 1.343 | 9.13 |
| 76)C | Fluoranthene | 1.238 | 1.281 | 1.185 | 1.211 | 1.086 | 1.025 | 1.171 | 8.29 |
| 77) I | Chrysene-d12 | ----------ISTD---------- | | | | | | | |
| 78) | Benzidine | 0.882 | 1.071 | 1.146 | 1.002 | 0.932 | 0.890 | 0.987 | 10.73 |
| 79) | Pyrene | 1.663 | 1.663 | 1.700 | 1.558 | 1.494 | 1.496 | 1.596 | 5.73 |
| 80)S | Terphenyl-d14 | 0.962 | 0.970 | 1.012 | 0.929 | 0.877 | 0.879 | 0.938 | 5.72 |
| 81) | Butylbenzylphthal | 0.772 | 0.782 | 0.827 | 0.787 | 0.741 | 0.748 | 0.776 | 3.97 |
| 82) | 3,3'-Dichlorobenz | 0.480 | 0.476 | 0.474 | 0.458 | 0.427 | 0.403 | 0.453 | 6.93 |
| 83) | Benzo[a]anthracen | 1.346 | 1.352 | 1.384 | 1.353 | 1.280 | 1.264 | 1.330 | 3.53 |
| 84) | Chrysene | 1.292 | 1.231 | 1.222 | 1.171 | 1.104 | 1.085 | 1.184 | 6.72 |
| 85) | bis(2-Ethylhexyl) | 1.075 | 1.057 | 1.082 | 1.035 | 0.958 | 0.962 | 1.028 | 5.37 |
| 86) I | Perylene-d12 | ----------ISTD---------- | | | | | | | |
| 87)C | Di-n-octylphthala | 2.054 | 1.970 | 1.957 | 1.829 | 1.665 | 1.671 | 1.858 | 8.81 |
| 88) | Benzo[b]fluoranth | 1.377 | 1.340 | 1.312 | 1.409 | 1.282 | 1.363 | 1.347 | 3.41 |
| 89) | Benzo[k]fluoranth | 1.406 | 1.364 | 1.322 | 1.153 | 1.139 | 1.017 | 1.234 | 12.40 |
| 90)C | Benzo[a]pyrene | 1.316 | 1.281 | 1.289 | 1.257 | 1.192 | 1.175 | 1.252 | 4.50 |
| 91) | Indeno[1,2,3-cd]p | 1.307 | 1.348 | 1.293 | 1.356 | 1.395 | 1.263 | 1.327 | 3.61 |
| 92) | Dibenz[a,h]anthra | 1.327 | 1.308 | 1.231 | 1.257 | 1.196 | 1.101 | 1.237 | 6.64 |
| 93) | Benzo[g,h,i]peryl | 1.419 | 1.423 | 1.332 | 1.364 | 1.333 | 1.221 | 1.349 | 5.52 |

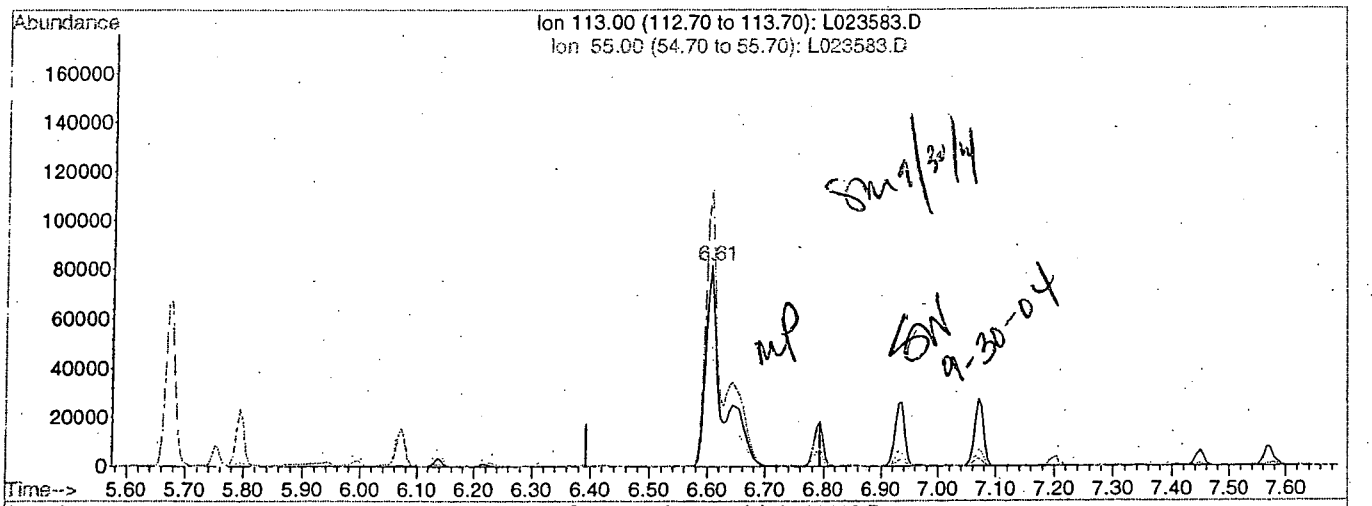
#) = Out of Range

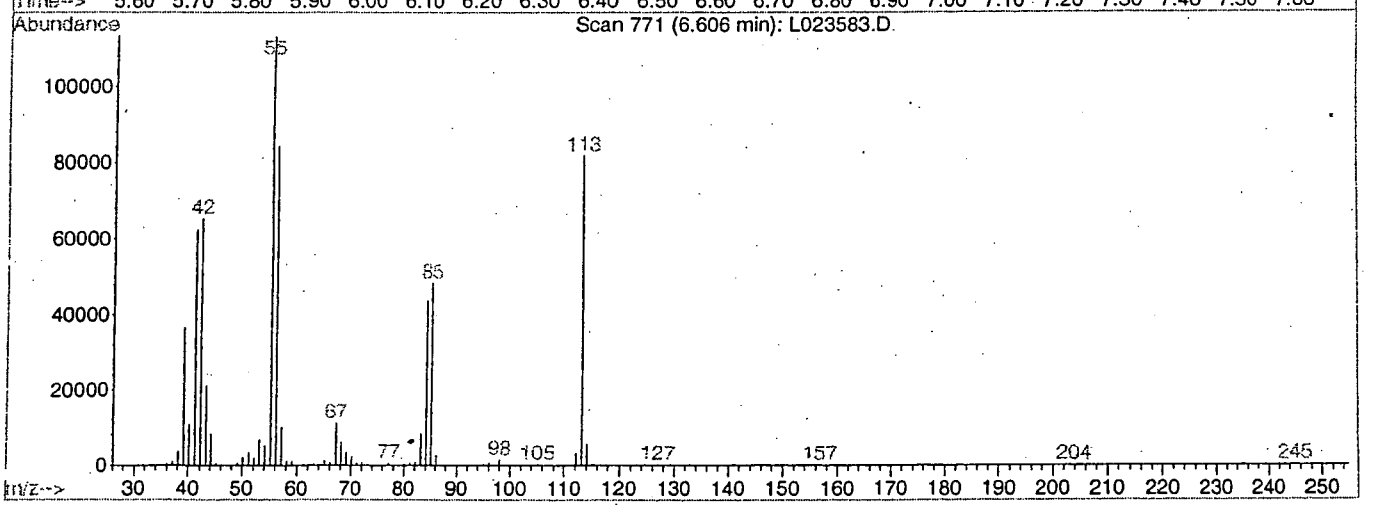
8270C.M Thu Sep 30 10:06:54 2004

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\092904\L023583.D  Vial: 2
Acq On : 29 Sep 2004 2:14 pm  Operator: sarahm
Sample : icc1251-75  Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:41 2004  Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Multiple Level Calibration




TIC: L023583.D

(36) Caprolactam

6.61min 39.76ppm m

response 165060

| Ion | Exp% | Act% |
|---|---|---|
| 113.00 | 100 | 100 |
| 55.00 | 154.90 | 138.72 |
| 85.00 | 62.40 | 59.17 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023583.D Vial: 2
Acq On : 29 Sep 2004 2:14 pm Operator: sarahm
Sample : icc1251-75 Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:41 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.95 | 152 | 297696 | 40.00 ppm | 0.00 |
| 22) Naphthalene-d8 | 6.11 | 136 | 1174519 | 40.00 ppm | 0.00 |
| 41) Acenaphthene-d10 | 8.43 | 164 | 613300 | 40.00 ppm | 0.00 |
| 63) Phenanthrene-d10 | 10.91 | 188 | 1117691 | 40.00 ppm | 0.00 |
| 77) Chrysene-d12 | 15.85 | 240 | 884018 | 40.00 ppm | 0.00 |
| 86) Perylene-d12 | 18.37 | 264 | 826938 | 40.00 ppm | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 7) 2-Fluorophenol | 4.03 | 112 | 1354382 | 146.22 ppm | -0.02 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = | 146.22%# | |
| 9) Phenol-d5 | 4.73 | 99 | 1472417 | 128.33 ppm | 0.01 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = | 128.33%# | |
| 23) Nitrobenzene-d5 | 5.45 | 82 | 770644 | 73.50 ppm | 0.00 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = | 147.00%# | |
| 45) 2-Fluorobiphenyl | 7.45 | 172 | 1613802 | 78.67 ppm | -0.02 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = | 157.34%# | |
| 67) 2,4,6-Tribromophenol | 9.75 | 330 | 366659 | 143.83 ppm | -0.03 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = | 143.83%# | |
| 80) Terphenyl-d14 | 13.95 | 244 | 1539048 | 75.83 ppm | -0.05 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = | 151.66%# | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.54 | 88 | 260044 | 71.54 ppm | 98 |
| 3) N-nitrosodimethylamine | 2.88 | 42 | 385042 | 72.94 ppm | 95 |
| 4) Pyridine | 2.88 | 79 | 777343 | 74.12 ppm | 88 |
| 5) Benzaldehyde | 4.62 | 106 | 185828 | 23.24 ppm | 100 |
| 6) Aniline | 4.73 | 93 | 915754 | 62.55 ppm | 94 |
| 8) bis(2-Chloroethyl)ether | 4.77 | 93 | 649841 | 72.94 ppm | 96 |
| 10) Phenol | 4.74 | 94 | 844869 | 65.84 ppm | 91 |
| 11) 2-Chlorophenol | 4.83 | 128 | 789614 | 73.88 ppm | 96 |
| 12) 1,3-Dichlorobenzene | 4.92 | 146 | 871352 | 76.60 ppm | 99 |
| 13) 1,4-Dichlorobenzene | 4.97 | 146 | 835961 | 73.07 ppm | 98 |
| 14) 1,2-Dichlorobenzene | 5.12 | 146 | 808868 | 75.38 ppm | 98 |
| 15) Benzyl alcohol | 5.09 | 108 | 526863 | 74.64 ppm | 98 |
| 16) bis(2-chloroisopropyl)ethe | 5.21 | 45 | 973089 | 59.02 ppm | 76 |
| 17) 2-Methylphenol | 5.20 | 108 | 692004 | 72.43 ppm | 94 |
| 18) Acetophenone | 5.31 | 105 | 521754 | 37.55 ppm | 99 |
| 19) Hexachloroethane | 5.38 | 117 | 301570 | 72.57 ppm | 97 |
| 20) N-Nitroso-di-n-propylamine | 5.33 | 70 | 487743 | 70.50 ppm | 92 |
| 21) 3&4-Methylphenol | 5.32 | 108 | 736570 | 72.36 ppm | 98 |
| 24) Nitrobenzene | 5.46 | 77 | 730077 | 71.09 ppm | 99 |
| 25) Isophorone | 5.68 | 82 | 1397805 | 73.26 ppm | 97 |
| 26) 2-Nitrophenol | 5.76 | 139 | 482190 | 78.71 ppm | 97 |
| 27) 2,4-Dimethylphenol | 5.79 | 107 | 711085 | 69.37 ppm | 96 |
| 28) bis(2-Chloroethoxy)methane | 5.88 | 93 | 814989 | 71.32 ppm | 98 |
| 29) Benzoic Acid | 5.94 | 105 | 652974 | 79.08 ppm | 99 |
| 30) 2,4-Dichlorophenol | 6.00 | 162 | 686859 | 75.44 ppm | 98 |
| 31) 1,2,4-Trichlorobenzene | 6.07 | 180 | 690384 | 73.45 ppm | 98 |
| 32) Naphthalene | 6.14 | 128 | 2065160 | 68.11 ppm | 99 |
| 33) 4-Chloroaniline | 6.22 | 127 | 977622 | 72.46 ppm | 97 |
| 34) 2,6-Dichlorophenol | 6.23 | 162 | 643535 | 70.89 ppm | 98 |
| 35) Hexachlorobutadiene | 6.33 | 225 | 330001 | 72.36 ppm | 99 |
| 36) Caprolactam | 6.61 | 113 | 165060m | 39.76 ppm | |
| 37) 4-Chloro-3-methylphenol | 6.79 | 107 | 687776 | 74.15 ppm | 93 |
| 38) 2-Methylnaphthalene | 6.93 | 142 | 1553630 | 75.73 ppm | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023583.D Vial: 2
Acq On : 29 Sep 2004 2:14 pm Operator: sarahm
Sample : icc1251-75 Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:41 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) 1-Methylnaphthalene | 7.07 | 142 | 1497216 | 74.13 | ppm | | 97 |
| 40) 1,2,4,5-Tetrachlorobenzene | 7.20 | 216 | 676164 | 71.10 | ppm | | 100 |
| 42) Hexachlorocyclopentadiene | 7.23 | 237 | 331440 | 68.11 | ppm | | 100 |
| 43) 2,4,6-Trichlorophenol | 7.35 | 196 | 496885 | 81.45 | ppm | | 97 |
| 44) 2,4,5-Trichlorophenol | 7.41 | 196 | 529792 | 81.18 | ppm | | 100 |
| 46) 1,1'-Biphenyl | 7.57 | 154 | 930903 | 38.79 | ppm | | 100 |
| 47) 2-Chloronaphthalene | 7.58 | 162 | 1392576 | 77.69 | ppm | | 97 |
| 48) 2-Nitroaniline | 7.79 | 65 | 467451 | 85.18 | ppm | | 99 |
| 49) Acenaphthylene | 8.20 | 152 | 2374374 | 81.91 | ppm | | 99 |
| 50) Dimethylphthalate | 8.12 | 163 | 1764716 | 83.03 | ppm | | 99 |
| 51) 2,6-Dinitrotoluene | 8.21 | 165 | 425966 | 86.54 | ppm | # | 72 |
| 52) Acenaphthene | 8.49 | 153 | 1421875 | 79.39 | ppm | | 97 |
| 53) 3-Nitroaniline | 8.43 | 138 | 517159 | 86.38 | ppm | | 96 |
| 54) 2,4-Dinitrophenol | 8.59 | 184 | 289975 | 90.42 | ppm | | 98 |
| 55) Dibenzofuran | 8.74 | 168 | 2070644 | 81.51 | ppm | | 92 |
| 56) 2,4-Dinitrotoluene | 8.84 | 165 | 610677 | 87.45 | ppm | | 92 |
| 57) 4-Nitrophenol | 8.77 | 109 | 243110 | 81.24 | ppm | | 91 |
| 58) 2,3,4,6-Tetrachlorophenol | 9.03 | 232 | 413262 | 82.13 | ppm | | 99 |
| 59) Fluorene | 9.30 | 166 | 1676258 | 81.24 | ppm | | 99 |
| 60) 4-Chlorophenyl-phenylether | 9.32 | 204 | 736400 | 77.38 | ppm | | 99 |
| 61) Diethylphthalate | 9.28 | 149 | 1730652 | 81.83 | ppm | | 98 |
| 62) 4-Nitroaniline | 9.45 | 138 | 572238 | 92.88 | ppm | | 96 |
| 64) 4,6-Dinitro-2-methylphenol | 9.53 | 198 | 387364 | 86.85 | ppm | # | 41 |
| 65) n-Nitrosodiphenylamine | 9.55 | 169 | 1480162 | 90.87 | ppm | | 99 |
| 66) 1,2-Diphenylhydrazine | 9.59 | 77 | 1410676 | 71.91 | ppm | | 96 |
| 68) 4-Bromophenyl-phenylether | 10.15 | 248 | 431147 | 75.77 | ppm | | 96 |
| 69) Hexachlorobenzene | 10.39 | 284 | 428804 | 73.23 | ppm | | 97 |
| 70) Atrazine | 10.59 | 200 | 250929 | 37.54 | ppm | | 92 |
| 71) Pentachlorophenol | 10.73 | 266 | 266803 | 70.54 | ppm | | 100 |
| 72) Phenanthrene | 10.95 | 178 | 2352666 | 73.92 | ppm | | 99 |
| 73) Anthracene | 11.03 | 178 | 2437327 | 74.72 | ppm | | 99 |
| 74) Carbazole | 11.37 | 167 | 2479149 | 79.16 | ppm | | 100 |
| 75) Di-n-butylphthalate | 12.22 | 149 | 2858529 | 77.93 | ppm | | 99 |
| 76) Fluoranthene | 13.14 | 202 | 2538386 | 76.32 | ppm | | 99 |
| 78) Benzidine | 13.47 | 184 | 1660704 | 71.22 | ppm | | 99 |
| 79) Pyrene | 13.54 | 202 | 2581664 | 77.00 | ppm | | 96 |
| 81) Butylbenzylphthalate | 15.02 | 149 | 1304101 | 83.68 | ppm | | 100 |
| 82) 3,3'-Dichlorobenzidine | 15.89 | 252 | 759518 | 73.81 | ppm | | 100 |
| 83) Benzo[a]anthracene | 15.83 | 228 | 2242212 | 78.26 | ppm | | 98 |
| 84) Chrysene | 15.91 | 228 | 1940976 | 73.72 | ppm | | 99 |
| 85) bis(2-Ethylhexyl)phthalate | 16.23 | 149 | 1715207 | 82.62 | ppm | | 99 |
| 87) Di-n-octylphthalate | 17.35 | 149 | 2835863 | 81.15 | ppm | | 99 |
| 88) Benzo[b]fluoranthene | 17.77 | 252 | 2184231 | 79.30 | ppm | | 99 |
| 89) Benzo[k]fluoranthene | 17.82 | 252 | 1788240 | 69.01 | ppm | | 99 |
| 90) Benzo[a]pyrene | 18.29 | 252 | 1949729 | 77.14 | ppm | | 98 |
| 91) Indeno[1,2,3-cd]pyrene | 20.00 | 276 | 2101911 | 76.89 | ppm | | 99 |
| 92) Dibenz[a,h]anthracene | 20.04 | 278 | 1949138 | 73.65 | ppm | | 99 |
| 93) Benzo[g,h,i]perylene | 20.36 | 276 | 2114456 | 74.00 | ppm | | 98 |

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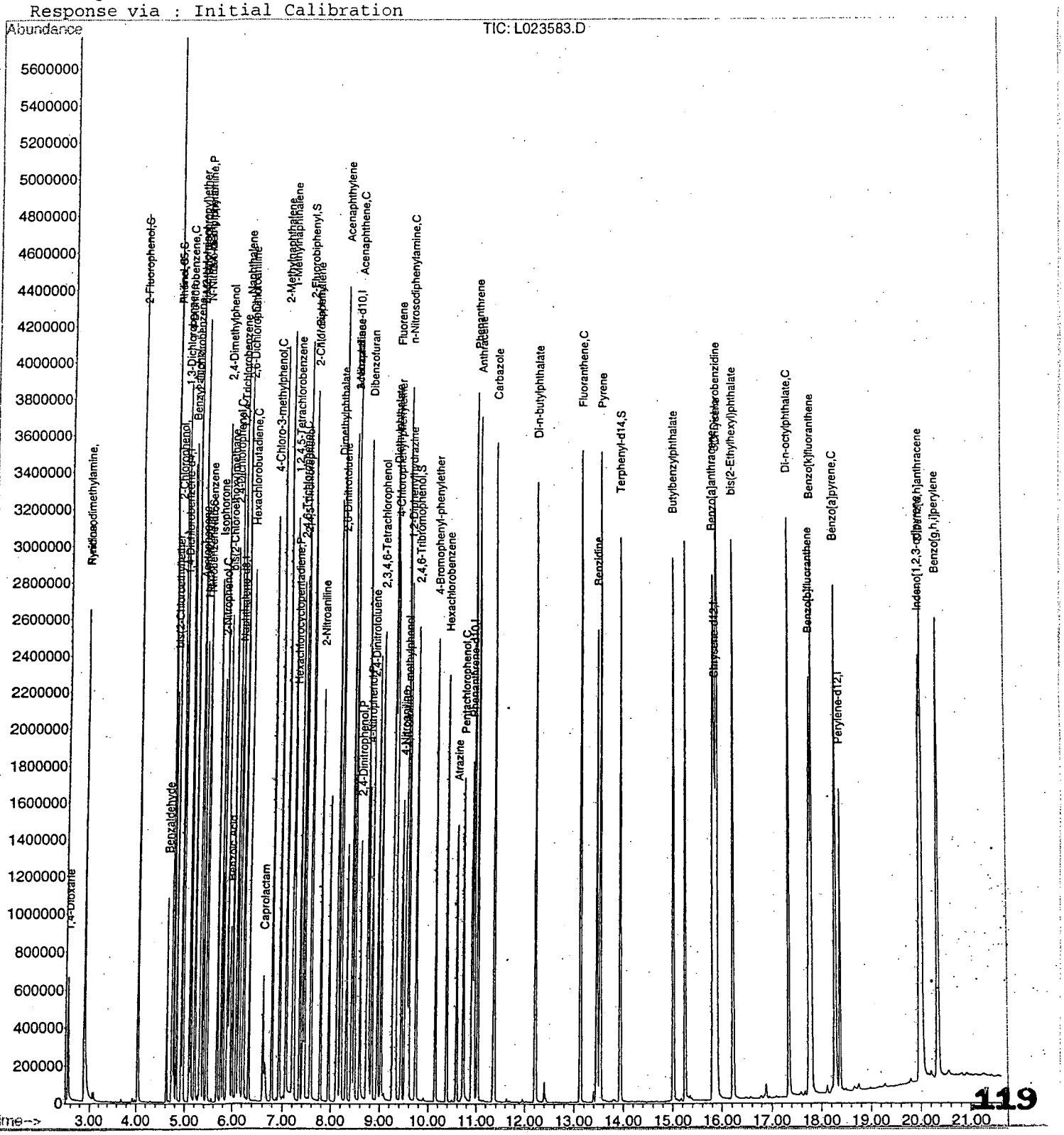
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\092904\L023583.D  Vial: 2
Acq On : 29 Sep 2004 2:14 pm  Operator: sarahm
Sample : icc1251-75  Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:41 2004  Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023584.D Vial: 3
Acq On : 29 Sep 2004 2:45 pm Operator: sarahm
Sample : ic1251-5 Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:36 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

Sm 9/30/04

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.95 | 152 | 303240 | 40.00 | ppm | 0.00 |
| 22) Naphthalene-d8 | 6.11 | 136 | 1138453 | 40.00 | ppm | -0.01 |
| 41) Acenaphthene-d10 | 8.42 | 164 | 596666 | 40.00 | ppm | -0.02 |
| 63) Phenanthrene-d10 | 10.90 | 188 | 1026342 | 40.00 | ppm | -0.02 |
| 77) Chrysene-d12 | 15.84 | 240 | 818277 | 40.00 | ppm | -0.02 |
| 86) Perylene-d12 | 18.36 | 264 | 694405 | 40.00 | ppm | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 7) 2-Fluorophenol | 4.03 | 112 | 91902 | 9.74 | ppm | -0.02 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 9.74%# | | | |
| 9) Phenol-d5 | 4.73 | 99 | 115072 | 9.85 | ppm | 0.00 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 9.85%# | | | |
| 23) Nitrobenzene-d5 | 5.44 | 82 | 48191 | 4.74 | ppm | -0.02 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 9.48%# | | | |
| 45) 2-Fluorobiphenyl | 7.44 | 172 | 106847 | 5.35 | ppm | -0.03 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 10.70%# | | | |
| 67) 2,4,6-Tribromophenol | 9.73 | 330 | 23640 | 10.10 | ppm | -0.05 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 10.10%# | | | |
| 80) Terphenyl-d14 | 13.93 | 244 | 98444 | 5.24 | ppm | -0.06 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 10.48%# | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.55 | 88 | 16188 | 4.37 | ppm | 97 |
| 3) N-nitrosodimethylamine | 2.88 | 42 | 24938 | 4.64 | ppm | 99 |
| 4) Pyridine | 2.92 | 79 | 45985 | 4.30 | ppm | 91 |
| 5) Benzaldehyde | 4.62 | 106 | 18154 | 2.23 | ppm | 95 |
| 6) Aniline | 4.73 | 93 | 76378 | 5.12 | ppm | 87 |
| 8) bis(2-Chloroethyl)ether | 4.77 | 93 | 44246 | 4.88 | ppm | 98 |
| 10) Phenol | 4.74 | 94 | 63626 | 4.87 | ppm | 96 |
| 11) 2-Chlorophenol | 4.82 | 128 | 52092 | 4.78 | ppm | 99 |
| 12) 1,3-Dichlorobenzene | 4.92 | 146 | 58652 | 5.06 | ppm | 97 |
| 13) 1,4-Dichlorobenzene | 4.97 | 146 | 58358 | 5.01 | ppm | 94 |
| 14) 1,2-Dichlorobenzene | 5.12 | 146 | 55617 | 5.09 | ppm | 97 |
| 15) Benzyl alcohol | 5.08 | 108 | 33922 | 4.72 | ppm | 96 |
| 16) bis(2-chloroisopropyl)ethe | 5.20 | 45 | 77892 | 4.64 | ppm | 85 |
| 17) 2-Methylphenol | 5.20 | 108 | 45341 | 4.66 | ppm | 95 |
| 18) Acetophenone | 5.30 | 105 | 30968 | 2.19 | ppm | 99 |
| 19) Hexachloroethane | 5.38 | 117 | 20377 | 4.81 | ppm | 98 |
| 20) N-Nitroso-di-n-propylamine | 5.32 | 70 | 33711 | 4.78 | ppm | 93 |
| 21) 3&4-Methylphenol | 5.32 | 108 | 48324 | 4.66 | ppm | 99 |
| 24) Nitrobenzene | 5.45 | 77 | 49173 | 4.94 | ppm | 93 |
| 25) Isophorone | 5.66 | 82 | 89250 | 4.83 | ppm | 98 |
| 26) 2-Nitrophenol | 5.75 | 139 | 28506 | 4.80 | ppm | 94 |
| 27) 2,4-Dimethylphenol | 5.79 | 107 | 47005 | 4.73 | ppm | 96 |
| 28) bis(2-Chloroethoxy)methane | 5.87 | 93 | 52897 | 4.78 | ppm | 96 |
| 29) Benzoic Acid | 5.87 | 105 | 30384 | 3.80 | ppm | 95 |
| 30) 2,4-Dichlorophenol | 5.99 | 162 | 42399 | 4.80 | ppm | 96 |
| 31) 1,2,4-Trichlorobenzene | 6.07 | 180 | 45224 | 4.96 | ppm | 100 |
| 32) Naphthalene | 6.13 | 128 | 143221 | 4.87 | ppm | 98 |
| 33) 4-Chloroaniline | 6.21 | 127 | 65654 | 5.02 | ppm | 99 |
| 34) 2,6-Dichlorophenol | 6.22 | 162 | 42135 | 4.79 | ppm | 96 |
| 35) Hexachlorobutadiene | 6.32 | 225 | 22436 | 5.08 | ppm | 96 |
| 36) Caprolactam | 6.55 | 113 | 8965 | 2.23 | ppm # | 85 |
| 37) 4-Chloro-3-methylphenol | 6.78 | 107 | 39683 | 4.41 | ppm | 96 |
| 38) 2-Methylnaphthalene | 6.93 | 142 | 100690 | 5.06 | ppm | 99 |

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(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023584.D Vial: 3
Acq On : 29 Sep 2004 2:45 pm Operator: sarahm
Sample : ic1251-5 Inst : MSBNA02
Misc : op11351,s11251,970,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:36 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 39) | 1-Methylnaphthalene | 7.07 | 142 | 97152 | 4.96 | ppm | | 97 |
| 40) | 1,2,4,5-Tetrachlorobenzene | 7.20 | 216 | 43616 | 4.73 | ppm | | 98 |
| 42) | Hexachlorocyclopentadiene | 7.23 | 237 | 10950 | 2.31 | ppm | | 97 |
| 43) | 2,4,6-Trichlorophenol | 7.34 | 196 | 29759 | 5.01 | ppm | | 92 |
| 44) | 2,4,5-Trichlorophenol | 7.41 | 196 | 31724 | 5.00 | ppm | | 99 |
| 46) | 1,1'-Biphenyl | 7.56 | 154 | 55661 | 2.38 | ppm | | 97 |
| 47) | 2-Chloronaphthalene | 7.57 | 162 | 94922 | 5.44 | ppm | | 97 |
| 48) | 2-Nitroaniline | 7.77 | 65 | 27751 | 5.20 | ppm | | 94 |
| 49) | Acenaphthylene | 8.19 | 152 | 157347 | 5.58 | ppm | | 98 |
| 50) | Dimethylphthalate | 8.10 | 163 | 111545 | 5.39 | ppm | | 98 |
| 51) | 2,6-Dinitrotoluene | 8.19 | 165 | 26163 | 5.46 | ppm | | 90 |
| 52) | Acenaphthene | 8.47 | 153 | 93643 | 5.37 | ppm | | 97 |
| 53) | 3-Nitroaniline | 8.41 | 138 | 31172 | 5.35 | ppm | | 90 |
| 54) | 2,4-Dinitrophenol | 8.58 | 184 | 8300 | 2.66 | ppm | | 99 |
| 55) | Dibenzofuran | 8.72 | 168 | 133830 | 5.41 | ppm | | 96 |
| 56) | 2,4-Dinitrotoluene | 8.82 | 165 | 33230 | 4.89 | ppm | | 95 |
| 57) | 4-Nitrophenol | 8.75 | 109 | 11514 | 3.95 | ppm | # | 39 |
| 58) | 2,3,4,6-Tetrachlorophenol | 9.02 | 232 | 23054 | 4.71 | ppm | | 97 |
| 59) | Fluorene | 9.29 | 166 | 109870 | 5.47 | ppm | | 98 |
| 60) | 4-Chlorophenyl-phenylether | 9.32 | 204 | 49439 | 5.34 | ppm | | 96 |
| 61) | Diethylphthalate | 9.25 | 149 | 113486 | 5.52 | ppm | | 100 |
| 62) | 4-Nitroaniline | 9.41 | 138 | 31564 | 5.27 | ppm | | 98 |
| 64) | 4,6-Dinitro-2-methylphenol | 9.50 | 198 | 15755 | 3.85 | ppm | # | 66 |
| 65) | n-Nitrosodiphenylamine | 9.53 | 169 | 96238 | 6.43 | ppm | | 96 |
| 66) | 1,2-Diphenylhydrazine | 9.58 | 77 | 93113 | 5.17 | ppm | | 96 |
| 68) | 4-Bromophenyl-phenylether | 10.14 | 248 | 26753 | 5.12 | ppm | | 94 |
| 69) | Hexachlorobenzene | 10.37 | 284 | 28279 | 5.26 | ppm | | 94 |
| 70) | Atrazine | 10.57 | 200 | 14305 | 2.33 | ppm | | 92 |
| 71) | Pentachlorophenol | 10.71 | 266 | 11470 | 3.30 | ppm | | 88 |
| 72) | Phenanthrene | 10.93 | 178 | 158246 | 5.41 | ppm | | 98 |
| 73) | Anthracene | 11.01 | 178 | 161259 | 5.38 | ppm | | 98 |
| 74) | Carbazole | 11.35 | 167 | 155945 | 5.42 | ppm | | 97 |
| 75) | Di-n-butylphthalate | 12.21 | 149 | 187662 | 5.57 | ppm | | 99 |
| 76) | Fluoranthene | 13.12 | 202 | 158853 | 5.20 | ppm | | 100 |
| 78) | Benzidine | 13.45 | 184 | 90190 | 4.18 | ppm | | 98 |
| 79) | Pyrene | 13.52 | 202 | 170150 | 5.48 | ppm | | 98 |
| 81) | Butylbenzylphthalate | 15.00 | 149 | 78926 | 5.47 | ppm | | 97 |
| 82) | 3,3'-Dichlorobenzidine | 15.86 | 252 | 49056 | 5.15 | ppm | | 99 |
| 83) | Benzo[a]anthracene | 15.81 | 228 | 137722 | 5.19 | ppm | | 97 |
| 84) | Chrysene | 15.88 | 228 | 132159 | 5.42 | ppm | | 99 |
| 85) | bis(2-Ethylhexyl)phthalate | 16.22 | 149 | 109910 | 5.72 | ppm | | 99 |
| 87) | Di-n-octylphthalate | 17.33 | 149 | 178326 | 6.08 | ppm | | 98 |
| 88) | Benzo[b]fluoranthene | 17.73 | 252 | 119529 | 5.17 | ppm | | 96 |
| 89) | Benzo[k]fluoranthene | 17.78 | 252 | 122084 | 5.61 | ppm | | 99 |
| 90) | Benzo[a]pyrene | 18.25 | 252 | 114260 | 5.38 | ppm | | 99 |
| 91) | Indeno[1,2,3-cd]pyrene | 19.96 | 276 | 113427 | 4.94 | ppm | | 97 |
| 92) | Dibenz[a,h]anthracene | 19.99 | 278 | 115213 | 5.18 | ppm | | 96 |
| 93) | Benzo[g,h,i]perylene | 20.31 | 276 | 123165 | 5.13 | ppm | | 94 |

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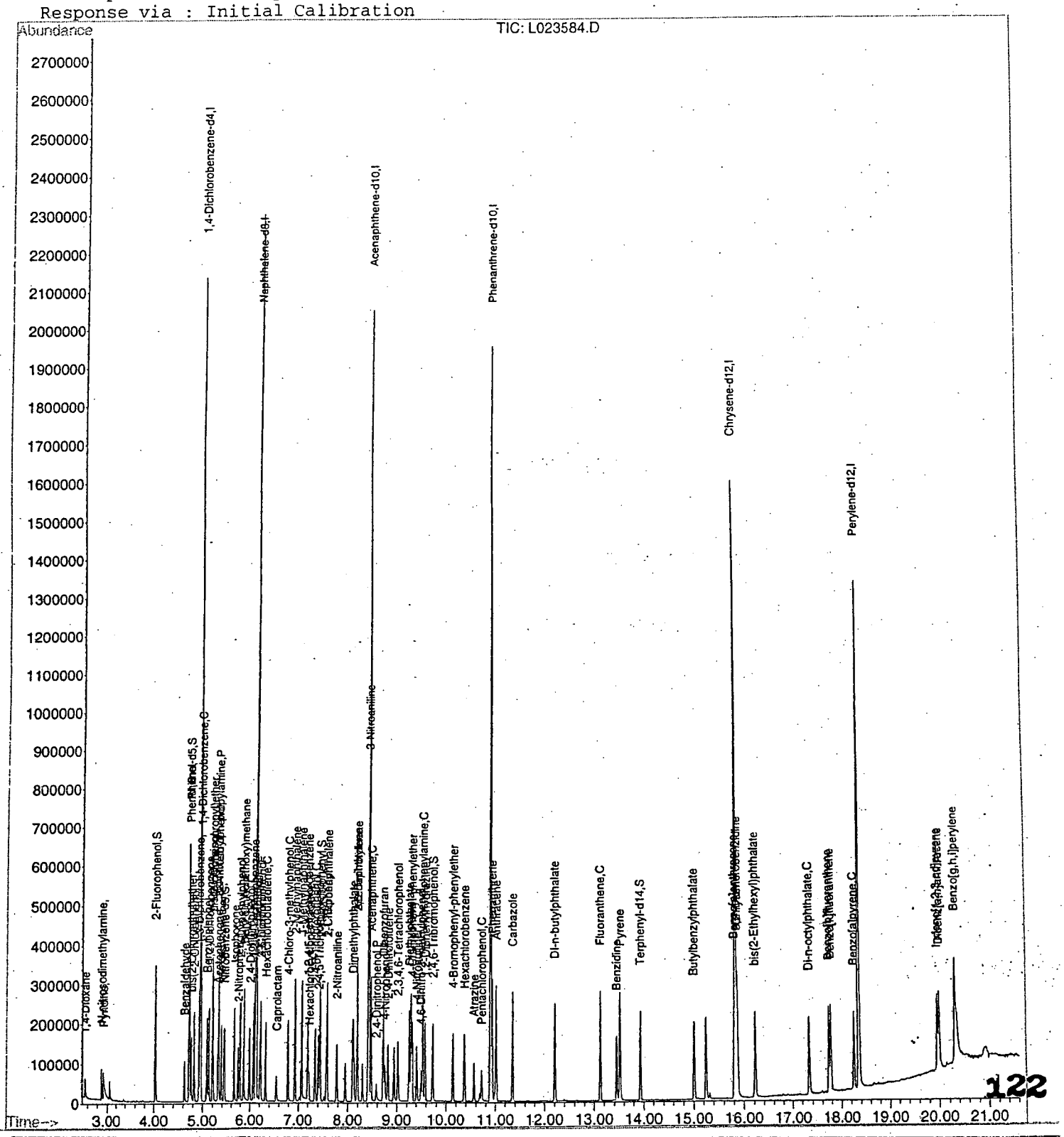
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\092904\L023584.D  Vial: 3
Acq On : 29 Sep 2004 2:45 pm  Operator: sarahm
Sample : ic1251-5  Inst : MSBNA02
Misc : op11351,s11251,970,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:36 2004  Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023585.D
Acq On : 29 Sep 2004 3:17 pm
Sample : ic1251-25
Misc : op11351,sl1251,970,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:36 2004

Vial: 4
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

SMq 9/30/04

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.95 | 152 | 294448 | 40.00 | ppm | 0.00 |
| 22) Naphthalene-d8 | 6.11 | 136 | 1104402 | 40.00 | ppm | -0.01 |
| 41) Acenaphthene-d10 | 8.43 | 164 | 580388 | 40.00 | ppm | -0.02 |
| 63) Phenanthrene-d10 | 10.90 | 188 | 964340 | 40.00 | ppm | -0.02 |
| 77) Chrysene-d12 | 15.84 | 240 | 757543 | 40.00 | ppm | -0.02 |
| 86) Perylene-d12 | 18.36 | 264 | 665300 | 40.00 | ppm | -0.02 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 7) 2-Fluorophenol | 4.02 | 112 | 443248 | 48.38 | ppm | -0.02 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 48.38% | | | |
| 9) Phenol-d5 | 4.72 | 99 | 547804 | 48.27 | ppm | 0.00 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 48.27% | | | |
| 23) Nitrobenzene-d5 | 5.44 | 82 | 234768 | 23.81 | ppm | -0.01 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 47.62%# | | | |
| 45) 2-Fluorobiphenyl | 7.44 | 172 | 516277 | 26.59 | ppm | -0.03 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 53.18% | | | |
| 67) 2,4,6-Tribromophenol | 9.73 | 330 | 113599 | 51.65 | ppm | -0.05 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 51.65% | | | |
| 80) Terphenyl-d14 | 13.93 | 244 | 459247 | 26.40 | ppm | -0.06 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 52.80% | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.54 | 88 | 80198 | 22.31 | ppm | 100 |
| 3) N-nitrosodimethylamine | 2.87 | 42 | 122618 | 23.48 | ppm | 96 |
| 4) Pyridine | 2.89 | 79 | 238703 | 23.01 | ppm | 92 |
| 5) Benzaldehyde | 4.62 | 106 | 92421 | 11.69 | ppm | 97 |
| 6) Aniline | 4.73 | 93 | 350539 | 24.21 | ppm | 93 |
| 8) bis(2-Chloroethyl)ether | 4.77 | 93 | 212562 | 24.12 | ppm | 99 |
| 10) Phenol | 4.73 | 94 | 304501 | 23.99 | ppm | 90 |
| 11) 2-Chlorophenol | 4.82 | 128 | 252785 | 23.91 | ppm | 97 |
| 12) 1,3-Dichlorobenzene | 4.93 | 146 | 281883 | 25.05 | ppm | 98 |
| 13) 1,4-Dichlorobenzene | 4.96 | 146 | 281308 | 24.86 | ppm | 100 |
| 14) 1,2-Dichlorobenzene | 5.12 | 146 | 267957 | 25.25 | ppm | 96 |
| 15) Benzyl alcohol | 5.08 | 108 | 159604 | 22.86 | ppm | 95 |
| 16) bis(2-chloroisopropyl)ethe | 5.20 | 45 | 357434 | 21.92 | ppm | 86 |
| 17) 2-Methylphenol | 5.20 | 108 | 219267 | 23.20 | ppm | 94 |
| 18) Acetophenone | 5.31 | 105 | 156932 | 11.42 | ppm | 99 |
| 19) Hexachloroethane | 5.38 | 117 | 99557 | 24.22 | ppm | 93 |
| 20) N-Nitroso-di-n-propylamine | 5.32 | 70 | 162000 | 23.68 | ppm | 98 |
| 21) 3&4-Methylphenol | 5.32 | 108 | 236082 | 23.45 | ppm | 97 |
| 24) Nitrobenzene | 5.46 | 77 | 234225 | 24.25 | ppm | 96 |
| 25) Isophorone | 5.66 | 82 | 421035 | 23.47 | ppm | 100 |
| 26) 2-Nitrophenol | 5.75 | 139 | 143633 | 24.94 | ppm | 92 |
| 27) 2,4-Dimethylphenol | 5.79 | 107 | 229516 | 23.81 | ppm | 96 |
| 28) bis(2-Chloroethoxy)methane | 5.87 | 93 | 258847 | 24.09 | ppm | 99 |
| 29) Benzoic Acid | 5.90 | 105 | 175007 | 22.54 | ppm | 97 |
| 30) 2,4-Dichlorophenol | 5.99 | 162 | 212037 | 24.77 | ppm | 98 |
| 31) 1,2,4-Trichlorobenzene | 6.07 | 180 | 223323 | 25.27 | ppm | 99 |
| 32) Naphthalene | 6.13 | 128 | 691147 | 24.24 | ppm | 100 |
| 33) 4-Chloroaniline | 6.21 | 127 | 311316 | 24.54 | ppm | 98 |
| 34) 2,6-Dichlorophenol | 6.22 | 162 | 205128 | 24.03 | ppm | 97 |
| 35) Hexachlorobutadiene | 6.33 | 225 | 108580 | 25.32 | ppm | 98 |
| 36) Caprolactam | 6.56 | 113 | 44040 | 11.28 | ppm | 95 |
| 37) 4-Chloro-3-methylphenol | 6.79 | 107 | 205773 | 23.59 | ppm | 95 |
| 38) 2-Methylnaphthalene | 6.93 | 142 | 491830 | 25.50 | ppm | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023585.D Vial: 4
Acq On : 29 Sep 2004 3:17 pm Operator: sarahm
Sample : ic1251-25 Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:36 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 39) | 1-Methylnaphthalene | 7.07 | 142 | 476443 | 25.09 | ppm | | 98 |
| 40) | 1,2,4,5-Tetrachlorobenzene | 7.20 | 216 | 213746 | 23.90 | ppm | | 99 |
| 42) | Hexachlorocyclopentadiene | 7.22 | 237 | 87234 | 18.94 | ppm | | 99 |
| 43) | 2,4,6-Trichlorophenol | 7.35 | 196 | 145617 | 25.22 | ppm | | 95 |
| 44) | 2,4,5-Trichlorophenol | 7.40 | 196 | 158961 | 25.74 | ppm | | 99 |
| 46) | 1,1'-Biphenyl | 7.56 | 154 | 289450 | 12.75 | ppm | | 99 |
| 47) | 2-Chloronaphthalene | 7.58 | 162 | 456108 | 26.89 | ppm | | 96 |
| 48) | 2-Nitroaniline | 7.78 | 65 | 133902 | 25.78 | ppm | | 96 |
| 49) | Acenaphthylene | 8.19 | 152 | 762567 | 27.80 | ppm | | 99 |
| 50) | Dimethylphthalate | 8.10 | 163 | 542324 | 26.96 | ppm | | 98 |
| 51) | 2,6-Dinitrotoluene | 8.20 | 165 | 127511 | 27.37 | ppm | # | 77 |
| 52) | Acenaphthene | 8.47 | 153 | 453050 | 26.73 | ppm | | 99 |
| 53) | 3-Nitroaniline | 8.41 | 138 | 153179 | 27.03 | ppm | | 97 |
| 54) | 2,4-Dinitrophenol | 8.58 | 184 | 63792 | 21.02 | ppm | | 97 |
| 55) | Dibenzofuran | 8.73 | 168 | 652284 | 27.13 | ppm | | 100 |
| 56) | 2,4-Dinitrotoluene | 8.82 | 165 | 173539 | 26.26 | ppm | | 96 |
| 57) | 4-Nitrophenol | 8.75 | 109 | 66161 | 23.36 | ppm | | 92 |
| 58) | 2,3,4,6-Tetrachlorophenol | 9.02 | 232 | 119403 | 25.07 | ppm | | 98 |
| 59) | Fluorene | 9.29 | 166 | 536097 | 27.45 | ppm | | 100 |
| 60) | 4-Chlorophenyl-phenylether | 9.32 | 204 | 235225 | 26.12 | ppm | | 99 |
| 61) | Diethylphthalate | 9.26 | 149 | 528949 | 26.43 | ppm | | 99 |
| 62) | 4-Nitroaniline | 9.42 | 138 | 156844 | 26.90 | ppm | | 97 |
| 64) | 4,6-Dinitro-2-methylphenol | 9.50 | 198 | 98202 | 25.52 | ppm | | 94 |
| 65) | n-Nitrosodiphenylamine | 9.54 | 169 | 462577 | 32.91 | ppm | | 100 |
| 66) | 1,2-Diphenylhydrazine | 9.58 | 77 | 447802 | 26.46 | ppm | | 99 |
| 68) | 4-Bromophenyl-phenylether | 10.15 | 248 | 127733 | 26.02 | ppm | | 97 |
| 69) | Hexachlorobenzene | 10.38 | 284 | 133334 | 26.39 | ppm | | 98 |
| 70) | Atrazine | 10.57 | 200 | 70379 | 12.20 | ppm | | 93 |
| 71) | Pentachlorophenol | 10.72 | 266 | 65999 | 20.23 | ppm | | 99 |
| 72) | Phenanthrene | 10.94 | 178 | 734163 | 26.74 | ppm | | 99 |
| 73) | Anthracene | 11.02 | 178 | 752590 | 26.74 | ppm | | 99 |
| 74) | Carbazole | 11.36 | 167 | 735704 | 27.23 | ppm | | 99 |
| 75) | Di-n-butylphthalate | 12.21 | 149 | 877652 | 27.73 | ppm | | 100 |
| 76) | Fluoranthene | 13.12 | 202 | 772357 | 26.92 | ppm | | 99 |
| 78) | Benzidine | 13.45 | 184 | 506956 | 25.37 | ppm | | 99 |
| 79) | Pyrene | 13.52 | 202 | 787489 | 27.41 | ppm | | 98 |
| 81) | Butylbenzylphthalate | 15.01 | 149 | 370191 | 27.72 | ppm | | 97 |
| 82) | 3,3'-Dichlorobenzidine | 15.87 | 252 | 225155 | 25.53 | ppm | | 98 |
| 83) | Benzo[a]anthracene | 15.81 | 228 | 640075 | 26.07 | ppm | | 98 |
| 84) | Chrysene | 15.89 | 228 | 582966 | 25.84 | ppm | | 99 |
| 85) | bis(2-Ethylhexyl)phthalate | 16.22 | 149 | 500398 | 28.13 | ppm | | 99 |
| 87) | Di-n-octylphthalate | 17.34 | 149 | 819165 | 29.13 | ppm | | 100 |
| 88) | Benzo[b]fluoranthene | 17.75 | 252 | 557276 | 25.15 | ppm | | 100 |
| 89) | Benzo[k]fluoranthene | 17.78 | 252 | 567268 | 27.21 | ppm | | 98 |
| 90) | Benzo[a]pyrene | 18.26 | 252 | 532668 | 26.19 | ppm | | 99 |
| 91) | Indeno[1,2,3-cd]pyrene | 19.97 | 276 | 560470 | 25.48 | ppm | | 99 |
| 92) | Dibenz[a,h]anthracene | 20.01 | 278 | 543852 | 25.54 | ppm | | 98 |
| 93) | Benzo[g,h,i]perylene | 20.32 | 276 | 591884 | 25.75 | ppm | | 95 |

(#) = qualifier out of range (m) = manual integration

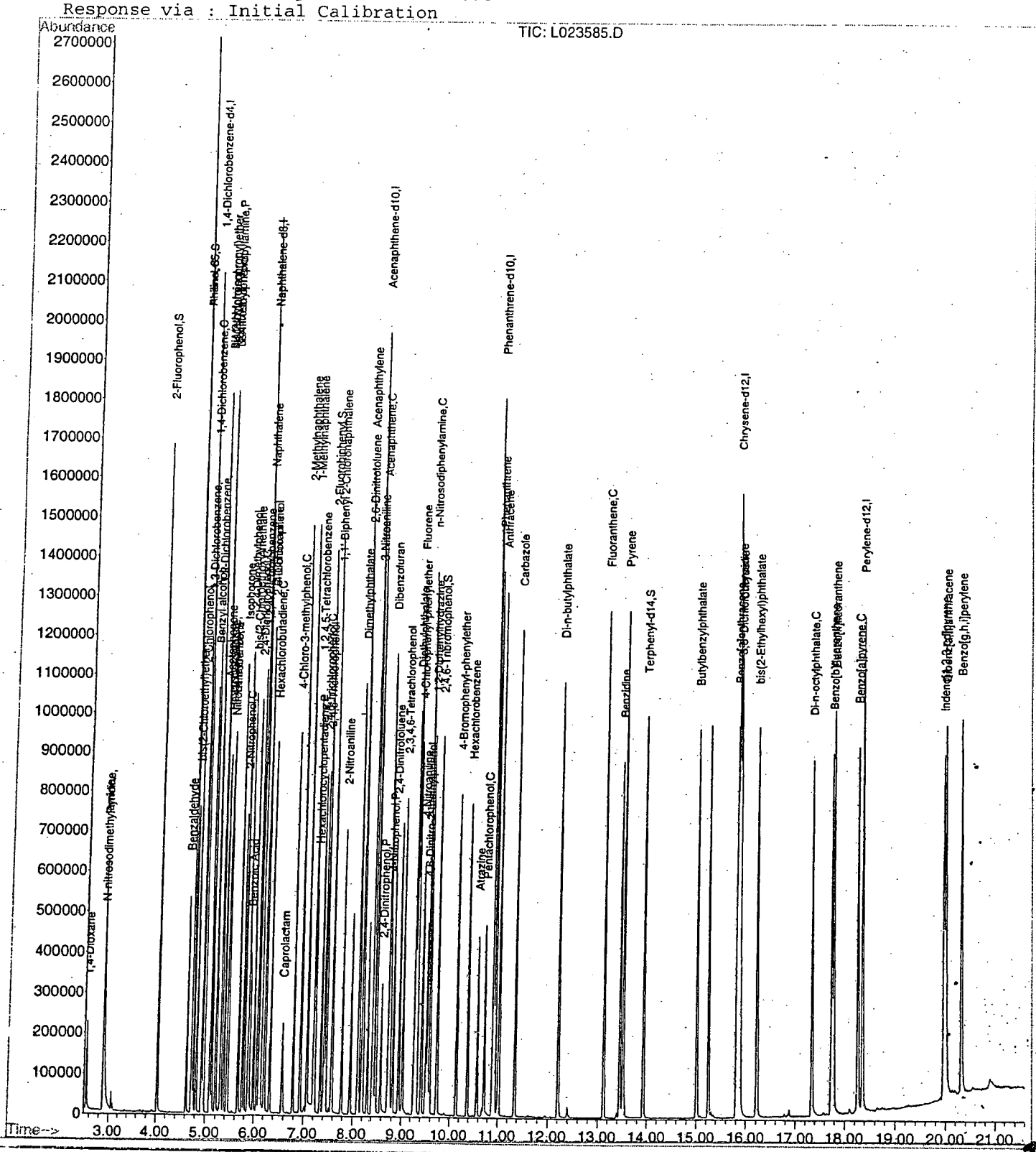
Quantitation Report

Data File : C:\HPCHEM\1\DATA\092904\L023585.D
Acq On : 29 Sep 2004 3:17 pm
Sample : ic1251-25
Misc : op11351,sl1251,970,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:36 2004

Vial: 4
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

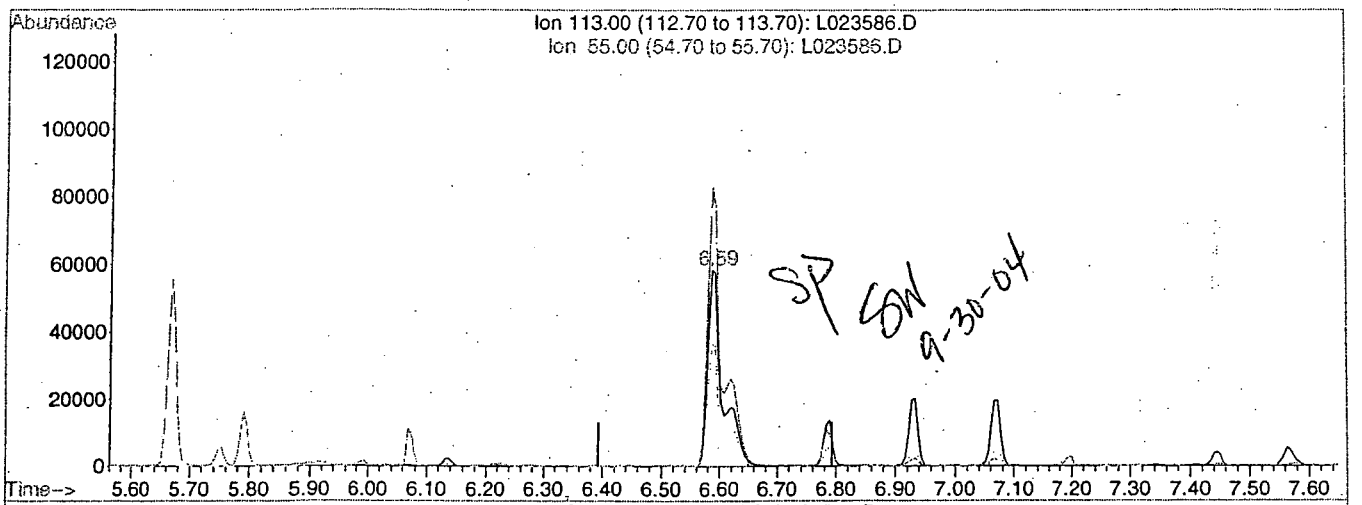
Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration

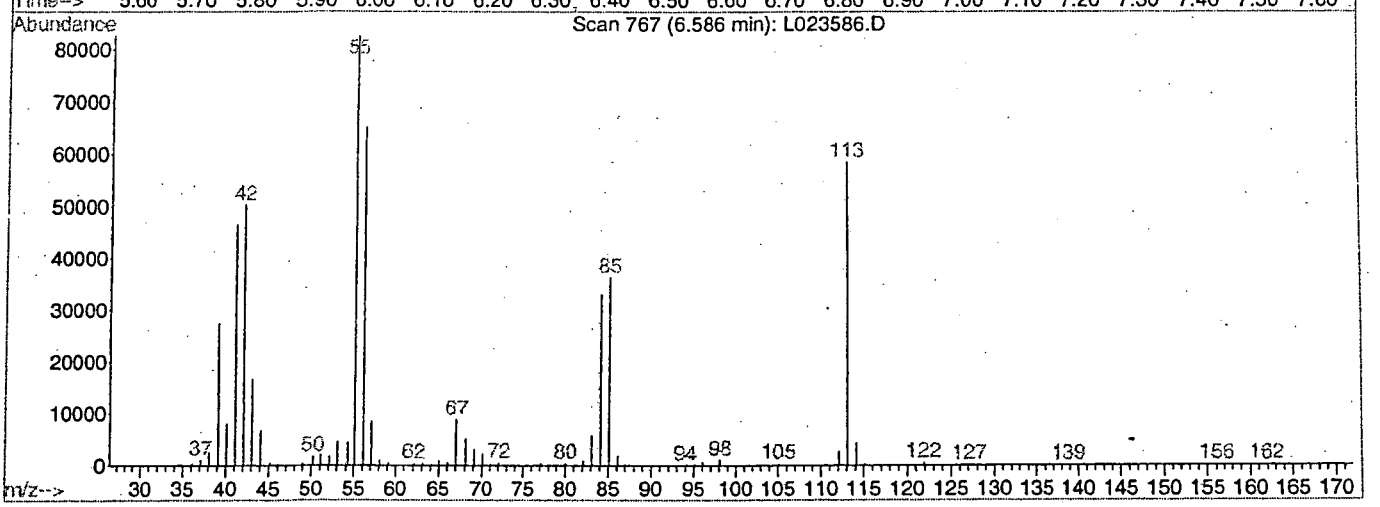


Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\092904\L023586.D  Vial: 5
Acq On : 29 Sep 2004 3:48 pm  Operator: sarahm
Sample : ic1251-50  Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water  Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 30 9:38 2004  Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : Tune Evaluation
Last Update : Fri Aug 06 13:33:08 2004
Response via : Multiple Level Calibration




TIC: L023586.D

(36) Caprolactam

6.59min 24.26ppm m

response 104994

| Ion | Exp% | Act% |
|---|---|---|
| 113.00 | 100 | 100 |
| 55.00 | 154.90 | 141.46 |
| 85.00 | 62.40 | 62.16 |
| 0.00 | 0.00 | 0.00 |



L023586.D DFTPP.M Thu Sep 30 14:09:44 2004

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023586.D Vial: 5
Acq On : 29 Sep 2004 3:48 pm Operator: sarahm
Sample : ic1251-50 Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:38 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

Bm 9/30/04

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.95 | 152 | 323951 | 40.00 | ppm | 0.00 |
| 22) Naphthalene-d8 | 6.12 | 136 | 1224599 | 40.00 | ppm | 0.00 |
| 41) Acenaphthene-d10 | 8.43 | 164 | 647260 | 40.00 | ppm | -0.01 |
| 63) Phenanthrene-d10 | 10.90 | 188 | 1111721 | 40.00 | ppm | -0.01 |
| 77) Chrysene-d12 | 15.84 | 240 | 790985 | 40.00 | ppm | -0.02 |
| 86) Perylene-d12 | 18.36 | 264 | 692571 | 40.00 | ppm | -0.01 |
| **System Monitoring Compounds** | | | | | | |
| 7) 2-Fluorophenol | 4.03 | 112 | 961322 | 95.38 | ppm | -0.02 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 95.38%# | | | |
| 9) Phenol-d5 | 4.73 | 99 | 1093458 | 87.57 | ppm | 0.00 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 87.57%# | | | |
| 23) Nitrobenzene-d5 | 5.44 | 82 | 535753 | 49.01 | ppm | -0.01 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 98.02% | | | |
| 45) 2-Fluorobiphenyl | 7.45 | 172 | 1147068 | 52.98 | ppm | -0.03 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 105.96% | | | |
| 67) 2,4,6-Tribromophenol | 9.74 | 330 | 252410 | 99.54 | ppm | -0.04 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 99.54% | | | |
| 80) Terphenyl-d14 | 13.94 | 244 | 1000236 | 55.08 | ppm | -0.05 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 110.16% | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.54 | 88 | 177868 | 44.97 | ppm | 95 |
| 3) N-nitrosodimethylamine | 2.88 | 42 | 273682 | 47.64 | ppm | 94 |
| 4) Pyridine | 2.88 | 79 | 539014 | 47.23 | ppm | 92 |
| 5) Benzaldehyde | 4.63 | 106 | 207647 | 23.87 | ppm | 98 |
| 6) Aniline | 4.73 | 93 | 684827 | 42.98 | ppm | 89 |
| 8) bis(2-Chloroethyl)ether | 4.77 | 93 | 459636 | 47.41 | ppm | 98 |
| 10) Phenol | 4.74 | 94 | 616436 | 44.15 | ppm | 97 |
| 11) 2-Chlorophenol | 4.82 | 128 | 563557 | 48.45 | ppm | 98 |
| 12) 1,3-Dichlorobenzene | 4.92 | 146 | 626496 | 50.61 | ppm | 98 |
| 13) 1,4-Dichlorobenzene | 4.97 | 146 | 609637 | 48.97 | ppm | 99 |
| 14) 1,2-Dichlorobenzene | 5.12 | 146 | 585738 | 50.16 | ppm | 97 |
| 15) Benzyl alcohol | 5.08 | 108 | 365659 | 47.60 | ppm | 100 |
| 16) bis(2-chloroisopropyl)ethe | 5.20 | 45 | 735661 | 41.00 | ppm | 79 |
| 17) 2-Methylphenol | 5.20 | 108 | 486212 | 46.76 | ppm | 95 |
| 18) Acetophenone | 5.30 | 105 | 372586 | 24.64 | ppm | 98 |
| 19) Hexachloroethane | 5.38 | 117 | 216951 | 47.97 | ppm | 98 |
| 20) N-Nitroso-di-n-propylamine | 5.32 | 70 | 348811 | 46.33 | ppm | 97 |
| 21) 3&4-Methylphenol | 5.32 | 108 | 521091 | 47.05 | ppm | 99 |
| 24) Nitrobenzene | 5.46 | 77 | 505140 | 47.17 | ppm | 99 |
| 25) Isophorone | 5.67 | 82 | 954007 | 47.95 | ppm | 99 |
| 26) 2-Nitrophenol | 5.75 | 139 | 328109 | 51.37 | ppm | 95 |
| 27) 2,4-Dimethylphenol | 5.79 | 107 | 500165 | 46.80 | ppm | 96 |
| 28) bis(2-Chloroethoxy)methane | 5.88 | 93 | 569110 | 47.77 | ppm | 99 |
| 29) Benzoic Acid | 5.92 | 105 | 431429 | 50.11 | ppm | 99 |
| 30) 2,4-Dichlorophenol | 5.99 | 162 | 478236 | 50.38 | ppm | 98 |
| 31) 1,2,4-Trichlorobenzene | 6.07 | 180 | 491492 | 50.15 | ppm | 98 |
| 32) Naphthalene | 6.14 | 128 | 1499643 | 47.44 | ppm | 100 |
| 33) 4-Chloroaniline | 6.22 | 127 | 691812 | 49.18 | ppm | 97 |
| 34) 2,6-Dichlorophenol | 6.23 | 162 | 456408 | 48.22 | ppm | 97 |
| 35) Hexachlorobutadiene | 6.32 | 225 | 236463 | 49.73 | ppm | 99 |
| 36) Caprolactam | 6.59 | 113 | 104994m | 24.26 | ppm | |
| 37) 4-Chloro-3-methylphenol | 6.79 | 107 | 467866 | 48.38 | ppm | 94 |
| 38) 2-Methylnaphthalene | 6.93 | 142 | 1104688 | 51.65 | ppm | 99 |

127

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023586.D Vial: 5
Acq On : 29 Sep 2004 3:48 pm Operator: sarahm
Sample : ic1251-50 Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:38 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 39) 1-Methylnaphthalene | 7.07 | 142 | 1065617 | 50.60 ppm | 98 |
| 40) 1,2,4,5-Tetrachlorobenzene | 7.20 | 216 | 485579 | 48.97 ppm | 99 |
| 42) Hexachlorocyclopentadiene | 7.23 | 237 | 228524 | 44.50 ppm | 99 |
| 43) 2,4,6-Trichlorophenol | 7.34 | 196 | 347816 | 54.02 ppm | 96 |
| 44) 2,4,5-Trichlorophenol | 7.41 | 196 | 364989 | 52.99 ppm | 98 |
| 46) 1,1'-Biphenyl | 7.56 | 154 | 678321 | 26.78 ppm | 100 |
| 47) 2-Chloronaphthalene | 7.58 | 162 | 1002489 | 52.99 ppm | 97 |
| 48) 2-Nitroaniline | 7.78 | 65 | 312610 | 53.98 ppm | 97 |
| 49) Acenaphthylene | 8.19 | 152 | 1688280 | 55.19 ppm | 100 |
| 50) Dimethylphthalate | 8.12 | 163 | 1218822 | 54.33 ppm | 99 |
| 51) 2,6-Dinitrotoluene | 8.20 | 165 | 291351 | 56.09 ppm | 77 |
| 52) Acenaphthene | 8.48 | 153 | 1017102 | 53.81 ppm | 100 |
| 53) 3-Nitroaniline | 8.42 | 138 | 348515 | 55.16 ppm | 95 |
| 54) 2,4-Dinitrophenol | 8.58 | 184 | 176523 | 52.16 ppm | 97 |
| 55) Dibenzofuran | 8.73 | 168 | 1449862 | 54.08 ppm | 98 |
| 56) 2,4-Dinitrotoluene | 8.83 | 165 | 399177 | 54.16 ppm | 96 |
| 57) 4-Nitrophenol | 8.76 | 109 | 153889 | 48.73 ppm | 94 |
| 58) 2,3,4,6-Tetrachlorophenol | 9.02 | 232 | 271624 | 51.15 ppm | 98 |
| 59) Fluorene | 9.29 | 166 | 1172358 | 53.84 ppm | 100 |
| 60) 4-Chlorophenyl-phenylether | 9.32 | 204 | 519235 | 51.70 ppm | 100 |
| 61) Diethylphthalate | 9.27 | 149 | 1198073 | 53.68 ppm | 100 |
| 62) 4-Nitroaniline | 9.43 | 138 | 362822 | 55.80 ppm | 98 |
| 64) 4,6-Dinitro-2-methylphenol | 9.51 | 198 | 246189 | 55.49 ppm | 95 |
| 65) n-Nitrosodiphenylamine | 9.55 | 169 | 1033142 | 63.77 ppm | 99 |
| 66) 1,2-Diphenylhydrazine | 9.59 | 77 | 1002268 | 51.37 ppm | 94 |
| 68) 4-Bromophenyl-phenylether | 10.15 | 248 | 291137 | 51.44 ppm | 97 |
| 69) Hexachlorobenzene | 10.38 | 284 | 293375 | 50.37 ppm | 95 |
| 70) Atrazine | 10.58 | 200 | 167728 | 25.23 ppm | 91 |
| 71) Pentachlorophenol | 10.73 | 266 | 167179 | 44.44 ppm | 98 |
| 72) Phenanthrene | 10.94 | 178 | 1604242 | 50.68 ppm | 99 |
| 73) Anthracene | 11.02 | 178 | 1658901 | 51.13 ppm | 99 |
| 74) Carbazole | 11.36 | 167 | 1615692 | 51.87 ppm | 99 |
| 75) Di-n-butylphthalate | 12.21 | 149 | 1920438 | 52.64 ppm | 100 |
| 76) Fluoranthene | 13.13 | 202 | 1646164 | 49.76 ppm | 98 |
| 78) Benzidine | 13.46 | 184 | 1132989 | 54.31 ppm | 99 |
| 79) Pyrene | 13.53 | 202 | 1680603 | 56.02 ppm | 98 |
| 81) Butylbenzylphthalate | 15.01 | 149 | 817617 | 58.63 ppm | 98 |
| 82) 3,3'-Dichlorobenzidine | 15.88 | 252 | 469093 | 50.95 ppm | 99 |
| 83) Benzo[a]anthracene | 15.82 | 228 | 1368719 | 53.39 ppm | 100 |
| 84) Chrysene | 15.90 | 228 | 1208146 | 51.29 ppm | 100 |
| 85) bis(2-Ethylhexyl)phthalate | 16.22 | 149 | 1069603 | 57.58 ppm | 99 |
| 87) Di-n-octylphthalate | 17.34 | 149 | 1694216 | 57.88 ppm | 99 |
| 88) Benzo[b]fluoranthene | 17.76 | 252 | 1135406 | 49.22 ppm | 100 |
| 89) Benzo[k]fluoranthene | 17.80 | 252 | 1144328 | 52.73 ppm | 99 |
| 90) Benzo[a]pyrene | 18.27 | 252 | 1115929 | 52.71 ppm | 99 |
| 91) Indeno[1,2,3-cd]pyrene | 19.98 | 276 | 1119797 | 48.91 ppm | 98 |
| 92) Dibenz[a,h]anthracene | 20.02 | 278 | 1065607 | 48.08 ppm | 99 |
| 93) Benzo[g,h,i]perylene | 20.34 | 276 | 1153313 | 48.19 ppm | 98 |

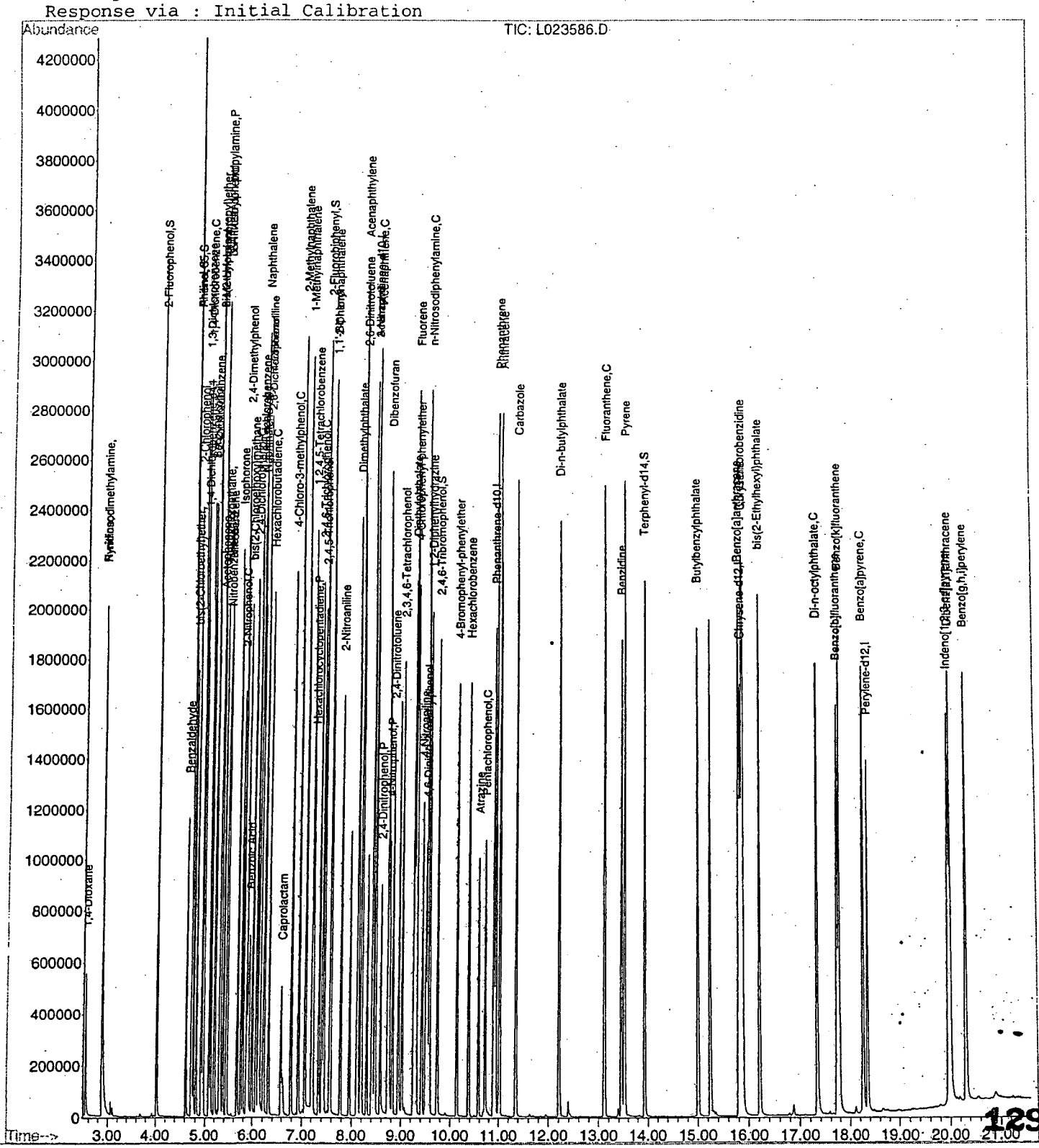
128

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\092904\L023586.D  Vial: 5
Acq On : 29 Sep 2004 3:48 pm  Operator: sarahm
Sample : ic1251-50  Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:38 2004  Quant Results File: 8270C.RES

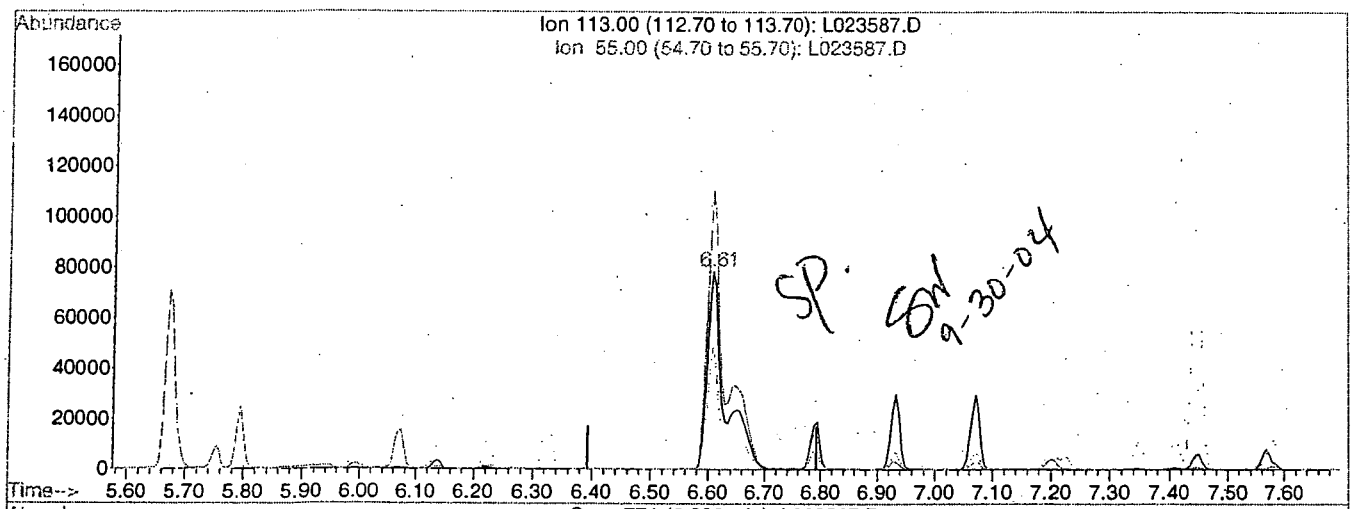
Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration

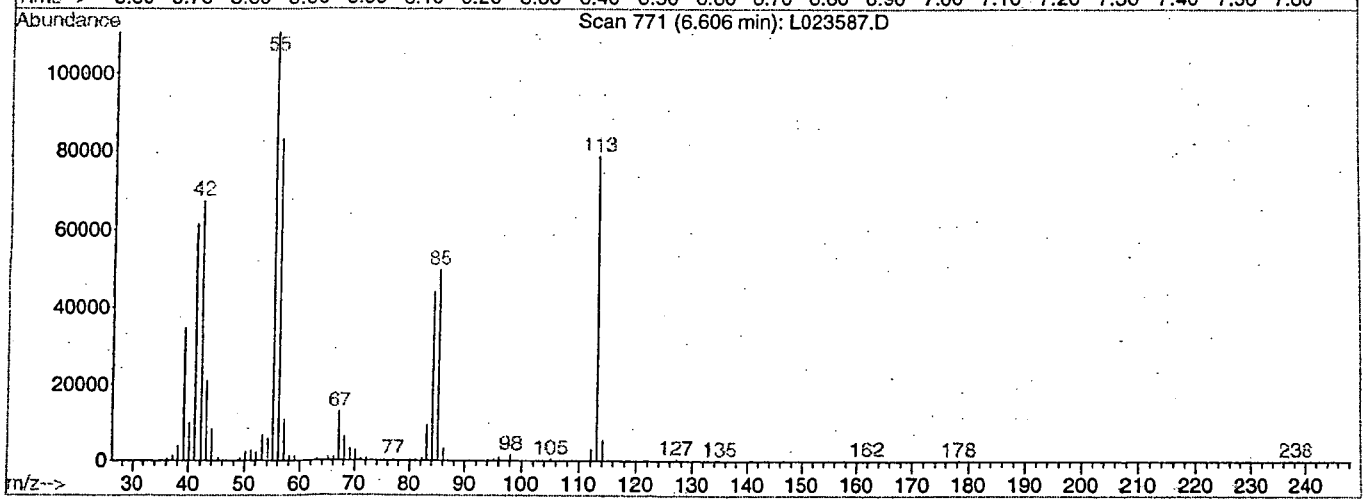


Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\092904\L023587.D  Vial: 6
Acq On : 29 Sep 2004 4:20 pm  Operator: sarahm
Sample : ic1251-100  Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water  Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 30 9:43 2004  Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : Tune Evaluation
Last Update : Fri Aug 06 13:33:08 2004
Response via : Multiple Level Calibration




TIC: L023587.D

(36) Caprolactam

6.61min 48.16ppm m

response 171953

| Ion | Exp% | Act% |
|---|---|---|
| 113.00 | 100 | 100 |
| 55.00 | 154.90 | 140.59 |
| 85.00 | 62.40 | 63.12 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023587.D Vial: 6
Acq On : 29 Sep 2004 4:20 pm Operator: sarahm
Sample : ic1251-100 Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:43 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

SBm 9/30/04

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.96 | 152 | 256723 | 40.00 | ppm | 0.00 |
| 22) Naphthalene-d8 | 6.11 | 136 | 1010111 | 40.00 | ppm | 0.00 |
| 41) Acenaphthene-d10 | 8.43 | 164 | 522778 | 40.00 | ppm | 0.00 |
| 63) Phenanthrene-d10 | 10.91 | 188 | 963294 | 40.00 | ppm | 0.00 |
| 77) Chrysene-d12 | 15.85 | 240 | 722416 | 40.00 | ppm | 0.00 |
| 86) Perylene-d12 | 18.37 | 264 | 692512 | 40.00 | ppm | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 7) 2-Fluorophenol | 4.03 | 112 | 1423752 | 178.24 | ppm | -0.02 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery | = | 178.24%# | |
| 9) Phenol-d5 | 4.73 | 99 | 1573044 | 158.98 | ppm | 0.01 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery | = | 158.98%# | |
| 23) Nitrobenzene-d5 | 5.45 | 82 | 825682 | 91.57 | ppm | 0.00 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery | = | 183.14%# | |
| 45) 2-Fluorobiphenyl | 7.45 | 172 | 1721793 | 98.47 | ppm | -0.02 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery | = | 196.94%# | |
| 67) 2,4,6-Tribromophenol | 9.75 | 330 | 385642 | 175.52 | ppm | -0.03 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery | = | 175.52%# | |
| 80) Terphenyl-d14 | 13.95 | 244 | 1583087 | 95.45 | ppm | -0.04 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery | = | 190.90%# | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.54 | 88 | 279196 | 89.07 | ppm | 100 |
| 3) N-nitrosodimethylamine | 2.88 | 42 | 409258 | 89.90 | ppm | 93 |
| 4) Pyridine | 2.88 | 79 | 806882 | 89.21 | ppm | 89 |
| 5) Benzaldehyde | 4.62 | 106 | 153569 | 22.27 | ppm | 98 |
| 6) Aniline | 4.73 | 93 | 957068 | 75.80 | ppm | 97 |
| 8) bis(2-Chloroethyl)ether | 4.77 | 93 | 706203 | 91.91 | ppm | 99 |
| 10) Phenol | 4.74 | 94 | 899288 | 81.27 | ppm | 87 |
| 11) 2-Chlorophenol | 4.82 | 128 | 865449 | 93.90 | ppm | 98 |
| 12) 1,3-Dichlorobenzene | 4.92 | 146 | 942795 | 96.11 | ppm | 98 |
| 13) 1,4-Dichlorobenzene | 4.97 | 146 | 918901 | 93.14 | ppm | 99 |
| 14) 1,2-Dichlorobenzene | 5.12 | 146 | 877527 | 94.83 | ppm | 97 |
| 15) Benzyl alcohol | 5.09 | 108 | 574908 | 94.45 | ppm | 96 |
| 16) bis(2-chloroisopropyl)ethe | 5.21 | 45 | 1048475 | 73.74 | ppm | 78 |
| 17) 2-Methylphenol | 5.20 | 108 | 739253 | 89.72 | ppm | 93 |
| 18) Acetophenone | 5.31 | 105 | 569781 | 47.55 | ppm | 99 |
| 19) Hexachloroethane | 5.38 | 117 | 325996 | 90.96 | ppm | 99 |
| 20) N-Nitroso-di-n-propylamine | 5.33 | 70 | 528950 | 88.66 | ppm | 96 |
| 21) 3&4-Methylphenol | 5.32 | 108 | 790143 | 90.02 | ppm | 97 |
| 24) Nitrobenzene | 5.46 | 77 | 781836 | 88.52 | ppm | 99 |
| 25) Isophorone | 5.68 | 82 | 1500631 | 91.45 | ppm | 98 |
| 26) 2-Nitrophenol | 5.75 | 139 | 522400 | 99.16 | ppm | 92 |
| 27) 2,4-Dimethylphenol | 5.79 | 107 | 773390 | 87.73 | ppm | 95 |
| 28) bis(2-Chloroethoxy)methane | 5.87 | 93 | 873969 | 88.93 | ppm | 98 |
| 29) Benzoic Acid | 5.95 | 105 | 722523 | 101.74 | ppm | 97 |
| 30) 2,4-Dichlorophenol | 5.99 | 162 | 740167 | 94.53 | ppm | 100 |
| 31) 1,2,4-Trichlorobenzene | 6.07 | 180 | 746366 | 92.32 | ppm | 98 |
| 32) Naphthalene | 6.14 | 128 | 2242561 | 86.00 | ppm | 99 |
| 33) 4-Chloroaniline | 6.22 | 127 | 1039159 | 89.55 | ppm | 98 |
| 34) 2,6-Dichlorophenol | 6.23 | 162 | 697958 | 89.40 | ppm | 98 |
| 35) Hexachlorobutadiene | 6.33 | 225 | 357249 | 91.09 | ppm | 97 |
| 36) Caprolactam | 6.61 | 113 | 171953m | 48.16 | ppm | |
| 37) 4-Chloro-3-methylphenol | 6.79 | 107 | 728261 | 91.29 | ppm | 96 |
| 38) 2-Methylnaphthalene | 6.93 | 142 | 1667911 | 94.53 | ppm | 98 |

131

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023587.D Vial: 6
Acq On : 29 Sep 2004 4:20 pm Operator: sarahm
Sample : ic1251-100 Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:43 2004 Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) 1-Methylnaphthalene | 7.07 | 142 | 1622095 | 93.38 | ppm | | 97 |
| 40) 1,2,4,5-Tetrachlorobenzene | 7.20 | 216 | 731234 | 89.40 | ppm | | 99 |
| 42) Hexachlorocyclopentadiene | 7.23 | 237 | 372030 | 89.69 | ppm | | 99 |
| 43) 2,4,6-Trichlorophenol | 7.35 | 196 | 535308 | 102.94 | ppm | | 95 |
| 44) 2,4,5-Trichlorophenol | 7.41 | 196 | 561608 | 100.95 | ppm | | 98 |
| 46) 1,1'-Biphenyl | 7.57 | 154 | 1015407 | 49.64 | ppm | | 100 |
| 47) 2-Chloronaphthalene | 7.58 | 162 | 1496904 | 97.97 | ppm | | 96 |
| 48) 2-Nitroaniline | 7.79 | 65 | 501539 | 107.22 | ppm | | 97 |
| 49) Acenaphthylene | 8.20 | 152 | 2516872 | 101.86 | ppm | | 100 |
| 50) Dimethylphthalate | 8.12 | 163 | 1856865 | 102.49 | ppm | | 99 |
| 51) 2,6-Dinitrotoluene | 8.21 | 165 | 454603 | 108.35 | ppm | # | 71 |
| 52) Acenaphthene | 8.49 | 153 | 1523212 | 99.77 | ppm | | 98 |
| 53) 3-Nitroaniline | 8.43 | 138 | 549908 | 107.75 | ppm | | 95 |
| 54) 2,4-Dinitrophenol | 8.59 | 184 | 314507 | 115.05 | ppm | | 96 |
| 55) Dibenzofuran | 8.74 | 168 | 2224654 | 102.73 | ppm | | 92 |
| 56) 2,4-Dinitrotoluene | 8.84 | 165 | 654025 | 109.88 | ppm | | 94 |
| 57) 4-Nitrophenol | 8.77 | 109 | 258982 | 101.53 | ppm | | 90 |
| 58) 2,3,4,6-Tetrachlorophenol | 9.03 | 232 | 432695 | 100.88 | ppm | | 99 |
| 59) Fluorene | 9.30 | 166 | 1781968 | 101.31 | ppm | | 99 |
| 60) 4-Chlorophenyl-phenylether | 9.33 | 204 | 796312 | 98.17 | ppm | | 99 |
| 61) Diethylphthalate | 9.27 | 149 | 1833292 | 101.69 | ppm | | 98 |
| 62) 4-Nitroaniline | 9.45 | 138 | 593938 | 113.10 | ppm | | 97 |
| 64) 4,6-Dinitro-2-methylphenol | 9.53 | 198 | 411350 | 107.01 | ppm | # | 41 |
| 65) n-Nitrosodiphenylamine | 9.56 | 169 | 1577837 | 112.39 | ppm | | 100 |
| 66) 1,2-Diphenylhydrazine | 9.59 | 77 | 1507115 | 89.15 | ppm | | 96 |
| 68) 4-Bromophenyl-phenylether | 10.15 | 248 | 456491 | 93.08 | ppm | | 97 |
| 69) Hexachlorobenzene | 10.38 | 284 | 454541 | 90.07 | ppm | | 94 |
| 70) Atrazine | 10.59 | 200 | 262758 | 45.61 | ppm | | 91 |
| 71) Pentachlorophenol | 10.73 | 266 | 277454 | 85.12 | ppm | | 98 |
| 72) Phenanthrene | 10.95 | 178 | 2502583 | 91.24 | ppm | | 99 |
| 73) Anthracene | 11.03 | 178 | 2560144 | 91.06 | ppm | | 99 |
| 74) Carbazole | 11.37 | 167 | 2567110 | 95.11 | ppm | | 99 |
| 75) Di-n-butylphthalate | 12.22 | 149 | 2962913 | 93.72 | ppm | | 99 |
| 76) Fluoranthene | 13.13 | 202 | 2615961 | 91.26 | ppm | | 98 |
| 78) Benzidine | 13.47 | 184 | 1683427 | 88.35 | ppm | | 99 |
| 79) Pyrene | 13.54 | 202 | 2697992 | 98.47 | ppm | | 97 |
| 81) Butylbenzylphthalate | 15.02 | 149 | 1338709 | 105.12 | ppm | | 97 |
| 82) 3,3'-Dichlorobenzidine | 15.89 | 252 | 770793 | 91.66 | ppm | | 99 |
| 83) Benzo[a]anthracene | 15.83 | 228 | 2312558 | 98.77 | ppm | | 100 |
| 84) Chrysene | 15.91 | 228 | 1994501 | 92.70 | ppm | | 99 |
| 85) bis(2-Ethylhexyl)phthalate | 16.23 | 149 | 1729319 | 101.93 | ppm | | 99 |
| 87) Di-n-octylphthalate | 17.35 | 149 | 2883349 | 98.52 | ppm | | 99 |
| 88) Benzo[b]fluoranthene | 17.77 | 252 | 2219088 | 96.21 | ppm | | 99 |
| 89) Benzo[k]fluoranthene | 17.81 | 252 | 1972340 | 90.89 | ppm | | 99 |
| 90) Benzo[a]pyrene | 18.28 | 252 | 2063293 | 97.47 | ppm | | 99 |
| 91) Indeno[1,2,3-cd]pyrene | 20.00 | 276 | 2415265 | 105.50 | ppm | | 97 |
| 92) Dibenz[a,h]anthracene | 20.04 | 278 | 2070771 | 93.44 | ppm | | 99 |
| 93) Benzo[g,h,i]perylene | 20.36 | 276 | 2307709 | 96.44 | ppm | | 99 |

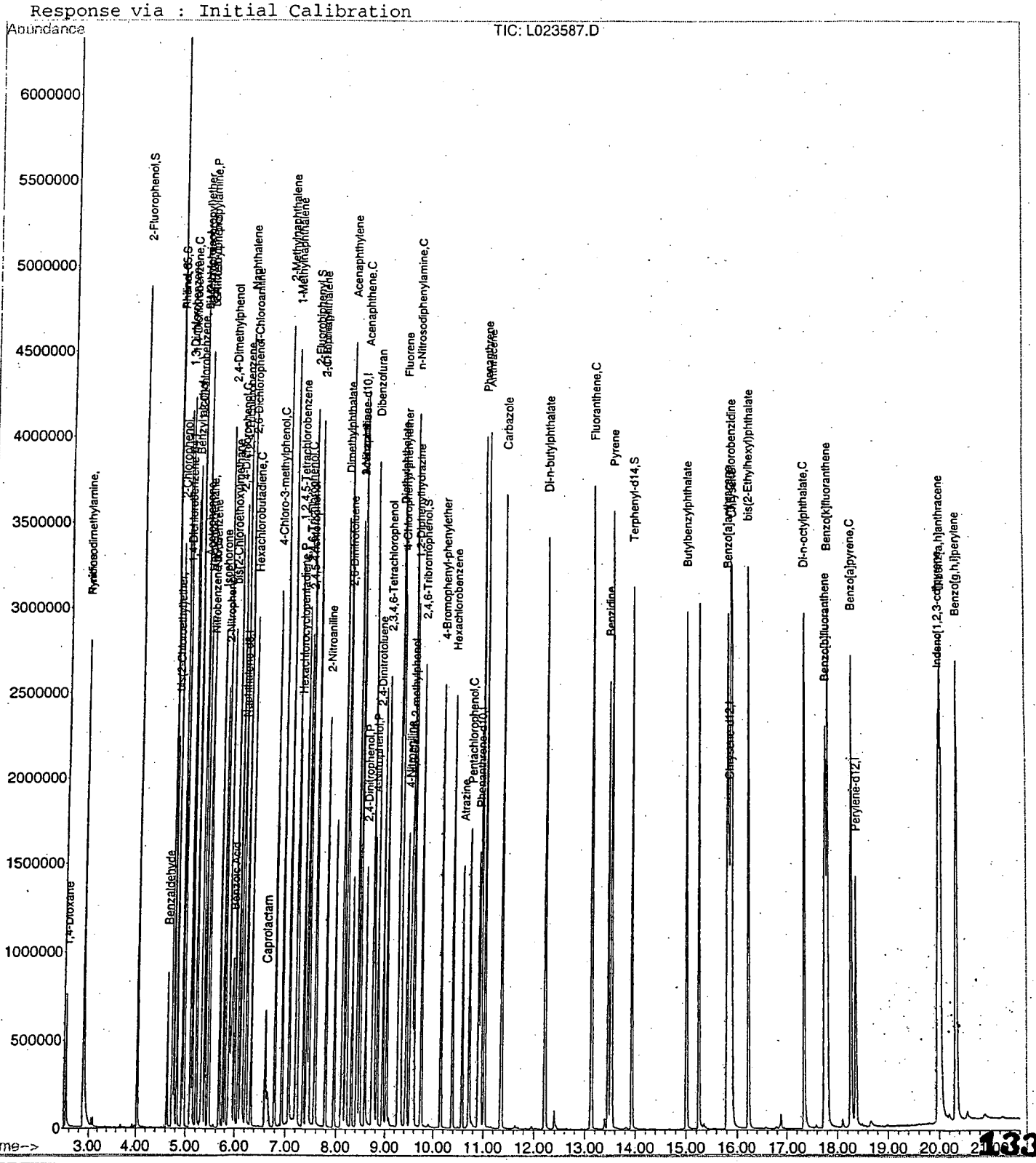
132

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\092904\L023587.D  Vial: 6
Acq On : 29 Sep 2004 4:20 pm  Operator: sarahm
Sample : ic1251-100  Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:43 2004  Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration

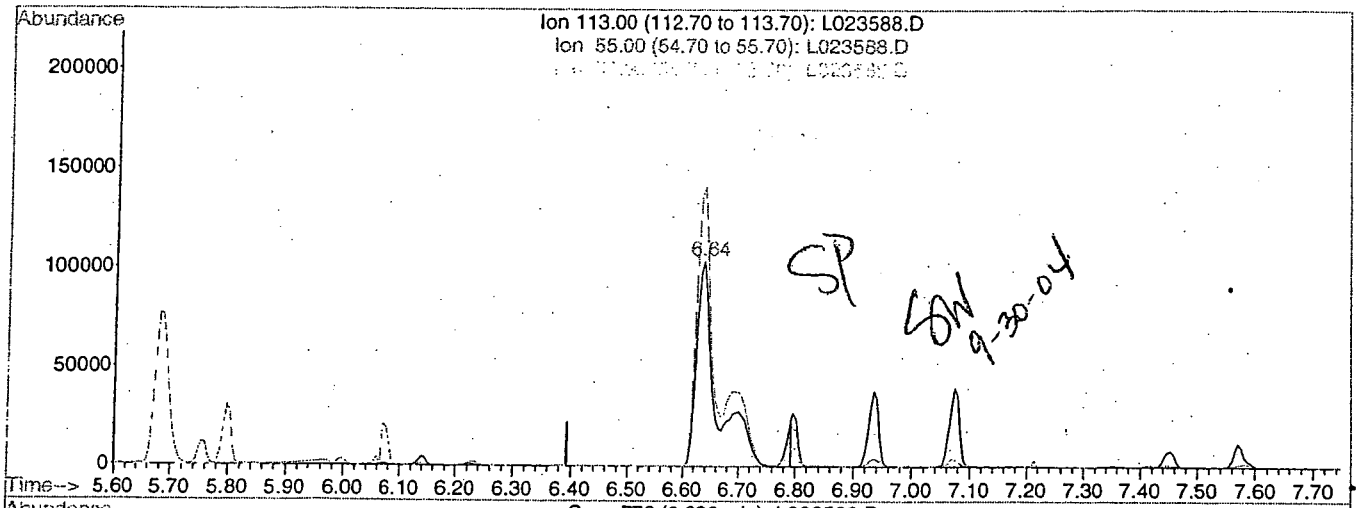


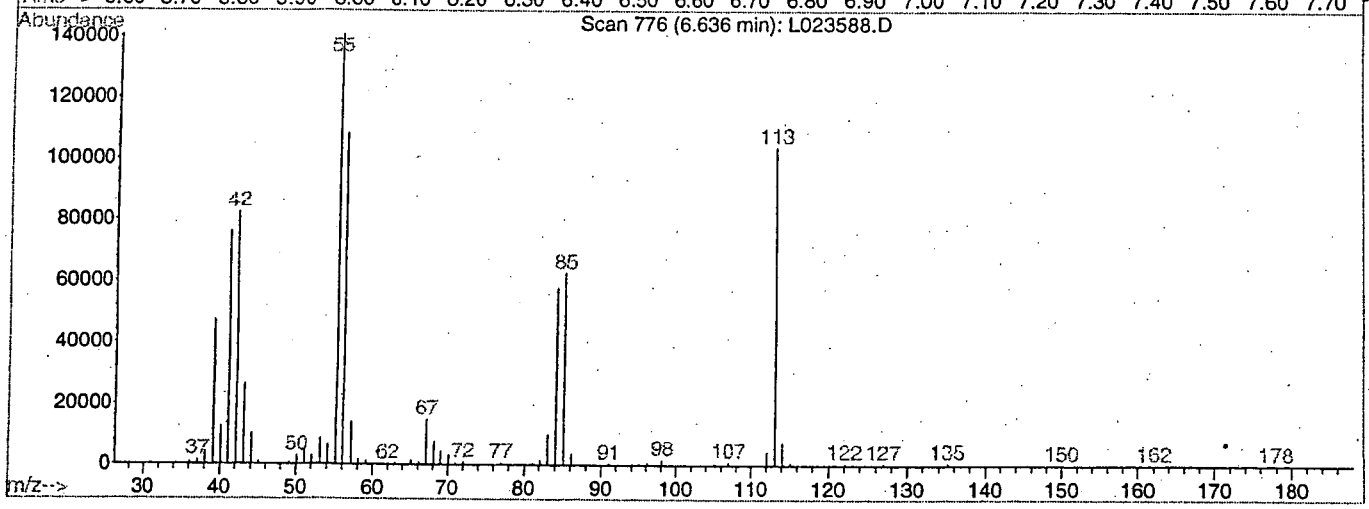
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\092904\L023588.D  Vial: 7
Acq On : 29 Sep 2004 4:52 pm  Operator: sarahm
Sample : ic1251-125  Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water  Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 30 9:47 2004  Quant Results File: temp.res

SM 9/30/04

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : Tune Evaluation
Last Update : Fri Aug 06 13:33:08 2004
Response via : Multiple Level Calibration




TIC: L023588.D

(36) Caprolactam

6.64min 63.13ppm m

response 264482

| Ion | Exp% | Act% |
|---|---|---|
| 113.00 | 100 | 100 |
| 55.00 | 154.90 | 135.53 |
| 85.00 | 62.40 | 60.35 |
| 0.00 | 0.00 | 0.00 |

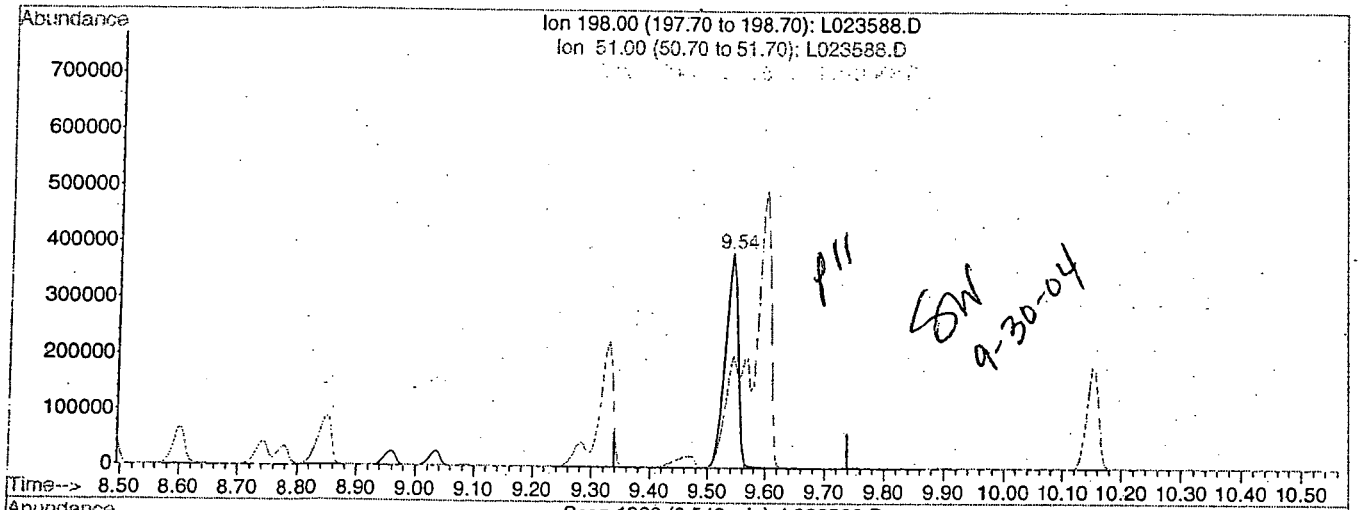
Quantitation Report (Qedit)

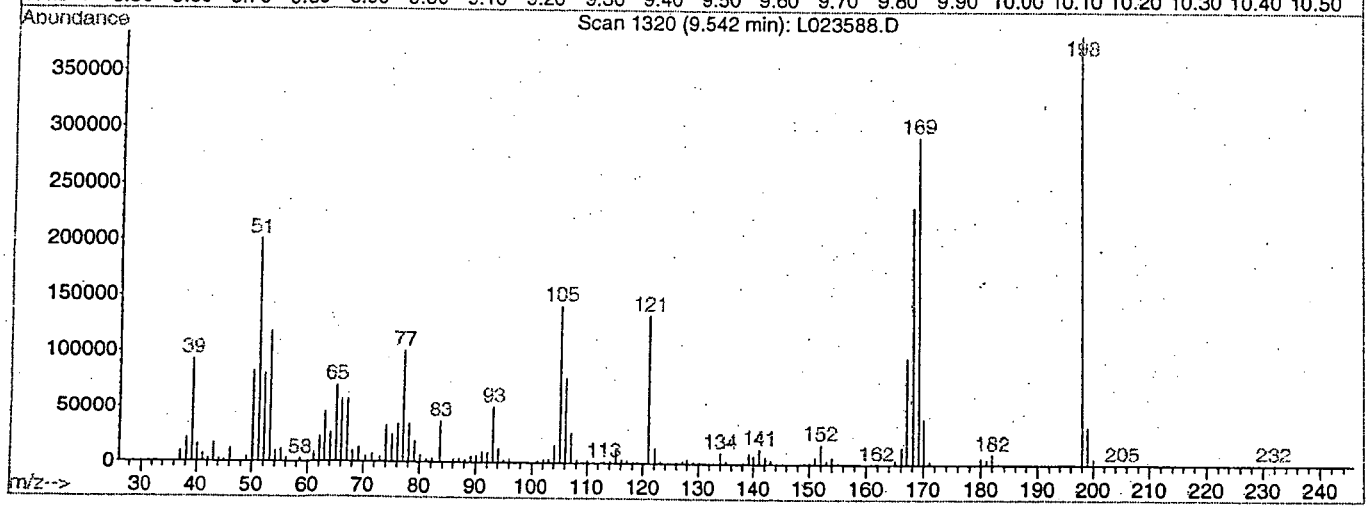
Data File : C:\HPCHEM\1\DATA\092904\L023588.D
Acq On : 29 Sep 2004 4:52 pm
Sample : ic1251-125
Misc : op11351,sl1251,970,,,1,1,water
MS Integration Params: RTEINT.P
Quant Time: Sep 30 9:47 2004

Vial: 7
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : Tune Evaluation
Last Update : Fri Aug 06 13:33:08 2004
Response via : Multiple Level Calibration

SM 9/30/4




TIC: L023588.D

(64) 4,6-Dinitro-2-methylphenol

9.54min 131.70ppm m

response 589607

| Ion | Exp% | Act% |
|---|---|---|
| 198.00 | 100 | 100 |
| 51.00 | 34.70 | 52.26 |
| 105.00 | 33.00 | 36.86 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023588.D
Acq On : 29 Sep 2004 4:52 pm
Sample : ic1251-125
Misc : op11351,sl1251,970,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:47 2004

Vial: 7
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

SM 9/30/04

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.95 | 152 | 308735 | 40.00 | ppm | 0.00 |
| 22) Naphthalene-d8 | 6.12 | 136 | 1185362 | 40.00 | ppm | 0.00 |
| 41) Acenaphthene-d10 | 8.43 | 164 | 610556 | 40.00 | ppm | -0.01 |
| 63) Phenanthrene-d10 | 10.91 | 188 | 1121841 | 40.00 | ppm | 0.00 |
| 77) Chrysene-d12 | 15.86 | 240 | 788641 | 40.00 | ppm | 0.00 |
| 86) Perylene-d12 | 18.37 | 264 | 731706 | 40.00 | ppm | 0.00 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 7) 2-Fluorophenol | 4.03 | 112 | 1939513 | 201.91 | ppm | -0.01 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 201.91%# | | | |
| 9) Phenol-d5 | 4.73 | 99 | 2060487 | 173.16 | ppm | 0.02 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 173.16%# | | | |
| 23) Nitrobenzene-d5 | 5.45 | 82 | 1194879 | 112.92 | ppm | 0.00 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 225.84%# | | | |
| 45) 2-Fluorobiphenyl | 7.45 | 172 | 2480743 | 121.48 | ppm | -0.02 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 242.96%# | | | |
| 67) 2,4,6-Tribromophenol | 9.76 | 330 | 538638 | 210.51 | ppm | -0.02 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 210.51%# | | | |
| 80) Terphenyl-d14 | 13.95 | 244 | 2166543 | 119.65 | ppm | -0.04 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 239.30%# | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.54 | 88 | 422984 | 112.21 | ppm | 99 |
| 3) N-nitrosodimethylamine | 2.88 | 42 | 592104 | 108.16 | ppm | 95 |
| 4) Pyridine | 2.88 | 79 | 1256478 | 115.52 | ppm | 87 |
| 5) Benzaldehyde | 4.63 | 106 | 180045 | 21.71 | ppm | 97 |
| 6) Aniline | 4.73 | 93 | 1289499 | 84.92 | ppm | 95 |
| 8) bis(2-Chloroethyl)ether | 4.78 | 93 | 1016309 | 109.99 | ppm | 95 |
| 10) Phenol | 4.74 | 94 | 1197447 | 89.98 | ppm | 93 |
| 11) 2-Chlorophenol | 4.82 | 128 | 1234274 | 111.35 | ppm | 98 |
| 12) 1,3-Dichlorobenzene | 4.93 | 146 | 1345326 | 114.04 | ppm | 97 |
| 13) 1,4-Dichlorobenzene | 4.97 | 146 | 1299348 | 109.51 | ppm | 97 |
| 14) 1,2-Dichlorobenzene | 5.12 | 146 | 1256120 | 112.87 | ppm | 96 |
| 15) Benzyl alcohol | 5.09 | 108 | 835600 | 114.15 | ppm | 96 |
| 16) bis(2-chloroisopropyl)ethe | 5.21 | 45 | 1359684 | 79.52 | ppm | 72 |
| 17) 2-Methylphenol | 5.20 | 108 | 1007244 | 101.65 | ppm | 92 |
| 18) Acetophenone | 5.31 | 105 | 834912 | 57.94 | ppm | 100 |
| 19) Hexachloroethane | 5.38 | 117 | 470397 | 109.14 | ppm | 92 |
| 20) N-Nitroso-di-n-propylamine | 5.34 | 70 | 753157 | 104.98 | ppm | 94 |
| 21) 3&4-Methylphenol | 5.33 | 108 | 1098002 | 104.02 | ppm | 98 |
| 24) Nitrobenzene | 5.47 | 77 | 1118114 | 107.87 | ppm | 99 |
| 25) Isophorone | 5.68 | 82 | 2239615 | 116.30 | ppm | 98 |
| 26) 2-Nitrophenol | 5.75 | 139 | 775459 | 125.43 | ppm | 92 |
| 27) 2,4-Dimethylphenol | 5.80 | 107 | 1097354 | 106.08 | ppm | 95 |
| 28) bis(2-Chloroethoxy)methane | 5.88 | 93 | 1258887 | 109.16 | ppm | 99 |
| 29) Benzoic Acid | 5.97 | 105 | 1096564 | 131.58 | ppm | 100 |
| 30) 2,4-Dichlorophenol | 6.00 | 162 | 1059516 | 115.31 | ppm | 97 |
| 31) 1,2,4-Trichlorobenzene | 6.07 | 180 | 1070822 | 112.88 | ppm | 98 |
| 32) Naphthalene | 6.14 | 128 | 3144879 | 102.77 | ppm | 98 |
| 33) 4-Chloroaniline | 6.22 | 127 | 1407421 | 103.36 | ppm | 98 |
| 34) 2,6-Dichlorophenol | 6.24 | 162 | 979538 | 106.91 | ppm | 97 |
| 35) Hexachlorobutadiene | 6.33 | 225 | 518631 | 112.69 | ppm | 100 |
| 36) Caprolactam | 6.64 | 113 | 264482m | 63.13 | ppm | |
| 37) 4-Chloro-3-methylphenol | 6.80 | 107 | 1063603 | 113.62 | ppm | 95 |
| 38) 2-Methylnaphthalene | 6.93 | 142 | 2319288 | 112.02 | ppm | 97 |

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(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023588.D
Acq On : 29 Sep 2004 4:52 pm
Sample : ic1251-125
Misc : op11351,s11251,970,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:47 2004

Vial: 7
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00
Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:35:50 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) | 1-Methylnaphthalene | 7.07 | 142 | 2248206 | 110.29 ppm | | 97 |
| 40) | 1,2,4,5-Tetrachlorobenzene | 7.21 | 216 | 1049877 | 109.38 ppm | | 98 |
| 42) | Hexachlorocyclopentadiene | 7.23 | 237 | 570601 | 117.79 ppm | | 98 |
| 43) | 2,4,6-Trichlorophenol | 7.35 | 196 | 784490 | 129.16 ppm | | 98 |
| 44) | 2,4,5-Trichlorophenol | 7.42 | 196 | 832577 | 128.15 ppm | | 99 |
| 46) | 1,1'-Biphenyl | 7.57 | 154 | 1446695 | 60.56 ppm | | 99 |
| 47) | 2-Chloronaphthalene | 7.59 | 162 | 2108381 | 118.15 ppm | | 97 |
| 48) | 2-Nitroaniline | 7.79 | 65 | 733064 | 134.18 ppm | | 95 |
| 49) | Acenaphthylene | 8.20 | 152 | 3527307 | 122.24 ppm | | 99 |
| 50) | Dimethylphthalate | 8.14 | 163 | 2707909 | 127.97 ppm | | 99 |
| 51) | 2,6-Dinitrotoluene | 8.22 | 165 | 654524 | 133.57 ppm | # | 73 |
| 52) | Acenaphthene | 8.49 | 153 | 2132866 | 119.62 ppm | | 97 |
| 53) | 3-Nitroaniline | 8.44 | 138 | 795717 | 133.50 ppm | | 95 |
| 54) | 2,4-Dinitrophenol | 8.60 | 184 | 497831 | 155.93 ppm | | 97 |
| 55) | Dibenzofuran | 8.75 | 168 | 3123002 | 123.48 ppm | | 95 |
| 56) | 2,4-Dinitrotoluene | 8.85 | 165 | 952404 | 137.00 ppm | | 86 |
| 57) | 4-Nitrophenol | 8.78 | 109 | 385744 | 129.48 ppm | | 86 |
| 58) | 2,3,4,6-Tetrachlorophenol | 9.03 | 232 | 638760 | 127.51 ppm | | 99 |
| 59) | Fluorene | 9.31 | 166 | 2406938 | 117.17 ppm | | 98 |
| 60) | 4-Chlorophenyl-phenylether | 9.33 | 204 | 1113772 | 117.56 ppm | | 99 |
| 61) | Diethylphthalate | 9.28 | 149 | 2509153 | 119.17 ppm | | 97 |
| 62) | 4-Nitroaniline | 9.47 | 138 | 879299 | 143.37 ppm | | 96 |
| 64) | 4,6-Dinitro-2-methylphenol | 9.54 | 198 | 589607m | 131.70 ppm | | |
| 65) | n-Nitrosodiphenylamine | 9.57 | 169 | 2207907 | 135.05 ppm | | 99 |
| 66) | 1,2-Diphenylhydrazine | 9.60 | 77 | 2337666 | 118.73 ppm | | 94 |
| 68) | 4-Bromophenyl-phenylether | 10.16 | 248 | 655968 | 114.85 ppm | | 95 |
| 69) | Hexachlorobenzene | 10.39 | 284 | 646896 | 110.07 ppm | | 95 |
| 70) | Atrazine | 10.60 | 200 | 390457 | 58.20 ppm | | 94 |
| 71) | Pentachlorophenol | 10.73 | 266 | 419893 | 110.61 ppm | | 98 |
| 72) | Phenanthrene | 10.96 | 178 | 3484189 | 109.07 ppm | | 99 |
| 73) | Anthracene | 11.04 | 178 | 3577202 | 109.26 ppm | | 99 |
| 74) | Carbazole | 11.38 | 167 | 3619719 | 115.16 ppm | | 99 |
| 75) | Di-n-butylphthalate | 12.22 | 149 | 4068659 | 110.51 ppm | | 99 |
| 76) | Fluoranthene | 13.14 | 202 | 3592592 | 107.62 ppm | | 98 |
| 78) | Benzidine | 13.47 | 184 | 2192359 | 105.39 ppm | | 98 |
| 79) | Pyrene | 13.55 | 202 | 3686735 | 123.25 ppm | | 96 |
| 81) | Butylbenzylphthalate | 15.03 | 149 | 1843995 | 132.63 ppm | | 97 |
| 82) | 3,3'-Dichlorobenzidine | 15.89 | 252 | 992467 | 108.11 ppm | | 100 |
| 83) | Benzo[a]anthracene | 15.83 | 228 | 3115156 | 121.88 ppm | | 98 |
| 84) | Chrysene | 15.92 | 228 | 2674317 | 113.86 ppm | | 99 |
| 85) | bis(2-Ethylhexyl)phthalate | 16.24 | 149 | 2371609 | 128.06 ppm | | 99 |
| 87) | Di-n-octylphthalate | 17.35 | 149 | 3820351 | 123.54 ppm | | 99 |
| 88) | Benzo[b]fluoranthene | 17.78 | 252 | 3116523 | 127.88 ppm | | 99 |
| 89) | Benzo[k]fluoranthene | 17.83 | 252 | 2325892 | 101.44 ppm | | 98 |
| 90) | Benzo[a]pyrene | 18.30 | 252 | 2687832 | 120.18 ppm | | 98 |
| 91) | Indeno[1,2,3-cd]pyrene | 20.00 | 276 | 2888535 | 119.42 ppm | | 97 |
| 92) | Dibenz[a,h]anthracene | 20.05 | 278 | 2518103 | 107.54 ppm | | 98 |
| 93) | Benzo[g,h,i]perylene | 20.37 | 276 | 2790844 | 110.38 ppm | | 99 |

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(#) = qualifier out of range (m) = manual integration

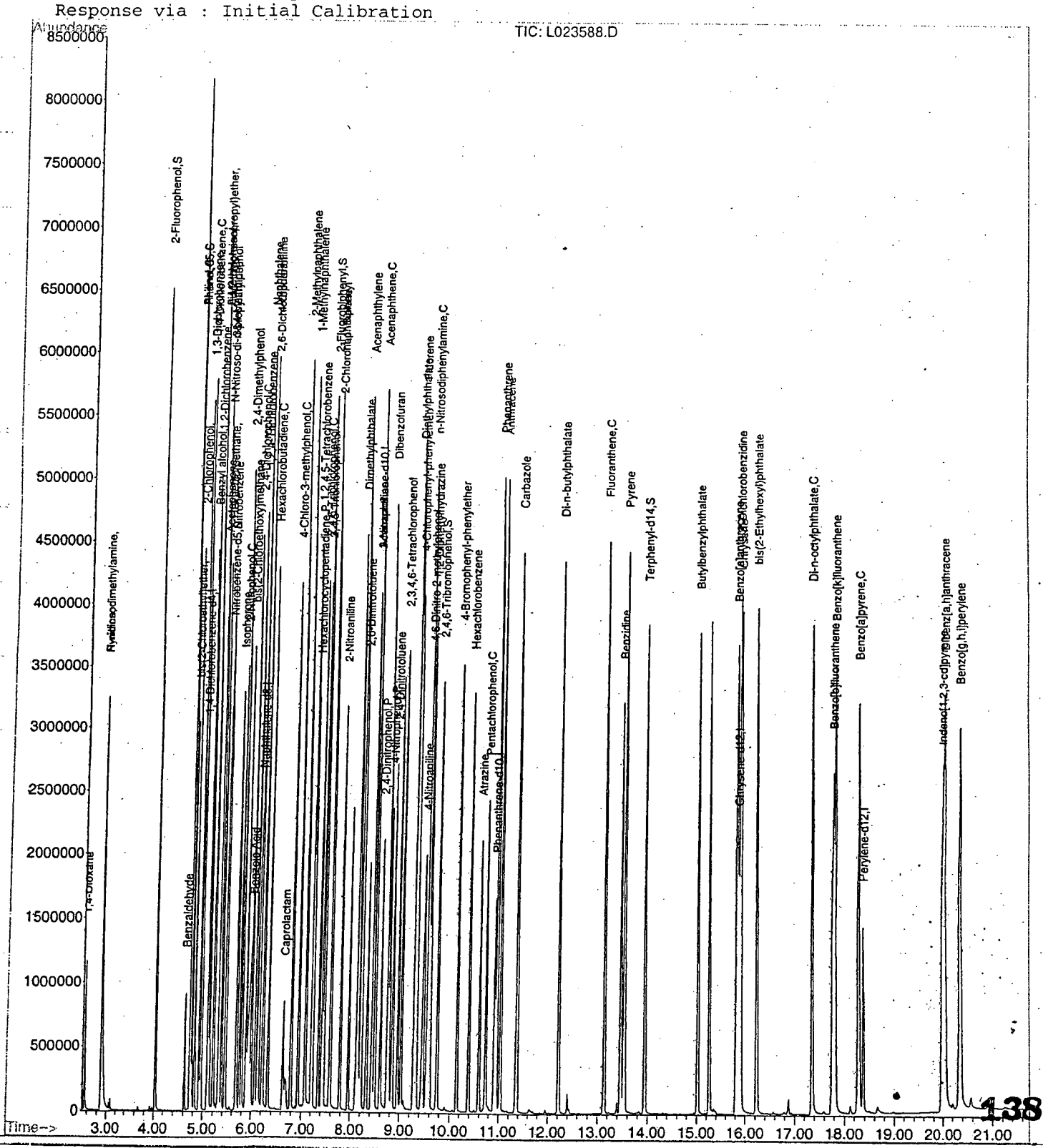
Quantitation Report

Data File : C:\HPCHEM\1\DATA\092904\L023588.D
Acq On : 29 Sep 2004 4:52 pm
Sample : ic1251-125
Misc : op11351,sl1251,970,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Sep 30 9:47 2004

Vial: 7
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration

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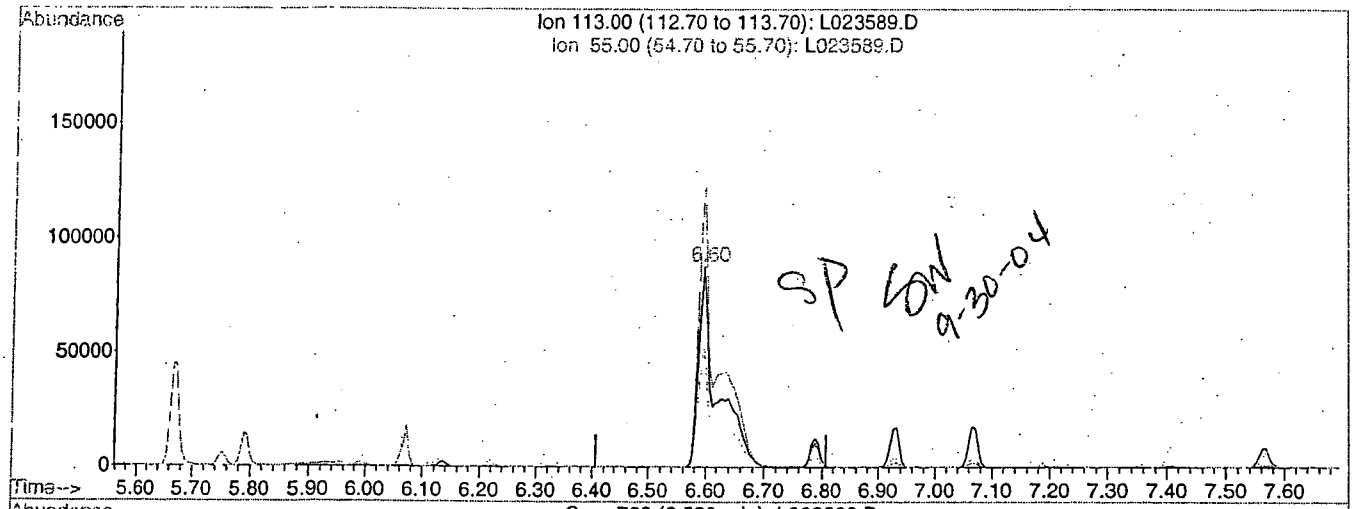
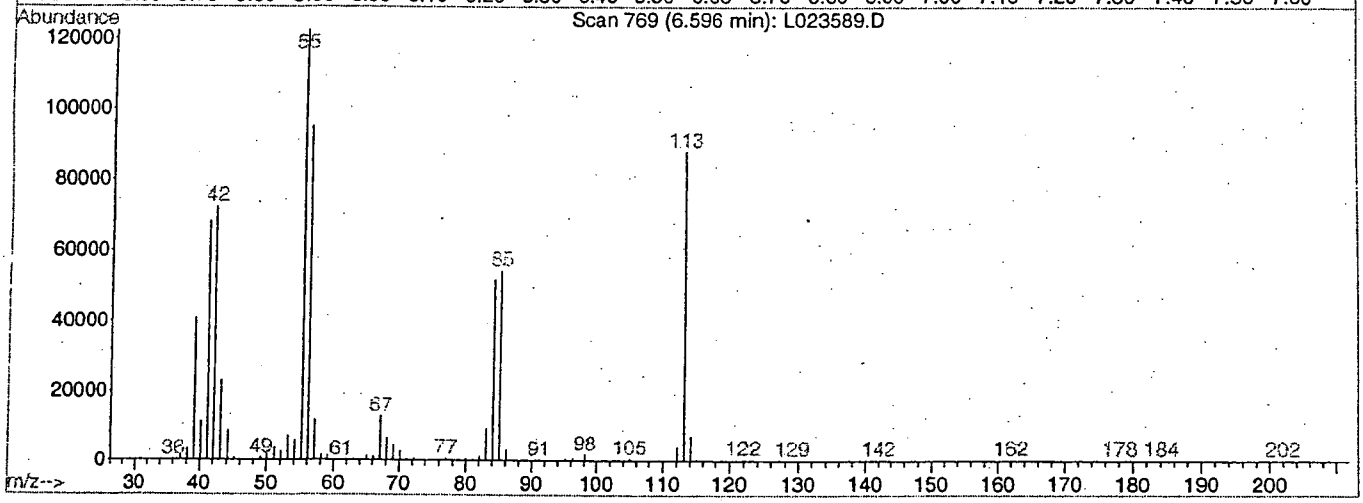
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\092904\L023589.D  Vial: 8
Acq On : 29 Sep 2004 5:23 pm  Operator: sarahm
Sample : icv1251-50  Inst : MSBNA02
Misc : op11351,sl1251,970,,,1,1,water  Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 30 10:05 2004  Quant Results File: temp.res

Sm 9/30/04

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
Title : Tune Evaluation
Last Update : Fri Aug 06 13:33:08 2004
Response via : Multiple Level Calibration




TIC: L023589.D

(36) Caprolactam

6.60min 50.17ppm m

response 197857

| Ion | Exp% | Act% |
|---|---|---|
| 113.00 | 100 | 100 |
| 55.00 | 138.70 | 138.84 |
| 85.00 | 59.20 | 61.67 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023589.D
Acq On : 29 Sep 2004 5:23 pm
Sample : icv1251-50
Misc : op11351,sl1251,970,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Sep 30 10:05 2004

Vial: 8
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 10:02:41 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

Sarah 9/30/04

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.96 | 152 | 299070 | 40.00 ppm | 0.00 |
| 22) Naphthalene-d8 | 6.11 | 136 | 1154698 | 40.00 ppm | 0.00 |
| 41) Acenaphthene-d10 | 8.43 | 164 | 598905 | 40.00 ppm | 0.00 |
| 63) Phenanthrene-d10 | 10.90 | 188 | 1026386 | 40.00 ppm | 0.00 |
| 77) Chrysene-d12 | 15.85 | 240 | 816421 | 40.00 ppm | 0.00 |
| 86) Perylene-d12 | 18.36 | 264 | 736466 | 40.00 ppm | 0.00 |

System Monitoring Compounds

| | | | | | |
|---|---|---|---|---|---|
| 7) 2-Fluorophenol | 0.00 | 112 | 0 | 0.00 ppm | |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 0.00%# | | |
| 9) Phenol-d5 | 0.00 | 99 | 0d | 0.00 ppm | |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 0.00%# | | |
| 23) Nitrobenzene-d5 | 0.00 | 82 | 0d | 0.00 ppm | |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 0.00%# | | |
| 45) 2-Fluorobiphenyl | 0.00 | 172 | 0 | 0.00 ppm | |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 0.00%# | | |
| 67) 2,4,6-Tribromophenol | 0.00 | 330 | 0 | 0.00 ppm | |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 0.00%# | | |
| 80) Terphenyl-d14 | 0.00 | 244 | 0 | 0.00 ppm | |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 0.00%# | | |

Target Compounds

| | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.57 | 88 | 165118 | 50.16 ppm | 96 |
| 3) N-nitrosodimethylamine | 2.90 | 42 | 250127 | 50.93 ppm | 97 |
| 4) Pyridine | 2.90 | 79 | 475522 | 48.96 ppm | 98 |
| 5) Benzaldehyde | 4.63 | 106 | 2938 | 0.52 ppm | 97 |
| 6) Aniline | 4.73 | 93 | 431353 | 32.99 ppm | 78 |
| 8) bis(2-Chloroethyl)ether | 4.77 | 93 | 450814 | 53.40 ppm | 96 |
| 10) Phenol | 4.74 | 94 | 672945 | 59.93 ppm | 95 |
| 11) 2-Chlorophenol | 4.83 | 128 | 557807 | 54.71 ppm | 99 |
| 12) 1,3-Dichlorobenzene | 4.93 | 146 | 551132 | 48.87 ppm | 98 |
| 13) 1,4-Dichlorobenzene | 4.97 | 146 | 550300 | 49.90 ppm | 97 |
| 14) 1,2-Dichlorobenzene | 5.12 | 146 | 530499 | 50.15 ppm | 99 |
| 15) Benzyl alcohol | 5.09 | 108 | 363827 | 54.36 ppm | 99 |
| 16) bis(2-chloroisopropyl)ethe | 5.21 | 45 | 697229 | 52.78 ppm | 89 |
| 17) 2-Methylphenol | 5.20 | 108 | 469841 | 53.68 ppm | 96 |
| 18) Acetophenone | 5.31 | 105 | 539057 | 40.98 ppm | 99 |
| 19) Hexachloroethane | 5.38 | 117 | 193421 | 49.27 ppm | 99 |
| 20) N-Nitroso-di-n-propylamine | 5.33 | 70 | 290227 | 45.58 ppm | 99 |
| 21) 3&4-Methylphenol | 5.32 | 108 | 922531 | 98.27 ppm | 98 |
| 24) Nitrobenzene | 5.46 | 77 | 482485 | 51.22 ppm | 97 |
| 25) Isophorone | 5.67 | 82 | 853151 | 48.00 ppm | 100 |
| 26) 2-Nitrophenol | 5.75 | 139 | 313271 | 51.76 ppm | 94 |
| 27) 2,4-Dimethylphenol | 5.79 | 107 | 498430 | 54.10 ppm | 98 |
| 28) bis(2-Chloroethoxy)methane | 5.87 | 93 | 509917 | 48.74 ppm | 99 |
| 29) Benzoic Acid | 5.96 | 105 | 895022 | 114.30 ppm | 99 |
| 30) 2,4-Dichlorophenol | 5.99 | 162 | 470816 | 54.11 ppm | 99 |
| 31) 1,2,4-Trichlorobenzene | 6.07 | 180 | 448985 | 50.16 ppm | 99 |
| 32) Naphthalene | 6.14 | 128 | 1384782 | 50.83 ppm | 99 |
| 33) 4-Chloroaniline | 6.22 | 127 | 586885 | 46.92 ppm | 99 |
| 34) 2,6-Dichlorophenol | 6.23 | 162 | 432475 | 52.13 ppm | 98 |
| 35) Hexachlorobutadiene | 6.32 | 225 | 211675 | 48.84 ppm | 99 |
| 36) Caprolactam | 6.60 | 113 | 197857m | 50.17 ppm | |
| 37) 4-Chloro-3-methylphenol | 6.79 | 107 | 455662 | 53.49 ppm | 98 |
| 38) 2-Methylnaphthalene | 6.93 | 142 | 992664 | 49.91 ppm | 99 |

(#) = qualifier out of range (m) = manual integration

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\092904\L023589.D
Acq On : 29 Sep 2004 5:23 pm
Sample : icv1251-50
Misc : op11351,sl1251,970,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Sep 30 10:05 2004

Vial: 8
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 10:02:41 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) 1-Methylnaphthalene | 7.07 | 142 | 968035 | 50.32 | ppm | | 99 |
| 40) 1,2,4,5-Tetrachlorobenzene | 7.20 | 216 | 424689 | 48.68 | ppm | | 100 |
| 42) Hexachlorocyclopentadiene | 7.23 | 237 | 185764 | 45.50 | ppm | | 98 |
| 43) 2,4,6-Trichlorophenol | 7.34 | 196 | 327323 | 52.82 | ppm | | 98 |
| 44) 2,4,5-Trichlorophenol | 7.41 | 196 | 349441 | 53.01 | ppm | | 99 |
| 46) 1,1'-Biphenyl | 7.56 | 154 | 1135306 | 48.12 | ppm | | 99 |
| 47) 2-Chloronaphthalene | 7.58 | 162 | 874942 | 48.49 | ppm | | 99 |
| 48) 2-Nitroaniline | 7.78 | 65 | 288939 | 50.30 | ppm | | 98 |
| 49) Acenaphthylene | 8.19 | 152 | 1532384 | 50.59 | ppm | | 100 |
| 50) Dimethylphthalate | 8.11 | 163 | 1140022 | 51.49 | ppm | | 99 |
| 51) 2,6-Dinitrotoluene | 8.20 | 165 | 257636 | 48.61 | ppm | | 98 |
| 52) Acenaphthene | 8.48 | 153 | 906170 | 49.87 | ppm | | 97 |
| 53) 3-Nitroaniline | 8.42 | 138 | 322576 | 50.52 | ppm | | 94 |
| 54) 2,4-Dinitrophenol | 8.59 | 184 | 381017 | 110.86 | ppm | | 97 |
| 55) Dibenzofuran | 8.73 | 168 | 1294406 | 49.29 | ppm | | 90 |
| 56) 2,4-Dinitrotoluene | 8.83 | 165 | 366069 | 49.76 | ppm | | 95 |
| 57) 4-Nitrophenol | 8.76 | 109 | 299283 | 105.32 | ppm | | 97 |
| 58) 2,3,4,6-Tetrachlorophenol | 9.02 | 232 | 251218 | 50.35 | ppm | | 98 |
| 59) Fluorene | 9.29 | 166 | 1056674 | 49.92 | ppm | | 98 |
| 60) 4-Chlorophenyl-phenylether | 9.32 | 204 | 478903 | 50.68 | ppm | | 99 |
| 61) Diethylphthalate | 9.26 | 149 | 1126718 | 52.00 | ppm | | 97 |
| 62) 4-Nitroaniline | 9.44 | 138 | 337126 | 49.72 | ppm | | 99 |
| 64) 4,6-Dinitro-2-methylphenol | 9.51 | 198 | 499803 | 118.44 | ppm | # | 35 |
| 65) n-Nitrosodiphenylamine | 9.54 | 169 | 812689 | 53.63 | ppm | | 99 |
| 66) 1,2-Diphenylhydrazine | 9.59 | 77 | 913282 | 51.39 | ppm | | 99 |
| 68) 4-Bromophenyl-phenylether | 10.15 | 248 | 270775 | 52.22 | ppm | | 98 |
| 69) Hexachlorobenzene | 10.38 | 284 | 268420 | 51.00 | ppm | | 99 |
| 70) Atrazine | 10.59 | 200 | 260521 | 44.19 | ppm | | 99 |
| 71) Pentachlorophenol | 10.73 | 266 | 358895 | 116.80 | ppm | | 99 |
| 72) Phenanthrene | 10.94 | 178 | 1516451 | 52.44 | ppm | | 99 |
| 73) Anthracene | 11.02 | 178 | 1549011 | 52.15 | ppm | | 99 |
| 74) Carbazole | 11.36 | 167 | 1502680 | 51.07 | ppm | | 99 |
| 75) Di-n-butylphthalate | 12.21 | 149 | 1789092 | 51.93 | ppm | | 99 |
| 76) Fluoranthene | 13.13 | 202 | 1601841 | 53.31 | ppm | | 99 |
| 78) Benzidine | 13.45 | 184 | 4365 | 0.22 | ppm | | 93 |
| 79) Pyrene | 13.53 | 202 | 1648894 | 50.63 | ppm | | 99 |
| 81) Butylbenzylphthalate | 15.01 | 149 | 816021 | 51.51 | ppm | | 97 |
| 82) 3,3'-Dichlorobenzidine | 15.87 | 252 | 400820 | 43.36 | ppm | | 98 |
| 83) Benzo[a]anthracene | 15.82 | 228 | 1359206 | 50.07 | ppm | | 98 |
| 84) Chrysene | 15.90 | 228 | 1257406 | 52.02 | ppm | | 99 |
| 85) bis(2-Ethylhexyl)phthalate | 16.22 | 149 | 1086704 | 51.79 | ppm | | 100 |
| 87) Di-n-octylphthalate | 17.34 | 149 | 1881924 | 55.02 | ppm | | 100 |
| 88) Benzo[b]fluoranthene | 17.76 | 252 | 1280005 | 51.61 | ppm | | 99 |
| 89) Benzo[k]fluoranthene | 17.80 | 252 | 1146106 | 50.46 | ppm | | 100 |
| 90) Benzo[a]pyrene | 18.27 | 252 | 1158482 | 50.26 | ppm | | 99 |
| 91) Indeno[1,2,3-cd]pyrene | 19.98 | 276 | 1161581 | 47.54 | ppm | | 99 |
| 92) Dibenz[a,h]anthracene | 20.02 | 278 | 1190648 | 52.29 | ppm | | 99 |
| 93) Benzo[g,h,i]perylene | 20.34 | 276 | 1214733 | 48.92 | ppm | | 98 |

(#) = qualifier out of range (m) = manual integration

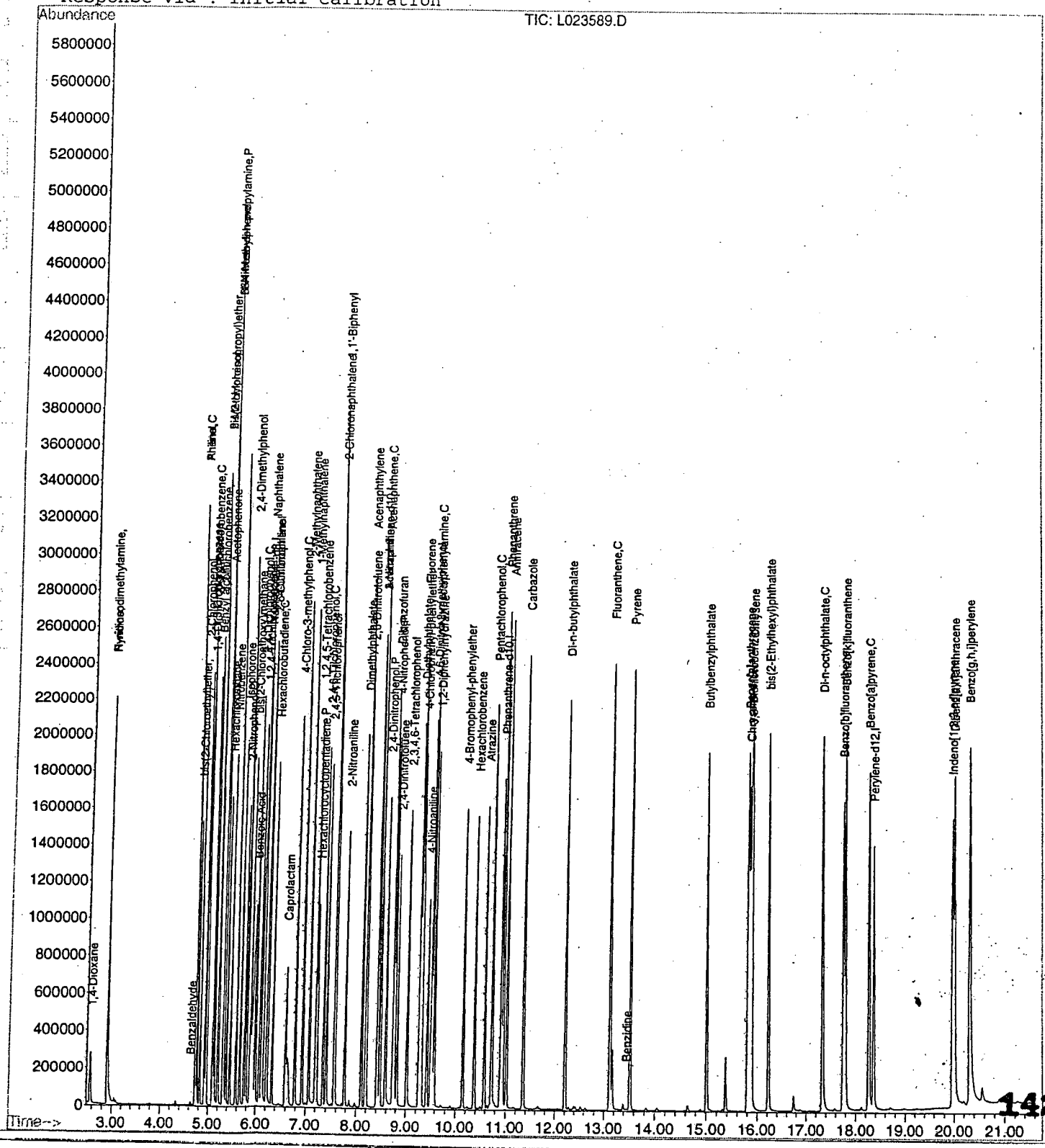
Quantitation Report

Data File : C:\HPCHEM\1\DATA\092904\L023589.D
Acq On : 29 Sep 2004 5:23 pm
Sample : icv1251-50
Misc : op11351,sl1251,970,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Sep 30 10:05 2004

Vial: 8
Operator: sarahm
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration

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# *CONTINUING CALIBRATION*

*SVOC.09*

GC/MS QA-QC Check Report

une File : C:\HPCHEM\1\DATA\100404\L023663.D
ie Time : 4 Oct 2004 12:01 pm

aily Calibration File : C:\HPCHEM\1\DATA\100404\L023664.D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 212598 | 824975 | 424086 | |
| | | | | | | 729991 | 568548 | 517788 | |

| ile | Sample | Surrogate Recovery % | | | | Internal Standard Responses | | |
|---|---|---|---|---|---|---|---|---|
| 23664.D | cc1250-75 | 162* | 158* | 161* | 166* | 212598 | 824975 | 424086 |
| | | 163* | 156* | | | 729991 | 568548 | 517788 |
| 023665.D | op11403-bs | 39 | 27 | 74 | 77 | 226541 | 857733 | 438061 |
| | | 86 | 91 | | | 711667 | 537719 | 472166 |
| 023666.D | op11403-mb | 32 | 21 | 69 | 70 | 222641 | 822511 | 423241 |
| | | 77 | 88 | | | 689198 | 530248 | 483970 |
| 23667.D | n78365-5,4 | 7* | 5* | 17* | 17* | 225673 | 853051 | 448971 |
| | | 18* | 15* | | | 729083 | 570788 | 505905 |
| 23668.D | n78365-10, | 8* | 6* | 16* | 18* | 238321 | 878946 | 449367 |
| | | 22* | 21* | | | 730129 | 559948 | 502917 |
| 023669.D | n78365-10 | 35 | 24 | 71 | 73 | 232251 | 857982 | 445127 |
| | | 90 | 83 | | | 714118 | 555624 | 499480 |
| 23670.D | op11403-ms | 55 | 42 | 77 | 81 | 231014 | 879640 | 446906 |
| | | 90 | 91 | | | 750538 | 578069 | 516134 |
| 23671.D | op11403-ms | 54 | 42 | 76 | 78 | 222295 | 828509 | 424876 |
| | | 90 | 89 | | | 707222 | 549666 | 494867 |
| 23672.D | n78365-11a | 34 | 22 | 68 | 69 | 250942 | 932142 | 477000 |
| | | 76 | 74 | | | 758105 | 603882 | 543675 |
| 023673.D | n78399-1 | 35 | 23 | 72 | 74 | 246555 | 908433 | 458438 |
| | | 86 | 77 | | | 745123 | 589159 | 514240 |
| 23674.D | op11381-bs | 88 | 92 | 81 | 86 | 273743 | 1033856 | 523864 |
| | | 94 | 93 | | | 865983 | 640398 | 534750 |
| 23675.D | op11381-mb | 87 | 93 | 84 | 89 | 277815 | 1019655 | 504865 |
| | | 88 | 95 | | | 795282 | 608479 | 503829 |
| 23676.D | f26800-2 | 81 | 87 | 77 | 81 | 283913 | 1030163 | 510690 |
| | | 90 | 86 | | | 803298 | 594205 | 486997 |
| 023677.D | op11381-ms | 79 | 83 | 72 | 76 | 272429 | 1016015 | 520182 |
| | | 86 | 85 | | | 866577 | 641795 | 525707 |
| 23678.D | op11381-ms | 85 | 89 | 78 | 80 | 281321 | 1054687 | 544839 |
| | | 88 | 89 | | | 912336 | 660928 | 536251 |
| 23679.D | f26800-4 | 80 | 86 | 75 | 81 | 296348 | 1073963 | 545748 |
| | | 93 | 91 | | | 891413 | 667779 | 538890 |
| 023680.D | f26800-9 | 68 | 75 | 61 | 72 | 284807 | 1047850 | 523478 |
| | | 91 | 86 | | | 844880 | 639482 | 531319 |
| 23681.D | n77963-1,1 | 4* | 4* | 3* | 4* | 249169 | 904101 | 457834 |
| | | 4* | 4* | | | 746080 | 579470 | 547577 |
| 23682.D | n77963-2,1 | 4* | 5* | 4* | 4* | 243086 | 874280 | 460158 |
| | | 5* | 4* | | | 747963 | 577551 | 530708 |
| 23683.D | n77963-3,4 | 19* | 21* | 20* | 18* | 262893 | 849867 | 502824 |
| | | 20* | 18* | | | 823107 | 690868 | 550337 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 5* | 5* | | | 787582 | 621213 | 544386 |
| L023685.D | n77963-5,1 | 5* | 5* | 4* | 4* | 256814 | 924339 | 487746 |
| | | 5* | 5* | | | 792955 | 606599 | 544164 |
| L023686.D | n77963-6,1 | 4* | 5* | 4* | 4* | 268083 | 967932 | 517215 |
| | | 4* | 4* | | | 836636 | 652472 | 563196 |
| 23687.D t solvent bl | | 0* | 0* | 0* | 0* | 0* | 0* | 0* |
| | | 0* | 0* | | | 0* | 0* | 0* |

— solvent blank out of time. Not reporting

t - fails 12hr time check * - fails criteria

Created: Tue Oct 05 10:38:57 2004 MSBNA02

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023664.D
Acq On : 4 Oct 2004 12:20 pm
Sample : cc1250-75
Misc : op11398,sl1255,1000,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Oct 4 12:44 2004

Vial: 2
Operator: marke
Inst : MSBNA02
Multiplr: 1.00

Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

SM 10/5/4

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 4.89 | 152 | 212598 | 40.00 | ppm | -0.06 |
| 22) Naphthalene-d8 | 6.04 | 136 | 824975 | 40.00 | ppm | -0.08 |
| 41) Acenaphthene-d10 | 8.34 | 164 | 424086 | 40.00 | ppm | -0.10 |
| 63) Phenanthrene-d10 | 10.80 | 188 | 729991 | 40.00 | ppm | -0.10 |
| 77) Chrysene-d12 | 15.74 | 240 | 568548 | 40.00 | ppm | -0.11 |
| 86) Perylene-d12 | 18.26 | 264 | 517788 | 40.00 | ppm | -0.11 |
| **System Monitoring Compounds** | | | | | | |
| 7) 2-Fluorophenol | 3.98 | 112 | 993582 | 161.83 | ppm | -0.05 |
| Spiked Amount 100.000 | Range 19 - 90 | | Recovery = 161.83%# | | | |
| 9) Phenol-d5 | 4.68 | 99 | 1117226 | 158.27 | ppm | -0.06 |
| Spiked Amount 100.000 | Range 10 - 68 | | Recovery = 158.27%# | | | |
| 23) Nitrobenzene-d5 | 5.38 | 82 | 560173 | 80.35 | ppm | -0.07 |
| Spiked Amount 50.000 | Range 49 - 119 | | Recovery = 160.70%# | | | |
| 45) 2-Fluorobiphenyl | 7.36 | 172 | 1219115 | 83.18 | ppm | -0.09 |
| Spiked Amount 50.000 | Range 45 - 118 | | Recovery = 166.36%# | | | |
| 67) 2,4,6-Tribromophenol | 9.65 | 330 | 258267 | 162.80 | ppm | -0.10 |
| Spiked Amount 100.000 | Range 36 - 137 | | Recovery = 162.80%# | | | |
| 80) Terphenyl-d14 | 13.84 | 244 | 1042214 | 78.17 | ppm | -0.10 |
| Spiked Amount 50.000 | Range 46 - 135 | | Recovery = 156.34%# | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) 1,4-Dioxane | 2.47 | 88 | 174596 | 74.62 | ppm | 95 |
| 3) N-nitrosodimethylamine | 2.82 | 42 | 276882 | 79.31 | ppm | 98 |
| 4) Pyridine | 2.82 | 79 | 531381 | 76.97 | ppm | 99 |
| 5) Benzaldehyde | 4.56 | 106 | 207561 | 52.01 | ppm | 99 |
| 6) Aniline | 4.67 | 93 | 752399 | 80.96 | ppm | 87 |
| 8) bis(2-Chloroethyl)ether | 4.71 | 93 | 467985 | 77.97 | ppm | 99 |
| 10) Phenol | 4.69 | 94 | 657499 | 82.37 | ppm | 91 |
| 11) 2-Chlorophenol | 4.77 | 128 | 585371 | 80.77 | ppm | 98 |
| 12) 1,3-Dichlorobenzene | 4.86 | 146 | 652979 | 81.45 | ppm | 99 |
| 13) 1,4-Dichlorobenzene | 4.91 | 146 | 656155 | 83.70 | ppm | 97 |
| 14) 1,2-Dichlorobenzene | 5.05 | 146 | 614443 | 81.72 | ppm | 100 |
| 15) Benzyl alcohol | 5.03 | 108 | 360341 | 75.74 | ppm | 99 |
| 16) bis(2-chloroisopropyl)ethe | 5.14 | 45 | 729212 | 77.66 | ppm | 91 |
| 17) 2-Methylphenol | 5.14 | 108 | 504497 | 81.08 | ppm | 89 |
| 18) Acetophenone | 5.24 | 105 | 378730 | 40.50 | ppm | 99 |
| 19) Hexachloroethane | 5.31 | 117 | 224722 | 80.53 | ppm | 92 |
| 20) N-Nitroso-di-n-propylamine | 5.26 | 70 | 354594 | 78.34 | ppm | 96 |
| 21) 3&4-Methylphenol | 5.26 | 108 | 533268 | 79.91 | ppm | 98 |
| 24) Nitrobenzene | 5.39 | 77 | 535625 | 79.59 | ppm | 96 |
| 25) Isophorone | 5.60 | 82 | 986339 | 77.68 | ppm | 99 |
| 26) 2-Nitrophenol | 5.68 | 139 | 354104 | 81.89 | ppm | 94 |
| 27) 2,4-Dimethylphenol | 5.73 | 107 | 532975 | 80.97 | ppm | 99 |
| 28) bis(2-Chloroethoxy)methane | 5.80 | 93 | 595231 | 79.63 | ppm | 99 |
| 29) Benzoic Acid | 5.87 | 105 | 401226 | 71.72 | ppm | 97 |
| 30) 2,4-Dichlorophenol | 5.92 | 162 | 511863 | 82.34 | ppm | 99 |
| 31) 1,2,4-Trichlorobenzene | 6.00 | 180 | 527178 | 82.43 | ppm | 99 |
| 32) Naphthalene | 6.06 | 128 | 1606712 | 82.55 | ppm | 99 |
| 33) 4-Chloroaniline | 6.14 | 127 | 723457 | 80.96 | ppm | 98 |
| 34) 2,6-Dichlorophenol | 6.16 | 162 | 490544 | 82.75 | ppm | 99 |
| 35) Hexachlorobutadiene | 6.25 | 225 | 254238 | 82.11 | ppm | 100 |
| 36) Caprolactam | 6.51 | 113 | 102930m | 36.53 | ppm | |
| 37) 4-Chloro-3-methylphenol | 6.71 | 107 | 499542 | 82.08 | ppm | 96 |
| 38) 2-Methylnaphthalene | 6.85 | 142 | 1159606 | 81.61 | ppm | 99 |

~~(#) = qualifier out of range (m) = manual integration~~

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100404\L023664.D
Acq On : 4 Oct 2004 12:20 pm
Sample : cc1250-75
Misc : op11398,sl1255,1000,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Oct 4 12:44 2004

Vial: 2
Operator: marke
Inst : MSBNA02
Multiplr: 1.00
Quant Results File: 8270C.RES

Quant Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration
DataAcq Meth : 8270C

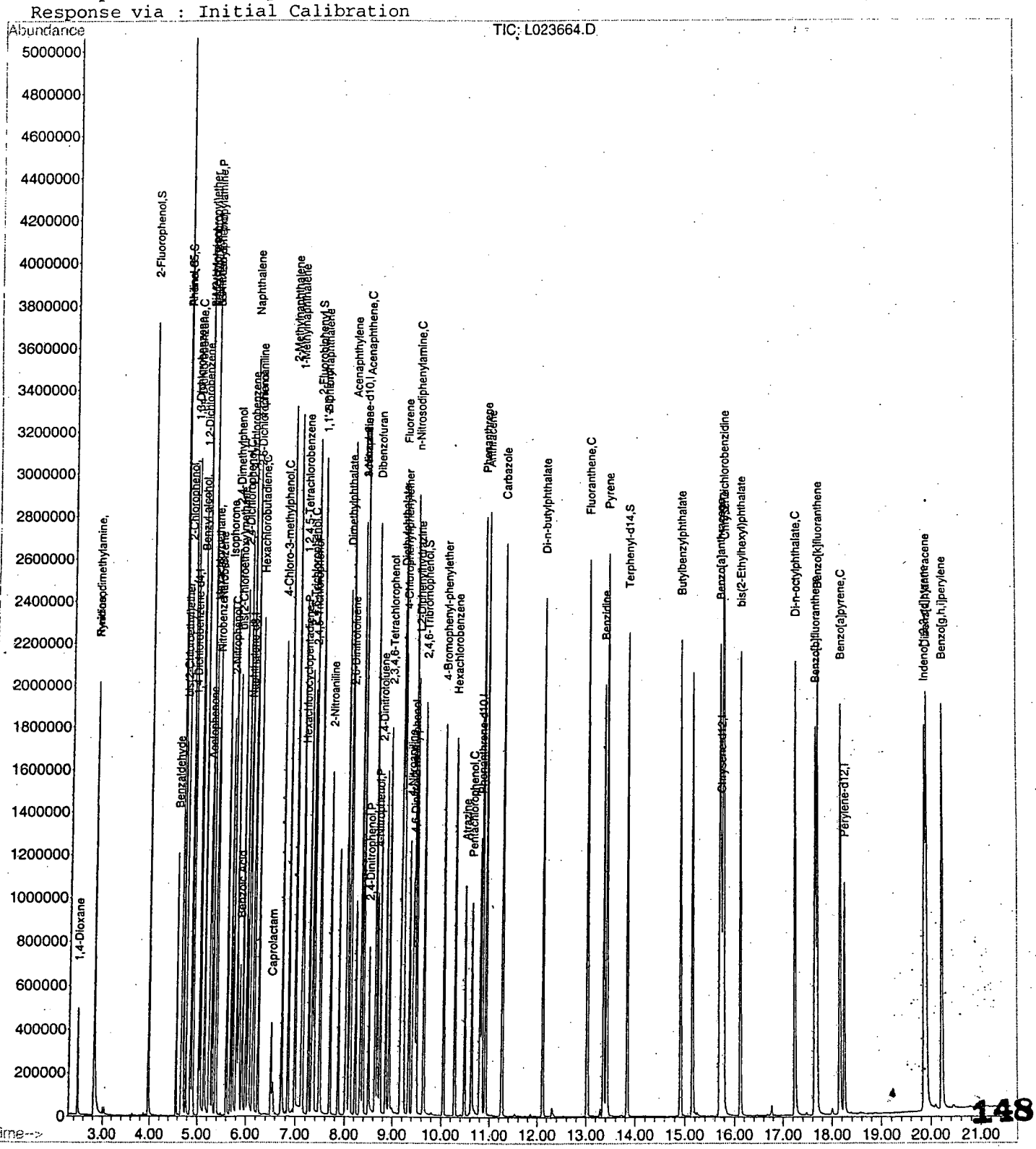
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 39) 1-Methylnaphthalene | 6.98 | 142 | 1113339 | 81.01 | ppm | | 99 |
| 40) 1,2,4,5-Tetrachlorobenzene | 7.12 | 216 | 513724 | 82.42 | ppm | | 100 |
| 42) Hexachlorocyclopentadiene | 7.14 | 237 | 238267 | 78.73 | ppm | | 100 |
| 43) 2,4,6-Trichlorophenol | 7.26 | 196 | 348891 | 79.51 | ppm | | 98 |
| 44) 2,4,5-Trichlorophenol | 7.33 | 196 | 374904 | 80.32 | ppm | | 99 |
| 46) 1,1'-Biphenyl | 7.47 | 154 | 683109 | 40.89 | ppm | | 100 |
| 47) 2-Chloronaphthalene | 7.49 | 162 | 1054874 | 82.56 | ppm | | 100 |
| 48) 2-Nitroaniline | 7.69 | 65 | 315891 | 77.66 | ppm | | 99 |
| 49) Acenaphthylene | 8.10 | 152 | 1763803 | 82.24 | ppm | | 99 |
| 50) Dimethylphthalate | 8.03 | 163 | 1251540 | 79.84 | ppm | | 98 |
| 51) 2,6-Dinitrotoluene | 8.12 | 165 | 298651 | 79.58 | ppm | | 98 |
| 52) Acenaphthene | 8.39 | 153 | 1066257 | 82.87 | ppm | | 97 |
| 53) 3-Nitroaniline | 8.34 | 138 | 355945 | 78.73 | ppm | | 97 |
| 54) 2,4-Dinitrophenol | 8.50 | 184 | 167409 | 68.79 | ppm | | 97 |
| 55) Dibenzofuran | 8.64 | 168 | 1508369 | 81.11 | ppm | | 91 |
| 56) 2,4-Dinitrotoluene | 8.74 | 165 | 413788 | 79.44 | ppm | | 95 |
| 57) 4-Nitrophenol | 8.68 | 109 | 152517 | 75.80 | ppm | # | 81 |
| 58) 2,3,4,6-Tetrachlorophenol | 8.93 | 232 | 278768 | 78.91 | ppm | | 98 |
| 59) Fluorene | 9.20 | 166 | 1217693 | 81.24 | ppm | | 98 |
| 60) 4-Chlorophenyl-phenylether | 9.23 | 204 | 539219 | 80.59 | ppm | | 98 |
| 61) Diethylphthalate | 9.17 | 149 | 1231275 | 80.25 | ppm | | 98 |
| 62) 4-Nitroaniline | 9.35 | 138 | 372812 | 77.65 | ppm | | 98 |
| 64) 4,6-Dinitro-2-methylphenol | 9.42 | 198 | 250667 | 83.52 | ppm | | 99 |
| 65) n-Nitrosodiphenylamine | 9.45 | 169 | 1058357 | 98.19 | ppm | | 100 |
| 66) 1,2-Diphenylhydrazine | 9.49 | 77 | 1004442 | 79.46 | ppm | | 98 |
| 68) 4-Bromophenyl-phenylether | 10.05 | 248 | 303686 | 82.35 | ppm | | 98 |
| 69) Hexachlorobenzene | 10.28 | 284 | 302832 | 80.90 | ppm | | 99 |
| 70) Atrazine | 10.49 | 200 | 171141 | 40.82 | ppm | | 98 |
| 71) Pentachlorophenol | 10.63 | 266 | 153431 | 74.02 | ppm | | 99 |
| 72) Phenanthrene | 10.85 | 178 | 1692545 | 82.30 | ppm | | 99 |
| 73) Anthracene | 10.93 | 178 | 1715228 | 81.19 | ppm | | 100 |
| 74) Carbazole | 11.27 | 167 | 1693179 | 80.91 | ppm | | 100 |
| 75) Di-n-butylphthalate | 12.12 | 149 | 1978909 | 80.76 | ppm | | 99 |
| 76) Fluoranthene | 13.03 | 202 | 1743446 | 81.58 | ppm | | 98 |
| 78) Benzidine | 13.37 | 184 | 1263146 | 90.04 | ppm | | 99 |
| 79) Pyrene | 13.43 | 202 | 1792410 | 79.03 | ppm | | 99 |
| 81) Butylbenzylphthalate | 14.92 | 149 | 881047 | 79.87 | ppm | | 97 |
| 82) 3,3'-Dichlorobenzidine | 15.78 | 252 | 523461 | 81.32 | ppm | | 100 |
| 83) Benzo[a]anthracene | 15.71 | 228 | 1517684 | 80.28 | ppm | | 99 |
| 84) Chrysene | 15.79 | 228 | 1323182 | 78.61 | ppm | | 99 |
| 85) bis(2-Ethylhexyl)phthalate | 16.13 | 149 | 1150709 | 78.75 | ppm | | 99 |
| 87) Di-n-octylphthalate | 17.25 | 149 | 1918573 | 79.78 | ppm | | 100 |
| 88) Benzo[b]fluoranthene | 17.65 | 252 | 1415241 | 81.16 | ppm | | 100 |
| 89) Benzo[k]fluoranthene | 17.70 | 252 | 1272637 | 79.69 | ppm | | 98 |
| 90) Benzo[a]pyrene | 18.17 | 252 | 1302902 | 80.40 | ppm | | 100 |
| 91) Indeno[1,2,3-cd]pyrene | 19.88 | 276 | 1344431 | 78.27 | ppm | | 99 |
| 92) Dibenz[a,h]anthracene | 19.92 | 278 | 1315307 | 82.16 | ppm | | 99 |
| 93) Benzo[g,h,i]perylene | 20.23 | 276 | 1378395 | 78.96 | ppm | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\100404\L023664.D  Vial: 2
Acq On : 4 Oct 2004 12:20 pm  Operator: marke
Sample : cc1250-75  Inst : MSBNA02
Misc : op11398,sl1255,1000,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 4 12:44 2004  Quant Results File: 8270C.RES

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Initial Calibration

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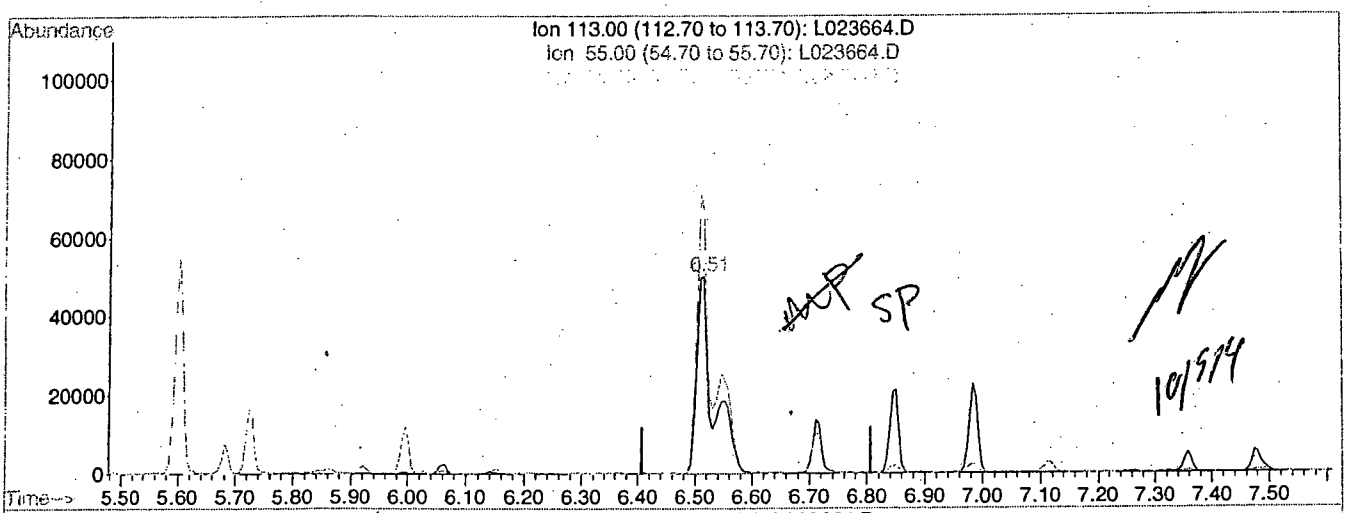
Quantitation Report (Qedit)

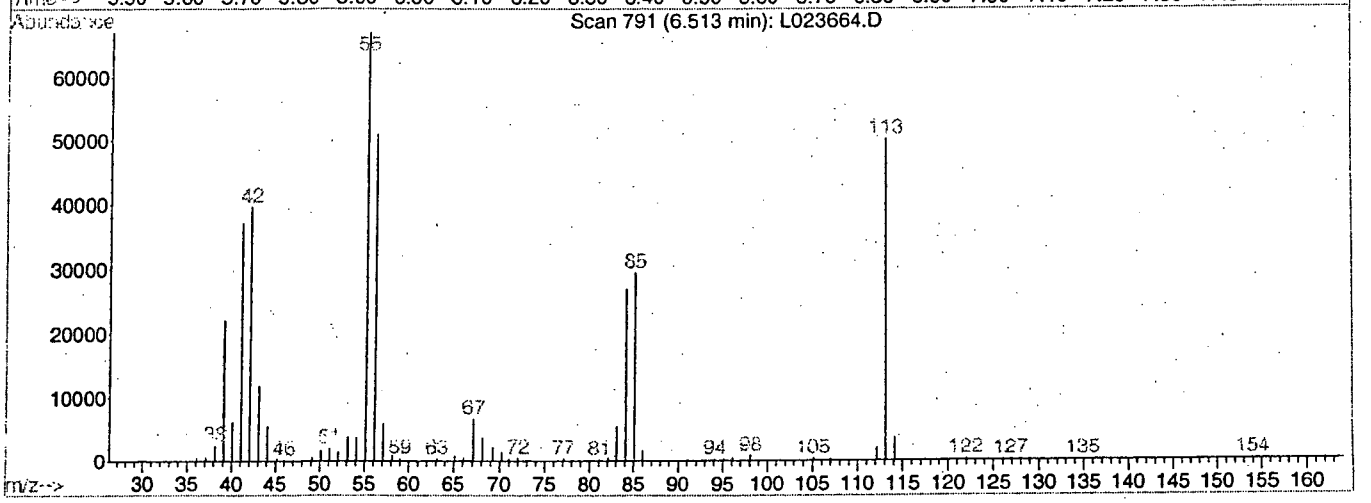
Data File : C:\HPCHEM\1\DATA\100404\L023664.D
Acq On : 4 Oct 2004 12:20 pm
Sample : cc1250-75
Misc : op11398,sl1255,1000,,,1,1,water
MS Integration Params: LSCINT.P
Quant Time: Oct 4 12:44 2004

Vial: 2
Operator: marke
Inst : MSBNA02
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Multiple Level Calibration

SM 10/5/04




TIC: L023664.D

(36) Caprolactam

6.51min 36.53ppm m

response 102930

| Ion | Exp% | Act% |
|---|---|---|
| 113.00 | 100 | 100 |
| 55.00 | 138.70 | 133.56 |
| 85.00 | 59.20 | 58.79 |
| 0.00 | 0.00 | 0.00 |

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Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\100404\L023664.D  Vial: 2
Acq On : 4 Oct 2004 12:20 pm  Operator: marke
Sample : cc1250-75  Inst : MSBNA02
Misc : op11398,sl1255,1000,,,1,1,water  Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Thu Sep 30 09:58:18 2004
Response via : Multiple Level Calibration

Sm 10/5/04

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 71 | -0.06 | 4.89 |
| 2 | | 1,4-Dioxane | 0.440 | 0.438 | 0.5 | 67 | -0.08 | 2.47 |
| 3 | | N-nitrosodimethylamine | 0.657 | 0.695 | -5.8 | 72 | -0.07 | 2.82 |
| 4 | | Pyridine | 1.299 | 1.333 | -2.6 | 68 | -0.07 | 2.82 |
| 5 | | Benzaldehyde | 0.751 | 1.041 | -38.6# | 112 | -0.06 | 4.56 |
| 6 | | Aniline | 1.749 | 1.888 | -7.9 | 82 | -0.06 | 4.67 |
| 7 | S | 2-Fluorophenol | 1.155 | 1.246 | -7.9 | 73 | -0.05 | 3.98 |
| 8 | | bis(2-Chloroethyl)ether | 1.129 | 1.174 | -4.0 | 72 | -0.06 | 4.71 |
| 9 | S | Phenol-d5 | 1.328 | 1.401 | -5.5 | 76 | -0.06 | 4.68 |
| 10 | C | Phenol | 1.502 | 1.649 | -9.8 | 78 | -0.05 | 4.69 |
| 1 | | 2-Chlorophenol | 1.364 | 1.468 | -7.6 | 74 | -0.06 | 4.77 |
| 2 | | 1,3-Dichlorobenzene | 1.508 | 1.638 | -8.6 | 75 | -0.06 | 4.86 |
| 13 | C | 1,4-Dichlorobenzene | 1.475 | 1.646 | -11.6 | 78 | -0.06 | 4.91 |
| 14 | | 1,2-Dichlorobenzene | 1.415 | 1.541 | -8.9 | 76 | -0.07 | 5.05 |
| 5 | | Benzyl alcohol | 0.895 | 0.904 | -1.0 | 68 | -0.06 | 5.03 |
| 6 | | bis(2-chloroisopropyl)eth | 1.767 | 1.829 | -3.5 | 75 | -0.07 | 5.14 |
| 17 | | 2-Methylphenol | 1.171 | 1.266 | -8.1 | 73 | -0.06 | 5.14 |
| 18 | | Acetophenone | 1.759 | 1.900 | -8.0 | 73 | -0.07 | 5.24 |
| 9 | | Hexachloroethane | 0.525 | 0.564 | -7.4 | 75 | -0.07 | 5.31 |
| 0 | P | N-Nitroso-di-n-propylamin | 0.852 | 0.890 | -4.5 | 73 | -0.07 | 5.26 |
| 21 | | 3&4-Methylphenol | 1.256 | 1.338 | -6.5 | 72 | -0.06 | 5.26 |
| 2 | I | Naphthalene-d8 | 1.000 | 1.000 | 0.0 | 70 | -0.08 | 6.04 |
| 3 | S | Nitrobenzene-d5 | 0.338 | 0.362 | -7.1 | 73 | -0.07 | 5.38 |
| 24 | | Nitrobenzene | 0.326 | 0.346 | -6.1 | 73 | -0.07 | 5.39 |
| 25 | | Isophorone | 0.616 | 0.638 | -3.6 | 71 | -0.07 | 5.60 |
| 6 | C | 2-Nitrophenol | 0.210 | 0.229 | -9.0 | 73 | -0.07 | 5.68 |
| 7 | | 2,4-Dimethylphenol | 0.319 | 0.345 | -8.2 | 75 | -0.06 | 5.73 |
| 28 | | bis(2-Chloroethoxy)methan | 0.362 | 0.385 | -6.4 | 73 | -0.07 | 5.80 |
| 29 | | Benzoic Acid | 0.271 | 0.259 | 4.4 | 61 | -0.08 | 5.87 |
| 0 | C | 2,4-Dichlorophenol | 0.301 | 0.331 | -10.0 | 75 | -0.07 | 5.92 |
| 1 | | 1,2,4-Trichlorobenzene | 0.310 | 0.341 | -10.0 | 76 | -0.08 | 6.00 |
| 32 | | Naphthalene | 0.944 | 1.039 | -10.1 | 78 | -0.08 | 6.06 |
| 33 | | 4-Chloroaniline | 0.433 | 0.468 | -8.1 | 74 | -0.08 | 6.14 |
| 4 | | 2,6-Dichlorophenol | 0.287 | 0.317 | -10.5 | 76 | -0.08 | 6.16 |
| 5 | C | Hexachlorobutadiene | 0.150 | 0.164 | -9.3 | 77 | -0.08 | 6.25 |
| 36 | | Caprolactam | 0.137 | 0.133 | 2.9 | 62 | -0.09 | 6.51 |
| 37 | C | 4-Chloro-3-methylphenol | 0.295 | 0.323 | -9.5 | 73 | -0.08 | 6.71 |
| 8 | | 2-Methylnaphthalene | 0.689 | 0.750 | -8.9 | 75 | -0.08 | 6.85 |
| 9 | | 1-Methylnaphthalene | 0.666 | 0.720 | -8.1 | 74 | -0.09 | 6.98 |
| 10 | | 1,2,4,5-Tetrachlorobenzen | 0.302 | 0.332 | -9.9 | 76 | -0.09 | 7.12 |
| 1 | I | Acenaphthene-d10 | 1.000 | 1.000 | 0.0 | 69 | -0.10 | 8.34 |
| | | ---------- | Amount | Calc. | %Drift | | ---------- | |
| 42 | P | Hexachlorocyclopentadiene | 75.000 | 78.729 | -5.0 | 72 | -0.09 | 7.14 |
| | | ---------- | AvgRF | CCRF | %Dev | | ---------- | |
| 43 | C | 2,4,6-Trichlorophenol | 0.414 | 0.439 | -6.0 | 70 | -0.09 | 7.26 |
| 44 | | 2,4,5-Trichlorophenol | 0.440 | 0.471 | -7.0 | 71 | -0.09 | 7.33 |
| 5 | S | 2-Fluorobiphenyl | 1.382 | 1.533 | -10.9 | 76 | -0.09 | 7.36 |
| 6 | | 1,1'-Biphenyl | 1.576 | 1.718 | -9.0 | 73 | -0.09 | 7.47 |
| 7 | | 2-Chloronaphthalene | 1.205 | 1.327 | -10.1 | 76 | -0.09 | 7.49 |
| 48 | | 2-Nitroaniline | 0.384 | 0.397 | -3.4 | 68 | -0.09 | 7.69 |
| 9 | | Acenaphthylene | 2.023 | 2.218 | -9.6 | 74 | -0.10 | 8.10 |
| 0 | | Dimethylphthalate | 1.479 | 1.574 | -6.4 | 71 | -0.09 | 8.03 |
| 1 | | 2,6-Dinitrotoluene | 0.354 | 0.376 | -6.2 | 70 | -0.09 | 8.12 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | | 3-Nitroaniline | 0.426 | 0.448 | -5.2 | 69 | -0.09 | 8.34 |
| 54 | P | 2,4-Dinitrophenol | 0.230 | 0.211 | 8.3 | 58 | -0.10 | 8.50 |
| 55 | | Dibenzofuran | 1.754 | 1.897 | -8.2 | 73 | -0.10 | 8.64 |
| 56 | | 2,4-Dinitrotoluene | 0.491 | 0.520 | -5.9 | 68 | -0.10 | 8.74 |
| 57 | P | 4-Nitrophenol | 0.190 | 0.192 | -1.1 | 63 | -0.09 | 8.68 |
| 58 | | 2,3,4,6-Tetrachlorophenol | 0.333 | 0.351 | -5.4 | 67 | -0.09 | 8.93 |
| 59 | | Fluorene | 1.414 | 1.531 | -8.3 | 73 | -0.10 | 9.20 |
| 60 | | 4-Chlorophenyl-phenylethe | 0.631 | 0.678 | -7.4 | 73 | -0.10 | 9.23 |
| 61 | | Diethylphthalate | 1.447 | 1.548 | -7.0 | 71 | -0.10 | 9.17 |
| 62 | | 4-Nitroaniline | 0.453 | 0.469 | -3.5 | 65 | -0.10 | 9.35 |
| 63 | I | Phenanthrene-d10 | 1.000 | 1.000 | 0.0 | 65 | -0.10 | 10.80 |
| 64 | | 4,6-Dinitro-2-methylpheno | 0.164 | 0.183 | -11.6 | 65 | -0.10 | 9.42 |
| 65 | C | n-Nitrosodiphenylamine | 0.591 | 0.644 | -9.0 | 72 | -0.10 | 9.45 |
| 66 | | 1,2-Diphenylhydrazine | 0.693 | 0.734 | -5.9 | 71 | -0.10 | 9.49 |
| 67 | S | 2,4,6-Tribromophenol | 0.087 | 0.094 | -8.0 | 70 | -0.10 | 9.65 |
| 68 | | 4-Bromophenyl-phenylether | 0.202 | 0.222 | -9.9 | 70 | -0.10 | 10.05 |
| 69 | | Hexachlorobenzene | 0.205 | 0.221 | -7.8 | 71 | -0.10 | 10.28 |
| 70 | | Atrazine | 0.230 | 0.250 | -8.7 | 68 | -0.10 | 10.49 |
| 71 | C | Pentachlorophenol | 0.114 | 0.112 | 1.8 | 58 | -0.10 | 10.63 |
| 72 | | Phenanthrene | 1.127 | 1.237 | -9.8 | 72 | -0.10 | 10.85 |
| 73 | | Anthracene | 1.158 | 1.253 | -8.2 | 70 | -0.10 | 10.93 |
| 74 | | Carbazole | 1.147 | 1.237 | -7.8 | 68 | -0.10 | 11.27 |
| 75 | | Di-n-butylphthalate | 1.343 | 1.446 | -7.7 | 69 | -0.10 | 12.12 |
| 76 | C | Fluoranthene | 1.171 | 1.274 | -8.8 | 69 | -0.10 | 13.03 |
| 77 | I | Chrysene-d12 | 1.000 | 1.000 | 0.0 | 64 | -0.11 | 15.74 |
| 78 | | Benzidine | 0.987 | 1.185 | -20.1# | 76 | -0.10 | 13.37 |
| 79 | | Pyrene | 1.596 | 1.681 | -5.3 | 69 | -0.11 | 13.43 |
| 80 | S | Terphenyl-d14 | 0.938 | 0.978 | -4.3 | 68 | -0.10 | 13.84 |
| 81 | | Butylbenzylphthalate | 0.776 | 0.826 | -6.4 | 68 | -0.10 | 14.92 |
| 82 | | 3,3'-Dichlorobenzidine | 0.453 | 0.491 | -8.4 | 69 | -0.11 | 15.78 |
| 83 | | Benzo[a]anthracene | 1.330 | 1.424 | -7.1 | 68 | -0.11 | 15.71 |
| 84 | | Chrysene | 1.184 | 1.241 | -4.8 | 68 | -0.11 | 15.79 |
| 85 | | bis(2-Ethylhexyl)phthalat | 1.028 | 1.079 | -5.0 | 67 | -0.10 | 16.13 |
| 86 | I | Perylene-d12 | 1.000 | 1.000 | 0.0 | 63 | -0.11 | 18.26 |
| 87 | C | Di-n-octylphthalate | 1.858 | 1.976 | -6.4 | 68 | -0.10 | 17.25 |
| 88 | | Benzo[b]fluoranthene | 1.347 | 1.458 | -8.2 | 65 | -0.12 | 17.65 |
| 89 | | Benzo[k]fluoranthene | 1.234 | 1.311 | -6.2 | 71 | -0.11 | 17.70 |
| 90 | C | Benzo[a]pyrene | 1.252 | 1.342 | -7.2 | 67 | -0.11 | 18.17 |
| 91 | | Indeno[1,2,3-cd]pyrene | 1.327 | 1.385 | -4.4 | 64 | -0.11 | 19.88 |
| 92 | | Dibenz[a,h]anthracene | 1.237 | 1.355 | -9.5 | 67 | -0.12 | 19.92 |
| 93 | | Benzo[g,h,i]perylene | 1.349 | 1.420 | -5.3 | 65 | -0.12 | 20.23 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L023583.D 8270C.M Tue Oct 05 09:49:36 2004

# *INTERNAL STANDARD*

*SVOC.10*

# Semivolatile Internal Standard Area Summary

**Job Number:** N78399
**Account:** ALNJ Accutest New Jersey
**Project:** GODNJP: Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Check Std:** | SL1255-CC1251 | **Injection Date:** | 10/04/04 |
| **Lab File ID:** | L023664.D | **Injection Time:** | 12:20 |
| **Instrument ID:** | GCMSL | **Method:** | SW846 8270C |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT | IS 6 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 212598 | 4.89 | 824975 | 6.04 | 424086 | 8.34 | 729991 | 10.80 | 568548 | 15.74 | 517788 | 18.26 |
| Upper Limit [a] | 425196 | 5.39 | 1649950 | 6.54 | 848172 | 8.84 | 1459982 | 11.30 | 1137096 | 16.24 | 1035576 | 18.76 |
| Lower Limit [b] | 106299 | 4.39 | 412488 | 5.54 | 212043 | 7.84 | 364996 | 10.30 | 284274 | 15.24 | 258894 | 17.76 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT | IS 6 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OP11403-BS | 226541 | 4.89 | 857733 | 6.04 | 438061 | 8.33 | 711667 | 10.80 | 537719 | 15.74 | 472166 | 18.25 |
| OP11403-MB | 222641 | 4.89 | 822511 | 6.03 | 423241 | 8.33 | 689198 | 10.79 | 530248 | 15.73 | 483970 | 18.25 |
| ZZZZZZ | 225673 | 4.89 | 853051 | 6.04 | 448971 | 8.33 | 729083 | 10.80 | 570788 | 15.73 | 505905 | 18.25 |
| N78365-10 | 232251 | 4.89 | 857982 | 6.04 | 445127 | 8.33 | 714118 | 10.80 | 555624 | 15.73 | 499480 | 18.26 |
| OP11403-MS | 231014 | 4.89 | 879640 | 6.03 | 446906 | 8.33 | 750538 | 10.80 | 578069 | 15.74 | 516134 | 18.26 |
| OP11403-MSD | 222295 | 4.89 | 828509 | 6.04 | 424876 | 8.33 | 707222 | 10.80 | 549666 | 15.74 | 494867 | 18.25 |
| ZZZZZZ | 250942 | 4.89 | 932142 | 6.04 | 477000 | 8.33 | 758105 | 10.80 | 603882 | 15.73 | 543675 | 18.25 |
| N78399-1 | 246555 | 4.89 | 908433 | 6.03 | 458438 | 8.33 | 745123 | 10.79 | 589159 | 15.73 | 514240 | 18.25 |
| OP11381-BS | 273743 | 4.89 | 1033856 | 6.04 | 523864 | 8.34 | 865983 | 10.80 | 640398 | 15.74 | 534750 | 18.26 |
| OP11381-MB | 277815 | 4.89 | 1019655 | 6.04 | 504865 | 8.33 | 795282 | 10.79 | 608479 | 15.73 | 503829 | 18.25 |
| F26800-2 | 283913 | 4.89 | 1030163 | 6.04 | 510690 | 8.33 | 803298 | 10.79 | 594205 | 15.73 | 486997 | 18.25 |
| OP11381-MS | 272429 | 4.89 | 1016015 | 6.04 | 520182 | 8.33 | 866577 | 10.80 | 641795 | 15.73 | 525707 | 18.25 |
| OP11381-MSD | 281321 | 4.89 | 1054687 | 6.04 | 544839 | 8.33 | 912336 | 10.80 | 660928 | 15.73 | 536251 | 18.25 |
| ZZZZZZ | 296348 | 4.89 | 1073963 | 6.03 | 545748 | 8.33 | 891413 | 10.79 | 667779 | 15.73 | 538890 | 18.25 |
| ZZZZZZ | 284807 | 4.89 | 1047850 | 6.04 | 523478 | 8.33 | 844880 | 10.80 | 639482 | 15.73 | 531319 | 18.25 |
| ZZZZZZ | 262893 | 4.89 | 849867 | 6.04 | 502824 | 8.33 | 823107 | 10.80 | 690868 | 15.75 | 550337 | 18.27 |

**IS 1** = 1,4-Dichlorobenzene-d4
**IS 2** = Naphthalene-d8
**IS 3** = Acenaphthene-D10
**IS 4** = Phenanthrene-d10
**IS 5** = Chrysene-d12
**IS 6** = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# *SEQUENCE LOGS AND BENCH SHEETS*

*SVOC.11*

Sequence Name: C:\HPCHEM\1\SEQUENCE\100404.S
Comment: SL1255
Operator: marke
Data Path: C:\HPCHEM\1\DATA\100404\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

| Line | Type | Vial | DataFile | Method | Sample Name |
|---|---|---|---|---|---|
| 1 | Sample | 1 | L023663 | DFTPP | dftpp |
| 2 | Sample | 2 | L023664 | 8270C | cc1250-75 |
| 3 | Sample | 3 | L023665 | 8270C | op11403-bs |
| 4 | Sample | 4 | L023666 | 8270C | op11403-mb |
| 5 | Sample | 5 | L023667 | 8270C | n78365-5,4 |
| 6 | Sample | 6 | L023668 | 8270C | n78365-10,4 |
| 7 | Sample | 7 | L023669 | 8270C | n78365-10 |
| 8 | Sample | 8 | L023670 | 8270C | op11403-ms |
| 9 | Sample | 9 | L023671 | 8270C | op11403-msd |
| 10 | Sample | 10 | L023672 | 8270C | n78365-11a |
| 11 | Sample | 11 | L023673 | 8270C | n78399-1 |
| 12 | Sample | 12 | L023674 | 8270C | op11381-bs |
| 13 | Sample | 13 | L023675 | 8270C | op11381-mb |
| 14 | Sample | 14 | L023676 | 8270C | f26800-2 |
| 15 | Sample | 15 | L023677 | 8270C | op11381-ms |
| 16 | Sample | 16 | L023678 | 8270C | op11381-msd |
| 17 | Sample | 17 | L023679 | 8270C | f26800-4 |
| 18 | Sample | 18 | L023680 | 8270C | f26800-9 |
| 19 | Sample | 19 | L023681 | 8270C | n77963-1,10 |
| 20 | Sample | 20 | L023682 | 8270C | n77963-2,10 |
| 21 | Sample | 21 | L023683 | 8270C | n77963-3,4 |
| 22 | Sample | 22 | L023684 | 8270C | n77963-4,10 |
| 23 | Sample | 23 | L023685 | 8270C | n77963-5,10 |
| 24 | Sample | 24 | L023686 | 8270C | n77963-6,10 |
| 25 | Sample | 25 | L023687 | 8270C | solvent blank |

# GC/MS ANALYSIS LOG

DATE: 10-4-04
COLUMN TYPE: 28-5
INSTRUMENT: ms-2

METHODS: 8270/625
METHOD FILE: 8270c
CALIB. DATE: 9-29-04

ANALYST: [illegible]
RUN BATCH: SL 1255
AMOUNT INJECTED: 2 ~~10~~ ul

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | MATRIX | OP BATCH | INITIAL AMOUNT | FINAL VOLUME | DILUTION FACTOR | RUN OK | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| L023663 | 1 | dftpp | 8270 | S2097 | | | | | ✓ | tune ok. |
| 64 | 2 | cc1250-75 | | S2087/S2088 | | | | | ✓ | pass. |
| 65 | 3 | OP11403-BS | | W | 11403 | 1000 | 1.0 | 1 | ✓ | ✓ |
| 66 | 4 | -MB | | | | 1000 | | ↓ | ✓ | ND. |
| 67 | 5 | n78365-5,4 | | | | 940 | | 4 | ✓ | ✓ |
| 68 | 6 | -10,4 | | | | 880 | | 4 | ✓ | ✓ |
| 69 | 7 | -10 | | | | ↓ | | 1x | ✓ | ✓ |
| 70 | 8 | OP11403-MS | | | | 460 | | | ✓ | ✓ |
| 71 | 9 | -MSD | | | | 460 | | | ✓ | ✓ |
| 72 | 10 | n78365-11a | | | | 960 | | | ✓ | ND |
| 73 | 11 | n78399-1 | | ↓ | ↓ | 1000 | ↓ | ↓ | ✓ | ND |
| 74 | 12 | OP11381-BS | | S | 11381 | 30.0 | 1 | 1 | ✓ | ✓ |
| 75 | 13 | -MB | | | | 30.0 | | | ✓ | ND |
| 76 | 14 | f26800-2 | | | | 30.2 | ↓ | | ✓ | ND. |
| 77 | 15 | OP11381-MS | | | | 30.4 | 1 | | ✓ | ✓ |
| 78 | 16 | -MSD | | | | 30.3 | | | ✓ | ✓ |
| 79 | 17 | f26800-4 | | | | 30.6 | | | ✓ | ✓ |
| 80 | 18 | -9 | | | | 30.1 | ↓ | ↓ | ✓ | ✓ |
| 81 | 19 | n77963-1,10 | | | | 30.2 | 2.0 | 10 | ✓ | RR 4x |
| 82 | 20 | -2,10 | | | | 30.1 | ↓ | 10 | ✓ | RR 4x |
| 83 | 21 | -3,4 | | | | 30.5 | 1.0 | 4 | ✓ | ✓ |
| 84 | 22 | -4,10 | | | | 30.3 | 2.0 | 10 | ✓ | RR 4x |
| 85 | 23 | -5,10 | | | | 30.4 | | | ✓ | RR 4x |
| 86 | 24 | -6,10 | | ↓ | ↓ | 30.7 | ↓ | ↓ | ✓ | RR 4x |
| 87 | 25 | Solvent blank | | | | | | | ✓ | Solv. |

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: [illegible]

Sequence Name: C:\HPCHEM\1\SEQUENCE\092904.S
Comment: SL1251
Operator: sarahm
Data Path: C:\HPCHEM\1\DATA\092904\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

| Line | Type | Vial | DataFile | Method | Sample Name |
|---|---|---|---|---|---|
| 1 | Sample | 1 | L023582 | DFTPP | dftpp |
| 2 | Sample | 2 | L023583 | 8270C | icc1251-75 |
| 3 | Sample | 3 | L023584 | 8270C | ic1251-5 |
| 4 | Sample | 4 | L023585 | 8270C | ic1251-25 |
| 5 | Sample | 5 | L023586 | 8270C | ic1251-50 |
| 6 | Sample | 6 | L023587 | 8270C | ic1251-100 |
| 7 | Sample | 7 | L023588 | 8270C | ic1251-125 |
| 8 | Sample | 8 | L023589 | 8270C | icv1251-50 |
| 9 | Sample | 9 | L023590 | 8270C | op11402-bs |
| 10 | Sample | 10 | L023591 | 8270C | op11402-mb |
| 11 | Sample | 11 | L023592 | 8270C | n77748-4 |
| 12 | Sample | 12 | L023593 | 8270C | n77748-5 |
| 13 | Sample | 13 | L023594 | 8270C | n77905-1 |
| 14 | Sample | 14 | L023595 | 8270C | n77905-2 |
| 15 | Sample | 15 | L023596 | 8270C | n77905-3 |
| 16 | Sample | 16 | L023597 | 8270C | n77905-4 |
| 17 | Sample | 17 | L023598 | 8270C | n77905-5 |
| 18 | Sample | 18 | L023599 | 8270C | n77905-6 |
| 19 | Sample | 19 | L023600 | 8270C | n77905-7 |
| 20 | Sample | 20 | L023601 | 8270C | n77905-8 |
| 21 | Sample | 21 | L023602 | 8270C | n77905-9 |
| 22 | Sample | 22 | L023603 | 8270C | n77905-10 |
| 23 | Sample | 23 | L023604 | 8270C | op11402-ms |
| 24 | Sample | 24 | L023605 | 8270C | op11402-msd |
| 25 | Sample | 25 | L023606 | 8270C | n77927-1,20 |
| 26 | Sample | 26 | L023607 | 8270C | n77963-9,10 |
| 27 | Sample | 27 | L023608 | 8270C | n77963-10,10 |
| 28 | Sample | 28 | L023609 | 8270C | n77963-11,10 |
| 29 | Sample | 29 | L023610 | 8270C | n78001-4,20 |
| 30 | Sample | 30 | L023611 | 8270C | n78001-5,10 |
| 31 | Sample | 31 | L023612 | 8270C | n78001-6,20 |

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# GC/MS ANALYSIS LOG

DATE: 9-29-04
COLUMN TYPE: ZB-5
INSTRUMENT: ~~MS D~~ MS 2

METHODS: 8270/625
METHOD FILE: 8270c
CALIB. DATE: SM 9/30/04 ~~7-29-04~~ 9-29-04

ANALYST: SM
RUN BATCH: SL 1251
AMOUNT INJECTED: 2 u

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | MATRIX | OP BATCH | INITIAL AMOUNT | FINAL VOLUME | DILUTION FACTOR | RUN OK | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | tune |
| L023582 | 1 | df+pp | 8270 | S2097 | | | | | | |
| 83 | 2 | icc 1251-75 | | S2087/S2088 | | | | SM 9/30/04 ~~175~~ 150:75 | ✓ | ✓ |
| 84 | 3 | ic 1251-5 | | | | | | 10:5 | ✓ | ✓ |
| 85 | 4 | -25 | | | | | | 50:25 | ✓ | ✓ |
| 86 | 5 | -50 | | | | | | 100:50 | ✓ | ✓ |
| 87 | 6 | -100 | | | | | | 200:100 | ✓ | ✓ |
| 88 | 7 | -125 | | | | | | 250:125 | ✓ | ✓ |
| 89 | 8 | icv 1251-50 | | 2356 | | | | 2X | ✓ | icv ok. |
| 90 | 9 | OP11402-BS | | S | 11402 | 30.0 | 1.0 | 1X | ✓ | ✓ |
| 91 | 10 | -MB | | | | 30.0 | | | ✓ | ND. |
| 92 | 11 | n77748-4 | | | | 30.9 | | | ✓ | ND |
| 93 | 12 | -5 | | | | 30.9 | | | ✓ | ND. |
| 94 | 13 | n77905-1 | | | | 30.5 | | | ✓ | ND |
| 95 | 14 | -2 | | | | 30.2 | | | ✓ | ND. |
| 96 | 15 | -3 | | | | 30.0 | | | ✓ | ND. |
| 97 | 16 | -4 | | | | 30.4 | | | ✓ | ND. |
| 98 | 17 | -5 | | | | 30.2 | | | ✓ | ND. |
| 99 | 18 | -6 | | | | 30.2 | | | ✓ | ND |
| 600 | 19 | -7 | | | | 30.1 | | | ✓ | ND. |
| 01 | 20 | -8 | | | | 30.3 | | | ✓ | ND. |
| 02 | 21 | -9 | | | | 30.1 | | | ✓ | ND. |
| 03 | 22 | -10 | | | | 30.6 | | | ✓ | ND. |
| 04 | 23 | OP11402-MS | | | | 30.7 | | | ✓ | ✓ |
| 05 | 24 | -MSD | | | | 30.1 | | | ✓ | ✓ |
| 06 | 25 | n77927-1,20 | | | | 30.0 | | 20X | ✗ | out of tune ↓ 2X |

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: SM

Ms1_log.xls NF rev. 11/01

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# GC/MS ANALYSIS LOG

DATE: 9-29-04
COLUMN TYPE: 26-5
INSTRUMENT: MS-2

METHODS: 625 - 8270
METHOD FILE: 8270C
CALIB. DATE: 9-29-04

ANALYST: SM
RUN BATCH: SL 1251.
AMOUNT INJECTED: .2 ul

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | MATRIX | OP BATCH | INITIAL AMOUNT | FINAL VOLUME | DILUTION FACTOR | RUN OK | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| L023607 | 26 | n77963-9,10 | 8270 | S | 11402 | 30.8 | 1.0 | 10 | X | out of tune (2x) |
| 08 | 27 | -10,10 | | | | 30.3 | | 10 | X | 2x |
| 09 | 28 | Sm 9/30/04 -11,10 | | | | 30.1 | | 10 | X | 2x |
| 10 | 29 | ~~AB~~ n78001-4,20 | | | | 30.1 | | 20 | X | 10x |
| 11 | 30 | -5,10 | | | | 30.0 | | 10 | X | 1x |
| 12 | 31 | -6,20 | | | | 30.1 | | 20 | X | 10x |

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature: SM

Ms1 log.xls NF rev. 11/01

# *SAMPLE PREP REPORT*

*SVOC.12*

# LIQUID SAMPLE PREP REPORT

Date: 09/27/04 Analytical Method: 8270 Batch#: 11403

Prep Method: 3510C 3535A 3580A or Method Analyst: JFS

| Sample ID | Bottle Number | Amount Extracted (ml) | Initial pH | Adjusted pH | Surrogate Amount | Spike Amount | Final Volume (ml) | Comments |
|---|---|---|---|---|---|---|---|---|
| OP 11403 MB | X | 1000 | 6 | <2,>11 | 0.5ml | | 1.0 | |
| OP 11403 BS | X | 1000 | ↓ | ↓ | ↓ | 0.5ml | ↓ | |
| N78365-5 | 4 | 940 | ↓ | ↓ | ↓ | | ↓ | |
| -10 | 3 | 880 | ↓ | ↓ | ↓ | | ↓ | MS/MSD |
| -11 | 5 | 960 | ↓ | ↓ | ↓ | | ↓ | |
| N78399-1 | 1 | 1000 | ↓ | ↓ | ↓ | | ↓ | |
| N78365-10 MS | 6 | DC 9/27/04 ~~460~~ | 6 | <2,>11 | 0.5ml | 0.5ml | 1.0 | 460 = VOL DC 9/27/04 |
| ↓ MSD | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| DUP | | | | | | | | |

AG 9/28/04

Comments:

Surrogate ID: 23858 IJ 9/27/04 Conc: 200/100 ppm Exp. Date: 3/20/05 Bath Temp.: 80

Spike ID: 2356 IJ Conc: 200/100 ppm Exp. Date: 3/24/05 Bath Temp2.: 30

CH2CL2 Lot # A21E45 Hexane Lot # — Na2SO4 Lot# —

Acetonitrile Lot # — Methanol Lot # — Acetone Lot# —

$H_2SO_4$ Reagent # ER# 565 NaOH Reagent # ER# Reagent # —

Relinquished By: Date: 9/28/04

By: 9/28/04

New Jersey
ACCUTEST
Laboratories

11/17/04

## Technical Report for

Dewberry

Atlantic States Cast Iron Pipe, Phillipsburg, NJ

3852

Accutest Job Number: N81296

Sampling Date: 10/21/04

Report to:

Dewberry-Goodkind, Inc.
299 Webro Road
Parsippany, NJ 08054

ATTN: Larry Brunt

Total number of pages in report: 131

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Vincent J. Pugliese
President

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Accutest Laboratories

# Sample Summary

Dewberry

**Job No:** N81296

Atlantic States Cast Iron Pipe, Phillipsburg, NJ
Project No: 3852

| Sample Number | Collected Date | Time By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|
| N81296-1 | 10/21/04 | 12:05 MS | 10/21/04 | AQ | Ground Water | MW-1 |
| N81296-2 | 10/21/04 | 12:05 MS | 10/21/04 | AQ | Trip Blank Water | TB |

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# Reduced Laboratory Data Deliverables
# For
# Non-USEPA/CLP Methods


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New Jersey * Fresh Ponds Corporate Village * Building B * 2235 Route 130 * Dayton, NJ 08810 Tel: 732.329.0200 * Fax: 732.329.3499 * http://www.accutest.com

# RESULTS

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N81296-1 | **Date Sampled:** | 10/21/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 10/21/04 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | A88889.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |
| Run #2 | A88890.D | 5 | 10/29/04 | ZLM | n/a | n/a | VA2763 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | 2.3 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | 0.31 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | 0.11 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | 0.17 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | 0.15 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | 2.5 | ug/l | |
| 75-15-0 | Carbon disulfide | ND | 2.0 | 0.23 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | 0.15 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | 0.23 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | 0.73 | ug/l | |
| 67-66-3 | Chloroform | 1.4 | 1.0 | 0.081 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | 0.13 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | 0.18 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.13 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.35 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.81 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 220 [a] | 5.0 | 1.2 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | 1.5 | 1.0 | 0.17 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.11 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | 0.071 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | 0.080 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 0.73 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | 0.59 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.20 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | 0.12 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.14 | ug/l | |
| 127-18-4 | Tetrachloroethene | 26.4 | 1.0 | 0.37 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.14 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 79-01-6 | Trichloroethene | 2.6 | 1.0 | 0.13 | ug/l | |

ND = Not detected  MDL - Method Detection Limit  J = Indicates an estimated value
RL = Reporting Limit  B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range  N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N81296-1 | **Date Sampled:** | 10/21/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 10/21/04 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

**VOA TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.66 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | 0.17 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | 110% | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | 113% | 68-129% |
| 2037-26-5 | Toluene-D8 | 100% | 102% | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | 99% | 82-120% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

(a) Result is from Run# 2



ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N81296-1 | **Date Sampled:** | 10/21/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 10/21/04 |
| **Method:** | SW846 8270C SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | M35485.D | 1 | 11/05/04 | WHS | 10/22/04 | OP18476 | EM1086 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

**BN TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | 2.0 | 0.30 | ug/l | |
| 208-96-8 | Acenaphthylene | ND | 2.0 | 0.35 | ug/l | |
| 120-12-7 | Anthracene | ND | 2.0 | 0.22 | ug/l | |
| 56-55-3 | Benzo(a)anthracene | ND | 2.0 | 0.27 | ug/l | |
| 50-32-8 | Benzo(a)pyrene | ND | 2.0 | 0.38 | ug/l | |
| 205-99-2 | Benzo(b)fluoranthene | ND | 2.0 | 0.37 | ug/l | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | 2.0 | 0.50 | ug/l | |
| 207-08-9 | Benzo(k)fluoranthene | ND | 2.0 | 0.37 | ug/l | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | 2.0 | 0.54 | ug/l | |
| 85-68-7 | Butyl benzyl phthalate | ND | 2.0 | 0.54 | ug/l | |
| 91-58-7 | 2-Chloronaphthalene | ND | 5.0 | 0.38 | ug/l | |
| 106-47-8 | 4-Chloroaniline | ND | 5.0 | 0.43 | ug/l | |
| 86-74-8 | Carbazole | ND | 2.0 | 0.34 | ug/l | |
| 218-01-9 | Chrysene | ND | 2.0 | 0.26 | ug/l | |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | 2.0 | 0.34 | ug/l | |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | 2.0 | 0.49 | ug/l | |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | 2.0 | 0.44 | ug/l | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | 2.0 | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.0 | 0.24 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.0 | 0.32 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.0 | 0.25 | ug/l | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | 2.0 | 0.78 | ug/l | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | 2.0 | 0.62 | ug/l | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | 5.0 | 0.39 | ug/l | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | 2.0 | 0.58 | ug/l | |
| 132-64-9 | Dibenzofuran | ND | 5.0 | 0.49 | ug/l | |
| 84-74-2 | Di-n-butyl phthalate | ND | 2.0 | 0.79 | ug/l | |
| 117-84-0 | Di-n-octyl phthalate | ND | 2.0 | 0.63 | ug/l | |
| 84-66-2 | Diethyl phthalate | ND | 2.0 | 1.4 | ug/l | |
| 131-11-3 | Dimethyl phthalate | ND | 2.0 | 0.58 | ug/l | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | 2.0 | 0.74 | ug/l | |
| 206-44-0 | Fluoranthene | ND | 2.0 | 0.63 | ug/l | |

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | N81296-1 | **Date Sampled:** | 10/21/04 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 10/21/04 |
| **Method:** | SW846 8270C SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

**BN TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 86-73-7 | Fluorene | ND | 2.0 | 0.89 | ug/l | |
| 118-74-1 | Hexachlorobenzene | ND | 2.0 | 1.2 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 2.0 | 0.41 | ug/l | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | 20 | 0.45 | ug/l | |
| 67-72-1 | Hexachloroethane | ND | 5.0 | 0.67 | ug/l | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | 2.0 | 1.5 | ug/l | |
| 78-59-1 | Isophorone | ND | 2.0 | 0.54 | ug/l | |
| 91-57-6 | 2-Methylnaphthalene | ND | 2.0 | 0.72 | ug/l | |
| 88-74-4 | 2-Nitroaniline | ND | 5.0 | 1.4 | ug/l | |
| 99-09-2 | 3-Nitroaniline | ND | 5.0 | 1.2 | ug/l | |
| 100-01-6 | 4-Nitroaniline | ND | 5.0 | 1.1 | ug/l | |
| 91-20-3 | Naphthalene | ND | 2.0 | 1.0 | ug/l | |
| 98-95-3 | Nitrobenzene | ND | 2.0 | 0.61 | ug/l | |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | 2.0 | 0.50 | ug/l | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | 5.0 | 0.80 | ug/l | |
| 85-01-8 | Phenanthrene | ND | 2.0 | 0.23 | ug/l | |
| 129-00-0 | Pyrene | ND | 2.0 | 0.58 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 2.0 | 0.32 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 4165-60-0 | Nitrobenzene-d5 | 66% | | 32-128% |
| 321-60-8 | 2-Fluorobiphenyl | 69% | | 34-121% |
| 1718-51-0 | Terphenyl-d14 | 71% | | 41-129% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | system artifact/aldol-condensation | 4.70 | 7.1 | ug/l | J |
| | system artifact | 24.27 | 10 | ug/l | J |
| | Total TIC, Semi-Volatile | | 0 | ug/l | |



ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TB | | |
| **Lab Sample ID:** | N81296-2 | **Date Sampled:** | 10/21/04 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 10/21/04 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | A88891.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | 2.3 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | 0.31 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | 0.11 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | 0.17 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | 0.15 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | 2.5 | ug/l | |
| 75-15-0 | Carbon disulfide | ND | 2.0 | 0.23 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | 0.15 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | 0.23 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | 0.73 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | 0.081 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | 0.13 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | 0.18 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.13 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.35 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.81 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.24 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.17 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.11 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | 0.071 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | 0.080 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 0.73 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | 0.59 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.20 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | 0.12 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.14 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.37 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.14 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.13 | ug/l | |

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ND = Not detected  MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TB | | |
| **Lab Sample ID:** | N81296-2 | **Date Sampled:** | 10/21/04 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 10/21/04 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | Atlantic States Cast Iron Pipe, Phillipsburg, NJ | | |

**VOA TCL List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.66 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | 0.17 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 116% | | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 119% | | 68-129% |
| 2037-26-5 | Toluene-D8 | 103% | | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 82-120% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |



ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# CHAIN OF CUSTODY

ACCUTEST. Laboratories

2235 Route 130, Dayton NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

| FED-EX Tracking # | Bottle Order Control # |
|---|---|
| Accutest Quote # | Accutest Job # N81296 |

**Client / Reporting Information**

Company Name: Dewberry-Goodkind, Inc
Address: 299 Webro Rd
City: Parsippany State: NJ Zip: 07054
Project Contact: LARRY BRUNT E-mail:
Phone #: (973) 428-4909 x306
Sampler's Name: MEHMET SECUMIS

**Project Information**

Project Name: Atlantic States Cast Iron Pipe Company
Street:
City: State:
Project #:
Fax #:
Client Purchase Order #: 3852

**Requested Analysis**

624 ☐ 8021 ☐ 602 ☐ PNUG ☐ BTEX ☐ MTBE ☐ TBA ☐ NAP ☐ PALG ☐
8260 ☐ 624 ☐ TCL ☐ PPL ☐ STARS ☐ MTBE ☐ TBA ☐ NAP ☐ +10 ☐ +15 ☐
8270 ☐ 625 ☐ TCL ☐ PPL ☐ STARS ☐ ABN ☐ BN ☐ PAH ☐ PAOF ☐ +TICs ☐

**Matrix Codes**: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

| Accutest Sample # | Field ID / Point of Collection | SUMMA # / MEOH Vial # | Collection Date | Collection Time | Sampled By | Matrix | # of bottles | HCl | MeOH | HNO3 | H2SO4 | NONE | NaHSO4 | MEOH | ENCORE | 8260 BTEX MTBE | 8260 TBA NAP | 8270 ABN | VOC +10 | BN +15 | | | | | | | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -1 | MW-1 | | 10/21/04 | 12:05 | MS | Aq | 3 | 3 | | | | | | | | | | | ✓ | ✓ | | | | | | | EX5, 2134 |
| -2 | TB 10/19/04, 1800 | | " | | | " | 2 | | | | | | | | | | | | ✓ | | | | | | | | 2134 |

**Turnaround Time (Business Days)**

- ☑ Std. 15 Business Days
- ☐ 10 Day *RUSH*
- ☐ 5 Day *RUSH*
- ☐ 3 Day *EMERGENCY*
- ☐ 2 Day *EMERGENCY*
- ☐ 1 Day *EMERGENCY*
- ☐ Other

Approved By: / Date:

**Emergency & Rush T/A data available VIA LabLink**

**Data Deliverable Information**

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☑ NJ Reduced
- ☐ NJ Full
- ☐ Other _____
- ☐ FULL CLP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☑ EDD Format dbf.

Commercial "A" = Results Only

**Comments / Remarks**

Sample Custody must be documented below each time samples change possession, including courier delivery.

| Relinquished by Sampler: | Date Time: | Received by: | Relinquished by: | Date Time: | Received by: |
|---|---|---|---|---|---|
| 1 | 10/21/04 | 1 | 2 | 10/21/04 1645 | 2 |
| Relinquished by: 3 | Date Time: | Received by: | Relinquished by: 4 | Date Time | Received by: 4 |
| Relinquished by: 5 | Date Time: | Received by: 5 | Custody Seal # | Preserved where applicable ☐ | On Ice ☒ Cooler Temp. 39. |

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Accutest Laboratories

# Internal Sample Tracking Chronicle

Dewberry

**Job No:** N81296

Atlantic States Cast Iron Pipe, Phillipsburg, NJ
Project No: 3852

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| N81296-1 MW-1 | Collected: 21-OCT-04 12:05 By: MS | | Received: 21-OCT-04 By: MPC | | | |
| N81296-1 | SW846 8260B | 29-OCT-04 16:59 | ZLM | | | V8260TCL+10 |
| N81296-1 | SW846 8260B | 29-OCT-04 17:29 | ZLM | | | V8260TCL+10 |
| N81296-1 | SW846 8270C | 05-NOV-04 10:14 | WHS | 22-OCT-04 | GGP | B8270TCL+ |
| N81296-2 TB | Collected: 21-OCT-04 12:05 By: MS | | Received: 21-OCT-04 By: MPC | | | |
| N81296-2 | SW846 8260B | 29-OCT-04 17:59 | ZLM | | | V8260TCL+10 |

# GC/MS

# GC/MS VOLATILE

ACCUTEST

# GC/MS Analysis Case Narrative/Conformance/Non-Conformance Summary

Fraction Volatile

| | NO | YES |
|---|---|---|
| 1. Chromatograms Labeled/Compounds Identified *(Field Samples and Method Blanks)* | | ✓ |
| 2. GC/MS Tune Meet Criteria | | ✓ |
| 3. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series. | | ✓ |
| 4. GC/MS Calibration – Initial and Continuing Calibration Meet Method Requirements | | ✓ |
| 5. GC/MS Calibration Requirements | | |
| a. Calibration Check Compounds | | ✓ |
| b. System Performance Check Compounds | | ✓ |
| 6. Blank Contamination | ✓ | |
| *If yes, the sample result is qualified with a "B".* | | |
| 7. Surrogate Recoveries Meet Criteria | | ✓ |
| *If the requirement is not met, refer to the Surrogate Summary for comment.* | | |
| 8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria | | ✓ |
| *If the requirement is not met, refer to MS/MSD Summary for comment.* | | |
| 9. Internal Standard Area/Retention Time Shift Meet Criteria | | ✓ |
| *If the requirement is not met, refer to the Internal Standard Summary for comment.* | | |
| 10. Extraction Holding Time Met | | N/A |
| *If the holding time is not met, refer to the Sample Result page for comment.* | | |
| 11. Analysis Holding Time Met | | ✓ |
| *If the holding time is not met, refer to the Sample Result page for comment.* | | |

12. Volatile Sample Preservation – pH should be < 2. *List any non-compliant samples below:*

Additional Comments:

QC Review Signature: Uma Chang Date: 11/16/04

Form: RG04
Rev. Date: 2/9/00

Case Narrative
Library Search data

The non-target compound detected in this sample were tentatively identified using a search of the NIST/EPA Mass spectral Library. This search selects certain uniqueness characteristics from the spectra of the non-target compounds and compares them to spectra of compounds that have been archived in the mass spectral Library. Compounds in the library whose spectra most closely resemble the spectra of the non-target compounds are listed in order of their "match quality" in the search results.

Interpreting library search data is subjective and dependent upon the analyst's judgement. Subjectivity increases as spectral complexity increases and the likelihood of listing a non-target compound as an unknown becomes greater.

Qualitative identifications of non-targeted compounds must be evaluated carefully to determine if their chemical and physical properties are consistent with the compound classes that can be determined by the method in use. If the chemical and physical properties of the suspect compound indicate that presence is possible, the library search data provides the basis for further investigation. The information generated via library searches of non-targeted compounds should be treated as semi-qualitative.

Quantitative values placed on tentatively identified compounds (TICs) are calculated using an assumed response factor of one (1). This assumption can cause the calculated concentration to be grossly estimated and may be high by as much as a factor of five (5) or low by as much as a factor of one thousand (1,000). The accuracy of quantitative data generated using library search procedures is unknown and should be used guardedly.

The library search may have indicated the presence of organo-silicon compounds, carbon dioxide, or aldol condensates. The organo-silicon compounds that have been identified in sample are found in components of the analytical instrumentation. They are classified as normal system artifacts. Carbon dioxide, an atmospheric component is soluble in eater and capable of being detected in purge and trap systems. Its presence is inconsequential because of its ubiquitous nature. Aldol condensates are byproducts of extraction/concentration procedures that use acetone as a solvent. They are produced under certain pH conditions, which are a function of sample matrix characteristics. None of these compounds are of sample origin and their appearance should be discounted for decision-making purpose.

# Method Blank Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VA2763-MB2 | A88876.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N81296-1, N81296-2

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | 2.3 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | 0.31 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | 0.11 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | 0.17 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | 0.15 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | 2.5 | ug/l | |
| 75-15-0 | Carbon disulfide | ND | 2.0 | 0.23 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | 0.15 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | 0.23 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | 0.73 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | 0.081 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | 0.13 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | 0.18 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.13 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.35 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.81 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.24 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.17 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.11 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | 0.071 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | 0.080 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 0.73 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | 0.59 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.20 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | 0.12 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.14 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.37 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.14 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.13 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.66 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | 0.17 | ug/l | |

# Method Blank Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VA2763-MB2 | A88876.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N81296-1, N81296-2

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 111% | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 117% | 68-129% |
| 2037-26-5 | Toluene-D8 | 102% | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 101% | 82-120% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

# Method Blank Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VA2763-MB1 | A88869.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

VA2763-BS

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | 2.3 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | 0.31 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | 0.11 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | 0.17 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | 0.15 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | 2.5 | ug/l | |
| 75-15-0 | Carbon disulfide | ND | 2.0 | 0.23 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | 0.15 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | 0.23 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | 0.73 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | 0.081 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | 0.13 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | 0.18 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.13 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.35 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.81 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.24 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.17 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.11 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | 0.071 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | 0.080 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 0.73 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | 0.59 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.20 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | 0.12 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | 0.14 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.37 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.14 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.13 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.66 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | 0.17 | ug/l | |

# Method Blank Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VA2763-MB1 | A88869.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

VA2763-BS

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 119% | 68-129% |
| 2037-26-5 | Toluene-D8 | 102% | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 101% | 82-120% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

# Blank Spike Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VA2763-BS | A88872.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N81296-1, N81296-2

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | 50 | 63.7 | 127 | 53-153 |
| 71-43-2 | Benzene | 50 | 51.9 | 104 | 77-119 |
| 75-27-4 | Bromodichloromethane | 50 | 51.4 | 103 | 82-126 |
| 75-25-2 | Bromoform | 50 | 44.2 | 88 | 73-135 |
| 74-83-9 | Bromomethane | 50 | 42.6 | 85 | 61-138 |
| 78-93-3 | 2-Butanone (MEK) | 50 | 52.8 | 106 | 58-142 |
| 75-15-0 | Carbon disulfide | 50 | 39.3 | 79 | 60-130 |
| 56-23-5 | Carbon tetrachloride | 50 | 48.6 | 97 | 72-140 |
| 108-90-7 | Chlorobenzene | 50 | 48.4 | 97 | 81-117 |
| 75-00-3 | Chloroethane | 50 | 52.5 | 105 | 69-135 |
| 67-66-3 | Chloroform | 50 | 51.9 | 104 | 80-122 |
| 74-87-3 | Chloromethane | 50 | 62.2 | 124 | 59-132 |
| 124-48-1 | Dibromochloromethane | 50 | 46.3 | 93 | 80-125 |
| 75-34-3 | 1,1-Dichloroethane | 50 | 52.3 | 105 | 78-121 |
| 107-06-2 | 1,2-Dichloroethane | 50 | 56.7 | 113 | 66-137 |
| 75-35-4 | 1,1-Dichloroethene | 50 | 46.2 | 92 | 73-124 |
| 156-59-2 | cis-1,2-Dichloroethene | 50 | 50.7 | 101 | 76-120 |
| 156-60-5 | trans-1,2-Dichloroethene | 50 | 48.2 | 96 | 73-119 |
| 78-87-5 | 1,2-Dichloropropane | 50 | 55.4 | 111 | 82-117 |
| 10061-01-5 | cis-1,3-Dichloropropene | 50 | 50.2 | 100 | 81-120 |
| 10061-02-6 | trans-1,3-Dichloropropene | 50 | 46.1 | 92 | 81-125 |
| 100-41-4 | Ethylbenzene | 50 | 51.5 | 103 | 79-120 |
| 591-78-6 | 2-Hexanone | 50 | 58.5 | 117 | 66-140 |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | 50 | 57.0 | 114 | 70-134 |
| 75-09-2 | Methylene chloride | 50 | 49.1 | 98 | 75-122 |
| 100-42-5 | Styrene | 50 | 50.5 | 101 | 80-125 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 50 | 49.9 | 100 | 76-117 |
| 127-18-4 | Tetrachloroethene | 50 | 46.8 | 94 | 69-130 |
| 108-88-3 | Toluene | 50 | 51.5 | 103 | 81-120 |
| 71-55-6 | 1,1,1-Trichloroethane | 50 | 49.6 | 99 | 77-132 |
| 79-00-5 | 1,1,2-Trichloroethane | 50 | 53.6 | 107 | 85-117 |
| 79-01-6 | Trichloroethene | 50 | 49.9 | 100 | 83-119 |
| 75-01-4 | Vinyl chloride | 50 | 53.7 | 107 | 65-135 |
| 1330-20-7 | Xylene (total) | 150 | 156 | 104 | 81-119 |

# Blank Spike Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| VA2763-BS | A88872.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N81296-1, N81296-2

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 104% | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 109% | 68-129% |
| 2037-26-5 | Toluene-D8 | 105% | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 103% | 82-120% |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| N81276-9MS | A88881.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |
| N81276-9MSD | A88882.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |
| N81276-9 | A88879.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N81296-1, N81296-2

| CAS No. | Compound | N81276-9 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | | 50 | 54.2 | 108 | 53.3 | 107 | 2 | 47-163/22 |
| 71-43-2 | Benzene | ND | | 50 | 55.2 | 110 | 53.2 | 106 | 4 | 51-138/10 |
| 75-27-4 | Bromodichloromethane | ND | | 50 | 54.5 | 109 | 52.4 | 105 | 4 | 80-128/10 |
| 75-25-2 | Bromoform | ND | | 50 | 45.7 | 91 | 45.5 | 91 | 0 | 68-137/10 |
| 74-83-9 | Bromomethane | ND | | 50 | 48.4 | 97 | 48.5 | 97 | 0 | 61-141/17 |
| 78-93-3 | 2-Butanone (MEK) | ND | | 50 | 54.1 | 108 | 54.9 | 110 | 1 | 55-149/22 |
| 75-15-0 | Carbon disulfide | ND | | 50 | 41.4 | 83 | 39.8 | 80 | 4 | 59-128/14 |
| 56-23-5 | Carbon tetrachloride | ND | | 50 | 56.1 | 112 | 52.9 | 106 | 6 | 71-143/13 |
| 108-90-7 | Chlorobenzene | ND | | 50 | 52.4 | 105 | 50.8 | 102 | 3 | 78-120/10 |
| 75-00-3 | Chloroethane | ND | | 50 | 57.3 | 115 | 55.7 | 111 | 3 | 67-139/16 |
| 67-66-3 | Chloroform | ND | | 50 | 57.0 | 114 | 54.2 | 108 | 5 | 78-126/11 |
| 74-87-3 | Chloromethane | ND | | 50 | 62.3 | 125 | 60.9 | 122 | 2 | 57-134/17 |
| 124-48-1 | Dibromochloromethane | ND | | 50 | 50.4 | 101 | 49.0 | 98 | 3 | 79-127/10 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 50 | 57.5 | 115 | 55.3 | 111 | 4 | 75-125/11 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 50 | 57.7 | 115 | 54.7 | 109 | 5 | 63-142/12 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 50 | 49.8 | 100 | 49.1 | 98 | 1 | 69-129/12 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 50 | 56.5 | 113 | 54.6 | 109 | 3 | 73-127/10 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 50 | 52.3 | 105 | 50.3 | 101 | 4 | 71-123/11 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 50 | 59.0 | 118 | 56.6 | 113 | 4 | 81-120/10 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 50 | 56.9 | 114 | 55.3 | 111 | 3 | 78-121/10 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 50 | 51.4 | 103 | 49.9 | 100 | 3 | 77-128/11 |
| 100-41-4 | Ethylbenzene | ND | | 50 | 56.7 | 113 | 54.5 | 109 | 4 | 51-142/11 |
| 591-78-6 | 2-Hexanone | ND | | 50 | 58.9 | 118 | 57.6 | 115 | 2 | 64-145/13 |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | | 50 | 57.7 | 115 | 57.6 | 115 | 0 | 66-140/12 |
| 75-09-2 | Methylene chloride | ND | | 50 | 50.6 | 101 | 49.7 | 99 | 2 | 73-126/10 |
| 100-42-5 | Styrene | ND | | 50 | 54.5 | 109 | 52.9 | 106 | 3 | 79-130/10 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 50 | 51.4 | 103 | 50.8 | 102 | 1 | 74-121/10 |
| 127-18-4 | Tetrachloroethene | ND | | 50 | 53.5 | 107 | 51.3 | 103 | 4 | 70-128/12 |
| 108-88-3 | Toluene | ND | | 50 | 55.7 | 111 | 52.8 | 106 | 5 | 49-147/10 |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 50 | 56.5 | 113 | 53.4 | 107 | 6 | 74-136/13 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 50 | 56.3 | 113 | 53.5 | 107 | 5 | 83-121/10 |
| 79-01-6 | Trichloroethene | ND | | 50 | 56.1 | 112 | 52.9 | 106 | 6 | 75-128/10 |
| 75-01-4 | Vinyl chloride | ND | | 50 | 58.2 | 116 | 58.1 | 116 | 0 | 60-141/16 |
| 1330-20-7 | Xylene (total) | ND | | 150 | 172 | 115 | 165 | 110 | 4 | 44-146/11 |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| N81276-9MS | A88881.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |
| N81276-9MSD | A88882.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |
| N81276-9 | A88879.D | 1 | 10/29/04 | ZLM | n/a | n/a | VA2763 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260B

N81296-1, N81296-2

| CAS No. | Surrogate Recoveries | MS | MSD | N81276-9 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | 104% | 117% | 79-119% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 110% | 107% | 123% | 68-129% |
| 2037-26-5 | Toluene-D8 | 106% | 104% | 103% | 83-118% |
| 460-00-4 | 4-Bromofluorobenzene | 103% | 102% | 100% | 82-120% |

# Instrument Performance Check (BFB)



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | VA2749-BFB | **Injection Date:** | 10/21/04 |
| **Lab File ID:** | A88524.D | **Injection Time:** | 09:43 |
| **Instrument ID:** | GCMSA | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | Pass/Fail |
|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 9687 | 16.3 | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 27515 | 46.4 | Pass |
| 95 | Base peak, 100% relative abundance | 59267 | 100.0 | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 4005 | 6.8 | Pass |
| 173 | Less than 2.0% of mass 174 | 0 | 0.0 (0.0) [a] | Pass |
| 174 | 50.0 - 150.0% of mass 95 | 60755 | 102.5 | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 4423 | 7.5 (7.3) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 59291 | 100.0 (97.6) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 4013 | 6.8 (6.8) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| VA2749-IC2749 | A88525.D | 10/21/04 | 10:01 | 00:18 | Initial cal 1 |
| VA2749-IC2749 | A88526.D | 10/21/04 | 10:34 | 00:51 | Initial cal 2 |
| VA2749-IC2749 | A88527.D | 10/21/04 | 11:04 | 01:21 | Initial cal 5 |
| VA2749-IC2749 | A88528.D | 10/21/04 | 11:35 | 01:52 | Initial cal 20 |
| VA2749-ICC2749 | A88529.D | 10/21/04 | 12:12 | 02:29 | Initial cal 50 |
| VA2749-IC2749 | A88530.D | 10/21/04 | 12:45 | 03:02 | Initial cal 200 |
| VA2749-IC2749 | A88531.D | 10/21/04 | 13:13 | 03:30 | Initial cal 100 |
| VA2749-MB1 | A88534.D | 10/21/04 | 14:42 | 04:59 | Method Blank |
| ZZZZZZ | A88535.D | 10/21/04 | 15:21 | 05:38 | (unrelated sample) |
| ZZZZZZ | A88536.D | 10/21/04 | 15:50 | 06:07 | (unrelated sample) |
| ZZZZZZ | A88537.D | 10/21/04 | 16:20 | 06:37 | (unrelated sample) |
| ZZZZZZ | A88538.D | 10/21/04 | 16:50 | 07:07 | (unrelated sample) |
| ZZZZZZ | A88539.D | 10/21/04 | 17:19 | 07:36 | (unrelated sample) |
| ZZZZZZ | A88540.D | 10/21/04 | 17:49 | 08:06 | (unrelated sample) |
| ZZZZZZ | A88541.D | 10/21/04 | 18:18 | 08:35 | (unrelated sample) |
| ZZZZZZ | A88543.D | 10/21/04 | 19:17 | 09:34 | (unrelated sample) |
| VA2749-BS | A88544.D | 10/21/04 | 19:47 | 10:04 | Blank Spike |
| ZZZZZZ | A88545.D | 10/21/04 | 20:17 | 10:34 | (unrelated sample) |
| ZZZZZZ | A88546.D | 10/21/04 | 20:46 | 11:03 | (unrelated sample) |
| ZZZZZZ | A88547.D | 10/21/04 | 21:16 | 11:33 | (unrelated sample) |

# Instrument Performance Check (BFB)



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | VA2762-BFB | **Injection Date:** | 10/29/04 |
| **Lab File ID:** | A88860.D | **Injection Time:** | 00:30 |
| **Instrument ID:** | GCMSA | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 10441 | 18.0 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 27587 | 47.7 | | Pass |
| 95 | Base peak, 100% relative abundance | 57888 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 4047 | 7.0 | | Pass |
| 173 | Less than 2.0% of mass 174 | 0 | 0.0 | (0.0) [a] | Pass |
| 174 | 50.0 - 150.0% of mass 95 | 58011 | 100.2 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 4134 | 7.1 | (7.1) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 56123 | 97.0 | (96.7) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 3776 | 6.5 | (6.7) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| VA2762-CC2749 | A88861.D | 10/29/04 | 01:58 | 01:28 | Continuing cal 50 |
| VA2762-MB2 | A88863.D | 10/29/04 | 02:57 | 02:27 | Method Blank |
| ZZZZZZ | A88864.D | 10/29/04 | 03:27 | 02:57 | (unrelated sample) |
| ZZZZZZ | A88865.D | 10/29/04 | 03:56 | 03:26 | (unrelated sample) |
| ZZZZZZ | A88866.D | 10/29/04 | 04:26 | 03:56 | (unrelated sample) |
| ZZZZZZ | A88867.D | 10/29/04 | 04:56 | 04:26 | (unrelated sample) |
| ZZZZZZ | A88868.D | 10/29/04 | 05:25 | 04:55 | (unrelated sample) |
| VA2763-MB1 | A88869.D | 10/29/04 | 06:10 | 05:40 | Method Blank |
| ZZZZZZ | A88870.D | 10/29/04 | 06:39 | 06:09 | (unrelated sample) |
| ZZZZZZ | A88871.D | 10/29/04 | 07:09 | 06:39 | (unrelated sample) |
| VA2763-BS | A88872.D | 10/29/04 | 07:38 | 07:08 | Blank Spike |

# Instrument Performance Check (BFB)



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | VA2763-BFB | **Injection Date:** | 10/29/04 |
| **Lab File ID:** | A88873.D | **Injection Time:** | 08:53 |
| **Instrument ID:** | GCMSA | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 10540 | 18.0 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 28021 | 47.9 | | Pass |
| 95 | Base peak, 100% relative abundance | 58501 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 3959 | 6.8 | | Pass |
| 173 | Less than 2.0% of mass 174 | 142 | 0.24 | (0.24) [a] | Pass |
| 174 | 50.0 - 150.0% of mass 95 | 58661 | 100.3 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 4263 | 7.3 | (7.3) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 57869 | 98.9 | (98.6) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 3678 | 6.3 | (6.4) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| VA2763-CC2749 | A88874.D | 10/29/04 | 09:21 | 00:28 | Continuing cal 20 |
| VA2763-MB2 | A88876.D | 10/29/04 | 10:25 | 01:32 | Method Blank |
| ZZZZZZ | A88877.D | 10/29/04 | 10:55 | 02:02 | (unrelated sample) |
| ZZZZZZ | A88878.D | 10/29/04 | 11:24 | 02:31 | (unrelated sample) |
| N81276-9 | A88879.D | 10/29/04 | 11:56 | 03:03 | (used for QC only; not part of job N81296) |
| ZZZZZZ | A88880.D | 10/29/04 | 12:25 | 03:32 | (unrelated sample) |
| N81276-9MS | A88881.D | 10/29/04 | 12:49 | 03:56 | Matrix Spike |
| N81276-9MSD | A88882.D | 10/29/04 | 13:18 | 04:25 | Matrix Spike Duplicate |
| ZZZZZZ | A88883.D | 10/29/04 | 13:48 | 04:55 | (unrelated sample) |
| ZZZZZZ | A88884.D | 10/29/04 | 14:17 | 05:24 | (unrelated sample) |
| ZZZZZZ | A88885.D | 10/29/04 | 14:47 | 05:54 | (unrelated sample) |
| ZZZZZZ | A88886.D | 10/29/04 | 15:16 | 06:23 | (unrelated sample) |
| ZZZZZZ | A88887.D | 10/29/04 | 16:00 | 07:07 | (unrelated sample) |
| ZZZZZZ | A88888.D | 10/29/04 | 16:30 | 07:37 | (unrelated sample) |
| N81296-1 | A88889.D | 10/29/04 | 16:59 | 08:06 | MW-1 |
| N81296-1 | A88890.D | 10/29/04 | 17:29 | 08:36 | MW-1 |
| N81296-2 | A88891.D | 10/29/04 | 17:59 | 09:06 | TB |
| ZZZZZZ | A88892.D | 10/29/04 | 18:28 | 09:35 | (unrelated sample) |
| ZZZZZZ | A88893.D | 10/29/04 | 18:57 | 10:04 | (unrelated sample) |
| ZZZZZZ | A88894.D | 10/29/04 | 19:27 | 10:34 | (unrelated sample) |

# Volatile Internal Standard Area Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Check Std:** | VA2762-CC2749 | **Injection Date:** | 10/29/04 |
| **Lab File ID:** | A88861.D | **Injection Time:** | 01:58 |
| **Instrument ID:** | GCMSA | **Method:** | SW846 8260B |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 156858 | 6.79 | 211589 | 9.18 | 289380 | 10.12 | 299718 | 13.58 | 188822 | 16.22 |
| Upper Limit [a] | 313716 | 7.29 | 423178 | 9.68 | 578760 | 10.62 | 599436 | 14.08 | 377644 | 16.72 |
| Lower Limit [b] | 78429 | 6.29 | 105795 | 8.68 | 144690 | 9.62 | 149859 | 13.08 | 94411 | 15.72 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| VA2762-MB2 | 154744 | 6.79 | 191569 | 9.18 | 266008 | 10.12 | 269369 | 13.58 | 169950 | 16.22 |
| ZZZZZZ | 148983 | 6.79 | 183571 | 9.18 | 258224 | 10.12 | 260528 | 13.58 | 164750 | 16.22 |
| ZZZZZZ | 136053 | 6.79 | 180297 | 9.18 | 251368 | 10.12 | 256325 | 13.58 | 162673 | 16.22 |
| ZZZZZZ | 137186 | 6.79 | 173997 | 9.18 | 247256 | 10.12 | 250800 | 13.58 | 158810 | 16.22 |
| ZZZZZZ | 142593 | 6.79 | 184312 | 9.18 | 259841 | 10.12 | 260904 | 13.58 | 167559 | 16.22 |
| ZZZZZZ | 147907 | 6.79 | 186212 | 9.18 | 260062 | 10.12 | 267013 | 13.58 | 171295 | 16.22 |
| VA2763-MB1 | 146084 | 6.79 | 177715 | 9.18 | 253789 | 10.13 | 256121 | 13.58 | 162657 | 16.22 |
| ZZZZZZ | 130227 | 6.79 | 175158 | 9.18 | 249523 | 10.12 | 252246 | 13.58 | 158555 | 16.22 |
| ZZZZZZ | 128772 | 6.79 | 176922 | 9.18 | 253163 | 10.12 | 256933 | 13.57 | 163571 | 16.22 |
| VA2763-BS | 136738 | 6.80 | 192868 | 9.18 | 263871 | 10.13 | 277670 | 13.58 | 180078 | 16.22 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene
**IS 4** = Chlorobenzene-D5
**IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Internal Standard Area Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Check Std:** | VA2763-CC2749 | **Injection Date:** | 10/29/04 |
| **Lab File ID:** | A88874.D | **Injection Time:** | 09:21 |
| **Instrument ID:** | GCMSA | **Method:** | SW846 8260B |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 146603 | 6.79 | 190818 | 9.18 | 265794 | 10.12 | 270524 | 13.58 | 177025 | 16.22 |
| Upper Limit [a] | 293206 | 7.29 | 381636 | 9.68 | 531588 | 10.62 | 541048 | 14.08 | 354050 | 16.72 |
| Lower Limit [b] | 73302 | 6.29 | 95409 | 8.68 | 132897 | 9.62 | 135262 | 13.08 | 88513 | 15.72 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| VA2763-MB2 | 145237 | 6.80 | 175780 | 9.18 | 248371 | 10.12 | 253208 | 13.58 | 159947 | 16.22 |
| ZZZZZZ | 139387 | 6.80 | 170772 | 9.18 | 241506 | 10.13 | 246075 | 13.58 | 156681 | 16.22 |
| ZZZZZZ | 125868 | 6.80 | 169626 | 9.19 | 243051 | 10.13 | 246921 | 13.58 | 157688 | 16.22 |
| N81276-9 | 126003 | 6.79 | 163326 | 9.19 | 238207 | 10.13 | 242057 | 13.58 | 152998 | 16.22 |
| ZZZZZZ | 124118 | 6.80 | 165376 | 9.19 | 237851 | 10.13 | 244391 | 13.58 | 153540 | 16.22 |
| N81276-9MS | 133901 | 6.79 | 187934 | 9.19 | 259013 | 10.13 | 271689 | 13.58 | 178732 | 16.22 |
| N81276-9MSD | 152828 | 6.80 | 196852 | 9.19 | 270952 | 10.13 | 277892 | 13.58 | 180524 | 16.22 |
| ZZZZZZ | 156962 | 6.80 | 189732 | 9.19 | 267344 | 10.13 | 266802 | 13.58 | 171612 | 16.22 |
| ZZZZZZ | 146674 | 6.80 | 177436 | 9.19 | 251546 | 10.13 | 253612 | 13.58 | 161703 | 16.22 |
| ZZZZZZ | 134255 | 6.80 | 173005 | 9.19 | 247818 | 10.13 | 250315 | 13.58 | 158368 | 16.22 |
| ZZZZZZ | 125743 | 6.80 | 167572 | 9.19 | 244766 | 10.13 | 245767 | 13.58 | 155802 | 16.22 |
| ZZZZZZ | 122313 | 6.80 | 175273 | 9.19 | 244472 | 10.13 | 248944 | 13.58 | 160278 | 16.22 |
| ZZZZZZ | 123504 | 6.80 | 167877 | 9.19 | 239329 | 10.13 | 241856 | 13.58 | 155539 | 16.22 |
| N81296-1 | 121076 | 6.80 | 172514 | 9.19 | 237481 | 10.13 | 244085 | 13.58 | 154854 | 16.22 |
| N81296-1 | 121639 | 6.80 | 167599 | 9.19 | 231294 | 10.13 | 237482 | 13.59 | 152552 | 16.22 |
| N81296-2 | 117628 | 6.80 | 159502 | 9.19 | 228769 | 10.13 | 237646 | 13.59 | 152211 | 16.23 |
| ZZZZZZ | 134181 | 6.80 | 166376 | 9.19 | 235677 | 10.13 | 239954 | 13.59 | 156891 | 16.23 |
| ZZZZZZ | 122962 | 6.80 | 175036 | 9.19 | 241749 | 10.14 | 250203 | 13.58 | 158899 | 16.22 |
| ZZZZZZ | 124173 | 6.80 | 168037 | 9.19 | 239905 | 10.14 | 244402 | 13.59 | 156524 | 16.22 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene
**IS 4** = Chlorobenzene-D5
**IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Surrogate Recovery Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Method:** SW846 8260B **Matrix:** AQ

**Samples and QC shown here apply to the above method**

| Lab Sample ID | Lab File ID | S1 | S2 | S3 | S4 |
|---|---|---|---|---|---|
| N81296-1 | A88890.D | 110.0 | 113.0 | 102.0 | 99.0 |
| N81296-1 | A88889.D | 108.0 | 112.0 | 100.0 | 100.0 |
| N81296-2 | A88891.D | 116.0 | 119.0 | 103.0 | 100.0 |
| N81276-9MS | A88881.D | 106.0 | 110.0 | 106.0 | 103.0 |
| N81276-9MSD | A88882.D | 104.0 | 107.0 | 104.0 | 102.0 |
| VA2763-BS | A88872.D | 104.0 | 109.0 | 105.0 | 103.0 |
| VA2763-MB2 | A88876.D | 111.0 | 117.0 | 102.0 | 101.0 |
| VA2763-MB1 | A88869.D | 112.0 | 119.0 | 102.0 | 101.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = Dibromofluoromethane | 79-119% |
| S2 = 1,2-Dichloroethane-D4 | 68-129% |
| S3 = Toluene-D8 | 83-118% |
| S4 = 4-Bromofluorobenzene | 82-120% |

# Initial Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VA2749-ICC2749
**Lab FileID:** A88529.D

Response Factor Report MSA

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration

Calibration Files
5 =A88527.D 2 =A88526.D 20 =A88528.D 50 =A88529.D
100 =A88531.D 1 =A88525.D 200 =A88530.D

| Compound | 5 | 2 | 20 | 50 | 100 | 1 | 200 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) I Tert Butyl Alcohol-d9 | ----------ISTD---------- | | | | | | | | |
| 2)M ethanol | 0.100 | 0.103 | 0.088 | 0.091 | 0.085 | 0.091 | 0.085 | 0.092 | 7.72 |
| 3)M tertiary butyl al | 0.875 | 0.866 | 0.968 | 0.894 | 1.010 | 1.070 | 1.075 | 0.965 | 9.27 |
| 4) I pentafluorobenzene | ----------ISTD---------- | | | | | | | | |
| 5)M chlorodifluoromet | 0.813 | 0.809 | 0.848 | 0.747 | 0.737 | 0.928 | 0.805 | 0.812 | 7.90 |
| 6)M dichlorodifluorom | 0.775 | 0.711 | 0.757 | 0.725 | 0.670 | 0.633 | 0.702 | 0.710 | 6.89 |
| 7)M chloromethane | 0.710 | 0.769 | 0.674 | 0.640 | 0.559 | 0.887 | 0.618 | 0.694 | 15.60 |
| ----- Linear regression ----- Coefficient = 0.9973 | | | | | | | | | |
| Response Ratio = 0.00447 + 0.60700 *A | | | | | | | | | |
| 8)M vinyl chloride | 0.750 | 0.746 | 0.731 | 0.717 | 0.672 | 0.671 | 0.700 | 0.712 | 4.62 |
| 9)M bromomethane | 0.677 | 0.760 | 0.627 | 0.590 | 0.507 | 0.727 | | 0.648 | 14.35 |
| 10)M chloroethane | 0.409 | 0.415 | 0.390 | 0.378 | 0.333 | 0.397 | 0.331 | 0.379 | 9.07 |
| 11)M trichlorofluorome | 1.307 | 1.276 | 1.295 | 1.251 | 1.147 | 1.162 | 1.226 | 1.238 | 5.10 |
| 12)M ethyl ether | 0.383 | 0.333 | 0.391 | 0.377 | 0.345 | 0.315 | 0.363 | 0.358 | 7.91 |
| 13)M acrolein | 0.033 | | 0.028 | 0.026 | 0.025 | | 0.024 | 0.027 | 12.86 |
| 14)M 1,1-dichloroethen | 0.681 | 0.631 | 0.684 | 0.662 | 0.632 | 0.602 | 0.658 | 0.650 | 4.59 |
| 15)M acetone | 0.273 | 0.262 | 0.228 | 0.207 | 0.169 | 0.271 | 0.182 | 0.227 | 18.80 |
| ----- Linear regression ----- Coefficient = 0.9968 | | | | | | | | | |
| Response Ratio = 0.00892 + 0.17804 *A | | | | | | | | | |
| 16)M allyl chloride | 0.377 | 0.327 | 0.396 | 0.397 | 0.382 | 0.314 | 0.404 | 0.371 | 9.67 |
| 17)M acetonitrile | 0.061 | 0.063 | 0.057 | 0.055 | 0.058 | 0.074 | 0.059 | 0.061 | 10.14 |
| 18)M iodomethane | 1.507 | 1.357 | 1.511 | 1.498 | 1.465 | 1.321 | 1.552 | 1.458 | 5.92 |
| 19)M iso-butyl alcohol | 0.011 | | 0.013 | 0.012 | 0.011 | | 0.011 | 0.011 | 6.05 |
| 20)M carbon disulfide | 2.509 | 2.320 | 2.374 | 2.265 | 2.130 | 2.332 | 2.303 | 2.319 | 4.92 |
| 21)M methylene chlorid | 0.840 | 0.784 | 0.804 | 0.762 | 0.716 | 0.733 | 0.765 | 0.772 | 5.45 |
| 22)M methyl acetate | 0.507 | 0.485 | 0.657 | 0.472 | 0.582 | 0.535 | 0.484 | 0.532 | 12.63 |
| 23)M methyl tert butyl | 2.011 | 1.707 | 2.086 | 2.112 | 1.951 | 1.601 | 2.101 | 1.938 | 10.55 |
| 24)M trans-1,2-dichlor | 0.783 | 0.710 | 0.780 | 0.737 | 0.686 | 0.673 | 0.735 | 0.729 | 5.85 |
| 25)M di-isopropyl ethe | 0.892 | 0.779 | 1.030 | 0.930 | 0.958 | 0.874 | 1.029 | 0.927 | 9.63 |
| 26)M ethyl tert-butyl | 0.880 | 0.804 | 1.099 | 1.031 | 1.096 | 0.928 | 1.199 | 1.005 | 13.90 |
| 27)M 2-butanone | 0.115 | | 0.120 | 0.129 | 0.120 | | 0.132 | 0.123 | 5.89 |
| 28)M 1,1-dichloroethan | 0.689 | 0.630 | 0.677 | 0.656 | 0.607 | 0.571 | 0.650 | 0.640 | 6.41 |
| 29)M chloroprene | 0.357 | 0.309 | 0.414 | 0.379 | 0.391 | 0.353 | 0.439 | 0.378 | 11.37 |
| 30)M acrylonitrile | 0.237 | 0.203 | 0.198 | 0.235 | 0.214 | 0.189 | 0.229 | 0.215 | 8.88 |
| 31)M vinyl acetate | 0.026 | | 0.030 | 0.039 | 0.042 | | | 0.034 | 22.50 |
| ----- Linear regression ----- Coefficient = 0.9977 | | | | | | | | | |
| Response Ratio = -0.00386 + 0.04372 *A | | | | | | | | | |
| 32)M ethyl acetate | 0.032 | | 0.037 | 0.036 | 0.033 | | 0.036 | 0.035 | 6.53 |
| 33)M 2,2-dichloropropa | 0.622 | 0.552 | 0.630 | 0.606 | 0.541 | 0.500 | 0.593 | 0.578 | 8.28 |
| 34)M cis-1,2-dichloroe | 0.432 | 0.374 | 0.441 | 0.436 | 0.415 | 0.330 | 0.437 | 0.409 | 10.23 |
| 35)M propionitrile | 0.049 | 0.040 | 0.042 | 0.047 | 0.043 | 0.033 | 0.044 | 0.043 | 12.60 |
| 36)M bromochloromethan | 0.250 | 0.207 | 0.256 | 0.247 | 0.239 | | 0.253 | 0.242 | 7.55 |

# Initial Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VA2749-ICC2749
**Lab FileID:** A88529.D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 37)M tetrahydrofuran | 0.072 | | 0.090 | 0.091 | 0.084 | | 0.092 | 0.086 | 9.46 |
| 38)M chloroform | 0.794 | 0.708 | 0.761 | 0.728 | 0.664 | 0.664 | 0.721 | 0.720 | 6.64 |
| 39)S dibromofluorometh | 0.475 | 0.465 | 0.471 | 0.468 | 0.441 | 0.468 | 0.452 | 0.463 | 2.61 |
| 40)S 1,2-dichloroethan | 0.498 | 0.481 | 0.480 | 0.473 | 0.421 | 0.480 | 0.447 | 0.469 | 5.52 |
| 41)M freon 113 | 0.634 | 0.564 | 0.646 | 0.563 | 0.585 | 0.672 | 0.623 | 0.612 | 6.90 |
| 42)M methacrylonitrile | 0.169 | | 0.183 | 0.191 | 0.172 | | 0.196 | 0.182 | 6.49 |
| 43)M 1,1,1-trichloroet | 0.714 | 0.641 | 0.698 | 0.676 | 0.623 | 0.602 | 0.690 | 0.663 | 6.32 |
| 44)M tert-amyl methyl | 1.077 | 0.972 | 1.190 | 1.044 | 0.996 | 1.026 | 1.002 | 1.044 | 7.01 |
| 45) I 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | |
| 46)M Di-isobutylene | 0.439 | | 0.494 | 0.515 | 0.503 | | 0.548 | 0.500 | 7.89 |
| 47)M epichlorohydrin | 0.023 | 0.020 | 0.026 | 0.024 | 0.026 | | 0.028 | 0.025 | 10.45 |
| 48)M n-butyl alcohol | 0.006 | | 0.008 | 0.007 | 0.008 | | 0.008 | 0.007# | 9.85 |
| 49)M carbon tetrachlor | 0.486 | 0.436 | 0.479 | 0.463 | 0.434 | 0.431 | 0.466 | 0.457 | 5.01 |
| 50)M 1,1-dichloroprope | 0.356 | 0.312 | 0.368 | 0.359 | 0.341 | 0.297 | 0.356 | 0.341 | 7.78 |
| 51)M hexane | 0.174 | 0.145 | 0.204 | 0.188 | 0.212 | 0.191 | 0.231 | 0.192 | 14.46 |
| 52)M benzene | 1.075 | 1.011 | 1.081 | 1.030 | 0.978 | 0.956 | 0.983 | 1.016 | 4.77 |
| 53)M heptane | 0.086 | | 0.094 | 0.089 | 0.094 | | 0.104 | 0.093 | 7.40 |
| 54)M isopropyl acetate | 0.342 | 0.321 | 0.369 | 0.359 | 0.358 | 0.380 | 0.399 | 0.361 | 7.00 |
| 55)M 1,2-dichloroethan | 0.416 | 0.370 | 0.417 | 0.391 | 0.353 | 0.335 | 0.371 | 0.379 | 8.16 |
| 56)M trichloroethene | 0.308 | 0.283 | 0.309 | 0.302 | 0.291 | 0.270 | 0.304 | 0.295 | 4.92 |
| 57)M 2-nitropropane | 0.051 | | 0.038 | 0.033 | 0.031 | | 0.031 | 0.037 | 22.46 |
| ----- Linear regression ----- Coefficient = 0.9994 | | | | | | | | | |
| Response Ratio = 0.00213 + 0.03065 *A | | | | | | | | | |
| 58)m methylcyclohexane | 0.299 | 0.260 | 0.360 | 0.333 | 0.358 | 0.307 | 0.376 | 0.328 | 12.57 |
| 59)M 2-chloroethyl vin | 0.149 | 0.126 | 0.174 | 0.156 | 0.153 | 0.134 | 0.148 | 0.149 | 10.37 |
| 60)M methyl methacryla | 0.155 | | 0.180 | 0.178 | 0.169 | | 0.183 | 0.173 | 6.71 |
| 61)M 1,2-dichloropropa | 0.272 | 0.252 | 0.279 | 0.269 | 0.250 | 0.226 | 0.253 | 0.257 | 6.87 |
| 62)M dibromomethane | 0.210 | 0.190 | 0.209 | 0.202 | 0.187 | | 0.201 | 0.200 | 4.75 |
| 63)M 1,4-dioxane | 0.003 | | 0.003 | 0.003 | 0.003 | | 0.003 | 0.003# | 11.33 |
| 64)M bromodichlorometh | 0.423 | 0.384 | 0.418 | 0.406 | 0.386 | 0.349 | 0.417 | 0.398 | 6.64 |
| 65)M cis-1,3-dichlorop | 0.446 | 0.368 | 0.476 | 0.479 | 0.459 | 0.338 | 0.489 | 0.436 | 13.64 |
| 66)S toluene-d8 (s) | 1.176 | 1.159 | 1.178 | 1.192 | 1.158 | 1.154 | 1.157 | 1.168 | 1.24 |
| 67)M 4-methyl-2-pentan | 0.322 | | 0.370 | 0.369 | 0.352 | | 0.360 | 0.354 | 5.55 |
| 68)M toluene | 0.713 | 0.649 | 0.721 | 0.709 | 0.678 | 0.629 | 0.710 | 0.687 | 5.25 |
| 69)M 3-methyl-1-butano | 0.011 | | 0.013 | 0.013 | 0.013 | | 0.012 | 0.012 | 6.38 |
| 70)M trans-1,3-dichlor | 0.391 | 0.344 | 0.442 | 0.451 | 0.425 | 0.298 | 0.462 | 0.402 | 15.21 |
| ----- Linear regression ----- Coefficient = 0.9986 | | | | | | | | | |
| Response Ratio = -0.01131 + 0.45814 *A | | | | | | | | | |
| 71)M ethyl methacrylat | 0.269 | | 0.320 | 0.342 | 0.326 | | 0.351 | 0.322 | 9.91 |
| 72)M 1,1,2-trichloroet | 0.222 | 0.203 | 0.228 | 0.225 | 0.211 | 0.183 | 0.223 | 0.214 | 7.50 |
| 73)M 2-hexanone | 0.139 | | 0.164 | 0.164 | 0.144 | | 0.147 | 0.152 | 7.70 |
| 74) I chlorobenzene-d5 | ----------ISTD---------- | | | | | | | | |
| 75)M tetrachloroethene | 0.309 | 0.277 | 0.312 | 0.295 | 0.294 | 0.257 | 0.300 | 0.292 | 6.65 |
| 76)M 1,3-dichloropropa | 0.430 | 0.390 | 0.450 | 0.431 | 0.403 | 0.343 | 0.414 | 0.409 | 8.63 |
| 77)M butyl acetate | 0.128 | | 0.141 | 0.137 | 0.135 | | 0.164 | 0.141 | 9.88 |
| 78)M dibromochlorometh | 0.357 | 0.314 | 0.377 | 0.368 | 0.366 | 0.288 | 0.392 | 0.352 | 10.54 |
| 79)M 1,2-dibromoethane | 0.295 | 0.255 | 0.304 | 0.299 | 0.293 | 0.257 | 0.312 | 0.288 | 7.86 |
| 80)M chlorobenzene | 0.930 | 0.884 | 0.932 | 0.894 | 0.872 | 0.855 | 0.902 | 0.896 | 3.17 |
| 81)M 1,1,1,2-tetrachlo | 0.366 | 0.340 | 0.378 | 0.364 | 0.352 | 0.308 | 0.365 | 0.354 | 6.60 |
| 82)M ethylbenzene | 1.286 | 1.157 | 1.370 | 1.312 | 1.246 | 1.059 | 1.264 | 1.242 | 8.35 |
| 83)M m,p-xylene | 0.542 | 0.460 | 0.564 | 0.536 | 0.508 | 0.404 | 0.510 | 0.504 | 10.88 |
| 84)M o-xylene | 0.520 | 0.417 | 0.580 | 0.564 | 0.533 | 0.392 | 0.544 | 0.507 | 14.48 |
| 85)M styrene | 0.828 | | 0.947 | 0.924 | 0.878 | | 0.890 | 0.894 | 5.14 |
| 86)M bromoform | 0.249 | 0.215 | 0.269 | 0.276 | 0.281 | 0.217 | 0.311 | 0.260 | 13.58 |
| 87) I 1,4-dichlorobenzene-d | ----------ISTD---------- | | | | | | | | |

# Initial Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VA2749-ICC2749
**Lab FileID:** A88529.D

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 88) | M | isopropylbenzene | 1.651 | 1.345 | 1.936 | 1.980 | 1.964 | | 1.980 | 1.809 | 14.39 |
| 89) | S | 4-bromofluorobenz | 0.763 | 0.765 | 0.768 | 0.764 | 0.747 | 0.755 | 0.729 | 0.756 | 1.82 |
| 90) | M | bromobenzene | 0.710 | 0.655 | 0.731 | 0.724 | 0.712 | 0.579 | 0.713 | 0.689 | 7.92 |
| 91) | M | 1,1,2,2-tetrachlo | 0.583 | 0.550 | 0.595 | 0.583 | 0.554 | 0.518 | 0.569 | 0.565 | 4.67 |
| 92) | M | trans-1,4-dichlor | 0.100 | | 0.119 | 0.126 | 0.123 | | 0.131 | 0.120 | 10.07 |
| 93) | M | 1,2,3-trichloropr | 0.184 | 0.169 | 0.184 | 0.177 | 0.166 | | 0.169 | 0.175 | 4.62 |
| 94) | M | n-propylbenzene | 2.256 | 1.904 | 2.401 | 2.352 | 2.274 | 1.726 | 2.290 | 2.172 | 11.70 |
| 95) | M | 2-chlorotoluene | 1.696 | 1.472 | 1.775 | 1.752 | 1.688 | 1.323 | 1.716 | 1.632 | 10.32 |
| 96) | M | 4-chlorotoluene | 1.570 | 1.360 | 1.637 | 1.599 | 1.526 | 1.245 | 1.571 | 1.501 | 9.57 |
| 97) | M | 1,3,5-trimethylbe | 1.719 | 1.399 | 1.847 | 1.831 | 1.784 | 1.253 | 1.830 | 1.666 | 14.40 |
| 98) | M | tert-butylbenzene | 1.387 | | 1.566 | 1.620 | 1.617 | | 1.695 | 1.577 | 7.35 |
| 99) | M | pentachloroethane | 0.462 | 0.404 | 0.481 | 0.480 | 0.470 | 0.361 | 0.482 | 0.449 | 10.55 |
| 100) | M | 1,2,4-trimethylbe | 1.858 | 1.467 | 1.996 | 1.957 | 1.867 | | 1.884 | 1.838 | 10.32 |
| 101) | M | sec-butylbenzene | 1.951 | 1.537 | 2.155 | 2.186 | 2.172 | | 2.242 | 2.041 | 13.03 |
| 102) | M | 1,3-dichlorobenze | 1.347 | 1.214 | 1.354 | 1.305 | 1.293 | 1.122 | 1.329 | 1.281 | 6.56 |
| 103) | M | p-isopropyltoluen | 1.761 | 1.356 | 1.946 | 1.992 | 1.981 | | 2.076 | 1.852 | 14.28 |
| 104) | M | 1,4-dichlorobenze | 1.389 | 1.332 | 1.384 | 1.336 | 1.329 | 1.303 | 1.384 | 1.351 | 2.53 |
| 105) | M | 1,2-dichlorobenze | 1.307 | 1.180 | 1.329 | 1.312 | 1.315 | 1.124 | 1.354 | 1.274 | 6.80 |
| 106) | M | n-butylbenzene | 1.427 | 1.132 | 1.550 | 1.594 | 1.562 | | 1.645 | 1.485 | 12.61 |
| 107) | M | 1,2-dibromo-3-chl | 0.115 | | 0.120 | 0.124 | 0.122 | | 0.131 | 0.123 | 4.78 |
| 108) | M | 1,2,4-trichlorobe | 0.871 | 0.722 | 0.983 | 1.035 | 1.089 | | 1.055 | 0.959 | 14.47 |
| 109) | M | hexachlorobutadie | 0.438 | 0.398 | 0.402 | 0.411 | 0.425 | 0.385 | 0.404 | 0.409 | 4.36 |
| 110) | M | naphthalene | 1.715 | | 2.185 | 2.288 | 2.372 | | 2.248 | 2.161 | 11.97 |
| 111) | M | 1,2,3-trichlorobe | 0.799 | 0.692 | 0.911 | 0.950 | 0.993 | | 0.948 | 0.882 | 12.92 |
| 112) | M | hexachloroethane | 0.374 | 0.322 | 0.389 | 0.419 | 0.450 | | 0.481 | 0.406 | 13.98 |
| 113) | | 2-methylnaphthale | | | | | | | | 0.000# | -1.00 |
| 114) | M | Cyclohexane | 0.573 | 0.444 | 0.602 | 0.586 | 0.586 | 0.422 | 0.564 | 0.539 | 13.73 |

(#) = Out of Range

MA2749.M Fri Oct 22 18:11:52 2004 MSA

# Continuing Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VA2762-CC2749
**Lab FileID:** A88861.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\A88861.D
Acq On : 29 Oct 2004 1:58 am
Sample : CC2749-50
Misc : MS6228,VA2762,5,,,,1
MS Integration Params: RTEINT.P

Vial: 27
Operator: limianz
Inst : MSA
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|
| 1 I | Tert Butyl Alcohol-d9 | 1.000 | 1.000 | 0.0 | 94 | 0.00 | 6.79 |
| 2 M | ethanol | 0.092 | 0.092 | 0.0 | 95 | 0.02 | 5.51 |
| 3 M | tertiary butyl alcohol | 0.965 | 0.968 | -0.3 | 102 | 0.00 | 6.91 |
| 4 I | pentafluorobenzene | 1.000 | 1.000 | 0.0 | 97 | -0.01 | 9.18 |
| 5 M | chlorodifluoromethane | 0.812 | 0.891 | -9.7 | 116 | 0.00 | 3.51 |
| 6 M | dichlorodifluoromethane | 0.710 | 0.752 | -5.9 | 101 | 0.00 | 3.50 |
| | ---------- | True | Calc. | % Drift | ---------- | | |
| 7 M | chloromethane | 50.000 | 59.606 | -19.2 | 111 | 0.00 | 3.80 |
| | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 8 M | vinyl chloride | 0.712 | 0.796 | -11.8 | 108 | 0.00 | 4.04 |
| 9 M | bromomethane | 0.648 | 0.602 | 7.1 | 99 | 0.00 | 4.63 |
| 10 M | chloroethane | 0.379 | 0.410 | -8.2 | 105 | 0.00 | 4.80 |
| 11 M | trichlorofluoromethane | 1.238 | 1.279 | -3.3 | 99 | 0.04 | 5.28 |
| 12 M | ethyl ether | 0.358 | 0.348 | 2.8 | 90 | 0.00 | 5.68 |
| 13 M | acrolein | 0.027 | 0.070 | -159.3# | 258# | 0.00 | 5.89 |
| 14 M | 1,1-dichloroethene | 0.650 | 0.573 | 11.8 | 84 | 0.00 | 6.09 |
| | ---------- | True | Calc. | % Drift | ---------- | | |
| 15 M | acetone | 50.000 | 53.217 | -6.4 | 93 | 0.00 | 6.12 |
| | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 16 M | allyl chloride | 0.371 | 0.348 | 6.2 | 85 | 0.00 | 6.63 |
| 17 M | acetonitrile | 0.061 | 0.067 | -9.8 | 118 | 0.00 | 6.54 |
| 18 M | iodomethane | 1.458 | 1.256 | 13.9 | 82 | 0.00 | 6.34 |
| 19 M | iso-butyl alcohol | 0.011 | 0.014 | -27.3# | 115 | -0.01 | 9.46 |
| 20 M | carbon disulfide | 2.319 | 1.751 | 24.5# | 75 | 0.00 | 6.48 |
| 21 M | methylene chloride | 0.772 | 0.711 | 7.9 | 91 | 0.00 | 6.81 |
| 22 M | methyl acetate | 0.532 | 0.516 | 3.0 | 106 | 0.00 | 6.61 |
| 23 M | methyl tert butyl ether | 1.938 | 1.980 | -2.2 | 91 | 0.00 | 7.21 |
| 24 M | trans-1,2-dichloroethene | 0.729 | 0.662 | 9.2 | 87 | 0.00 | 7.22 |
| 25 M | di-isopropyl ether | 0.927 | 1.110 | -19.7 | 116 | 0.00 | 7.86 |
| 26 M | ethyl tert-butyl ether | 1.005 | 1.145 | -13.9 | 108 | 0.00 | 8.36 |
| 27 M | 2-butanone | 0.123 | 0.124 | -0.8 | 94 | -0.01 | 8.55 |
| 28 M | 1,1-dichloroethane | 0.640 | 0.638 | 0.3 | 94 | 0.00 | 7.81 |
| 29 M | chloroprene | 0.378 | 0.444 | -17.5 | 114 | -0.01 | 7.94 |
| 30 M | acrylonitrile | 0.215 | 0.233 | -8.4 | 96 | 0.00 | 7.12 |
| | ---------- | True | Calc. | % Drift | ---------- | | |
| 31 M | vinyl acetate | 50.000 | 63.974 | -27.9# | 131 | -0.01 | 8.82 |

# Continuing Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VA2762-CC2749
**Lab FileID:** A88861.D

| | | | AvgRF | CCRF | % Dev | | | |
|---|---|---|---|---|---|---|---|---|
| 32 | M | ethyl acetate | 0.035 | 0.044 | -25.7# | 121 | 0.00 | 8.61 |
| 33 | M | 2,2-dichloropropane | 0.578 | 0.501 | 13.3 | 80 | 0.00 | 8.60 |
| 34 | M | cis-1,2-dichloroethene | 0.409 | 0.415 | -1.5 | 92 | 0.00 | 8.58 |
| 35 | M | propionitrile | 0.043 | 0.049 | -14.0 | 101 | -0.01 | 8.62 |
| 36 | M | bromochloromethane | 0.242 | 0.231 | 4.5 | 91 | -0.01 | 8.89 |
| 37 | M | tetrahydrofuran | 0.086 | 0.091 | -5.8 | 97 | -0.01 | 8.96 |
| 38 | M | chloroform | 0.720 | 0.700 | 2.8 | 93 | -0.01 | 8.97 |
| 39 | S | dibromofluoromethane (s) | 0.463 | 0.464 | -0.2 | 96 | -0.01 | 9.18 |
| 40 | S | 1,2-dichloroethane-d4 (s) | 0.469 | 0.476 | -1.5 | 98 | -0.01 | 9.62 |
| 41 | M | freon 113 | 0.612 | 0.608 | 0.7 | 105 | 0.00 | 6.11 |
| 42 | M | methacrylonitrile | 0.182 | 0.196 | -7.7 | 99 | -0.02 | 8.83 |
| 43 | M | 1,1,1-trichloroethane | 0.663 | 0.628 | 5.3 | 90 | -0.01 | 9.26 |
| 44 | M | tert-amyl methyl ether | 1.044 | 1.157 | -10.8 | 108 | 0.00 | 9.80 |
| 45 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 97 | -0.01 | 10.12 |
| 46 | M | Di-isobutylene | 0.500 | 0.500 | 0.0 | 94 | 0.00 | 10.41 |
| 47 | M | epichlorohydrin | 0.025 | 0.026 | -4.0 | 104 | -0.01 | 11.44 |
| 48 | M | n-butyl alcohol | 0.007 | 0.008# | -14.3 | 109 | -0.02 | 10.25 |
| 49 | M | carbon tetrachloride | 0.457 | 0.425 | 7.0 | 89 | -0.01 | 9.48 |
| 50 | M | 1,1-dichloropropene | 0.341 | 0.339 | 0.6 | 91 | -0.01 | 9.45 |
| 51 | M | hexane | 0.192 | 0.213 | -10.9 | 110 | 0.00 | 7.60 |
| 52 | M | benzene | 1.016 | 0.995 | 2.1 | 93 | -0.01 | 9.72 |
| 53 | M | heptane | 0.093 | 0.096 | -3.2 | 104 | -0.01 | 9.98 |
| 54 | M | isopropyl acetate | 0.361 | 0.427 | -18.3 | 115 | -0.01 | 9.68 |
| 55 | M | 1,2-dichloroethane | 0.379 | 0.388 | -2.4 | 96 | -0.01 | 9.71 |
| 56 | M | trichloroethene | 0.295 | 0.289 | 2.0 | 92 | -0.01 | 10.48 |
| | | | True | Calc. | % Drift | | | |
| 57 | M | 2-nitropropane | 50.000 | 59.813 | -19.6 | 113 | -0.01 | 11.34 |
| | | | AvgRF | CCRF | % Dev | | | |
| 58 | m | methylcyclohexane | 0.328 | 0.374 | -14.0 | 108 | 0.00 | 10.75 |
| 59 | M | 2-chloroethyl vinyl ether | 0.149 | 0.170 | -14.1 | 105 | -0.01 | 11.34 |
| 60 | M | methyl methacrylate | 0.173 | 0.177 | -2.3 | 96 | -0.01 | 10.79 |
| 61 | M | 1,2-dichloropropane | 0.257 | 0.271 | -5.4 | 98 | -0.01 | 10.75 |
| 62 | M | dibromomethane | 0.200 | 0.195 | 2.5 | 93 | -0.01 | 10.89 |
| 63 | M | 1,4-dioxane | 0.003 | 0.003# | 0.0 | 100 | -0.01 | 10.87 |
| 64 | M | bromodichloromethane | 0.398 | 0.389 | 2.3 | 93 | -0.01 | 11.05 |
| 65 | M | cis-1,3-dichloropropene | 0.436 | 0.446 | -2.3 | 90 | -0.01 | 11.56 |
| 66 | S | toluene-d8 (s) | 1.168 | 1.205 | -3.2 | 98 | -0.01 | 11.90 |
| 67 | M | 4-methyl-2-pentanone | 0.354 | 0.401 | -13.3 | 105 | 0.00 | 11.70 |
| 68 | M | toluene | 0.687 | 0.681 | 0.9 | 93 | -0.01 | 11.98 |
| 69 | M | 3-methyl-1-butanol | 0.012 | 0.014 | -16.7 | 110 | -0.01 | 11.71 |
| | | | True | Calc. | % Drift | | | |
| 70 | M | trans-1,3-dichloropropene | 50.000 | 46.682 | 6.6 | 89 | -0.01 | 12.18 |
| | | | AvgRF | CCRF | % Dev | | | |
| 71 | M | ethyl methacrylate | 0.322 | 0.341 | -5.9 | 96 | 0.00 | 12.22 |
| 72 | M | 1,1,2-trichloroethane | 0.214 | 0.223 | -4.2 | 96 | -0.01 | 12.41 |
| 73 | M | 2-hexanone | 0.152 | 0.172 | -13.2 | 101 | -0.01 | 12.64 |
| 74 | I | chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 98 | -0.01 | 13.58 |
| 75 | M | tetrachloroethene | 0.292 | 0.275 | 5.8 | 91 | 0.00 | 12.63 |
| 76 | M | 1,3-dichloropropane | 0.409 | 0.420 | -2.7 | 95 | -0.01 | 12.61 |
| 77 | M | butyl acetate | 0.141 | 0.165 | -17.0 | 118 | -0.01 | 12.75 |
| 78 | M | dibromochloromethane | 0.352 | 0.328 | 6.8 | 87 | -0.01 | 12.90 |
| 79 | M | 1,2-dibromoethane | 0.288 | 0.279 | 3.1 | 92 | -0.01 | 13.06 |

# Continuing Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VA2762-CC2749
**Lab FileID:** A88861.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 80 | M | chlorobenzene | 0.896 | 0.854 | 4.7 | 93 | -0.01 | 13.61 |
| 81 | M | 1,1,1,2-tetrachloroethane | 0.354 | 0.340 | 4.0 | 91 | -0.01 | 13.68 |
| 82 | M | ethylbenzene | 1.242 | 1.251 | -0.7 | 93 | -0.01 | 13.70 |
| 83 | M | m,p-xylene | 0.504 | 0.510 | -1.2 | 93 | -0.01 | 13.82 |
| 84 | M | o-xylene | 0.507 | 0.536 | -5.7 | 93 | 0.00 | 14.29 |
| 85 | M | styrene | 0.894 | 0.875 | 2.1 | 93 | 0.00 | 14.30 |
| 86 | M | bromoform | 0.260 | 0.228 | 12.3 | 81 | 0.00 | 14.55 |
| 87 | I | 1,4-dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 97 | 0.00 | 16.22 |
| 88 | M | isopropylbenzene | 1.809 | 1.876 | -3.7 | 92 | -0.01 | 14.69 |
| 89 | S | 4-bromofluorobenzene (s) | 0.756 | 0.777 | -2.8 | 99 | 0.00 | 14.89 |
| 90 | M | bromobenzene | 0.689 | 0.682 | 1.0 | 91 | -0.01 | 15.10 |
| 91 | M | 1,1,2,2-tetrachloroethane | 0.565 | 0.563 | 0.4 | 94 | 0.00 | 15.00 |
| 92 | M | trans-1,4-dichloro-2-bute | 0.120 | 0.102 | 15.0 | 78 | -0.01 | 15.05 |
| 93 | M | 1,2,3-trichloropropane | 0.175 | 0.169 | 3.4 | 93 | -0.01 | 15.08 |
| 94 | M | n-propylbenzene | 2.172 | 2.263 | -4.2 | 93 | -0.01 | 15.16 |
| 95 | M | 2-chlorotoluene | 1.632 | 1.673 | -2.5 | 93 | -0.01 | 15.30 |
| 96 | M | 4-chlorotoluene | 1.501 | 1.516 | -1.0 | 92 | 0.00 | 15.41 |
| 97 | M | 1,3,5-trimethylbenzene | 1.666 | 1.748 | -4.9 | 93 | -0.01 | 15.33 |
| 98 | M | tert-butylbenzene | 1.577 | 1.546 | 2.0 | 93 | -0.01 | 15.73 |
| 99 | M | pentachloroethane | 0.449 | 0.465 | -3.6 | 94 | -0.01 | 15.78 |
| 100 | M | 1,2,4-trimethylbenzene | 1.838 | 1.860 | -1.2 | 92 | -0.01 | 15.77 |
| 101 | M | sec-butylbenzene | 2.041 | 2.094 | -2.6 | 93 | 0.00 | 15.97 |
| 102 | M | 1,3-dichlorobenzene | 1.281 | 1.257 | 1.9 | 94 | -0.01 | 16.15 |
| 103 | M | p-isopropyltoluene | 1.852 | 1.890 | -2.1 | 92 | -0.01 | 16.11 |
| 104 | M | 1,4-dichlorobenzene | 1.351 | 1.275 | 5.6 | 93 | -0.01 | 16.24 |
| 105 | M | 1,2-dichlorobenzene | 1.274 | 1.258 | 1.3 | 93 | 0.00 | 16.68 |
| 106 | M | n-butylbenzene | 1.485 | 1.520 | -2.4 | 93 | -0.01 | 16.58 |
| 107 | M | 1,2-dibromo-3-chloropropa | 0.123 | 0.113 | 8.1 | 89 | -0.01 | 17.53 |
| 108 | M | 1,2,4-trichlorobenzene | 0.959 | 0.987 | -2.9 | 93 | -0.01 | 18.45 |
| 109 | M | hexachlorobutadiene | 0.409 | 0.418 | -2.2 | 99 | -0.01 | 18.61 |
| 110 | M | naphthalene | 2.161 | 2.127 | 1.6 | 90 | -0.01 | 18.75 |
| 111 | M | 1,2,3-trichlorobenzene | 0.882 | 0.910 | -3.2 | 93 | -0.01 | 19.02 |
| 112 | M | hexachloroethane | 0.406 | 0.399 | 1.7 | 93 | 0.00 | 16.99 |
| 113 | | 2-methylnaphthalene | | ----------NA---------- | | | | |
| 114 | M | Cyclohexane | 0.539 | 0.519 | 3.7 | 86 | -0.01 | 9.36 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0

A88529.D  MA2749.M  Fri Oct 29 12:34:13 2004  MSA

# Continuing Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VA2763-CC2749
**Lab FileID:** A88874.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\A88874.D
Acq On : 29 Oct 2004 9:21 am
Sample : CC2749-20
Misc : MS6228,VA2763,5,,,,1
MS Integration Params: RTEINT.P

Vial: 2
Operator: limianz
Inst : MSA
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Tert Butyl Alcohol-d9 | 1.000 | 1.000 | 0.0 | 90 | 0.00 | 6.79 |
| 2 | M | ethanol | 0.092 | 0.097 | -5.4 | 99 | 0.02 | 5.51 |
| 3 | M | tertiary butyl alcohol | 0.965 | 0.798 | 17.3 | 74 | 0.00 | 6.92 |
| 4 | I | pentafluorobenzene | 1.000 | 1.000 | 0.0 | 90 | -0.01 | 9.18 |
| 5 | M | chlorodifluoromethane | 0.812 | 0.862 | -6.2 | 91 | 0.01 | 3.52 |
| 6 | M | dichlorodifluoromethane | 0.710 | 0.802 | -13.0 | 95 | 0.01 | 3.50 |
| | | ---------- | True | Calc. | % Drift | | ---------- | |
| 7 | M | chloromethane | 20.000 | 25.367 | -26.8# | 104 | 0.00 | 3.78 |
| | | ---------- | AvgRF | CCRF | % Dev | | ---------- | |
| 8 | M | vinyl chloride | 0.712 | 0.848 | -19.1 | 104 | -0.01 | 4.04 |
| 9 | M | bromomethane | 0.648 | 0.689 | -6.3 | 99 | 0.00 | 4.63 |
| 10 | M | chloroethane | 0.379 | 0.456 | -20.3# | 105 | 0.00 | 4.80 |
| 11 | M | trichlorofluoromethane | 1.238 | 1.402 | -13.2 | 97 | 0.04 | 5.29 |
| 12 | M | ethyl ether | 0.358 | 0.375 | -4.7 | 86 | -0.01 | 5.68 |
| 13 | M | acrolein | 0.027 | 0.040 | -48.1# | 129 | 0.00 | 5.90 |
| 14 | M | 1,1-dichloroethene | 0.650 | 0.627 | 3.5 | 82 | 0.00 | 6.09 |
| | | ---------- | True | Calc. | % Drift | | ---------- | |
| 15 | M | acetone | 20.000 | 24.155 | -20.8# | 94 | 0.00 | 6.12 |
| | | ---------- | AvgRF | CCRF | % Dev | | ---------- | |
| 16 | M | allyl chloride | 0.371 | 0.365 | 1.6 | 83 | 0.00 | 6.62 |
| 17 | M | acetonitrile | 0.061 | 0.059 | 3.3 | 93 | 0.00 | 6.54 |
| 18 | M | iodomethane | 1.458 | 1.304 | 10.6 | 78 | 0.00 | 6.35 |
| 19 | M | iso-butyl alcohol | 0.011 | 0.013 | -18.2 | 93 | 0.00 | 9.47 |
| 20 | M | carbon disulfide | 2.319 | 1.959 | 15.5 | 74 | 0.00 | 6.48 |
| 21 | M | methylene chloride | 0.772 | 0.796 | -3.1 | 89 | 0.00 | 6.81 |
| 22 | M | methyl acetate | 0.532 | 0.488 | 8.3 | 67 | 0.00 | 6.62 |
| 23 | M | methyl tert butyl ether | 1.938 | 1.984 | -2.4 | 86 | 0.00 | 7.21 |
| 24 | M | trans-1,2-dichloroethene | 0.729 | 0.739 | -1.4 | 85 | 0.00 | 7.22 |
| 25 | M | di-isopropyl ether | 0.927 | 1.003 | -8.2 | 88 | 0.00 | 7.86 |
| 26 | M | ethyl tert-butyl ether | 1.005 | 0.936 | 6.9 | 77 | 0.00 | 8.36 |
| 27 | M | 2-butanone | 0.123 | 0.123 | 0.0 | 93 | 0.00 | 8.56 |
| 28 | M | 1,1-dichloroethane | 0.640 | 0.708 | -10.6 | 94 | 0.00 | 7.81 |
| 29 | M | chloroprene | 0.378 | 0.398 | -5.3 | 86 | -0.01 | 7.94 |
| 30 | M | acrylonitrile | 0.215 | 0.241 | -12.1 | 109 | 0.00 | 7.13 |
| | | ---------- | True | Calc. | % Drift | | ---------- | |
| 31 | M | vinyl acetate | 20.000 | 22.233 | -11.2 | 118 | 0.00 | 37[illegible]3 |

# Continuing Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VA2763-CC2749
**Lab FileID:** A88874.D

| | | | AvgRF | CCRF | % Dev | | | |
|---|---|---|---|---|---|---|---|---|
| 32 | M | ethyl acetate | 0.035 | 0.037 | -5.7 | 91 | 0.00 | 8.61 |
| 33 | M | 2,2-dichloropropane | 0.578 | 0.666 | -15.2 | 95 | 0.00 | 8.61 |
| 34 | M | cis-1,2-dichloroethene | 0.409 | 0.432 | -5.6 | 88 | 0.00 | 8.59 |
| 35 | M | propionitrile | 0.043 | 0.053 | -23.3# | 112 | -0.01 | 8.62 |
| 36 | M | bromochloromethane | 0.242 | 0.254 | -5.0 | 89 | 0.00 | 8.90 |
| 37 | M | tetrahydrofuran | 0.086 | 0.087 | -1.2 | 87 | 0.00 | 8.96 |
| 38 | M | chloroform | 0.720 | 0.795 | -10.4 | 94 | -0.01 | 8.97 |
| 39 | S | dibromofluoromethane (s) | 0.463 | 0.489 | -5.6 | 93 | -0.01 | 9.18 |
| 40 | S | 1,2-dichloroethane-d4 (s) | 0.469 | 0.510 | -8.7 | 95 | -0.01 | 9.62 |
| 41 | M | freon 113 | 0.612 | 0.606 | 1.0 | 84 | 0.00 | 6.12 |
| 42 | M | methacrylonitrile | 0.182 | 0.192 | -5.5 | 94 | -0.01 | 8.84 |
| 43 | M | 1,1,1-trichloroethane | 0.663 | 0.704 | -6.2 | 91 | 0.00 | 9.26 |
| 44 | M | tert-amyl methyl ether | 1.044 | 1.084 | -3.8 | 82 | 0.00 | 9.81 |
| 45 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 91 | -0.01 | 10.12 |
| 46 | M | Di-isobutylene | 0.500 | 0.481 | 3.8 | 89 | 0.00 | 10.42 |
| 47 | M | epichlorohydrin | 0.025 | 0.023 | 8.0 | 79 | -0.01 | 11.44 |
| 48 | M | n-butyl alcohol | 0.007 | 0.007# | 0.0 | 83 | 0.00 | 10.26 |
| 49 | M | carbon tetrachloride | 0.457 | 0.470 | -2.8 | 89 | 0.00 | 9.49 |
| 50 | M | 1,1-dichloropropene | 0.341 | 0.359 | -5.3 | 89 | 0.00 | 9.45 |
| 51 | M | hexane | 0.192 | 0.186 | 3.1 | 83 | 0.00 | 7.60 |
| 52 | M | benzene | 1.016 | 1.068 | -5.1 | 90 | 0.00 | 9.72 |
| 53 | M | heptane | 0.093 | 0.093 | 0.0 | 90 | 0.00 | 9.98 |
| 54 | M | isopropyl acetate | 0.361 | 0.346 | 4.2 | 85 | 0.00 | 9.69 |
| 55 | M | 1,2-dichloroethane | 0.379 | 0.425 | -12.1 | 93 | -0.01 | 9.71 |
| 56 | M | trichloroethene | 0.295 | 0.304 | -3.1 | 90 | -0.01 | 10.48 |
| | | | True | Calc. | % Drift | | | |
| 57 | M | 2-nitropropane | 20.000 | 19.387 | 3.1 | 83 | -0.01 | 11.34 |
| | | | AvgRF | CCRF | % Dev | | | |
| 58 | m | methylcyclohexane | 0.328 | 0.323 | 1.5 | 82 | 0.00 | 10.75 |
| 59 | M | 2-chloroethyl vinyl ether | 0.149 | 0.147 | 1.3 | 77 | -0.01 | 11.34 |
| 60 | M | methyl methacrylate | 0.173 | 0.163 | 5.8 | 82 | 0.00 | 10.80 |
| 61 | M | 1,2-dichloropropane | 0.257 | 0.286 | -11.3 | 93 | -0.01 | 10.75 |
| 62 | M | dibromomethane | 0.200 | 0.209 | -4.5 | 91 | 0.00 | 10.90 |
| 63 | M | 1,4-dioxane | 0.003 | 0.003# | 0.0 | 77 | 0.00 | 10.87 |
| 64 | M | bromodichloromethane | 0.398 | 0.404 | -1.5 | 88 | -0.01 | 11.05 |
| 65 | M | cis-1,3-dichloropropene | 0.436 | 0.445 | -2.1 | 85 | -0.01 | 11.56 |
| 66 | S | toluene-d8 (s) | 1.168 | 1.211 | -3.7 | 94 | 0.00 | 11.90 |
| 67 | M | 4-methyl-2-pentanone | 0.354 | 0.368 | -4.0 | 90 | 0.00 | 11.70 |
| 68 | M | toluene | 0.687 | 0.711 | -3.5 | 90 | 0.00 | 11.98 |
| 69 | M | 3-methyl-1-butanol | 0.012 | 0.013 | -8.3 | 89 | 0.00 | 11.72 |
| | | | True | Calc. | % Drift | | | |
| 70 | M | trans-1,3-dichloropropene | 20.000 | 18.852 | 5.7 | 83 | -0.01 | 12.18 |
| | | | AvgRF | CCRF | % Dev | | | |
| 71 | M | ethyl methacrylate | 0.322 | 0.320 | 0.6 | 91 | 0.00 | 12.23 |
| 72 | M | 1,1,2-trichloroethane | 0.214 | 0.227 | -6.1 | 91 | -0.01 | 12.41 |
| 73 | M | 2-hexanone | 0.152 | 0.167 | -9.9 | 93 | 0.00 | 12.65 |
| 74 | I | chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 94 | -0.01 | 13.58 |
| 75 | M | tetrachloroethene | 0.292 | 0.289 | 1.0 | 87 | 0.00 | 12.63 |
| 76 | M | 1,3-dichloropropane | 0.409 | 0.429 | -4.9 | 89 | -0.01 | 12.61 |
| 77 | M | butyl acetate | 0.141 | 0.136 | 3.5 | 91 | 0.00 | 12.75 |
| 78 | M | dibromochloromethane | 0.352 | 0.325 | 7.7 | 81 | 0.00 | 12.90 |
| 79 | M | 1,2-dibromoethane | 0.288 | 0.279 | 3.1 | 86 | -0.01 | 13.[illegible] |

# Continuing Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** VA2763-CC2749
**Lab FileID:** A88874.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 80 | M | chlorobenzene | 0.896 | 0.904 | -0.9 | 91 | 0.00 | 13.61 |
| 81 | M | 1,1,1,2-tetrachloroethane | 0.354 | 0.360 | -1.7 | 89 | -0.01 | 13.68 |
| 82 | M | ethylbenzene | 1.242 | 1.317 | -6.0 | 90 | 0.00 | 13.70 |
| 83 | M | m,p-xylene | 0.504 | 0.539 | -6.9 | 89 | 0.00 | 13.83 |
| 84 | M | o-xylene | 0.507 | 0.547 | -7.9 | 88 | 0.00 | 14.29 |
| 85 | M | styrene | 0.894 | 0.898 | -0.4 | 89 | 0.00 | 14.30 |
| 86 | M | bromoform | 0.260 | 0.216 | 16.9 | 75 | 0.00 | 14.55 |
| 87 | I | 1,4-dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 94 | 0.00 | 16.22 |
| 88 | M | isopropylbenzene | 1.809 | 1.798 | 0.6 | 87 | 0.00 | 14.69 |
| 89 | S | 4-bromofluorobenzene (s) | 0.756 | 0.779 | -3.0 | 95 | 0.00 | 14.89 |
| 90 | M | bromobenzene | 0.689 | 0.696 | -1.0 | 89 | -0.01 | 15.10 |
| 91 | M | 1,1,2,2-tetrachloroethane | 0.565 | 0.577 | -2.1 | 91 | 0.00 | 15.00 |
| 92 | M | trans-1,4-dichloro-2-bute | 0.120 | 0.089 | 25.8# | 70 | 0.00 | 15.06 |
| 93 | M | 1,2,3-trichloropropane | 0.175 | 0.173 | 1.1 | 88 | -0.01 | 15.08 |
| 94 | M | n-propylbenzene | 2.172 | 2.334 | -7.5 | 91 | 0.00 | 15.16 |
| 95 | M | 2-chlorotoluene | 1.632 | 1.714 | -5.0 | 91 | 0.00 | 15.30 |
| 96 | M | 4-chlorotoluene | 1.501 | 1.588 | -5.8 | 91 | 0.00 | 15.41 |
| 97 | M | 1,3,5-trimethylbenzene | 1.666 | 1.787 | -7.3 | 91 | -0.01 | 15.33 |
| 98 | M | tert-butylbenzene | 1.577 | 1.470 | 6.8 | 88 | 0.00 | 15.73 |
| 99 | M | pentachloroethane | 0.449 | 0.466 | -3.8 | 91 | 0.00 | 15.79 |
| 100 | M | 1,2,4-trimethylbenzene | 1.838 | 1.910 | -3.9 | 90 | 0.00 | 15.78 |
| 101 | M | sec-butylbenzene | 2.041 | 2.064 | -1.1 | 90 | 0.00 | 15.98 |
| 102 | M | 1,3-dichlorobenzene | 1.281 | 1.308 | -2.1 | 91 | 0.00 | 16.15 |
| 103 | M | p-isopropyltoluene | 1.852 | 1.871 | -1.0 | 90 | 0.00 | 16.12 |
| 104 | M | 1,4-dichlorobenzene | 1.351 | 1.313 | 2.8 | 89 | 0.00 | 16.25 |
| 105 | M | 1,2-dichlorobenzene | 1.274 | 1.274 | 0.0 | 90 | 0.00 | 16.68 |
| 106 | M | n-butylbenzene | 1.485 | 1.517 | -2.2 | 92 | 0.00 | 16.58 |
| 107 | M | 1,2-dibromo-3-chloropropa | 0.123 | 0.102 | 17.1 | 79 | 0.00 | 17.54 |
| 108 | M | 1,2,4-trichlorobenzene | 0.959 | 0.866 | 9.7 | 83 | 0.00 | 18.46 |
| 109 | M | hexachlorobutadiene | 0.409 | 0.422 | -3.2 | 99 | 0.00 | 18.61 |
| 110 | M | naphthalene | 2.161 | 1.792 | 17.1 | 77 | 0.00 | 18.75 |
| 111 | M | 1,2,3-trichlorobenzene | 0.882 | 0.818 | 7.3 | 84 | -0.01 | 19.02 |
| 112 | M | hexachloroethane | 0.406 | 0.370 | 8.9 | 89 | 0.00 | 17.00 |
| 113 | | 2-methylnaphthalene | | ----------NA---------- | | | | |
| 114 | M | Cyclohexane | 0.539 | 0.535 | 0.7 | 83 | 0.00 | 9.36 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A88528.D MA2749.M Mon Nov 01 13:05:48 2004 MSA

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\A88889.D
Acq On : 29 Oct 2004 4:59 pm
Sample : N81296-1
Misc : MS6241,VA2763,5,,,,1
MS Integration Params: RTEINT.P
Quant Time: Nov 1 12:44 2004

Vial: 17
Operator: limianz
Inst : MSA
Multiplr: 1.00

Quant Results File: MA2749.RES

Quant Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration
DataAcq Meth : MA2749

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 6.80 | 65 | 121076 | 500.00 | ug/L | 0.00 |
| 4) pentafluorobenzene | 9.19 | 168 | 172514 | 50.00 | ug/L | 0.00 |
| 45) 1,4-difluorobenzene | 10.13 | 114 | 237481 | 50.00 | ug/L | 0.00 |
| 74) chlorobenzene-d5 | 13.58 | 117 | 244085 | 50.00 | ug/L | 0.00 |
| 87) 1,4-dichlorobenzene-d4 | 16.22 | 152 | 154854 | 50.00 | ug/L | 0.00 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 39) dibromofluoromethane (s) | 9.19 | 113 | 86592 | 54.24 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 79 - 119 | | Recovery = 108.48% | | | |
| 40) 1,2-dichloroethane-d4 (s) | 9.62 | 65 | 90318 | 55.85 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 68 - 129 | | Recovery = 111.70% | | | |
| 66) toluene-d8 (s) | 11.91 | 98 | 278647 | 50.24 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 83 - 118 | | Recovery = 100.48% | | | |
| 89) 4-bromofluorobenzene (s) | 14.90 | 95 | 116544 | 49.78 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 82 - 120 | | Recovery = 99.56% | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 24) trans-1,2-dichloroethene | 7.23 | 96 | 3721 | 1.48 | ug/L | 92 |
| 34) cis-1,2-dichloroethene | 8.59 | 96 | 348779 | 246.99 | ug/L | 97 |
| 38) chloroform | 8.98 | 83 | 3523 | 1.42 | ug/L | 99 |
| 56) trichloroethene | 10.50 | 95 | 3664 | 2.61 | ug/L | 90 |
| 75) tetrachloroethene | 12.64 | 164 | 37554 | 26.35 | ug/L | 100 |

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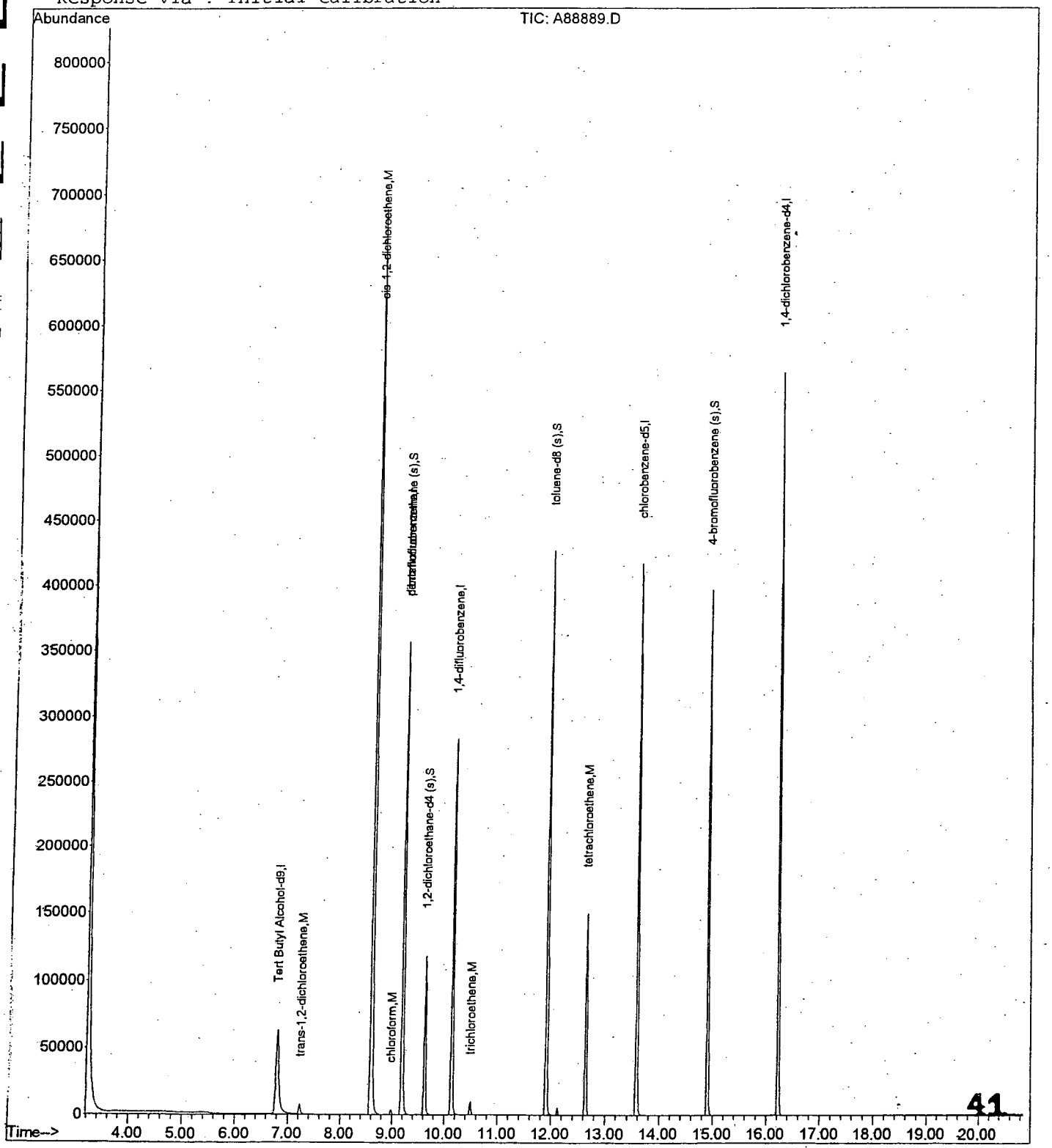
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\A88889.D
Acq On : 29 Oct 2004 4:59 pm
Sample : N81296-1
Misc : MS6241,VA2763,5,,,,1
MS Integration Params: RTEINT.P
Quant Time: Nov 1 12:44 2004

Vial: 17
Operator: limianz
Inst : MSA
Multiplr: 1.00
Quant Results File: MA2749.RES

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration

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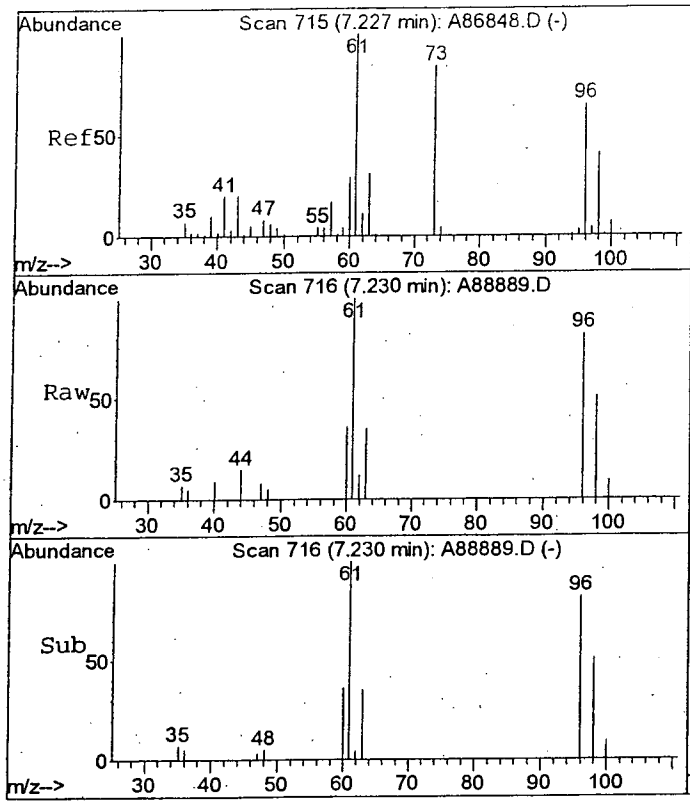
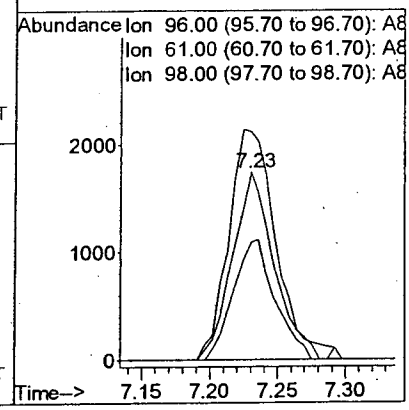
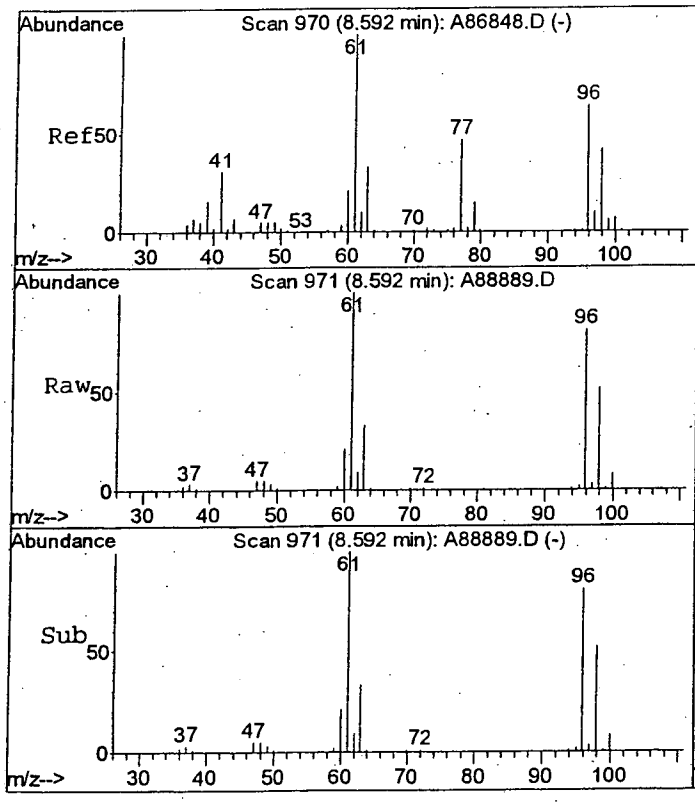



#24
trans-1,2-dichloroethene
Concen: 1.48 ug/L
RT: 7.23 min Scan# 716
Delta R.T. 0.00 min
Lab File: A88889.D
Acq: 29 Oct 2004 4:59 pm

Tgt Ion: 96 Resp: 3721

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 121.7 | 93.7 | 174.1 |
| 98 | 62.6 | 44.9 | 83.5 |

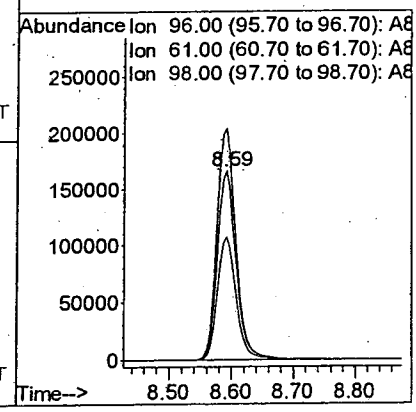


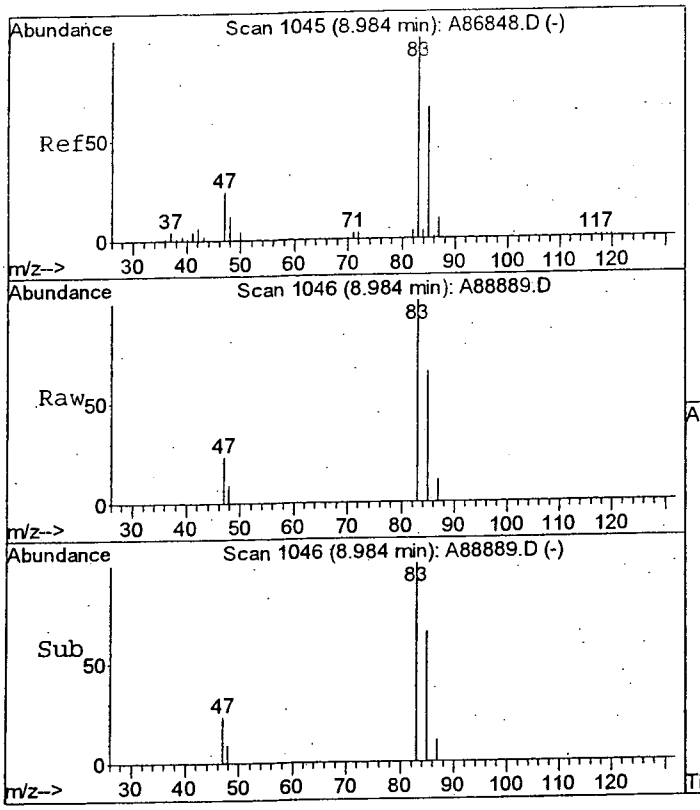




#34
cis-1,2-dichloroethene
Concen: 246.99 ug/L
RT: 8.59 min Scan# 971
Delta R.T. 0.00 min
Lab File: A88889.D
Acq: 29 Oct 2004 4:59 pm

Tgt Ion: 96 Resp: 348779

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 122.8 | 97.9 | 157.9 |
| 98 | 64.5 | 33.7 | 93.7 |

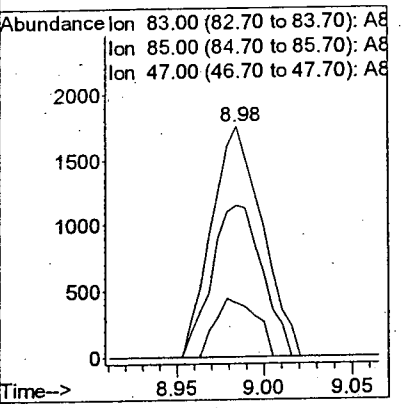


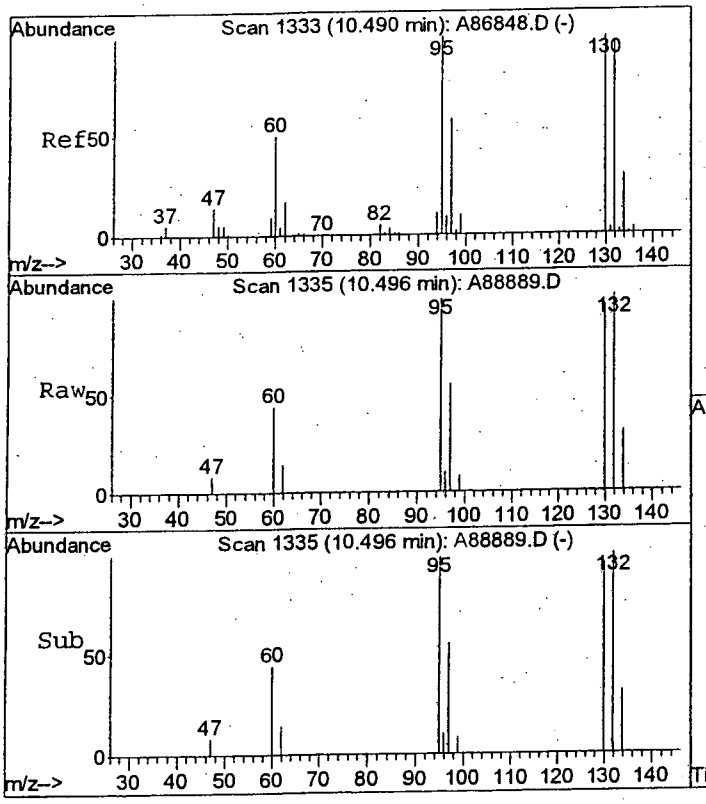



#38
chloroform
Concen: 1.42 ug/L
RT: 8.98 min Scan# 1046
Delta R.T. 0.00 min
Lab File: A88889.D
Acq: 29 Oct 2004 4:59 pm

Tgt Ion: 83 Resp: 3523

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.2 | 35.0 | 95.0 |
| 47 | 23.2 | 0.0 | 52.3 |

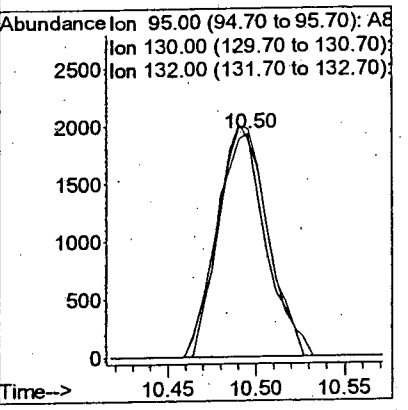


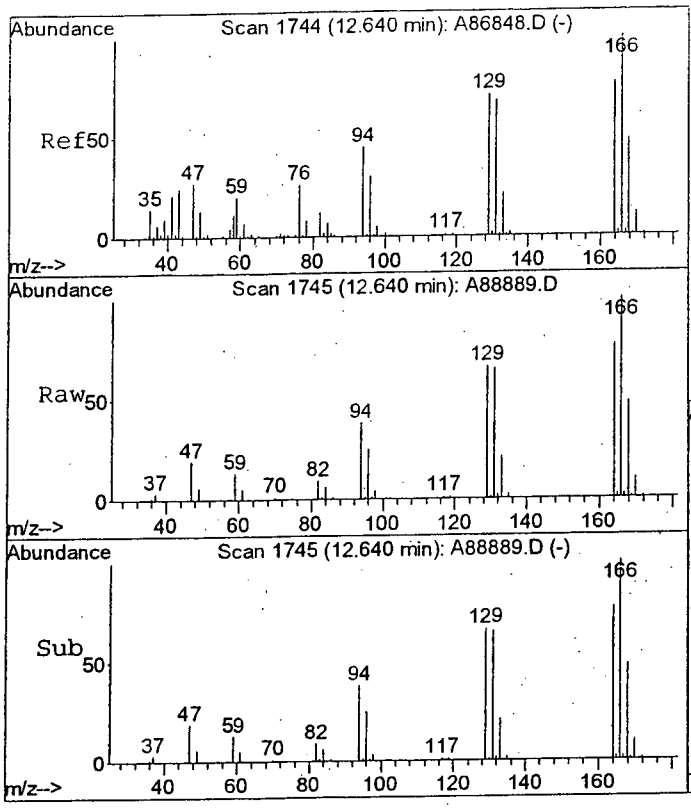




#56
trichloroethene
Concen: 2.61 ug/L
RT: 10.50 min Scan# 1335
Delta R.T. 0.01 min
Lab File: A88889.D
Acq: 29 Oct 2004 4:59 pm

Tgt Ion: 95 Resp: 3664

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 97.5 | 83.1 | 143.1 |
| 132 | 102.3 | 78.9 | 138.9 |

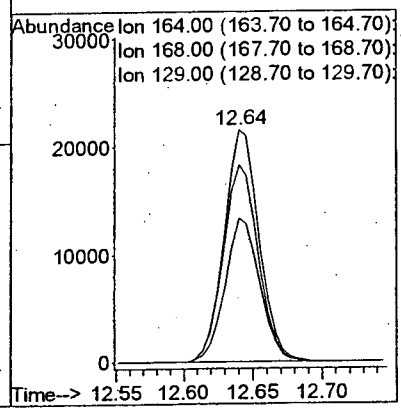





#75
tetrachloroethene
Concen: 26.35 ug/L
RT: 12.64 min Scan# 1745
Delta R.T. 0.00 min
Lab File: A88889.D
Acq: 29 Oct 2004 4:59 pm

Tgt Ion:164 Resp: 37554

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 168 | 61.9 | 31.9 | 91.9 |
| 129 | 84.9 | 55.1 | 115.1 |



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\A88890.D
Acq On : 29 Oct 2004 5:29 pm
Sample : N81296-1
Misc : MS6241,VA2763,5,,,,5
MS Integration Params: RTEINT.P
Quant Time: Nov 1 12:48 2004

Vial: 18
Operator: limianz
Inst : MSA
Multiplr: 1.00

Quant Results File: MA2749.RES

Quant Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration
DataAcq Meth : MA2749

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 6.80 | 65 | 121639 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.19 | 168 | 167599 | 50.00 ug/L | 0.00 |
| 45) 1,4-difluorobenzene | 10.13 | 114 | 231294 | 50.00 ug/L | 0.00 |
| 74) chlorobenzene-d5 | 13.59 | 117 | 237482 | 50.00 ug/L | 0.00 |
| 87) 1,4-dichlorobenzene-d4 | 16.22 | 152 | 152552 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 39) dibromofluoromethane (s) | 9.19 | 113 | 85486 | 55.12 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 79 - 119 | | Recovery = 110.24% | | |
| 40) 1,2-dichloroethane-d4 (s) | 9.62 | 65 | 89110 | 56.72 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 68 - 129 | | Recovery = 113.44% | | |
| 66) toluene-d8 (s) | 11.91 | 98 | 276170 | 51.12 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 83 - 118 | | Recovery = 102.24% | | |
| 89) 4-bromofluorobenzene (s) | 14.90 | 95 | 114301 | 49.56 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 82 - 120 | | Recovery = 99.12% | | |
| Target Compounds | | | | | Qvalue |
| 34) cis-1,2-dichloroethene | 8.59 | 96 | 60318 | 43.97 ug/L | 98 |
| 75) tetrachloroethene | 12.64 | 164 | 6038 | 4.35 ug/L | 98 |

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(#) = qualifier out of range (m) = manual integration

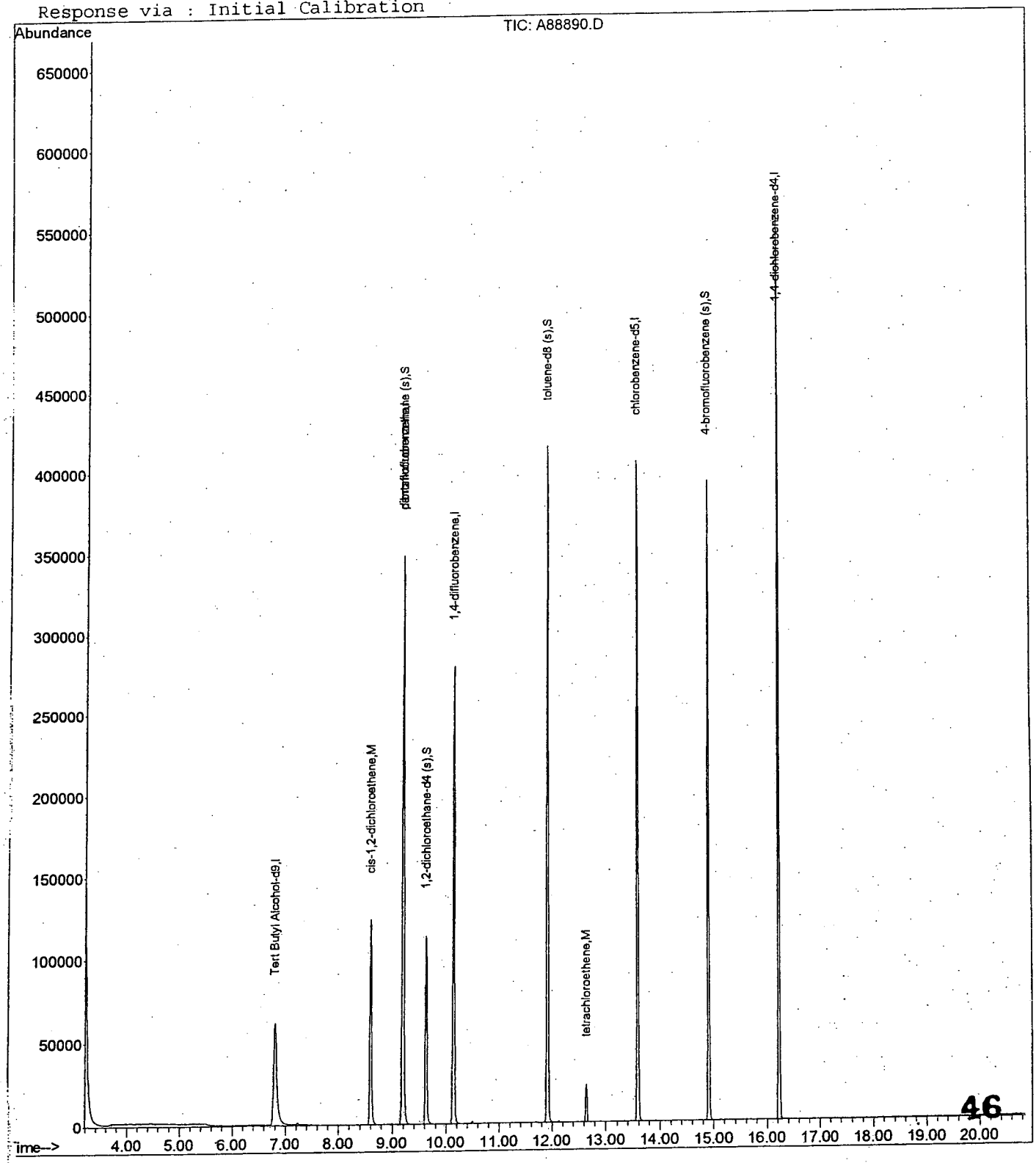
Quantitation Report

Data File : C:\HPCHEM\1\DATA\A88890.D
Acq On : 29 Oct 2004 5:29 pm
Sample : N81296-1
Misc : MS6241,VA2763,5,,,,5
MS Integration Params: RTEINT.P
Quant Time: Nov 1 12:48 2004

Vial: 18
Operator: limianz
Inst : MSA
Multiplr: 1.00

Quant Results File: MA2749.RES

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration

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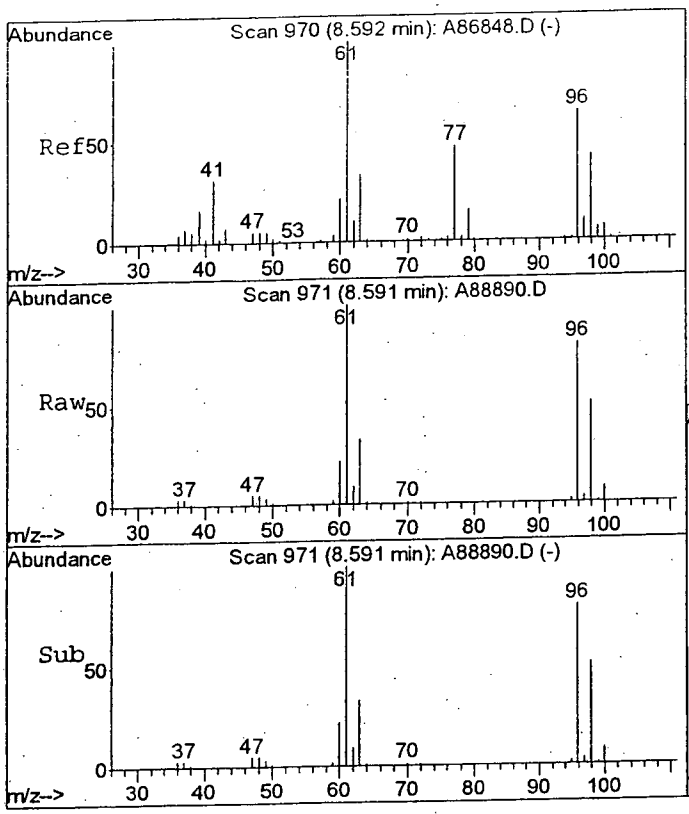
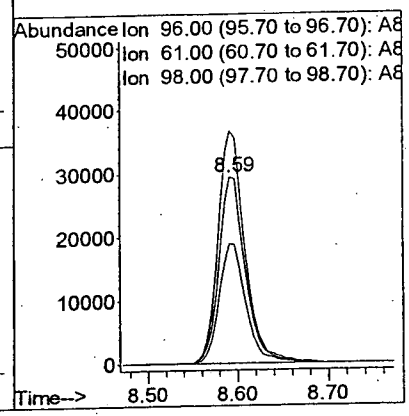
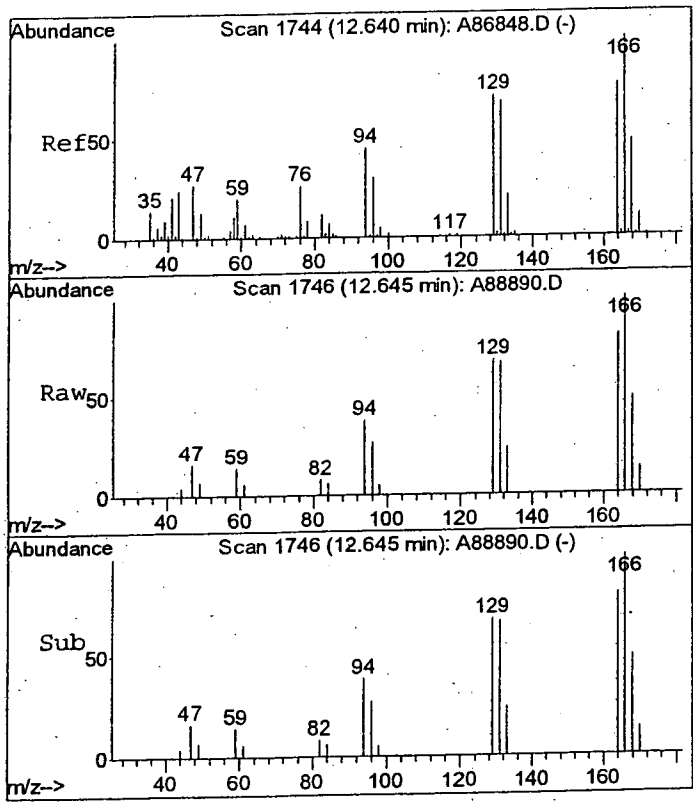



#34
cis-1,2-dichloroethene
Concen: 43.97 ug/L
RT: 8.59 min Scan# 971
Delta R.T. 0.00 min
Lab File: A88890.D
Acq: 29 Oct 2004 5:29 pm

Tgt Ion: 96 Resp: 60318

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 124.6 | 97.9 | 157.9 |
| 98 | 64.1 | 33.7 | 93.7 |

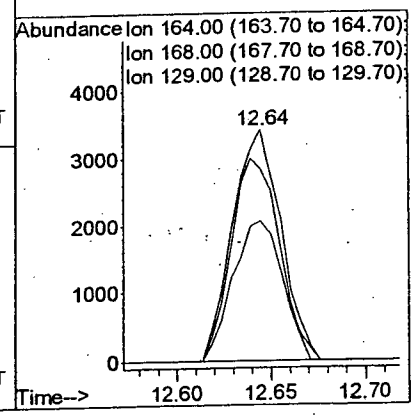



#75
tetrachloroethene
Concen: 4.35 ug/L
RT: 12.64 min Scan# 1746
Delta R.T. 0.00 min
Lab File: A88890.D
Acq: 29 Oct 2004 5:29 pm

Tgt Ion:164 Resp: 6038

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 168 | 60.2 | 31.9 | 91.9 |
| 129 | 83.1 | 55.1 | 115.1 |



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\A88889.D
Acq On : 29 Oct 2004 4:59 pm
Sample : N81296-1
Misc : MS6241,VA2763,5,,,,1
MS Integration Params: LSCINT.P

Vial: 17
Operator: limianz
Inst : MSA
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Smoothing : ON
Sampling : 1
Start Thrs: 0.01
Stop Thrs : 0.01

Filtering: 5
Min Area: 100 Area counts
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.012 | 144 | 146 | 149 | rVB4 | 365 | 377 | 0.03% | 0.006% |
| 2 | 4.051 | 149 | 153 | 155 | rVV2 | 450 | 414 | 0.03% | 0.006% |
| 3 | 4.113 | 162 | 164 | 169 | rVB2 | 516 | 472 | 0.03% | 0.007% |
| 4 | 4.226 | 181 | 184 | 186 | rBV2 | 552 | 494 | 0.03% | 0.008% |
| 5 | 4.249 | 186 | 188 | 191 | rVB2 | 464 | 395 | 0.03% | 0.006% |
| 6 | 4.277 | 191 | 193 | 195 | rBV2 | 524 | 454 | 0.03% | 0.007% |
| 7 | 4.328 | 201 | 202 | 206 | rVV2 | 318 | 354 | 0.02% | 0.006% |
| 8 | 4.390 | 206 | 213 | 216 | rVV2 | 755 | 1350 | 0.09% | 0.021% |
| 9 | 4.435 | 218 | 221 | 222 | rVB2 | 917 | 690 | 0.05% | 0.011% |
| 10 | 4.469 | 222 | 227 | 232 | rBV3 | 877 | 2053 | 0.14% | 0.032% |
| 11 | 4.509 | 232 | 234 | 235 | rVV | 487 | 416 | 0.03% | 0.006% |
| 12 | 4.520 | 235 | 236 | 239 | rVV2 | 571 | 525 | 0.04% | 0.008% |
| 13 | 4.548 | 239 | 241 | 246 | rVV4 | 652 | 951 | 0.06% | 0.015% |
| 14 | 4.599 | 246 | 250 | 252 | rVV3 | 620 | 995 | 0.07% | 0.016% |
| 15 | 4.616 | 252 | 253 | 257 | rVV2 | 641 | 782 | 0.05% | 0.012% |
| 16 | 4.655 | 257 | 260 | 261 | rVV2 | 513 | 596 | 0.04% | 0.009% |
| 17 | 4.672 | 261 | 263 | 267 | rVV2 | 646 | 825 | 0.06% | 0.013% |
| 18 | 4.717 | 267 | 271 | 273 | rVV2 | 736 | 1022 | 0.07% | 0.016% |
| 19 | 4.740 | 273 | 275 | 276 | rVV2 | 754 | 585 | 0.04% | 0.009% |
| 20 | 4.751 | 276 | 277 | 280 | rVV | 702 | 670 | 0.05% | 0.010% |
| 21 | 4.791 | 280 | 284 | 288 | rVV4 | 625 | 1424 | 0.10% | 0.022% |
| 22 | 4.819 | 288 | 289 | 296 | rVV3 | 809 | 1533 | 0.10% | 0.024% |
| 23 | 4.870 | 296 | 298 | 301 | rVV2 | 639 | 737 | 0.05% | 0.012% |
| 24 | 4.893 | 301 | 302 | 308 | rVV4 | 699 | 778 | 0.05% | 0.012% |
| 25 | 4.955 | 311 | 313 | 317 | rVV2 | 528 | 829 | 0.06% | 0.013% |
| 26 | 4.988 | 317 | 319 | 320 | rVV2 | 531 | 434 | 0.03% | 0.007% |
| 27 | 5.000 | 320 | 321 | 325 | rVV2 | 648 | 679 | 0.05% | 0.011% |
| 28 | 5.045 | 325 | 329 | 333 | rVV3 | 419 | 931 | 0.06% | 0.015% |
| 29 | 5.079 | 333 | 335 | 337 | rVV2 | 472 | 533 | 0.04% | 0.008% |
| 30 | 5.096 | 337 | 338 | 341 | rVV2 | 558 | 568 | 0.04% | 0.009% |
| 31 | 5.118 | 341 | 342 | 345 | rVV2 | 490 | 578 | 0.04% | 0.009% |
| 32 | 5.147 | 345 | 347 | 348 | rVV2 | 615 | 477 | 0.03% | 0.007% |
| 33 | 5.158 | 348 | 349 | 352 | rVV2 | 459 | 522 | 0.04% | 0.008% |
| 34 | 5.180 | 352 | 353 | 358 | rVV3 | 591 | 928 | 0.06% | 0.014% |
| 35 | 5.220 | 358 | 360 | 362 | rVV3 | 669 | 624 | 0.04% | 0.010% |
| 36 | 5.237 | 362 | 363 | 368 | rVV2 | 711 | 1065 | 0.07% | 0.017% |
| 37 | 5.293 | 368 | 373 | 377 | rVV3 | 642 | 1622 | 0.11% | 0.025% |
| 38 | 5.333 | 377 | 380 | 382 | rVV | 793 | 1082 | 0.07% | 0.017% |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39 | 5.367 | 385 | 386 | 388 | rVV2 | 895 | 691 | 0.05% | 0.011% |
| 40 | 5.389 | 388 | 390 | 391 | rVV | 716 | 582 | 0.04% | 0.009% |
| 41 | 5.406 | 391 | 393 | 395 | rVV2 | 796 | 933 | 0.06% | 0.015% |
| 42 | 5.435 | 395 | 398 | 400 | rVV2 | 911 | 1184 | 0.08% | 0.018% |
| 43 | 5.463 | 400 | 403 | 409 | rVV2 | 879 | 1917 | 0.13% | 0.030% |
| 44 | 5.508 | 409 | 411 | 419 | rVB | 782 | 1031 | 0.07% | 0.016% |
| 45 | 5.559 | 419 | 420 | 425 | rVB | 287 | 399 | 0.03% | 0.006% |
| 46 | 5.672 | 435 | 440 | 449 | rVB3 | 362 | 1082 | 0.07% | 0.017% |
| 47 | 6.135 | 517 | 522 | 537 | rVB2 | 363 | 1188 | 0.08% | 0.019% |
| 48 | 6.248 | 537 | 542 | 547 | rVV2 | 168 | 356 | 0.02% | 0.006% |
| 49 | 6.372 | 559 | 564 | 571 | rVV2 | 207 | 528 | 0.04% | 0.008% |
| 50 | 6.507 | 578 | 588 | 590 | rVV3 | 358 | 1003 | 0.07% | 0.016% |
| 51 | 6.558 | 595 | 597 | 601 | rVV2 | 230 | 358 | 0.02% | 0.006% |
| 52 | 6.609 | 605 | 606 | 615 | rVV2 | 214 | 582 | 0.04% | 0.009% |
| 53 | 6.688 | 615 | 620 | 621 | rVV | 270 | 399 | 0.03% | 0.006% |
| 54 | 6.795 | 624 | 639 | 677 | rVV | 62553 | 263089 | 17.95% | 4.110% |
| 55 | 7.015 | 677 | 678 | 684 | rVV2 | 813 | 1600 | 0.11% | 0.025% |
| 56 | 7.055 | 684 | 685 | 688 | rVV2 | 613 | 738 | 0.05% | 0.012% |
| 57 | 7.083 | 688 | 690 | 695 | rVV2 | 593 | 1026 | 0.07% | 0.016% |
| 58 | 7.140 | 695 | 700 | 704 | rVV2 | 500 | 1190 | 0.08% | 0.019% |
| 59 | 7.230 | 708 | 716 | 732 | rVV2 | 7835 | 18676 | 1.27% | 0.292% |
| 60 | 7.354 | 736 | 738 | 740 | rVV | 578 | 609 | 0.04% | 0.010% |
| 61 | 7.411 | 744 | 748 | 753 | rVV2 | 497 | 1333 | 0.09% | 0.021% |
| 62 | 7.450 | 753 | 755 | 758 | rVV2 | 507 | 739 | 0.05% | 0.012% |
| 63 | 7.484 | 758 | 761 | 769 | rVB2 | 529 | 1342 | 0.09% | 0.021% |
| 64 | 8.592 | 960 | 971 | 1004 | rBV | 688809 | 1465753 | 100.00% | 22.896% |
| 65 | 8.984 | 1038 | 1046 | 1054 | rBB2 | 3648 | 7103 | 0.48% | 0.111% |
| 66 | 9.188 | 1075 | 1085 | 1112 | rBB2 | 356506 | 719590 | 49.09% | 11.241% |
| 67 | 9.622 | 1159 | 1168 | 1189 | rBB | 117609 | 230383 | 15.72% | 3.599% |
| 68 | 10.135 | 1256 | 1266 | 1294 | rBB | 282440 | 515819 | 35.19% | 8.058% |
| 69 | 10.491 | 1327 | 1334 | 1343 | rBB2 | 9642 | 17650 | 1.20% | 0.276% |
| 70 | 11.908 | 1596 | 1605 | 1623 | rBV | 426819 | 713835 | 48.70% | 11.151% |
| 71 | 12.122 | 1640 | 1646 | 1653 | rBB | 5460 | 8783 | 0.60% | 0.137% |
| 72 | 12.640 | 1737 | 1745 | 1756 | rBB | 148821 | 255081 | 17.40% | 3.985% |
| 73 | 13.582 | 1917 | 1925 | 1943 | rBV | 416784 | 679434 | 46.35% | 10.613% |
| 74 | 14.900 | 2169 | 2177 | 2192 | rBB | 396263 | 596063 | 40.67% | 9.311% |
| 75 | 16.223 | 2421 | 2430 | 2445 | rBB | 563520 | 845320 | 57.67% | 13.205% |
| 76 | 18.242 | 2811 | 2816 | 2819 | rBB | 319 | 459 | 0.03% | 0.007% |
| 77 | 18.388 | 2840 | 2844 | 2849 | rBB | 392 | 689 | 0.05% | 0.011% |
| 78 | 18.446 | 2854 | 2855 | 2859 | rBV | 378 | 425 | 0.03% | 0.007% |
| 79 | 18.503 | 2863 | 2866 | 2869 | rBV | 330 | 445 | 0.03% | 0.007% |
| 80 | 19.073 | 2970 | 2975 | 2979 | rBV | 393 | 408 | 0.03% | 0.006% |
| 81 | 19.199 | 2994 | 2999 | 3004 | rBV | 340 | 504 | 0.03% | 0.008% |
| 82 | 19.230 | 3004 | 3005 | 3009 | rVB | 417 | 332 | 0.02% | 0.005% |
| 83 | 19.659 | 3083 | 3087 | 3089 | rBV | 440 | 394 | 0.03% | 0.006% |
| 84 | 19.842 | 3117 | 3122 | 3129 | rBV | 552 | 849 | 0.06% | 0.013% |
| 85 | 20.083 | 3165 | 3168 | 3173 | rVB | 318 | 428 | 0.03% | 0.007% |
| 86 | 20.156 | 3173 | 3182 | 3188 | rBV3 | 519 | 1106 | 0.08% | 0.017% |
| 87 | 20.213 | 3192 | 3193 | 3197 | rBV2 | 416 | 427 | 0.03% | 0.007% |
| 88 | 20.266 | 3197 | 3203 | 3207 | rBV2 | 520 | 909 | 0.06% | 0.014% |
| 89 | 20.318 | 3209 | 3213 | 3215 | rVV | 292 | 332 | 0.02% | 0.005% |
| 90 | 20.349 | 3215 | 3219 | 3223 | rVV | 308 | 411 | 0.03% | 0.006% |
| 91 | 20.443 | 3234 | 3237 | 3242 | rVB2 | 433 | 549 | 0.04% | 0.009% |
| 92 | 20.491 | 3242 | 3246 | 3249 | rBV | 451 | 536 | 0.04% | 0.008% |
| 93 | 20.527 | 3249 | 3253 | 3255 | rVV | 442 | 494 | 0.03% | 0.008% |
| 94 | 20.543 | 3255 | 3256 | 3262 | rVV2 | 418 | 745 | 0.05% | 0.012% |
| 95 | 20.585 | 3262 | 3264 | 3266 | rVV | 544 | 478 | 0.03% | 0.007% |

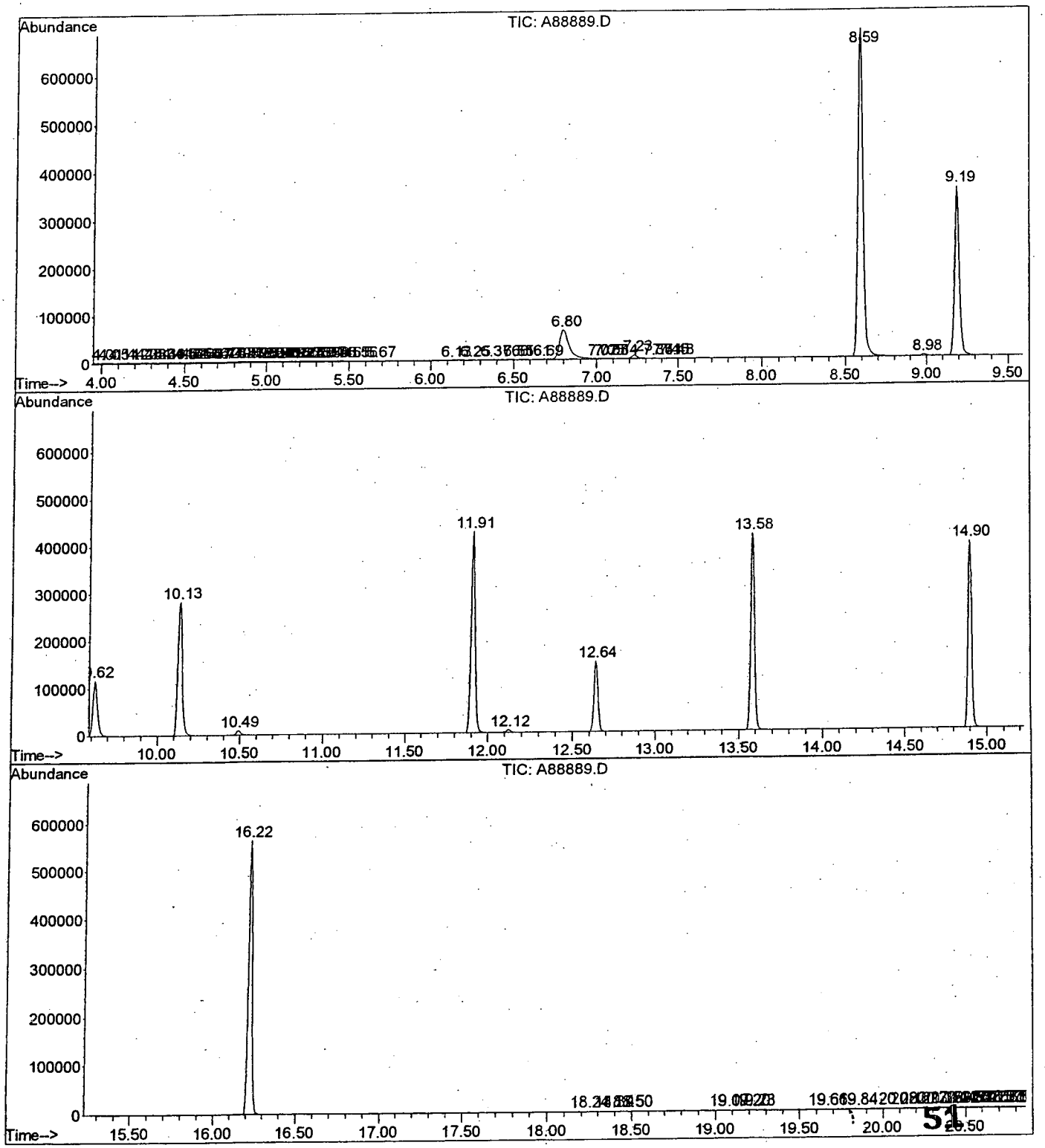
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 96 | 20.647 | 3269 | 3276 | 3278 | rVV3 | 479 | 971 | 0.07% | 0.015% |
| 97 | 20.684 | 3278 | 3283 | 3285 | rVV | 640 | 734 | 0.05% | 0.011% |
| 98 | 20.726 | 3288 | 3291 | 3293 | rVV | 537 | 491 | 0.03% | 0.008% |
| 99 | 20.762 | 3295 | 3298 | 3304 | rVB2 | 702 | 917 | 0.06% | 0.014% |
| 00 | 20.799 | 3304 | 3305 | 3310 | rBV | 409 | 496 | 0.03% | 0.008% |

Sum of corrected areas: 6401682

A88889.D MA2749.M Mon Nov 01 12:47:22 2004 MSA

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\A88889.D
Operator : limianz
Acquired : 29 Oct 2004 4:59 pm using AcqMethod MA2749
Instrument : MSA
Sample Name: N81296-1
Misc Info : MS6241,VA2763,5,,,,1
Vial Number: 17
Quant File :MA2749.RES (RTE Integrator)



Tentatively Identified Compound (LSC) summary

perator ID: limianz  Date Acquired: 29 Oct 2004  4:59 pm
ata File: C:\HPCHEM\1\DATA\A88889.D
ame: N81296-1
isc: MS6241,VA2763,5,,,,1
ethod: C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
itle: SW-846 Method 8260
ibrary Searched: C:\DATABASE\NBS75K.L

| TIC | Top Hit name | RT | EstConc | Units | Response | --Internal Standard--- # | RT | Resp | Conc |
|---|---|---|---|---|---|---|---|---|---|

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\A88891.D
Acq On : 29 Oct 2004 5:59 pm
Sample : N81296-2
Misc : MS6241,VA2763,5,,,,1
MS Integration Params: RTEINT.P
Quant Time: Nov 1 12:49 2004

Vial: 19
Operator: limianz
Inst : MSA
Multiplr: 1.00

Quant Results File: MA2749.RES

Quant Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration
DataAcq Meth : MA2749

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 6.80 | 65 | 117628 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.19 | 168 | 159502 | 50.00 ug/L | 0.00 |
| 45) 1,4-difluorobenzene | 10.13 | 114 | 228769 | 50.00 ug/L | 0.00 |
| 74) chlorobenzene-d5 | 13.59 | 117 | 237646 | 50.00 ug/L | 0.00 |
| 87) 1,4-dichlorobenzene-d4 | 16.23 | 152 | 152211 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 39) dibromofluoromethane (s) | 9.19 | 113 | 85311 | 57.79 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 79 - 119 | | Recovery = 115.58% | | |
| 40) 1,2-dichloroethane-d4 (s) | 9.63 | 65 | 88612 | 59.27 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 68 - 129 | | Recovery = 118.54% | | |
| 66) toluene-d8 (s) | 11.91 | 98 | 275266 | 51.52 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 83 - 118 | | Recovery = 103.04% | | |
| 89) 4-bromofluorobenzene (s) | 14.90 | 95 | 114509 | 49.76 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 82 - 120 | | Recovery = 99.52% | | |

Target Compounds Qvalue

Z

11/11/04

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(#) = qualifier out of range (m) = manual integration

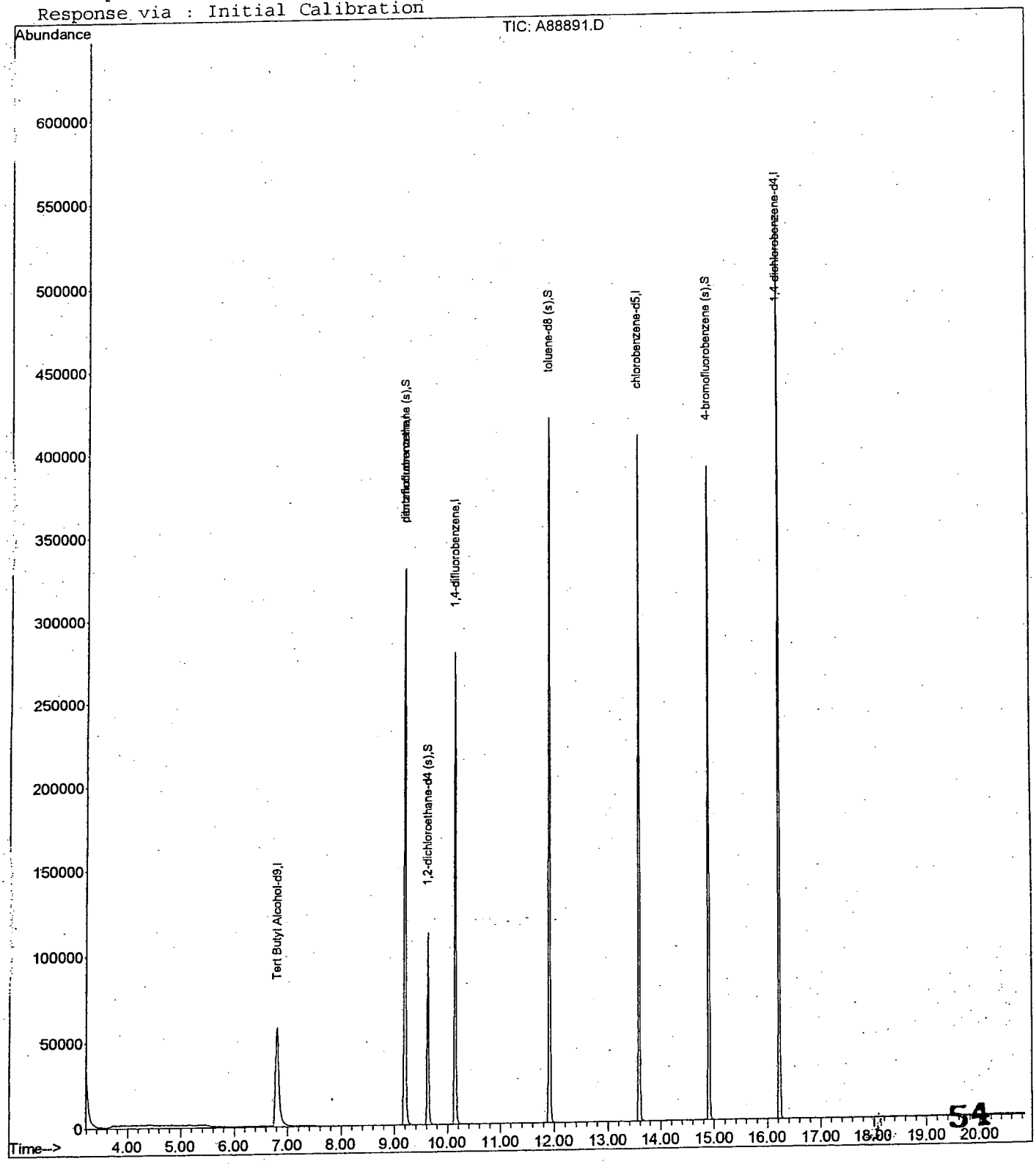
Quantitation Report

Data File : C:\HPCHEM\1\DATA\A88891.D
Acq On : 29 Oct 2004 5:59 pm
Sample : N81296-2
Misc : MS6241,VA2763,5,,,,1
MS Integration Params: RTEINT.P
Quant Time: Nov 1 12:49 2004

Vial: 19
Operator: limianz
Inst : MSA
Multiplr: 1.00

Quant Results File: MA2749.RES

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration

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LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\A88891.D
Acq On : 29 Oct 2004 5:59 pm
Sample : N81296-2
Misc : MS6241,VA2763,5,,,,1
MS Integration Params: LSCINT.P

Vial: 19
Operator: limianz
Inst : MSA
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Smoothing : ON
Sampling : 1
Start Thrs: 0.01
Stop Thrs : 0.01

Filtering: 5
Min Area: 100 Area counts
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.995 | 139 | 143 | 144 | rVB | 484 | 537 | 0.06% | 0.012% |
| 2 | 4.018 | 144 | 147 | 149 | rVV2 | 506 | 444 | 0.05% | 0.010% |
| 3 | 4.058 | 149 | 154 | 156 | rVV2 | 411 | 660 | 0.08% | 0.015% |
| 4 | 4.080 | 156 | 158 | 160 | rVV | 530 | 482 | 0.06% | 0.011% |
| 5 | 4.108 | 160 | 163 | 164 | rVV | 836 | 574 | 0.07% | 0.013% |
| 6 | 4.125 | 164 | 166 | 168 | rVV2 | 662 | 546 | 0.07% | 0.012% |
| 7 | 4.142 | 168 | 169 | 172 | rVV2 | 542 | 428 | 0.05% | 0.009% |
| 8 | 4.165 | 172 | 173 | 175 | rVV2 | 637 | 473 | 0.06% | 0.010% |
| 9 | 4.182 | 175 | 176 | 178 | rVV2 | 659 | 420 | 0.05% | 0.009% |
| 10 | 4.199 | 178 | 179 | 182 | rVV2 | 613 | 433 | 0.05% | 0.010% |
| 11 | 4.221 | 182 | 183 | 186 | rVV3 | 409 | 428 | 0.05% | 0.009% |
| 12 | 4.250 | 186 | 188 | 193 | rVV2 | 731 | 1011 | 0.12% | 0.022% |
| 13 | 4.289 | 193 | 195 | 197 | rVV2 | 627 | 563 | 0.07% | 0.012% |
| 14 | 4.306 | 197 | 198 | 202 | rVV3 | 522 | 628 | 0.08% | 0.014% |
| 15 | 4.346 | 202 | 205 | 207 | rVV | 500 | 548 | 0.07% | 0.012% |
| 16 | 4.379 | 207 | 211 | 214 | rVV2 | 974 | 1219 | 0.15% | 0.027% |
| 17 | 4.402 | 214 | 215 | 218 | rVV2 | 578 | 652 | 0.08% | 0.014% |
| 18 | 4.436 | 218 | 221 | 224 | rVV3 | 993 | 1405 | 0.17% | 0.031% |
| 19 | 4.470 | 224 | 227 | 229 | rVV2 | 823 | 1113 | 0.13% | 0.025% |
| 20 | 4.487 | 229 | 230 | 235 | rVV2 | 852 | 1206 | 0.14% | 0.027% |
| 21 | 4.521 | 235 | 236 | 238 | rVV | 646 | 576 | 0.07% | 0.013% |
| 22 | 4.538 | 238 | 239 | 243 | rVV2 | 796 | 1039 | 0.12% | 0.023% |
| 23 | 4.577 | 243 | 246 | 254 | rVV5 | 752 | 1903 | 0.23% | 0.042% |
| 24 | 4.645 | 254 | 258 | 259 | rVV2 | 803 | 1093 | 0.13% | 0.024% |
| 25 | 4.662 | 259 | 261 | 263 | rVV2 | 649 | 766 | 0.09% | 0.017% |
| 26 | 4.696 | 263 | 267 | 269 | rVV3 | 769 | 1108 | 0.13% | 0.024% |
| 27 | 4.735 | 269 | 274 | 278 | rVV2 | 833 | 1734 | 0.21% | 0.038% |
| 28 | 4.780 | 278 | 282 | 285 | rVV2 | 686 | 1239 | 0.15% | 0.027% |
| 29 | 4.809 | 285 | 287 | 288 | rVV | 661 | 596 | 0.07% | 0.013% |
| 30 | 4.831 | 288 | 291 | 293 | rVV2 | 729 | 888 | 0.11% | 0.020% |
| 31 | 4.865 | 293 | 297 | 302 | rVV3 | 802 | 1964 | 0.24% | 0.043% |
| 32 | 4.899 | 302 | 303 | 310 | rVV3 | 764 | 1592 | 0.19% | 0.035% |
| 33 | 4.972 | 310 | 316 | 317 | rVV | 730 | 1364 | 0.16% | 0.030% |
| 34 | 4.995 | 317 | 320 | 322 | rVV3 | 761 | 1121 | 0.13% | 0.025% |
| 35 | 5.029 | 322 | 326 | 329 | rVV | 860 | 1436 | 0.17% | 0.032% |
| 36 | 5.051 | 329 | 330 | 334 | rVV2 | 820 | 1037 | 0.12% | 0.023% |
| 37 | 5.091 | 334 | 337 | 338 | rVV | 741 | 787 | 0.09% | 0.017% |
| 38 | 5.119 | 338 | 342 | 345 | rVV2 | 788 | 1588 | 0.19% | 0.035% |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39 | 5.142 | 345 | 346 | 350 | rVV | 967 | 1172 | 0.14% | 0.026% |
| 40 | 5.181 | 350 | 353 | 358 | rVV4 | 966 | 1909 | 0.23% | 0.042% |
| 41 | 5.226 | 358 | 361 | 365 | rVV2 | 822 | 1557 | 0.19% | 0.034% |
| 42 | 5.260 | 365 | 367 | 371 | rVV2 | 840 | 1284 | 0.15% | 0.028% |
| 43 | 5.300 | 371 | 374 | 377 | rVV2 | 791 | 1328 | 0.16% | 0.029% |
| 44 | 5.328 | 377 | 379 | 380 | rVV2 | 974 | 644 | 0.08% | 0.014% |
| 45 | 5.345 | 380 | 382 | 383 | rVV | 791 | 693 | 0.08% | 0.015% |
| 46 | 5.362 | 383 | 385 | 387 | rVV | 979 | 1033 | 0.12% | 0.023% |
| 47 | 5.379 | 387 | 388 | 390 | rVV2 | 1101 | 837 | 0.10% | 0.018% |
| 48 | 5.396 | 390 | 391 | 397 | rVV | 867 | 1707 | 0.20% | 0.038% |
| 49 | 5.447 | 397 | 400 | 408 | rVV2 | 1132 | 2842 | 0.34% | 0.063% |
| 50 | 5.503 | 408 | 410 | 415 | rVV2 | 778 | 1221 | 0.15% | 0.027% |
| 51 | 5.537 | 415 | 416 | 428 | rVV2 | 306 | 626 | 0.08% | 0.014% |
| 52 | 5.881 | 473 | 477 | 486 | rVB2 | 145 | 379 | 0.05% | 0.008% |
| 53 | 6.147 | 520 | 524 | 531 | rVB2 | 186 | 370 | 0.04% | 0.008% |
| 54 | 6.610 | 599 | 606 | 608 | rVV2 | 189 | 355 | 0.04% | 0.008% |
| 55 | 6.677 | 610 | 618 | 619 | rVV2 | 146 | 343 | 0.04% | 0.008% |
| 56 | 6.802 | 621 | 640 | 680 | rVV2 | 57509 | 258879 | 31.06% | 5.715% |
| 57 | 7.033 | 680 | 681 | 689 | rVV3 | 688 | 1675 | 0.20% | 0.037% |
| 58 | 7.084 | 689 | 690 | 696 | rVV2 | 597 | 979 | 0.12% | 0.022% |
| 59 | 7.123 | 696 | 697 | 699 | rVV2 | 392 | 314 | 0.04% | 0.007% |
| 60 | 7.157 | 699 | 703 | 707 | rVV2 | 390 | 781 | 0.09% | 0.017% |
| 61 | 7.202 | 707 | 711 | 712 | rVV2 | 352 | 522 | 0.06% | 0.012% |
| 62 | 7.242 | 716 | 718 | 722 | rVV2 | 403 | 661 | 0.08% | 0.015% |
| 63 | 7.293 | 722 | 727 | 730 | rVV2 | 356 | 879 | 0.11% | 0.019% |
| 64 | 7.344 | 735 | 736 | 740 | rVV2 | 399 | 574 | 0.07% | 0.013% |
| 65 | 7.378 | 740 | 742 | 744 | rVV2 | 415 | 498 | 0.06% | 0.011% |
| 66 | 7.400 | 744 | 746 | 750 | rVV2 | 449 | 749 | 0.09% | 0.017% |
| 67 | 7.457 | 750 | 756 | 758 | rVV2 | 406 | 989 | 0.12% | 0.022% |
| 68 | 7.513 | 760 | 764 | 766 | rVB | 511 | 834 | 0.10% | 0.018% |
| 69 | 9.192 | 1074 | 1085 | 1113 | rBB2 | 329487 | 686166 | 82.34% | 15.149% |
| 70 | 9.626 | 1158 | 1168 | 1191 | rBB | 111436 | 224734 | 26.97% | 4.962% |
| 71 | 10.133 | 1256 | 1265 | 1288 | rBB | 278262 | 498260 | 59.79% | 11.000% |
| 72 | 11.906 | 1595 | 1604 | 1626 | rBB | 418814 | 706503 | 84.78% | 15.598% |
| 73 | 13.585 | 1916 | 1925 | 1944 | rBB | 407953 | 661139 | 79.33% | 14.596% |
| 74 | 14.903 | 2168 | 2177 | 2192 | rBB | 387949 | 586233 | 70.35% | 12.943% |
| 75 | 16.221 | 2421 | 2429 | 2444 | rBB | 539550 | 833353 | 100.00% | 18.398% |
| 76 | 18.240 | 2811 | 2815 | 2820 | rBB | 333 | 418 | 0.05% | 0.009% |
| 77 | 18.366 | 2834 | 2839 | 2843 | rBV | 487 | 699 | 0.08% | 0.015% |
| 78 | 18.418 | 2843 | 2849 | 2850 | rVB | 388 | 444 | 0.05% | 0.010% |
| 79 | 18.439 | 2850 | 2853 | 2857 | rBB | 381 | 458 | 0.05% | 0.010% |
| 80 | 18.815 | 2922 | 2925 | 2928 | rVV | 390 | 330 | 0.04% | 0.007% |
| 81 | 18.873 | 2932 | 2936 | 2938 | rVV | 395 | 335 | 0.04% | 0.007% |
| 82 | 19.056 | 2967 | 2971 | 2974 | rVB2 | 399 | 398 | 0.05% | 0.009% |
| 83 | 19.087 | 2974 | 2977 | 2982 | rBV | 446 | 457 | 0.05% | 0.010% |
| 84 | 19.208 | 2995 | 3000 | 3003 | rVB2 | 348 | 339 | 0.04% | 0.007% |
| 85 | 19.616 | 3074 | 3078 | 3080 | rBV | 329 | 354 | 0.04% | 0.008% |
| 86 | 19.715 | 3092 | 3097 | 3100 | rBV | 351 | 480 | 0.06% | 0.011% |
| 87 | 19.793 | 3111 | 3112 | 3119 | rBV | 358 | 339 | 0.04% | 0.007% |
| 88 | 19.856 | 3119 | 3124 | 3126 | rBV | 340 | 347 | 0.04% | 0.008% |
| 89 | 19.914 | 3132 | 3135 | 3139 | rVB | 368 | 452 | 0.05% | 0.010% |
| 90 | 19.955 | 3139 | 3143 | 3147 | rBV | 383 | 566 | 0.07% | 0.012% |
| 91 | 20.071 | 3161 | 3165 | 3167 | rBV | 464 | 376 | 0.05% | 0.008% |
| 92 | 20.118 | 3171 | 3174 | 3179 | rVB | 362 | 426 | 0.05% | 0.009% |
| 93 | 20.264 | 3195 | 3202 | 3208 | rVB | 309 | 753 | 0.09% | 0.017% |
| 94 | 20.327 | 3208 | 3214 | 3215 | rBV | 413 | 527 | 0.06% | 0.012% |
| 95 | 20.379 | 3221 | 3224 | 3228 | rBV2 | 527 | 480 | 0.06% | 0.011% |

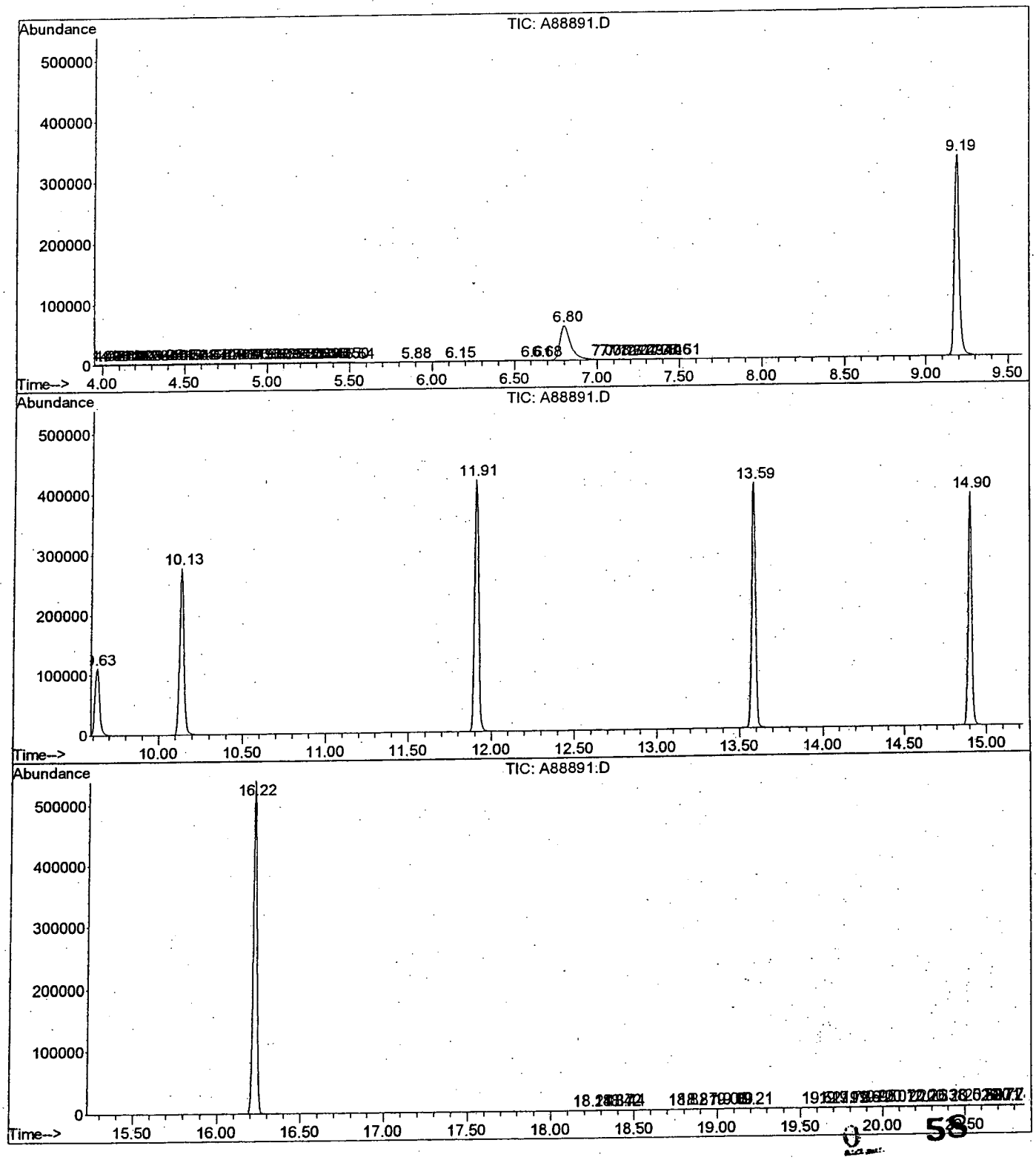
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 96 | 20.520 | 3248 | 3251 | 3253 | rVV | 530 | 344 | 0.04% | 0.008% |
| 97 | 20.604 | 3264 | 3267 | 3270 | rBV | 379 | 358 | 0.04% | 0.008% |
| 98 | 20.709 | 3282 | 3287 | 3289 | rBV | 603 | 430 | 0.05% | 0.009% |
| 99 | 20.724 | 3289 | 3290 | 3295 | rVV | 397 | 314 | 0.04% | 0.007% |
| 00 | 20.782 | 3299 | 3301 | 3305 | rBV | 554 | 417 | 0.05% | 0.009% |

Sum of corrected areas: 4529464

A88891.D MA2749.M Mon Nov 01 13:12:46 2004 MSA

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\A88891.D
Operator : limianz
Acquired : 29 Oct 2004 5:59 pm using AcqMethod MA2749
Instrument : MSA
Sample Name: N81296-2
Misc Info : MS6241,VA2763,5,,,,1
Vial Number: 19
Quant File :MA2749.RES (RTE Integrator)






A88891.D MA2749.M Mon Nov 01 13:12:46 2004 MSA

Tentatively Identified Compound (LSC) summary

perator ID: limianz  Date Acquired: 29 Oct 2004  5:59 pm
ata File: C:\HPCHEM\1\DATA\A88891.D
ame: N81296-2
isc: MS6241,VA2763,5,,,,1
ethod: C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
itle: SW-846 Method 8260
ibrary Searched: C:\DATABASE\NBS75K.L

| TIC | Top Hit name | RT | EstConc | Units | Response | --Internal Standard--- # | RT | Resp | Conc |
|---|---|---|---|---|---|---|---|---|---|

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\A88869.D
Acq On : 29 Oct 2004 6:10 am
Sample : MB1
Misc : MS6228,VA2763,5,,,,1
MS Integration Params: RTEINT.P
Quant Time: Oct 29 12:16 2004

Vial: 35
Operator: limianz
Inst : MSA
Multiplr: 1.00

Quant Results File: MA2749.RES

Quant Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration
DataAcq Meth : MA2749

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 6.79 | 65 | 146084 | 500.00 | ug/L | 0.00 |
| 4) pentafluorobenzene | 9.18 | 168 | 177715 | 50.00 | ug/L | 0.00 |
| 45) 1,4-difluorobenzene | 10.13 | 114 | 253789 | 50.00 | ug/L | 0.00 |
| 74) chlorobenzene-d5 | 13.58 | 117 | 256121 | 50.00 | ug/L | 0.00 |
| 87) 1,4-dichlorobenzene-d4 | 16.22 | 152 | 162657 | 50.00 | ug/L | 0.00 |

System Monitoring Compounds

| | | | | | | |
|---|---|---|---|---|---|---|
| 39) dibromofluoromethane (s) | 9.18 | 113 | 92204 | 56.06 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 79 - 119 | | Recovery = 112.12% | | | |
| 40) 1,2-dichloroethane-d4 (s) | 9.61 | 65 | 99457 | 59.71 | ug/L | -0.01 |
| Spiked Amount 50.000 | Range 68 - 129 | | Recovery = 119.42% | | | |
| 66) toluene-d8 (s) | 11.90 | 98 | 303172 | 51.15 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 83 - 118 | | Recovery = 102.30% | | | |
| 89) 4-bromofluorobenzene (s) | 14.89 | 95 | 124518 | 50.63 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 82 - 120 | | Recovery = 101.26% | | | |

Target Compounds Qvalue

E 10/8/04

60

(#) = qualifier out of range (m) = manual integration
A88869.D MA2749.M Fri Oct 29 12:16:32 2004 MSA

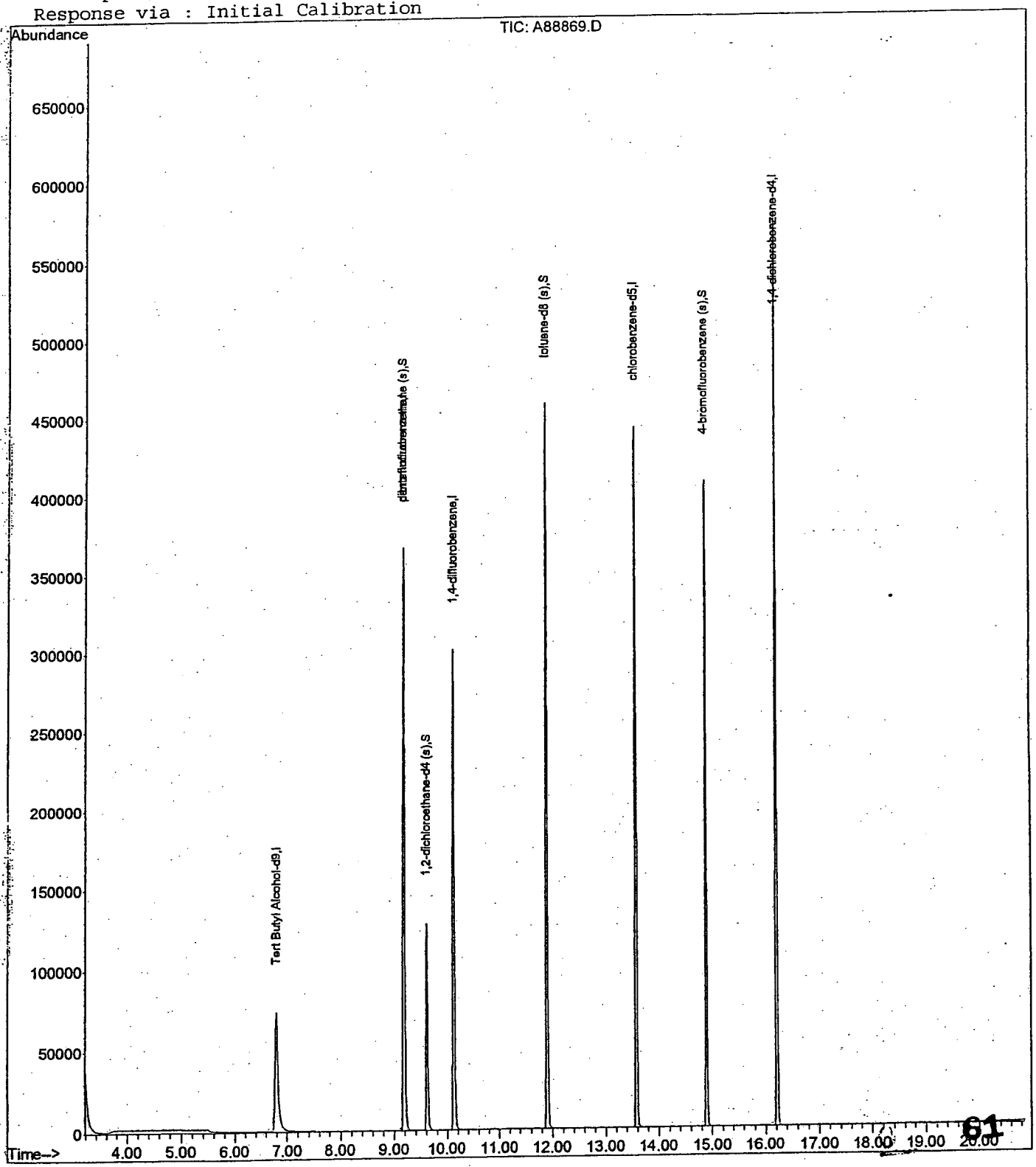
Quantitation Report

Data File : C:\HPCHEM\1\DATA\A88869.D
Acq On : 29 Oct 2004 6:10 am
Sample : MB1
Misc : MS6228,VA2763,5,,,,1
MS Integration Params: RTEINT.P
Quant Time: Oct 29 12:16 2004

Vial: 35
Operator: limianz
Inst : MSA
Multiplr: 1.00

Quant Results File: MA2749.RES

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration




61

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\A88869.D
Acq On : 29 Oct 2004 6:10 am
Sample : MB1
Misc : MS6228,VA2763,5,,,,1
MS Integration Params: LSCINT.P

Vial: 35
Operator: limianz
Inst : MSA
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Smoothing : ON
Sampling : 1
Start Thrs: 0.01
Stop Thrs : 0.01

Filtering: 5
Min Area: 100 Area counts
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Signal : TIC

| Peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| | 4.007 | 141 | 145 | 147 | rBV2 | 355 | 462 | 0.05% | 0.009% |
| 2 | 4.035 | 147 | 150 | 152 | rVV3 | 447 | 454 | 0.05% | 0.009% |
| 3 | 4.075 | 154 | 157 | 159 | rVB2 | 701 | 571 | 0.06% | 0.011% |
| | 4.109 | 159 | 163 | 165 | rBV2 | 466 | 583 | 0.07% | 0.012% |
| | 4.137 | 165 | 168 | 170 | rVV4 | 468 | 667 | 0.07% | 0.013% |
| 6 | 4.165 | 170 | 173 | 174 | rVV | 707 | 550 | 0.06% | 0.011% |
| | 4.199 | 174 | 179 | 181 | rVV3 | 742 | 928 | 0.10% | 0.019% |
| | 4.233 | 181 | 185 | 187 | rVV2 | 489 | 845 | 0.09% | 0.017% |
| 9 | 4.261 | 187 | 190 | 194 | rVV3 | 570 | 1142 | 0.13% | 0.023% |
| | 4.306 | 194 | 198 | 201 | rVV4 | 750 | 1275 | 0.14% | 0.025% |
| | 4.334 | 201 | 203 | 205 | rVV2 | 884 | 847 | 0.09% | 0.017% |
| 12 | 4.363 | 205 | 208 | 214 | rVV5 | 849 | 1986 | 0.22% | 0.040% |
| | 4.408 | 214 | 216 | 218 | rVV2 | 893 | 995 | 0.11% | 0.020% |
| | 4.436 | 218 | 221 | 224 | rVV5 | 1016 | 1724 | 0.19% | 0.034% |
| | 4.464 | 224 | 226 | 231 | rVV3 | 1175 | 1820 | 0.20% | 0.036% |
| | 4.526 | 231 | 237 | 243 | rVV5 | 1107 | 3460 | 0.39% | 0.069% |
| | 4.566 | 243 | 244 | 249 | rVV | 900 | 1428 | 0.16% | 0.029% |
| 3 | 4.605 | 249 | 251 | 256 | rVV3 | 936 | 1856 | 0.21% | 0.037% |
| 19 | 4.645 | 256 | 258 | 259 | rVV2 | 1011 | 842 | 0.09% | 0.017% |
| | 4.668 | 259 | 262 | 264 | rVV4 | 1343 | 1420 | 0.16% | 0.028% |
| 1 | 4.696 | 264 | 267 | 270 | rVV4 | 1019 | 1734 | 0.19% | 0.035% |
| | 4.730 | 272 | 273 | 276 | rVV2 | 1235 | 1050 | 0.12% | 0.021% |
| | 4.781 | 276 | 282 | 285 | rVV4 | 1096 | 2668 | 0.30% | 0.053% |
| | 4.809 | 285 | 287 | 290 | rVV3 | 1073 | 1407 | 0.16% | 0.028% |
| | 4.831 | 290 | 291 | 295 | rVV2 | 1133 | 1590 | 0.18% | 0.032% |
| | 4.860 | 295 | 296 | 298 | rVV | 1300 | 951 | 0.11% | 0.019% |
| | 4.893 | 298 | 302 | 306 | rVV4 | 1157 | 2545 | 0.29% | 0.051% |
| 28 | 4.922 | 306 | 307 | 310 | rVV | 1040 | 1321 | 0.15% | 0.026% |
| | 4.950 | 310 | 312 | 315 | rVV3 | 1238 | 1791 | 0.20% | 0.036% |
| | 4.989 | 315 | 319 | 320 | rVV3 | 1249 | 1815 | 0.20% | 0.036% |
| 11 | 5.023 | 320 | 325 | 328 | rVV4 | 1222 | 2592 | 0.29% | 0.052% |
| | 5.057 | 328 | 331 | 334 | rVV2 | 1046 | 1890 | 0.21% | 0.038% |
| | 5.085 | 334 | 336 | 339 | rVV3 | 1212 | 1708 | 0.19% | 0.034% |
| 4 | 5.119 | 339 | 342 | 344 | rVV3 | 1135 | 1726 | 0.19% | 0.035% |
| 5 | 5.164 | 347 | 350 | 351 | rVV | 1167 | 1381 | 0.15% | 0.028% |
| | 5.176 | 351 | 352 | 356 | rVV2 | 1214 | 1758 | 0.20% | 0.035% |
| 37 | 5.215 | 356 | 359 | 361 | rVV3 | 1167 | 1711 | 0.19% | 0.034% |
| | 5.255 | 361 | 366 | 369 | rVV5 | 1336 | 3045 | 0.34% | 0.061% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 5.294 | 369 | 373 | 377 | rVV2 | 1532 | 3243 | 0.36% | 0.065% |
| 0 | 5.362 | 377 | 385 | 391 | rVV4 | 1575 | 5825 | 0.65% | 0.116% |
| 1 | 5.430 | 394 | 397 | 399 | rVV3 | 1503 | 2126 | 0.24% | 0.043% |
| 2 | 5.481 | 401 | 406 | 419 | rVV3 | 1682 | 5685 | 0.64% | 0.114% |
| 3 | 5.571 | 419 | 422 | 427 | rVV2 | 392 | 654 | 0.07% | 0.013% |
| 4 | 5.644 | 432 | 435 | 439 | rVV2 | 283 | 475 | 0.05% | 0.009% |
| 5 | 6.791 | 623 | 638 | 685 | rVV | 73558 | 306295 | 34.34% | 6.125% |
| 6 | 7.078 | 685 | 689 | 694 | rVV3 | 485 | 870 | 0.10% | 0.017% |
| 7 | 7.479 | 758 | 760 | 767 | rVB2 | 421 | 1042 | 0.12% | 0.021% |
| 8 | 7.583 | 774 | 778 | 784 | rVB | 341 | 495 | 0.06% | 0.010% |
| 9 | 7.656 | 789 | 792 | 800 | rBB | 303 | 583 | 0.07% | 0.012% |
| 0 | 8.216 | 892 | 899 | 901 | rBB | 332 | 439 | 0.05% | 0.009% |
| 1 | 9.178 | 1071 | 1083 | 1106 | rBV2 | 366505 | 750901 | 84.20% | 15.015% |
| 2 | 9.612 | 1156 | 1166 | 1189 | rBB | 127483 | 252835 | 28.35% | 5.056% |
| 3 | 10.125 | 1255 | 1264 | 1287 | rBV | 300990 | 553873 | 62.10% | 11.076% |
| 4 | 11.898 | 1595 | 1603 | 1627 | rBB | 457666 | 780819 | 87.55% | 15.614% |
| 5 | 13.577 | 1915 | 1924 | 1940 | rBB | 442101 | 726523 | 81.46% | 14.528% |
| 6 | 14.895 | 2166 | 2176 | 2192 | rBB | 406919 | 634158 | 71.11% | 12.681% |
| 7 | 16.213 | 2416 | 2428 | 2446 | rBB | 575824 | 891848 | 100.00% | 17.834% |
| 8 | 16.966 | 2569 | 2572 | 2578 | rBB | 334 | 420 | 0.05% | 0.008% |
| 9 | 17.363 | 2641 | 2648 | 2654 | rBB | 326 | 564 | 0.06% | 0.011% |
| 0 | 17.782 | 2724 | 2728 | 2734 | rBB | 350 | 408 | 0.05% | 0.008% |
| 1 | 18.075 | 2781 | 2784 | 2788 | rBV | 309 | 420 | 0.05% | 0.008% |
| 2 | 18.143 | 2796 | 2797 | 2801 | rBB | 535 | 429 | 0.05% | 0.009% |
| 3 | 18.315 | 2826 | 2830 | 2836 | rBB2 | 478 | 819 | 0.09% | 0.016% |
| 4 | 18.378 | 2838 | 2842 | 2845 | rBV | 503 | 677 | 0.08% | 0.014% |
| 5 | 18.410 | 2845 | 2848 | 2851 | rVB | 595 | 528 | 0.06% | 0.011% |
| 6 | 18.441 | 2851 | 2854 | 2856 | rBV | 535 | 545 | 0.06% | 0.011% |
| 7 | 18.462 | 2856 | 2858 | 2862 | rVB | 529 | 637 | 0.07% | 0.013% |
| 8 | 18.593 | 2880 | 2883 | 2888 | rVB | 559 | 800 | 0.09% | 0.016% |
| 9 | 18.655 | 2891 | 2895 | 2898 | rVB2 | 377 | 417 | 0.05% | 0.008% |
| 0 | 18.687 | 2898 | 2901 | 2904 | rBV2 | 371 | 448 | 0.05% | 0.009% |
| 1 | 18.781 | 2915 | 2919 | 2922 | rBV2 | 337 | 417 | 0.05% | 0.008% |
| 2 | 18.938 | 2945 | 2949 | 2952 | rVB3 | 413 | 570 | 0.06% | 0.011% |
| 3 | 18.964 | 2952 | 2954 | 2958 | rVB | 487 | 458 | 0.05% | 0.009% |
| 4 | 18.995 | 2958 | 2960 | 2964 | rBV | 435 | 488 | 0.05% | 0.010% |
| 5 | 19.027 | 2964 | 2966 | 2970 | rBV2 | 357 | 489 | 0.05% | 0.010% |
| 6 | 19.131 | 2980 | 2986 | 2991 | rBV2 | 319 | 524 | 0.06% | 0.010% |
| 7 | 19.173 | 2991 | 2994 | 2999 | rVB2 | 415 | 691 | 0.08% | 0.014% |
| 8 | 19.225 | 3002 | 3004 | 3008 | rBV | 440 | 507 | 0.06% | 0.010% |
| 9 | 19.299 | 3014 | 3018 | 3021 | rBV2 | 408 | 600 | 0.07% | 0.012% |
| 0 | 19.393 | 3032 | 3036 | 3038 | rBV | 439 | 513 | 0.06% | 0.010% |
| 1 | 19.424 | 3040 | 3042 | 3046 | rBV2 | 388 | 411 | 0.05% | 0.008% |
| 2 | 19.487 | 3050 | 3054 | 3059 | rVB | 381 | 653 | 0.07% | 0.013% |
| 3 | 19.544 | 3059 | 3065 | 3070 | rBV3 | 479 | 1093 | 0.12% | 0.022% |
| 4 | 19.654 | 3082 | 3086 | 3090 | rBV2 | 462 | 662 | 0.07% | 0.013% |
| 5 | 19.712 | 3093 | 3097 | 3098 | rBV | 564 | 480 | 0.05% | 0.010% |
| 6 | 19.869 | 3121 | 3127 | 3129 | rVB | 428 | 766 | 0.09% | 0.015% |
| 7 | 19.916 | 3129 | 3136 | 3137 | rBV2 | 491 | 816 | 0.09% | 0.016% |
| 8 | 19.937 | 3137 | 3140 | 3145 | rVB2 | 394 | 468 | 0.05% | 0.009% |
| 9 | 20.026 | 3148 | 3157 | 3160 | rBV | 405 | 829 | 0.09% | 0.017% |
| 0 | 20.083 | 3164 | 3168 | 3171 | rBV2 | 491 | 594 | 0.07% | 0.012% |
| 1 | 20.115 | 3171 | 3174 | 3177 | rVB2 | 428 | 414 | 0.05% | 0.008% |
| 2 | 20.172 | 3181 | 3185 | 3189 | rVB2 | 531 | 904 | 0.10% | 0.018% |
| 3 | 20.271 | 3203 | 3204 | 3208 | rVB | 497 | 529 | 0.06% | 0.011% |
| 4 | 20.308 | 3208 | 3211 | 3214 | rBV2 | 618 | 778 | 0.09% | 0.016% |
| 5 | 20.392 | 3225 | 3227 | 3229 | rBV2 | 433 | 410 | 0.05% | 0.008% |

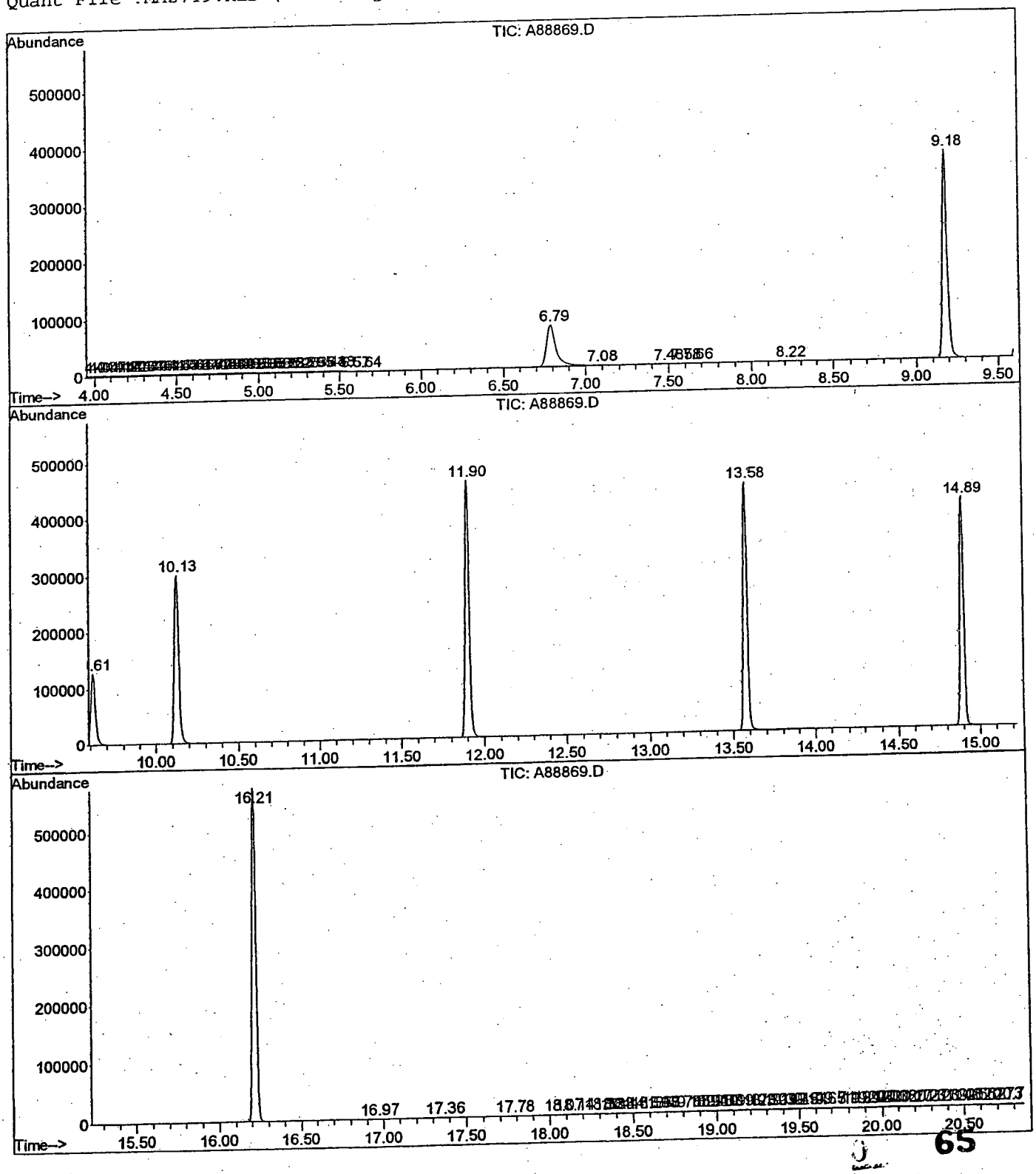
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 20.475 | 3238 | 3243 | 3245 | rBV2 | 427 | 591 | 0.07% | 0.012% |
| 7 | 20.564 | 3258 | 3260 | 3267 | rVB3 | 612 | 988 | 0.11% | 0.020% |
| | 20.622 | 3267 | 3271 | 3273 | rBV | 612 | 679 | 0.08% | 0.014% |
| | 20.726 | 3287 | 3291 | 3293 | rVB2 | 339 | 413 | 0.05% | 0.008% |
| | 20.789 | 3299 | 3303 | 3306 | rBV2 | 556 | 807 | 0.09% | 0.016% |

Sum of corrected areas: 5000881

88869.D MA2749.M Fri Oct 29 12:16:44 2004 MSA

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\A88869.D
Operator : limianz
Acquired : 29 Oct 2004 6:10 am using AcqMethod MA2749
Instrument : MSA
Sample Name: MB1
Misc Info : MS6228,VA2763,5,,,,1
Vial Number: 35
Quant File :MA2749.RES (RTE Integrator)






A88869.D MA2749.M Fri Oct 29 12:16:44 2004 MSA

Tentatively Identified Compound (LSC) summary

erator ID: limianz  Date Acquired: 29 Oct 2004  6:10 am
ta File: C:\HPCHEM\1\DATA\A88869.D
me: MB1
sc: MS6228,VA2763,5,,,,1
ethod: C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
tle: SW-846 Method 8260
brary Searched: C:\DATABASE\NBS75K.L

| TIC Top Hit name | RT | EstConc | Units | Response | --Internal Standard--- # | RT | Resp | Conc |
|---|---|---|---|---|---|---|---|---|

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\A88876.D
Acq On : 29 Oct 2004 10:25 am
Sample : MB2
Misc : MS6228,VA2763,5,,,,1
MS Integration Params: RTEINT.P
Quant Time: Nov 1 12:20 2004

Vial: 4
Operator: limianz
Inst : MSA
Multiplr: 1.00

Quant Results File: MA2749.RES

Quant Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration
DataAcq Meth : MA2749

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 6.80 | 65 | 145237 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.18 | 168 | 175780 | 50.00 ug/L | -0.01 |
| 45) 1,4-difluorobenzene | 10.12 | 114 | 248371 | 50.00 ug/L | -0.01 |
| 74) chlorobenzene-d5 | 13.58 | 117 | 253208 | 50.00 ug/L | -0.01 |
| 87) 1,4-dichlorobenzene-d4 | 16.22 | 152 | 159947 | 50.00 ug/L | 0.00 |

System Monitoring Compounds

| | | | | | |
|---|---|---|---|---|---|
| 39) dibromofluoromethane (s) | 9.18 | 113 | 90450 | 55.60 ug/L | -0.01 |
| Spiked Amount 50.000 | Range 79 - 119 | | Recovery = 111.20% | | |
| 40) 1,2-dichloroethane-d4 (s) | 9.62 | 65 | 96091 | 58.32 ug/L | -0.01 |
| Spiked Amount 50.000 | Range 68 - 129 | | Recovery = 116.64% | | |
| 66) toluene-d8 (s) | 11.90 | 98 | 296258 | 51.07 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 83 - 118 | | Recovery = 102.14% | | |
| 89) 4-bromofluorobenzene (s) | 14.89 | 95 | 121757 | 50.35 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 82 - 120 | | Recovery = 100.70% | | |

Target Compounds Qvalue

Z 11/1/04

67

(#) = qualifier out of range (m) = manual integration

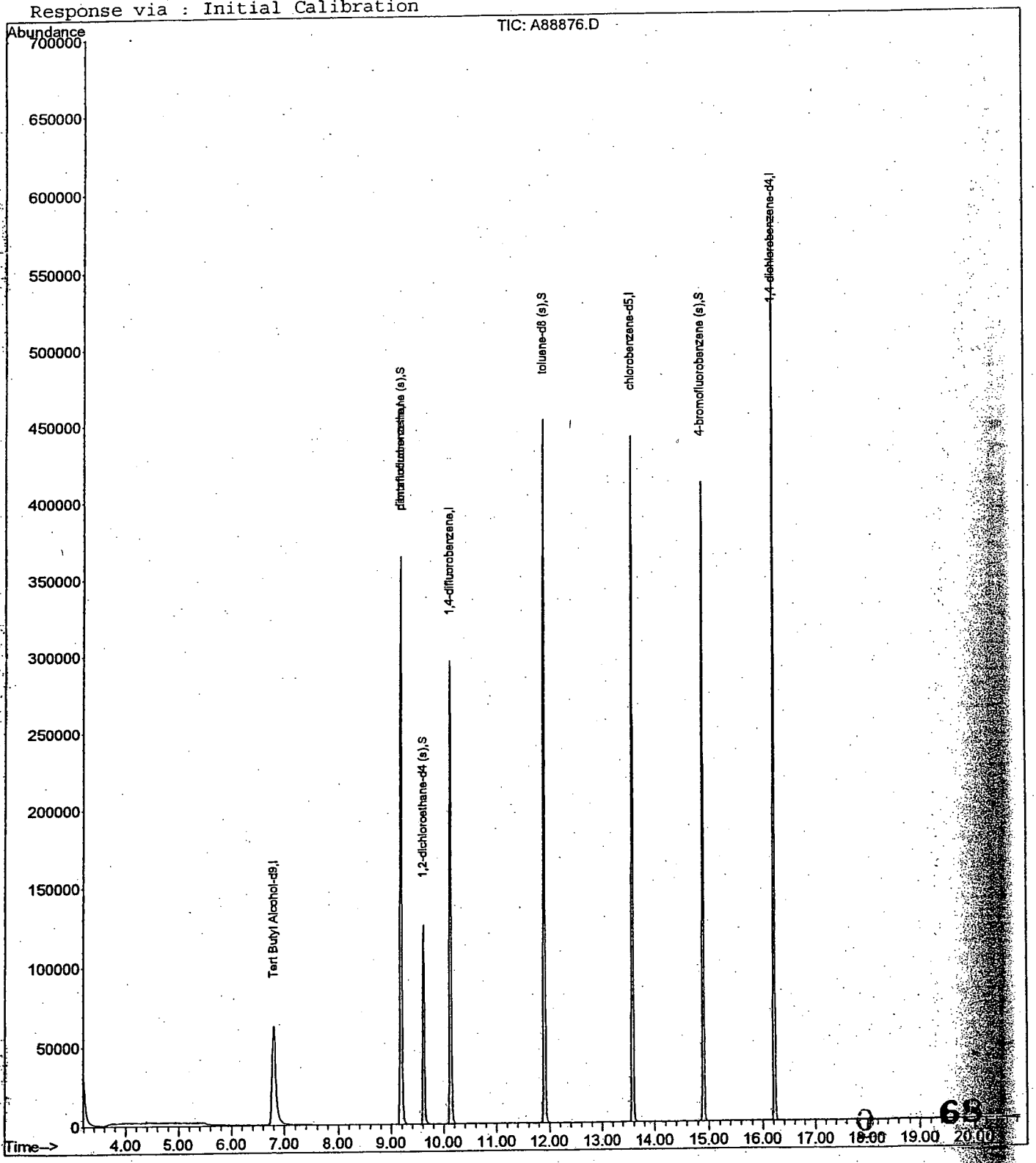
Quantitation Report

Data File : C:\HPCHEM\1\DATA\A88876.D
Acq On : 29 Oct 2004 10:25 am
Sample : MB2
Misc : MS6228,VA2763,5,,,,1
MS Integration Params: RTEINT.P
Quant Time: Nov 1 12:20 2004

Vial: 4
Operator: limianz
Inst : MSA
Multiplr: 1.00

Quant Results File: MA2749.RES

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Thu Oct 21 14:24:44 2004
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\A88876.D
Acq On : 29 Oct 2004 10:25 am
Sample : MB2
Misc : MS6121,VA2763,5,,,,1
MS Integration Params: LSCINT.P

Vial: 4
Operator: limianz
Inst : MSA
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
Title : SW-846 Method 8260
Smoothing : ON
Sampling : 1
Start Thrs: 0.01
Stop Thrs : 0.01

Filtering: 5
Min Area: 100 Area counts
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Signal : TIC

| Peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.029 | 143 | 149 | 155 | rVV4 | 511 | 1441 | 0.16% | 0.029% |
| 2 | 4.068 | 155 | 156 | 161 | rVV2 | 732 | 905 | 0.10% | 0.018% |
| 3 | 4.102 | 161 | 162 | 165 | rVV3 | 793 | 579 | 0.07% | 0.012% |
| 4 | 4.142 | 165 | 169 | 172 | rVV | 489 | 877 | 0.10% | 0.018% |
| 5 | 4.170 | 172 | 174 | 176 | rVV2 | 544 | 611 | 0.07% | 0.012% |
| 6 | 4.198 | 176 | 179 | 184 | rVV5 | 743 | 1335 | 0.15% | 0.027% |
| 7 | 4.260 | 186 | 190 | 192 | rVV3 | 664 | 1095 | 0.12% | 0.022% |
| 8 | 4.294 | 192 | 196 | 198 | rVV3 | 663 | 927 | 0.11% | 0.019% |
| 9 | 4.334 | 198 | 203 | 207 | rVV3 | 795 | 1610 | 0.18% | 0.033% |
| 10 | 4.384 | 207 | 212 | 214 | rVV2 | 1443 | 1697 | 0.19% | 0.034% |
| [illegible] | 4.418 | 214 | 218 | 224 | rVV5 | 1067 | 2784 | 0.32% | 0.056% |
| 12 | 4.463 | 224 | 226 | 230 | rVV2 | 1050 | 1742 | 0.20% | 0.035% |
| 13 | 4.503 | 230 | 233 | 235 | rVV4 | 886 | 1318 | 0.15% | 0.027% |
| [illegible] | 4.548 | 239 | 241 | 242 | rVV | 957 | 915 | 0.10% | 0.019% |
| [illegible] | 4.565 | 242 | 244 | 250 | rVV4 | 1234 | 2385 | 0.27% | 0.048% |
| [illegible] | 4.610 | 250 | 252 | 254 | rVV2 | 1082 | 1124 | 0.13% | 0.023% |
| [illegible] | 4.627 | 254 | 255 | 259 | rVV3 | 971 | 1303 | 0.15% | 0.026% |
| 18 | 4.678 | 261 | 264 | 266 | rVV3 | 927 | 1367 | 0.15% | 0.028% |
| 19 | 4.701 | 266 | 268 | 271 | rVV2 | 1027 | 1312 | 0.15% | 0.027% |
| [illegible] | 4.740 | 271 | 275 | 277 | rVV3 | 1262 | 1915 | 0.22% | 0.039% |
| 21 | 4.768 | 277 | 280 | 281 | rVV2 | 1103 | 1210 | 0.14% | 0.025% |
| 22 | 4.785 | 281 | 283 | 285 | rVV3 | 1186 | 1256 | 0.14% | 0.025% |
| [illegible] | 4.814 | 285 | 288 | 292 | rVV3 | 1307 | 2393 | 0.27% | 0.049% |
| [illegible] | 4.853 | 292 | 295 | 296 | rVV2 | 989 | 1242 | 0.14% | 0.025% |
| [illegible] | 4.876 | 296 | 299 | 302 | rVV2 | 1217 | 2008 | 0.23% | 0.041% |
| [illegible] | 4.898 | 302 | 303 | 305 | rVV | 1297 | 1071 | 0.12% | 0.022% |
| [illegible] | 4.921 | 305 | 307 | 308 | rVV3 | 1177 | 1006 | 0.11% | 0.020% |
| 28 | 4.943 | 308 | 311 | 313 | rVV2 | 1515 | 1773 | 0.20% | 0.036% |
| [illegible] | 4.983 | 313 | 318 | 320 | rVV4 | 1265 | 2421 | 0.27% | 0.049% |
| [illegible] | 5.000 | 320 | 321 | 323 | rVV | 1418 | 1131 | 0.13% | 0.023% |
| 31 | 5.022 | 323 | 325 | 329 | rVV4 | 1241 | 2044 | 0.23% | 0.041% |
| [illegible] | 5.056 | 329 | 331 | 335 | rVV4 | 1206 | 2071 | 0.23% | 0.042% |
| [illegible] | 5.096 | 335 | 338 | 341 | rVV3 | 1373 | 2308 | 0.26% | 0.047% |
| [illegible] | 5.135 | 341 | 345 | 349 | rVV2 | 1634 | 3089 | 0.35% | 0.063% |
| 35 | 5.181 | 349 | 353 | 354 | rVV3 | 1218 | 1838 | 0.21% | 0.037% |
| [illegible] | 5.209 | 354 | 358 | 363 | rVV2 | 1503 | 3647 | 0.41% | 0.074% |
| 37 | 5.277 | 368 | 370 | 372 | rVV3 | 1457 | 1553 | 0.18% | 0.031% |
| [illegible] | 5.310 | 372 | 376 | 378 | rVV4 | 1378 | 2354 | 0.27% | 0.048% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 5.327 | 378 | 379 | 384 | rVV3 | 1344 | 2430 | 0.28% | 0.049% |
| 0 | 5.361 | 384 | 385 | 391 | rVV3 | 1602 | 2844 | 0.32% | 0.058% |
| 41 | 5.406 | 391 | 393 | 398 | rVV4 | 1587 | 3267 | 0.37% | 0.066% |
| 2 | 5.440 | 398 | 399 | 407 | rVV4 | 1628 | 4217 | 0.48% | 0.085% |
| 3 | 5.497 | 407 | 409 | 417 | rVV3 | 1441 | 2886 | 0.33% | 0.059% |
| 44 | 5.564 | 417 | 421 | 434 | rVV2 | 519 | 1426 | 0.16% | 0.029% |
| 5 | 6.795 | 622 | 639 | 678 | rVV2 | 62341 | 302425 | 34.27% | 6.132% |
| 6 | 7.027 | 678 | 680 | 685 | rVV4 | 654 | 1096 | 0.12% | 0.022% |
| 47 | 7.061 | 685 | 686 | 693 | rVV3 | 431 | 795 | 0.09% | 0.016% |
| 3 | 7.112 | 693 | 695 | 703 | rVB2 | 369 | 544 | 0.06% | 0.011% |
| 9 | 7.501 | 762 | 764 | 767 | rVB2 | 458 | 446 | 0.05% | 0.009% |
| 0 | 7.593 | 776 | 780 | 785 | rBV | 354 | 587 | 0.07% | 0.012% |
| 1 | 7.640 | 785 | 789 | 792 | rVB | 368 | 431 | 0.05% | 0.009% |
| 2 | 7.677 | 792 | 796 | 801 | rBV | 350 | 572 | 0.06% | 0.012% |
| 53 | 7.823 | 819 | 824 | 826 | rBV | 338 | 499 | 0.06% | 0.010% |
| 54 | 8.759 | 993 | 1003 | 1007 | rBB | 330 | 659 | 0.07% | 0.013% |
| 5 | 9.183 | 1071 | 1084 | 1111 | rBB2 | 363949 | 744706 | 84.39% | 15.099% |
| 56 | 9.492 | 1135 | 1143 | 1147 | rBB | 202 | 441 | 0.05% | 0.009% |
| 7 | 9.617 | 1154 | 1167 | 1187 | rBB | 124899 | 248211 | 28.13% | 5.032% |
| 8 | 10.125 | 1254 | 1264 | 1285 | rBV | 295519 | 544626 | 61.72% | 11.042% |
| 9 | 11.139 | 1454 | 1458 | 1466 | rBB | 352 | 476 | 0.05% | 0.010% |
| 60 | 11.903 | 1595 | 1604 | 1624 | rVV | 451688 | 764093 | 86.58% | 15.492% |
| 1 | 13.576 | 1913 | 1924 | 1946 | rBB | 440361 | 716942 | 81.24% | 14.536% |
| 2 | 14.894 | 2168 | 2176 | 2191 | rBB | 409800 | 623516 | 70.65% | 12.642% |
| 63 | 16.218 | 2420 | 2429 | 2444 | rBV | 584049 | 882480 | 100.00% | 17.892% |
| 4 | 16.312 | 2444 | 2447 | 2450 | rVB | 336 | 414 | 0.05% | 0.008% |
| 5 | 16.882 | 2552 | 2556 | 2562 | rBB | 312 | 461 | 0.05% | 0.009% |
| 66 | 17.394 | 2651 | 2654 | 2658 | rBB | 388 | 447 | 0.05% | 0.009% |
| 7 | 17.509 | 2672 | 2676 | 2682 | rBB | 342 | 466 | 0.05% | 0.009% |
| 8 | 17.917 | 2753 | 2754 | 2761 | rVB | 371 | 472 | 0.05% | 0.010% |
| 69 | 18.027 | 2770 | 2775 | 2777 | rBB | 345 | 416 | 0.05% | 0.008% |
| 70 | 18.106 | 2787 | 2790 | 2793 | rBB | 496 | 421 | 0.05% | 0.009% |
| 1 | 18.142 | 2794 | 2797 | 2801 | rBB | 480 | 492 | 0.06% | 0.010% |
| 72 | 18.205 | 2807 | 2809 | 2814 | rBV | 541 | 600 | 0.07% | 0.012% |
| 3 | 18.252 | 2817 | 2818 | 2823 | rBV | 503 | 579 | 0.07% | 0.012% |
| 4 | 18.461 | 2853 | 2858 | 2863 | rBV2 | 360 | 643 | 0.07% | 0.013% |
| 5 | 18.550 | 2871 | 2875 | 2876 | rVB | 572 | 567 | 0.06% | 0.011% |
| 6 | 18.566 | 2876 | 2878 | 2880 | rBV | 575 | 514 | 0.06% | 0.010% |
| 7 | 18.660 | 2894 | 2896 | 2903 | rBV | 344 | 472 | 0.05% | 0.010% |
| 8 | 18.786 | 2917 | 2920 | 2923 | rBV2 | 398 | 448 | 0.05% | 0.009% |
| 79 | 18.843 | 2927 | 2931 | 2933 | rBV2 | 404 | 444 | 0.05% | 0.009% |
| 0 | 18.958 | 2951 | 2953 | 2959 | rVB3 | 332 | 547 | 0.06% | 0.011% |
| 81 | 19.099 | 2974 | 2980 | 2982 | rBV2 | 470 | 731 | 0.08% | 0.015% |
| 82 | 19.183 | 2992 | 2996 | 2999 | rVB2 | 379 | 434 | 0.05% | 0.009% |
| 3 | 19.225 | 2999 | 3004 | 3006 | rVB2 | 375 | 507 | 0.06% | 0.010% |
| 4 | 19.345 | 3023 | 3027 | 3030 | rVB | 305 | 473 | 0.05% | 0.010% |
| 85 | 19.429 | 3038 | 3043 | 3045 | rBV2 | 419 | 631 | 0.07% | 0.013% |
| 6 | 19.492 | 3050 | 3055 | 3056 | rBV2 | 418 | 537 | 0.06% | 0.011% |
| 7 | 19.622 | 3075 | 3080 | 3083 | rBV2 | 410 | 526 | 0.06% | 0.011% |
| 88 | 19.659 | 3083 | 3087 | 3093 | rVB3 | 327 | 489 | 0.06% | 0.010% |
| 9 | 19.717 | 3093 | 3098 | 3101 | rVB3 | 300 | 516 | 0.06% | 0.010% |
| 0 | 19.758 | 3101 | 3106 | 3108 | rVB2 | 448 | 732 | 0.08% | 0.015% |
| 91 | 19.805 | 3111 | 3115 | 3118 | rBV2 | 315 | 419 | 0.05% | 0.008% |
| 2 | 19.999 | 3146 | 3152 | 3154 | rBV | 258 | 420 | 0.05% | 0.009% |
| 3 | 20.041 | 3158 | 3160 | 3167 | rVV2 | 393 | 636 | 0.07% | 0.013% |
| 94 | 20.166 | 3179 | 3184 | 3186 | rVB2 | 374 | 585 | 0.07% | 0.012% |
| 5 | 20.198 | 3186 | 3190 | 3193 | rBV | 454 | 610 | 0.07% | 0.012% |

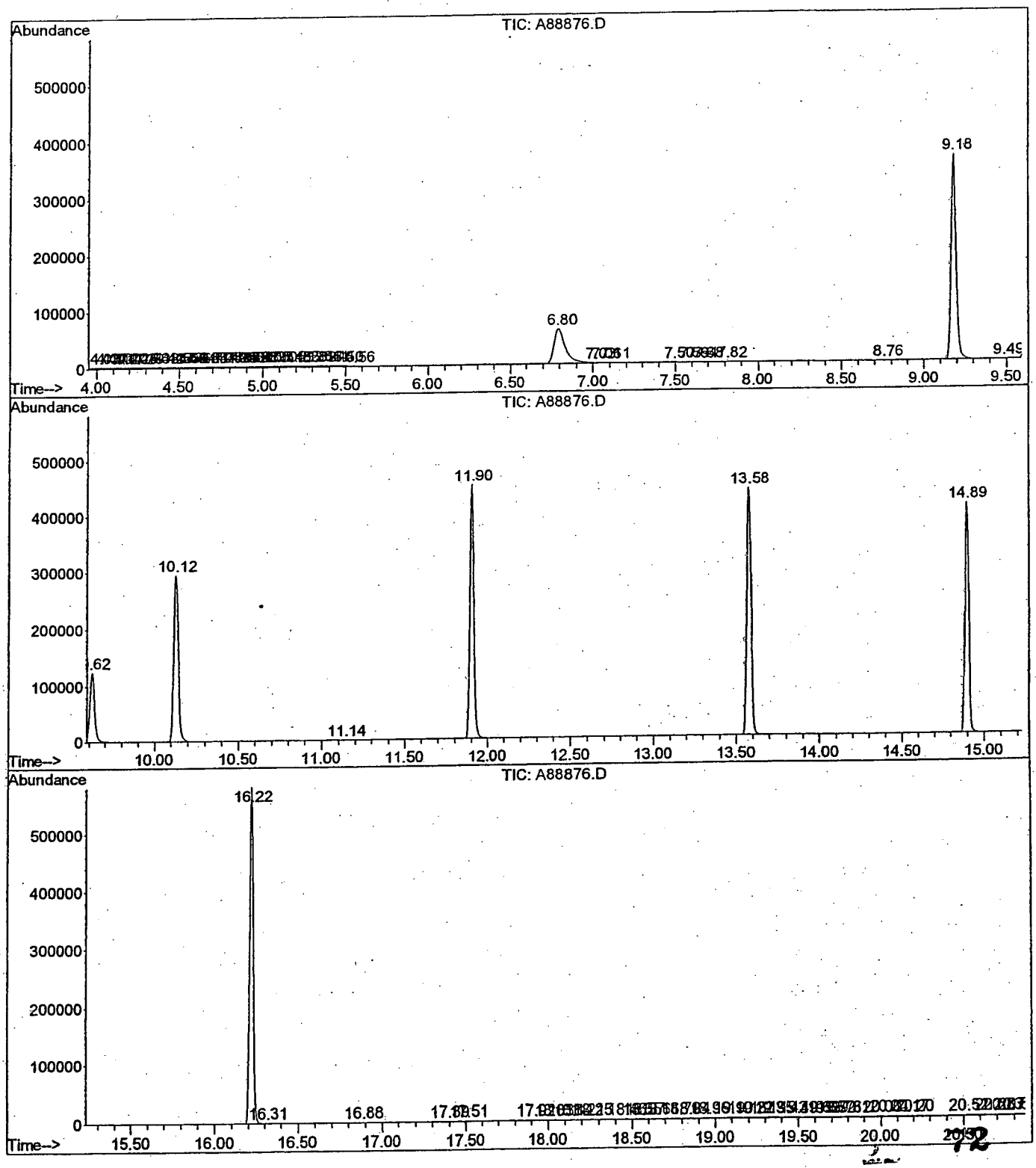
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 20.522 | 3249 | 3252 | 3254 | rBV | 677 | 561 | 0.06% | 0.011% |
| 7 | 20.679 | 3278 | 3282 | 3288 | rVB2 | 540 | 876 | 0.10% | 0.018% |
| 8 | 20.726 | 3288 | 3291 | 3293 | rBV2 | 691 | 765 | 0.09% | 0.016% |
| | 20.789 | 3297 | 3303 | 3305 | rVB3 | 339 | 551 | 0.06% | 0.011% |
| | 20.815 | 3305 | 3308 | 3311 | rBV2 | 575 | 586 | 0.07% | 0.012% |

Sum of corrected areas: 4932260

88876.D MA2749.M Mon Nov 01 12:21:58 2004 MSA

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\A88876.D
Operator : limianz
Acquired : 29 Oct 2004 10:25 am using AcqMethod MA2749
Instrument : MSA
Sample Name: MB2
Misc Info : MS6121,VA2763,5,,,,1
Vial Number: 4
Quant File :MA2749.RES (RTE Integrator)




A88876.D MA2749.M Mon Nov 01 12:21:58 2004 MSA

Tentatively Identified Compound (LSC) summary

erator ID: limianz  Date Acquired: 29 Oct 2004  10:25 am
ta File: C:\HPCHEM\1\DATA\A88876.D
ne: MB2
sc: MS6121,VA2763,5,,,,1
thod: C:\HPCHEM\1\METHODS\MA2749.M (RTE Integrator)
le: SW-846 Method 8260
rary Searched: C:\DATABASE\NBS75K.L

| TIC Top Hit name | RT | EstConc | Units | Response | --Internal Standard--- # | RT | Resp | Conc |
|---|---|---|---|---|---|---|---|---|

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# GC/MS SEMIVOLATILE

ACCUTEST

# GC/MS Analysis Case Narrative/Conformance/Non-Conformance Summary

| Fraction _____ | NO | YES |
|---|---|---|
| 1. Chromatograms Labeled/Compounds Identified *(Field Samples and Method Blanks)* | _____ | _____ |
| 2. GC/MS Tune Meet Criteria | _____ | _____ |
| 3. GC/MS Tuning Frequency -- Performed every 24 hours for 600 series and 12 hours for 8000 series. | _____ | _____ |
| 4. GC/MS Calibration – Initial and Continuing Calibration Meet Method Requirements | _____ | _____ |
| 5. GC/MS Calibration Requirements | | |
| a. Calibration Check Compounds | _____ | _____ |
| b. System Performance Check Compounds | _____ | _____ |
| 6. Blank Contamination | _____ | _____ |
| *If yes, the sample result is qualified with a "B".* | | |
| 7. Surrogate Recoveries Meet Criteria | _____ | _____ |
| *If the requirement is not met, refer to the Surrogate Summary for comment.* | | |
| 8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria | _____ | _____ |
| *If the requirement is not met, refer to MS/MSD Summary for comment.* | | |
| 9. Internal Standard Area/Retention Time Shift Meet Criteria | _____ | _____ |
| *If the requirement is not met, refer to the Internal Standard Summary for comment.* | | |
| 10. Extraction Holding Time Met | _____ | _____ |
| *If the holding time is not met, refer to the Sample Result page for comment.* | | |
| 11. Analysis Holding Time Met | _____ | _____ |
| *If the holding time is not met, refer to the Sample Result page for comment.* | | |

12. Volatile Sample Preservation – pH should be < 2. *List any non-compliant samples below:*

_____

Additional Comments: _____

_____

_____

**QC Review Signature:** _____ **Date:** _____

Form: RG04
Rev. Date: 2/9/00

Case Narrative
Library Search data

The non-target compound detected in this sample were tentatively identified using a search of the NIST/EPA Mass spectral Library. This search selects certain uniqueness characteristics from the spectra of the non-target compounds and compares them to spectra of compounds that have been archived in the mass spectral Library. Compounds in the library whose spectra most closely resemble the spectra of the non-target compounds are listed in order of their "match quality" in the search results.

Interpreting library search data is subjective and dependent upon the analyst's judgement. Subjectivity increases as spectral complexity increases and the likelihood of listing a non-target compound as an unknown becomes greater.

Qualitative identifications of non-targeted compounds must be evaluated carefully to determine if their chemical and physical properties are consistent with the compound classes that can be determined by the method in use. If the chemical and physical properties of the suspect compound indicate that presence is possible, the library search data provides the basis for further investigation. The information generated via library searches of non-targeted compounds should be treated as semi-qualitative.

Quantitative values placed on tentatively identified compounds (TICs) are calculated using an assumed response factor of one (1). This assumption can cause the calculated concentration to be grossly estimated and may be high by as much as a factor of five (5) or low by as much as a factor of one thousand (1,000). The accuracy of quantitative data generated using library search procedures is unknown and should be used guardedly.

The library search may have indicated the presence of organo-silicon compounds, carbon dioxide, or aldol condensates. The organo-silicon compounds that have been identified in sample are found in components of the analytical instrumentation. They are classified as normal system artifacts. Carbon dioxide, an atmospheric component is soluble in eater and capable of being detected in purge and trap systems. Its presence is inconsequential because of its ubiquitous nature. Aldol condensates are byproducts of extraction/concentration procedures that use acetone as a solvent. They are produced under certain pH conditions, which are a function of sample matrix characteristics. None of these compounds are of sample origin and their appearance should be discounted for decision-making purpose.

# Method Blank Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP18476-MB1 | M35236.D | 1 | 10/26/04 | WHS | 10/22/04 | OP18476 | EM1077 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N81296-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | 2.0 | 0.30 | ug/l | |
| 208-96-8 | Acenaphthylene | ND | 2.0 | 0.35 | ug/l | |
| 120-12-7 | Anthracene | ND | 2.0 | 0.22 | ug/l | |
| 56-55-3 | Benzo(a)anthracene | ND | 2.0 | 0.27 | ug/l | |
| 50-32-8 | Benzo(a)pyrene | ND | 2.0 | 0.38 | ug/l | |
| 205-99-2 | Benzo(b)fluoranthene | ND | 2.0 | 0.37 | ug/l | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | 2.0 | 0.50 | ug/l | |
| 207-08-9 | Benzo(k)fluoranthene | ND | 2.0 | 0.37 | ug/l | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | 2.0 | 0.54 | ug/l | |
| 85-68-7 | Butyl benzyl phthalate | ND | 2.0 | 0.54 | ug/l | |
| 91-58-7 | 2-Chloronaphthalene | ND | 5.0 | 0.38 | ug/l | |
| 106-47-8 | 4-Chloroaniline | ND | 5.0 | 0.43 | ug/l | |
| 86-74-8 | Carbazole | ND | 2.0 | 0.34 | ug/l | |
| 218-01-9 | Chrysene | ND | 2.0 | 0.26 | ug/l | |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | 2.0 | 0.34 | ug/l | |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | 2.0 | 0.49 | ug/l | |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | 2.0 | 0.44 | ug/l | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | 2.0 | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.0 | 0.24 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.0 | 0.32 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.0 | 0.25 | ug/l | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | 2.0 | 0.78 | ug/l | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | 2.0 | 0.62 | ug/l | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | 5.0 | 0.39 | ug/l | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | 2.0 | 0.58 | ug/l | |
| 132-64-9 | Dibenzofuran | ND | 5.0 | 0.49 | ug/l | |
| 84-74-2 | Di-n-butyl phthalate | ND | 2.0 | 0.79 | ug/l | |
| 117-84-0 | Di-n-octyl phthalate | ND | 2.0 | 0.63 | ug/l | |
| 84-66-2 | Diethyl phthalate | ND | 2.0 | 1.4 | ug/l | |
| 131-11-3 | Dimethyl phthalate | ND | 2.0 | 0.58 | ug/l | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | 2.0 | 0.74 | ug/l | |
| 206-44-0 | Fluoranthene | ND | 2.0 | 0.63 | ug/l | |
| 86-73-7 | Fluorene | ND | 2.0 | 0.89 | ug/l | |
| 118-74-1 | Hexachlorobenzene | ND | 2.0 | 1.2 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 2.0 | 0.41 | ug/l | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | 20 | 0.45 | ug/l | |

# Method Blank Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP18476-MB1 | M35236.D | 1 | 10/26/04 | WHS | 10/22/04 | OP18476 | EM1077 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N81296-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-72-1 | Hexachloroethane | ND | 5.0 | 0.67 | ug/l | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | 2.0 | 1.5 | ug/l | |
| 78-59-1 | Isophorone | ND | 2.0 | 0.54 | ug/l | |
| 91-57-6 | 2-Methylnaphthalene | ND | 2.0 | 0.72 | ug/l | |
| 88-74-4 | 2-Nitroaniline | ND | 5.0 | 1.4 | ug/l | |
| 99-09-2 | 3-Nitroaniline | ND | 5.0 | 1.2 | ug/l | |
| 100-01-6 | 4-Nitroaniline | ND | 5.0 | 1.1 | ug/l | |
| 91-20-3 | Naphthalene | ND | 2.0 | 1.0 | ug/l | |
| 98-95-3 | Nitrobenzene | ND | 2.0 | 0.61 | ug/l | |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | 2.0 | 0.50 | ug/l | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | 5.0 | 0.80 | ug/l | |
| 85-01-8 | Phenanthrene | ND | 2.0 | 0.23 | ug/l | |
| 129-00-0 | Pyrene | ND | 2.0 | 0.58 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 2.0 | 0.32 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 4165-60-0 | Nitrobenzene-d5 | 62% | 32-128% |
| 321-60-8 | 2-Fluorobiphenyl | 66% | 34-121% |
| 1718-51-0 | Terphenyl-d14 | 56% | 41-129% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | system artifact/aldol-condensation | 4.71 | 6.7 | ug/l | J |
| | Total TIC, Semi-Volatile | | 0 | ug/l | |

# Method Blank Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP18476-MB1 | P10162.D | 1 | 11/05/04 | NAP | 10/22/04 | OP18476 | EP420 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N81296-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | 2.0 | 0.30 | ug/l | |
| 208-96-8 | Acenaphthylene | ND | 2.0 | 0.35 | ug/l | |
| 120-12-7 | Anthracene | ND | 2.0 | 0.22 | ug/l | |
| 56-55-3 | Benzo(a)anthracene | ND | 2.0 | 0.27 | ug/l | |
| 50-32-8 | Benzo(a)pyrene | ND | 2.0 | 0.38 | ug/l | |
| 205-99-2 | Benzo(b)fluoranthene | ND | 2.0 | 0.37 | ug/l | |
| 191-24-2 | Benzo(g,h,i)perylene | ND | 2.0 | 0.50 | ug/l | |
| 207-08-9 | Benzo(k)fluoranthene | ND | 2.0 | 0.37 | ug/l | |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | 2.0 | 0.54 | ug/l | |
| 85-68-7 | Butyl benzyl phthalate | ND | 2.0 | 0.54 | ug/l | |
| 91-58-7 | 2-Chloronaphthalene | ND | 5.0 | 0.38 | ug/l | |
| 106-47-8 | 4-Chloroaniline | ND | 5.0 | 0.43 | ug/l | |
| 86-74-8 | Carbazole | ND | 2.0 | 0.34 | ug/l | |
| 218-01-9 | Chrysene | ND | 2.0 | 0.26 | ug/l | |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | 2.0 | 0.34 | ug/l | |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | 2.0 | 0.49 | ug/l | |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | 2.0 | 0.44 | ug/l | |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | 2.0 | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.0 | 0.24 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.0 | 0.32 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.0 | 0.25 | ug/l | |
| 121-14-2 | 2,4-Dinitrotoluene | ND | 2.0 | 0.78 | ug/l | |
| 606-20-2 | 2,6-Dinitrotoluene | ND | 2.0 | 0.62 | ug/l | |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | 5.0 | 0.39 | ug/l | |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | 2.0 | 0.58 | ug/l | |
| 132-64-9 | Dibenzofuran | ND | 5.0 | 0.49 | ug/l | |
| 84-74-2 | Di-n-butyl phthalate | ND | 2.0 | 0.79 | ug/l | |
| 117-84-0 | Di-n-octyl phthalate | ND | 2.0 | 0.63 | ug/l | |
| 84-66-2 | Diethyl phthalate | ND | 2.0 | 1.4 | ug/l | |
| 131-11-3 | Dimethyl phthalate | ND | 2.0 | 0.58 | ug/l | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | 2.0 | 0.74 | ug/l | |
| 206-44-0 | Fluoranthene | ND | 2.0 | 0.63 | ug/l | |
| 86-73-7 | Fluorene | ND | 2.0 | 0.89 | ug/l | |
| 118-74-1 | Hexachlorobenzene | ND | 2.0 | 1.2 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 2.0 | 0.41 | ug/l | |
| 77-47-4 | Hexachlorocyclopentadiene | ND | 20 | 0.45 | ug/l | |

# Method Blank Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP18476-MB1 | P10162.D | 1 | 11/05/04 | NAP | 10/22/04 | OP18476 | EP420 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N81296-1

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 67-72-1 | Hexachloroethane | ND | 5.0 | 0.67 | ug/l | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | 2.0 | 1.5 | ug/l | |
| 78-59-1 | Isophorone | ND | 2.0 | 0.54 | ug/l | |
| 91-57-6 | 2-Methylnaphthalene | ND | 2.0 | 0.72 | ug/l | |
| 88-74-4 | 2-Nitroaniline | ND | 5.0 | 1.4 | ug/l | |
| 99-09-2 | 3-Nitroaniline | ND | 5.0 | 1.2 | ug/l | |
| 100-01-6 | 4-Nitroaniline | ND | 5.0 | 1.1 | ug/l | |
| 91-20-3 | Naphthalene | ND | 2.0 | 1.0 | ug/l | |
| 98-95-3 | Nitrobenzene | ND | 2.0 | 0.61 | ug/l | |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | 2.0 | 0.50 | ug/l | |
| 86-30-6 | N-Nitrosodiphenylamine | ND | 5.0 | 0.80 | ug/l | |
| 85-01-8 | Phenanthrene | ND | 2.0 | 0.23 | ug/l | |
| 129-00-0 | Pyrene | ND | 2.0 | 0.58 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 2.0 | 0.32 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 4165-60-0 | Nitrobenzene-d5 | 58% | 32-128% |
| 321-60-8 | 2-Fluorobiphenyl | 69% | 34-121% |
| 1718-51-0 | Terphenyl-d14 | 79% | 41-129% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Semi-Volatile | | 0 | ug/l | |

# Blank Spike Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP18476-BS1 | M35484.D | 1 | 11/05/04 | WHS | 10/22/04 | OP18476 | EM1086 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N81296-1

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | 50 | 37.1 | 74 | 53-109 |
| 208-96-8 | Acenaphthylene | 50 | 35.3 | 71 | 48-101 |
| 120-12-7 | Anthracene | 50 | 40.5 | 81 | 61-113 |
| 56-55-3 | Benzo(a)anthracene | 50 | 41.3 | 83 | 62-115 |
| 50-32-8 | Benzo(a)pyrene | 50 | 40.0 | 80 | 60-118 |
| 205-99-2 | Benzo(b)fluoranthene | 50 | 39.5 | 79 | 58-122 |
| 191-24-2 | Benzo(g,h,i)perylene | 50 | 46.3 | 93 | 52-131 |
| 207-08-9 | Benzo(k)fluoranthene | 50 | 38.2 | 76 | 51-131 |
| 101-55-3 | 4-Bromophenyl phenyl ether | 50 | 41.8 | 84 | 57-115 |
| 85-68-7 | Butyl benzyl phthalate | 50 | 40.4 | 81 | 61-124 |
| 91-58-7 | 2-Chloronaphthalene | 50 | 37.3 | 75 | 50-109 |
| 106-47-8 | 4-Chloroaniline | 50 | 32.6 | 65 | 27-115 |
| 86-74-8 | Carbazole | 50 | 43.4 | 87 | 60-133 |
| 218-01-9 | Chrysene | 50 | 40.6 | 81 | 61-118 |
| 111-91-1 | bis(2-Chloroethoxy)methane | 50 | 39.8 | 80 | 50-115 |
| 111-44-4 | bis(2-Chloroethyl)ether | 50 | 37.0 | 74 | 45-113 |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 50 | 38.0 | 76 | 46-109 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 50 | 38.0 | 76 | 54-115 |
| 95-50-1 | 1,2-Dichlorobenzene | 50 | 38.0 | 76 | 41-106 |
| 541-73-1 | 1,3-Dichlorobenzene | 50 | 36.2 | 72 | 38-102 |
| 106-46-7 | 1,4-Dichlorobenzene | 50 | 35.9 | 72 | 39-103 |
| 121-14-2 | 2,4-Dinitrotoluene | 50 | 41.1 | 82 | 62-118 |
| 606-20-2 | 2,6-Dinitrotoluene | 50 | 43.3 | 87 | 57-118 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 50 | 40.3 | 81 | 39-131 |
| 53-70-3 | Dibenzo(a,h)anthracene | 50 | 45.0 | 90 | 53-130 |
| 132-64-9 | Dibenzofuran | 50 | 39.3 | 79 | 55-115 |
| 84-74-2 | Di-n-butyl phthalate | 50 | 42.3 | 85 | 61-125 |
| 117-84-0 | Di-n-octyl phthalate | 50 | 41.0 | 82 | 55-140 |
| 84-66-2 | Diethyl phthalate | 50 | 39.4 | 79 | 57-118 |
| 131-11-3 | Dimethyl phthalate | 50 | 39.7 | 79 | 45-123 |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 50 | 40.3 | 81 | 57-128 |
| 206-44-0 | Fluoranthene | 50 | 40.2 | 80 | 60-122 |
| 86-73-7 | Fluorene | 50 | 37.8 | 76 | 54-112 |
| 118-74-1 | Hexachlorobenzene | 50 | 40.8 | 82 | 58-114 |
| 87-68-3 | Hexachlorobutadiene | 50 | 38.7 | 77 | 41-116 |
| 77-47-4 | Hexachlorocyclopentadiene | 100 | 61.1 | 61 | 19-107 |

# Blank Spike Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP18476-BS1 | M35484.D | 1 | 11/05/04 | WHS | 10/22/04 | OP18476 | EM1086 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N81296-1

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 67-72-1 | Hexachloroethane | 50 | 36.3 | 73 | 36-104 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 50 | 39.9 | 80 | 52-131 |
| 78-59-1 | Isophorone | 50 | 35.7 | 71 | 46-113 |
| 91-57-6 | 2-Methylnaphthalene | 50 | 37.9 | 76 | 47-109 |
| 88-74-4 | 2-Nitroaniline | 50 | 39.9 | 80 | 53-122 |
| 99-09-2 | 3-Nitroaniline | 50 | 38.8 | 78 | 43-127 |
| 100-01-6 | 4-Nitroaniline | 50 | 37.4 | 75 | 47-140 |
| 91-20-3 | Naphthalene | 50 | 34.8 | 70 | 44-105 |
| 98-95-3 | Nitrobenzene | 50 | 37.0 | 74 | 46-108 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 50 | 38.3 | 77 | 50-117 |
| 86-30-6 | N-Nitrosodiphenylamine | 50 | 41.1 | 82 | 60-121 |
| 85-01-8 | Phenanthrene | 50 | 38.9 | 78 | 59-110 |
| 129-00-0 | Pyrene | 50 | 41.1 | 82 | 60-115 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 50 | 37.2 | 74 | 44-103 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 4165-60-0 | Nitrobenzene-d5 | 71% | 32-128% |
| 321-60-8 | 2-Fluorobiphenyl | 72% | 34-121% |
| 1718-51-0 | Terphenyl-d14 | 73% | 41-129% |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP18476-MS | M35486.D | 1 | 11/05/04 | WHS | 10/22/04 | OP18476 | EM1086 |
| OP18476-MSD | M35487.D | 1 | 11/05/04 | WHS | 10/22/04 | OP18476 | EM1086 |
| N81296-1 | M35485.D | 1 | 11/05/04 | WHS | 10/22/04 | OP18476 | EM1086 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N81296-1

| CAS No. | Compound | N81296-1 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 83-32-9 | Acenaphthene | ND | | 100 | 76.3 | 76 | 76.5 | 77 | 0 | 40-114/30 |
| 208-96-8 | Acenaphthylene | ND | | 100 | 74.2 | 74 | 73.7 | 74 | 1 | 36-106/31 |
| 120-12-7 | Anthracene | ND | | 100 | 82.2 | 82 | 82.9 | 83 | 1 | 54-119/23 |
| 56-55-3 | Benzo(a)anthracene | ND | | 100 | 84.7 | 85 | 86.0 | 86 | 2 | 57-122/22 |
| 50-32-8 | Benzo(a)pyrene | ND | | 100 | 80.8 | 81 | 82.6 | 83 | 2 | 53-126/23 |
| 205-99-2 | Benzo(b)fluoranthene | ND | | 100 | 80.9 | 81 | 80.0 | 80 | 1 | 50-135/26 |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | 100 | 91.3 | 91 | 93.9 | 94 | 3 | 35-141/29 |
| 207-08-9 | Benzo(k)fluoranthene | ND | | 100 | 77.4 | 77 | 81.4 | 81 | 5 | 37-144/24 |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | 100 | 84.7 | 85 | 85.3 | 85 | 1 | 49-121/25 |
| 85-68-7 | Butyl benzyl phthalate | ND | | 100 | 83.6 | 84 | 85.7 | 86 | 2 | 56-132/23 |
| 91-58-7 | 2-Chloronaphthalene | ND | | 100 | 77.7 | 78 | 77.4 | 77 | 0 | 34-115/30 |
| 106-47-8 | 4-Chloroaniline | ND | | 100 | 67.7 | 68 | 67.9 | 68 | 0 | 10-108/37 |
| 86-74-8 | Carbazole | ND | | 100 | 87.2 | 87 | 88.4 | 88 | 1 | 49-146/22 |
| 218-01-9 | Chrysene | ND | | 100 | 82.9 | 83 | 83.1 | 83 | 0 | 55-125/23 |
| 111-91-1 | bis(2-Chloroethoxy)methane | ND | | 100 | 83.0 | 83 | 84.1 | 84 | 1 | 37-119/32 |
| 111-44-4 | bis(2-Chloroethyl)ether | ND | | 100 | 79.5 | 80 | 78.5 | 79 | 1 | 32-122/37 |
| 108-60-1 | bis(2-Chloroisopropyl)ether | ND | | 100 | 81.6 | 82 | 81.8 | 82 | 0 | 34-112/32 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | 100 | 78.1 | 78 | 79.1 | 79 | 1 | 43-118/27 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 100 | 81.2 | 81 | 79.7 | 80 | 2 | 31-110/31 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 100 | 78.1 | 78 | 76.3 | 76 | 2 | 27-107/32 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 100 | 77.5 | 78 | 76.0 | 76 | 2 | 29-108/31 |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | 100 | 80.1 | 80 | 84.4 | 84 | 5 | 50-125/31 |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | 100 | 87.2 | 87 | 88.5 | 89 | 1 | 45-124/28 |
| 91-94-1 | 3,3'-Dichlorobenzidine | ND | | 100 | 81.3 | 81 | 82.3 | 82 | 1 | 1-145/37 |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | 100 | 89.0 | 89 | 91.6 | 92 | 3 | 40-138/27 |
| 132-64-9 | Dibenzofuran | ND | | 100 | 81.3 | 81 | 81.4 | 81 | 0 | 42-119/28 |
| 84-74-2 | Di-n-butyl phthalate | ND | | 100 | 85.1 | 85 | 87.3 | 87 | 3 | 54-131/22 |
| 117-84-0 | Di-n-octyl phthalate | ND | | 100 | 83.4 | 83 | 87.2 | 87 | 4 | 49-151/25 |
| 84-66-2 | Diethyl phthalate | ND | | 100 | 79.7 | 80 | 81.6 | 82 | 2 | 49-123/24 |
| 131-11-3 | Dimethyl phthalate | ND | | 100 | 81.0 | 81 | 82.1 | 82 | 1 | 39-124/27 |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND | | 100 | 82.5 | 83 | 84.6 | 85 | 3 | 51-140/29 |
| 206-44-0 | Fluoranthene | ND | | 100 | 80.9 | 81 | 81.7 | 82 | 1 | 52-129/22 |
| 86-73-7 | Fluorene | ND | | 100 | 77.7 | 78 | 78.1 | 78 | 1 | 43-116/26 |
| 118-74-1 | Hexachlorobenzene | ND | | 100 | 82.1 | 82 | 82.6 | 83 | 1 | 49-121/24 |
| 87-68-3 | Hexachlorobutadiene | ND | | 100 | 84.8 | 85 | 83.9 | 84 | 1 | 30-126/33 |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | 200 | 127 | 64 | 131 | 66 | 3 | 1-109/41 |

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP18476-MS | M35486.D | 1 | 11/05/04 | WHS | 10/22/04 | OP18476 | EM1086 |
| OP18476-MSD | M35487.D | 1 | 11/05/04 | WHS | 10/22/04 | OP18476 | EM1086 |
| N81296-1 | M35485.D | 1 | 11/05/04 | WHS | 10/22/04 | OP18476 | EM1086 |

**The QC reported here applies to the following samples:** **Method:** SW846 8270C

N81296-1

| CAS No. | Compound | N81296-1 ug/l | Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| 67-72-1 | Hexachloroethane | ND | | 100 | 79.9 | 80 | 80.7 | 81 | 1 | 22-113/34 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | 100 | 77.2 | 77 | 79.7 | 80 | 3 | 40-139/28 |
| 78-59-1 | Isophorone | ND | | 100 | 74.9 | 75 | 75.4 | 75 | 1 | 34-116/37 |
| 91-57-6 | 2-Methylnaphthalene | ND | | 100 | 79.7 | 80 | 80.4 | 80 | 1 | 28-123/32 |
| 88-74-4 | 2-Nitroaniline | ND | | 100 | 81.4 | 81 | 82.4 | 82 | 1 | 30-135/33 |
| 99-09-2 | 3-Nitroaniline | ND | | 100 | 79.3 | 79 | 78.8 | 79 | 1 | 15-134/35 |
| 100-01-6 | 4-Nitroaniline | ND | | 100 | 74.4 | 74 | 78.8 | 79 | 6 | 18-153/32 |
| 91-20-3 | Naphthalene | ND | | 100 | 74.8 | 75 | 73.9 | 74 | 1 | 22-120/30 |
| 98-95-3 | Nitrobenzene | ND | | 100 | 78.7 | 79 | 79.0 | 79 | 0 | 31-118/32 |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND | | 100 | 80.6 | 81 | 81.8 | 82 | 1 | 32-125/33 |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | 100 | 83.1 | 83 | 84.0 | 84 | 1 | 49-131/24 |
| 85-01-8 | Phenanthrene | ND | | 100 | 79.9 | 80 | 79.9 | 80 | 0 | 51-117/23 |
| 129-00-0 | Pyrene | ND | | 100 | 84.8 | 85 | 85.3 | 85 | 1 | 54-122/22 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 100 | 80.6 | 81 | 79.3 | 79 | 2 | 27-115/31 |

| CAS No. | Surrogate Recoveries | MS | MSD | N81296-1 | Limits |
|---|---|---|---|---|---|
| 4165-60-0 | Nitrobenzene-d5 | 75% | 74% | 66% | 32-128% |
| 321-60-8 | 2-Fluorobiphenyl | 74% | 74% | 69% | 34-121% |
| 1718-51-0 | Terphenyl-d14 | 77% | 78% | 71% | 41-129% |

# Instrument Performance Check (DFTPP)



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | EM1070-DFTPP | **Injection Date:** | 10/20/04 |
| **Lab File ID:** | M35081.D | **Injection Time:** | 04:14 |
| **Instrument ID:** | GCMSM | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 69296 | 50.6 | | Pass |
| 68 | Less than 2.0% of mass 69 | 0 | 0.0 | (0.0) [a] | Pass |
| 69 | Mass 69 relative abundance | 59080 | 43.2 | | Pass |
| 70 | Less than 2.0% of mass 69 | 204 | 0.15 | (0.35) [a] | Pass |
| 127 | 40.0 - 60.0% of mass 198 | 67171 | 49.1 | | Pass |
| 197 | Less than 1.0% of mass 198 | 0 | 0.0 | | Pass |
| 198 | Base peak, 100% relative abundance | 136819 | 100.0 | | Pass |
| 199 | 5.0 - 9.0% of mass 198 | 9393 | 6.9 | | Pass |
| 275 | 10.0 - 30.0% of mass 198 | 36968 | 27.0 | | Pass |
| 365 | 1.0 - 100.0% of mass 198 | 4035 | 2.9 | | Pass |
| 441 | Present, but less than mass 443 | 14843 | 10.8 | (80.2) [b] | Pass |
| 442 | 40.0 - 100.0% of mass 198 | 92048 | 67.3 | | Pass |
| 443 | 17.0 - 23.0% of mass 442 | 18513 | 13.5 | (20.1) [c] | Pass |

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| EM1070-ICC1070 | M35082.D | 10/20/04 | 04:28 | 00:14 | Initial cal 50 |
| EM1070-IC1070 | M35083.D | 10/20/04 | 05:04 | 00:50 | Initial cal 100 |
| EM1070-IC1070 | M35084.D | 10/20/04 | 05:40 | 01:26 | Initial cal 80 |
| EM1070-IC1070 | M35085.D | 10/20/04 | 06:17 | 02:03 | Initial cal 25 |
| EM1070-IC1070 | M35086.D | 10/20/04 | 06:53 | 02:39 | Initial cal 10 |
| EM1070-IC1070 | M35087.D | 10/20/04 | 07:28 | 03:14 | Initial cal 5 |
| EM1070-IC1070 | M35088.D | 10/20/04 | 08:05 | 03:51 | Initial cal 2 |

# Instrument Performance Check (DFTPP)



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | EM1077-DFTPP | **Injection Date:** | 10/26/04 |
| **Lab File ID:** | M35231.D | **Injection Time:** | 10:51 |
| **Instrument ID:** | GCMSM | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 99284 | 48.5 | | Pass |
| 68 | Less than 2.0% of mass 69 | 0 | 0.0 | (0.0) [a] | Pass |
| 69 | Mass 69 relative abundance | 85808 | 42.0 | | Pass |
| 70 | Less than 2.0% of mass 69 | 171 | 0.08 | (0.2) [a] | Pass |
| 127 | 40.0 - 60.0% of mass 198 | 96997 | 47.4 | | Pass |
| 197 | Less than 1.0% of mass 198 | 0 | 0.0 | | Pass |
| 198 | Base peak, 100% relative abundance | 204501 | 100.0 | | Pass |
| 199 | 5.0 - 9.0% of mass 198 | 14434 | 7.1 | | Pass |
| 275 | 10.0 - 30.0% of mass 198 | 53480 | 26.2 | | Pass |
| 365 | 1.0 - 100.0% of mass 198 | 5290 | 2.6 | | Pass |
| 441 | Present, but less than mass 443 | 21085 | 10.3 | (75.3) [b] | Pass |
| 442 | 40.0 - 100.0% of mass 198 | 141352 | 69.1 | | Pass |
| 443 | 17.0 - 23.0% of mass 442 | 28003 | 13.7 | (19.8) [c] | Pass |

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| EM1077-CC1070 | M35232.D | 10/26/04 | 11:05 | 00:14 | Continuing cal 25 |
| OP18358-MB2 | M35233.D | 10/26/04 | 11:41 | 00:50 | Method Blank |
| OP18358-BS2 | M35234.D | 10/26/04 | 12:17 | 01:26 | Blank Spike |
| N80065-10 | M35235.D | 10/26/04 | 12:53 | 02:02 | (used for QC only; not part of job N81296) |
| OP18476-MB1 | M35236.D | 10/26/04 | 13:29 | 02:38 | Method Blank |
| ZZZZZZ | M35237.D | 10/26/04 | 14:05 | 03:14 | (unrelated sample) |
| ZZZZZZ | M35238.D | 10/26/04 | 14:41 | 03:50 | (unrelated sample) |
| ZZZZZZ | M35239.D | 10/26/04 | 15:17 | 04:26 | (unrelated sample) |
| ZZZZZZ | M35240.D | 10/26/04 | 15:53 | 05:02 | (unrelated sample) |
| ZZZZZZ | M35241.D | 10/26/04 | 16:29 | 05:38 | (unrelated sample) |
| ZZZZZZ | M35242.D | 10/26/04 | 21:53 | 11:02 | (unrelated sample) |

# Instrument Performance Check (DFTPP)



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | EM1086-DFTPP | **Injection Date:** | 11/05/04 |
| **Lab File ID:** | M35482.D | **Injection Time:** | 08:48 |
| **Instrument ID:** | GCMSM | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 98287 | 51.5 | | Pass |
| 68 | Less than 2.0% of mass 69 | 0 | 0.0 | (0.0) [a] | Pass |
| 69 | Mass 69 relative abundance | 83254 | 43.7 | | Pass |
| 70 | Less than 2.0% of mass 69 | 569 | 0.3 | (0.68) [a] | Pass |
| 127 | 40.0 - 60.0% of mass 198 | 94320 | 49.5 | | Pass |
| 197 | Less than 1.0% of mass 198 | 0 | 0.0 | | Pass |
| 198 | Base peak, 100% relative abundance | 190720 | 100.0 | | Pass |
| 199 | 5.0 - 9.0% of mass 198 | 13607 | 7.1 | | Pass |
| 275 | 10.0 - 30.0% of mass 198 | 47368 | 24.8 | | Pass |
| 365 | 1.0 - 100.0% of mass 198 | 4876 | 2.6 | | Pass |
| 441 | Present, but less than mass 443 | 18926 | 9.9 | (75.4) [b] | Pass |
| 442 | 40.0 - 100.0% of mass 198 | 126365 | 66.3 | | Pass |
| 443 | 17.0 - 23.0% of mass 442 | 25106 | 13.2 | (19.9) [c] | Pass |

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| EM1086-CC1070 | M35483.D | 11/05/04 | 09:02 | 00:14 | Continuing cal 50 |
| OP18476-BS1 | M35484.D | 11/05/04 | 09:38 | 00:50 | Blank Spike |
| N81296-1 | M35485.D | 11/05/04 | 10:14 | 01:26 | MW-1 |
| OP18476-MS | M35486.D | 11/05/04 | 10:51 | 02:03 | Matrix Spike |
| OP18476-MSD | M35487.D | 11/05/04 | 11:27 | 02:39 | Matrix Spike Duplicate |
| OP18461-MB1 | M35488.D | 11/05/04 | 12:03 | 03:15 | Method Blank |
| OP18461-BS1 | M35489.D | 11/05/04 | 12:39 | 03:51 | Blank Spike |
| OP18444-MB2 | M35490.D | 11/05/04 | 13:15 | 04:27 | Method Blank |
| OP18444-BS2 | M35491.D | 11/05/04 | 13:51 | 05:03 | Blank Spike |
| ZZZZZZ | M35492.D | 11/05/04 | 14:27 | 05:39 | (unrelated sample) |
| ZZZZZZ | M35493.D | 11/05/04 | 15:03 | 06:15 | (unrelated sample) |
| ZZZZZZ | M35494.D | 11/05/04 | 15:40 | 06:52 | (unrelated sample) |
| ZZZZZZ | M35495.D | 11/05/04 | 16:16 | 07:28 | (unrelated sample) |
| ZZZZZZ | M35496.D | 11/05/04 | 16:52 | 08:04 | (unrelated sample) |
| N81201-1 | M35497.D | 11/05/04 | 17:28 | 08:40 | (used for QC only; not part of job N81296) |
| OP18461-MS | M35498.D | 11/05/04 | 18:04 | 09:16 | Matrix Spike |
| OP18461-MSD | M35499.D | 11/05/04 | 18:40 | 09:52 | Matrix Spike Duplicate |
| ZZZZZZ | M35500.D | 11/05/04 | 19:16 | 10:28 | (unrelated sample) |
| ZZZZZZ | M35501.D | 11/05/04 | 19:52 | 11:04 | (unrelated sample) |

# Instrument Performance Check (DFTPP)



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EM1086-DFTPP
**Lab File ID:** M35482.D
**Instrument ID:** GCMSM
**Injection Date:** 11/05/04
**Injection Time:** 08:48

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| ZZZZZZ | M35502.D | 11/05/04 | 20:29 | 11:41 | (unrelated sample) |
| OP18489-BS2 | M35504.D | 11/05/04 | 21:41 | 12:53 | Blank Spike |
| ZZZZZZ | M35505.D | 11/05/04 | 22:17 | 13:29 | (unrelated sample) |
| ZZZZZZ | M35506.D | 11/05/04 | 22:54 | 14:06 | (unrelated sample) |
| ZZZZZZ | M35507.D | 11/05/04 | 23:30 | 14:42 | (unrelated sample) |
| ZZZZZZ | M35508.D | 11/06/04 | 00:06 | 15:18 | (unrelated sample) |
| ZZZZZZ | M35509.D | 11/06/04 | 00:43 | 15:55 | (unrelated sample) |
| ZZZZZZ | M35510.D | 11/06/04 | 01:19 | 16:31 | (unrelated sample) |
| ZZZZZZ | M35511.D | 11/06/04 | 01:55 | 17:07 | (unrelated sample) |

# Instrument Performance Check (DFTPP)



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | EP383-DFTPP | **Injection Date:** | 09/20/04 |
| **Lab File ID:** | P09140.D | **Injection Time:** | 08:54 |
| **Instrument ID:** | GCMSP | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 18274 | 41.1 | | Pass |
| 68 | Less than 2.0% of mass 69 | 116 | 0.26 | (0.63) [a] | Pass |
| 69 | Mass 69 relative abundance | 18308 | 41.2 | | Pass |
| 70 | Less than 2.0% of mass 69 | 111 | 0.25 | (0.61) [a] | Pass |
| 127 | 40.0 - 60.0% of mass 198 | 24092 | 54.2 | | Pass |
| 197 | Less than 1.0% of mass 198 | 0 | 0.0 | | Pass |
| 198 | Base peak, 100% relative abundance | 44454 | 100.0 | | Pass |
| 199 | 5.0 - 9.0% of mass 198 | 3134 | 7.0 | | Pass |
| 275 | 10.0 - 30.0% of mass 198 | 10490 | 23.6 | | Pass |
| 365 | 1.0 - 100.0% of mass 198 | 1323 | 3.0 | | Pass |
| 441 | Present, but less than mass 443 | 4349 | 9.8 | (84.5) [b] | Pass |
| 442 | 40.0 - 100.0% of mass 198 | 26941 | 60.6 | | Pass |
| 443 | 17.0 - 23.0% of mass 442 | 5145 | 11.6 | (19.1) [c] | Pass |

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| EP383-ICC383 | P09141.D | 09/20/04 | 09:09 | 00:15 | Initial cal 50 |
| EP383-IC383 | P09142.D | 09/20/04 | 09:48 | 00:54 | Initial cal 100 |
| EP383-IC383 | P09143.D | 09/20/04 | 11:33 | 02:39 | Initial cal 80 |
| EP383-IC383 | P09145.D | 09/20/04 | 12:08 | 03:14 | Initial cal 10 |
| EP383-IC383 | P09144.D | 09/20/04 | 12:44 | 03:50 | Initial cal 25 |
| EP383-IC383 | P09147.D | 09/20/04 | 13:20 | 04:26 | Initial cal 2 |
| EP383-IC383 | P09146.D | 09/20/04 | 13:55 | 05:01 | Initial cal 5 |

# Instrument Performance Check (DFTPP)



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Sample:** | EP420-DFTPP | **Injection Date:** | 11/05/04 |
| **Lab File ID:** | P10150.D | **Injection Time:** | 10:16 |
| **Instrument ID:** | GCMSP | | |

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 51 | 30.0 - 60.0% of mass 198 | 9190 | 33.1 | | Pass |
| 68 | Less than 2.0% of mass 69 | 186 | 0.67 | (1.8) [a] | Pass |
| 69 | Mass 69 relative abundance | 10369 | 37.3 | | Pass |
| 70 | Less than 2.0% of mass 69 | 118 | 0.42 | (1.1) [a] | Pass |
| 127 | 40.0 - 60.0% of mass 198 | 14447 | 52.0 | | Pass |
| 197 | Less than 1.0% of mass 198 | 0 | 0.0 | | Pass |
| 198 | Base peak, 100% relative abundance | 27794 | 100.0 | | Pass |
| 199 | 5.0 - 9.0% of mass 198 | 1810 | 6.5 | | Pass |
| 275 | 10.0 - 30.0% of mass 198 | 6502 | 23.4 | | Pass |
| 365 | 1.0 - 100.0% of mass 198 | 724 | 2.6 | | Pass |
| 441 | Present, but less than mass 443 | 2857 | 10.3 | (85.0) [b] | Pass |
| 442 | 40.0 - 100.0% of mass 198 | 17738 | 63.8 | | Pass |
| 443 | 17.0 - 23.0% of mass 442 | 3361 | 12.1 | (18.9) [c] | Pass |

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| EP420-CC383 | P10151.D | 11/05/04 | 10:31 | 00:15 | Continuing cal 50 |
| ZZZZZZ | P10152.D | 11/05/04 | 11:07 | 00:51 | (unrelated sample) |
| ZZZZZZ | P10153.D | 11/05/04 | 11:42 | 01:26 | (unrelated sample) |
| ZZZZZZ | P10154.D | 11/05/04 | 12:16 | 02:00 | (unrelated sample) |
| N82011-1 | P10159.D | 11/05/04 | 13:46 | 03:30 | (used for QC only; not part of job N81296) |
| ZZZZZZ | P10160.D | 11/05/04 | 14:21 | 04:05 | (unrelated sample) |
| OP18553-MB1 | P10158.D | 11/05/04 | 14:56 | 04:40 | Method Blank |
| ZZZZZZ | P10155.D | 11/05/04 | 15:31 | 05:15 | (unrelated sample) |
| ZZZZZZ | P10156.D | 11/05/04 | 16:05 | 05:49 | (unrelated sample) |
| ZZZZZZ | P10157.D | 11/05/04 | 16:40 | 06:24 | (unrelated sample) |
| OP18465-MB1 | P10161.D | 11/05/04 | 17:24 | 07:08 | Method Blank |
| OP18476-MB1 | P10162.D | 11/05/04 | 17:59 | 07:43 | Method Blank |
| ZZZZZZ | P10163.D | 11/05/04 | 18:33 | 08:17 | (unrelated sample) |
| ZZZZZZ | P10164.D | 11/05/04 | 19:08 | 08:52 | (unrelated sample) |
| ZZZZZZ | P10165.D | 11/05/04 | 19:42 | 09:26 | (unrelated sample) |
| ZZZZZZ | P10166.D | 11/05/04 | 20:17 | 10:01 | (unrelated sample) |
| ZZZZZZ | P10167.D | 11/05/04 | 20:52 | 10:36 | (unrelated sample) |
| ZZZZZZ | P10168.D | 11/05/04 | 21:27 | 11:11 | (unrelated sample) |
| ZZZZZZ | P10169.D | 11/05/04 | 22:01 | 11:45 | (unrelated sample) |

# Semivolatile Internal Standard Area Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Check Std:** | EM1077-CC1070 | **Injection Date:** | 10/26/04 |
| **Lab File ID:** | M35232.D | **Injection Time:** | 11:05 |
| **Instrument ID:** | GCMSM | **Method:** | SW846 8270C |

| | IS 1 | | IS 2 | | IS 3 | | IS 4 | | IS 5 | | IS 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT |
| Check Std | 300248 | 6.89 | 1044845 | 8.88 | 578527 | 12.32 | 928568 | 15.62 | 920907 | 21.89 | 598173 | 25.04 |
| Upper Limit [a] | 600496 | 7.39 | 2089690 | 9.38 | 1157054 | 12.82 | 1857136 | 16.12 | 1841814 | 22.39 | 1196346 | 25.54 |
| Lower Limit [b] | 150124 | 6.39 | 522423 | 8.38 | 289264 | 11.82 | 464284 | 15.12 | 460454 | 21.39 | 299087 | 24.54 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT | IS 6 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OP18358-MB2 | 319985 | 6.88 | 1112803 | 8.87 | 580785 | 12.32 | 1046950 | 15.61 | 1022216 | 21.88 | 641690 | 25.03 |
| OP18358-BS2 | 293337 | 6.88 | 1045712 | 8.88 | 582188 | 12.32 | 930981 | 15.62 | 923119 | 21.89 | 606915 | 25.04 |
| N80065-10 | 301013 | 6.88 | 1052596 | 8.87 | 543012 | 12.32 | 986061 | 15.61 | 952464 | 21.88 | 601522 | 25.03 |
| OP18476-MB1 | 318320 | 6.88 | 1094574 | 8.87 | 549926 | 12.32 | 991828 | 15.61 | 953275 | 21.88 | 580968 | 25.03 |
| ZZZZZZ | 288107 | 6.88 | 1005435 | 8.87 | 525839 | 12.32 | 942395 | 15.61 | 935207 | 21.88 | 590600 | 25.03 |
| ZZZZZZ | 290332 | 6.88 | 1020622 | 8.87 | 540948 | 12.32 | 957513 | 15.61 | 911300 | 21.88 | 565621 | 25.03 |
| ZZZZZZ | 259338 | 6.89 | 863820 | 8.87 | 468509 | 12.32 | 761657 | 15.62 | 750882 | 21.88 | 466689 | 25.03 |
| ZZZZZZ | 293192 | 6.89 | 1038513 | 8.87 | 647199 | 12.32 | 943334 | 15.62 | 888304 | 21.88 | 523711 | 25.03 |
| ZZZZZZ | 277561 | 6.89 | 984091 | 8.87 | 555316 | 12.32 | 915720 | 15.61 | 862844 | 21.88 | 517163 | 25.03 |
| ZZZZZZ | 291273 | 6.88 | 1010257 | 8.87 | 563852 | 12.32 | 946318 | 15.61 | 876861 | 21.88 | 495043 | 25.03 |

**IS 1** = 1,4-Dichlorobenzene-d4
**IS 2** = Naphthalene-d8
**IS 3** = Acenaphthene-D10
**IS 4** = Phenanthrene-d10
**IS 5** = Chrysene-d12
**IS 6** = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Internal Standard Area Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Check Std:** | EM1086-CC1070 | **Injection Date:** | 11/05/04 |
| **Lab File ID:** | M35483.D | **Injection Time:** | 09:02 |
| **Instrument ID:** | GCMSM | **Method:** | SW846 8270C |

| | IS 1 | | IS 2 | | IS 3 | | IS 4 | | IS 5 | | IS 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT |
| Check Std | 290384 | 6.87 | 983748 | 8.85 | 536760 | 12.29 | 825503 | 15.59 | 748611 | 21.85 | 478033 | 25.00 |
| Upper Limit [a] | 580768 | 7.37 | 1967496 | 9.35 | 1073520 | 12.79 | 1651006 | 16.09 | 1497222 | 22.35 | 956066 | 25.50 |
| Lower Limit [b] | 145192 | 6.37 | 491874 | 8.35 | 268380 | 11.79 | 412752 | 15.09 | 374306 | 21.35 | 239017 | 24.50 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT | IS 6 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OP18476-BS1 | 330898 | 6.86 | 1159806 | 8.85 | 630929 | 12.29 | 984760 | 15.58 | 900720 | 21.85 | 572563 | 25.00 |
| N81296-1 | 344217 | 6.86 | 1226004 | 8.85 | 672915 | 12.29 | 1092060 | 15.58 | 989680 | 21.85 | 613863 | 25.00 |
| OP18476-MS | 319567 | 6.87 | 1114560 | 8.85 | 604229 | 12.29 | 942158 | 15.58 | 843276 | 21.85 | 535868 | 25.00 |
| OP18476-MSD | 348729 | 6.86 | 1226781 | 8.85 | 671633 | 12.29 | 1058063 | 15.58 | 950168 | 21.85 | 598114 | 25.01 |
| OP18461-MB1 | 376942 | 6.86 | 1345808 | 8.85 | 720596 | 12.29 | 1151201 | 15.58 | 1017915 | 21.85 | 612507 | 25.00 |
| OP18461-BS1 | 361117 | 6.86 | 1248588 | 8.85 | 676775 | 12.29 | 1039060 | 15.58 | 931522 | 21.85 | 588483 | 25.00 |
| OP18444-MB2 | 373119 | 6.87 | 1337606 | 8.85 | 732617 | 12.29 | 1161825 | 15.57 | 1042842 | 21.84 | 637430 | 25.00 |
| OP18444-BS2 | 353223 | 6.87 | 1226136 | 8.85 | 679550 | 12.29 | 1066994 | 15.58 | 1001606 | 21.85 | 652209 | 24.99 |
| ZZZZZZ | 328983 | 6.86 | 1156624 | 8.85 | 633986 | 12.28 | 1036817 | 15.57 | 937661 | 21.84 | 573352 | 25.00 |
| ZZZZZZ | 332408 | 6.87 | 1196973 | 8.85 | 652311 | 12.29 | 1053298 | 15.58 | 954028 | 21.85 | 572713 | 25.00 |
| ZZZZZZ | 326688 | 6.86 | 1169692 | 8.85 | 649095 | 12.28 | 1077842 | 15.57 | 1013749 | 21.84 | 628160 | 24.99 |
| ZZZZZZ | 336622 | 6.86 | 1163591 | 8.84 | 619052 | 12.29 | 983763 | 15.57 | 862737 | 21.84 | 478098 | 24.99 |
| ZZZZZZ | 302988 | 6.86 | 1068372 | 8.84 | 559597 | 12.28 | 885574 | 15.57 | 785944 | 21.84 | 448812 | 24.99 |
| N81201-1 | 375321 | 6.86 | 1321021 | 8.84 | 716646 | 12.28 | 1127537 | 15.57 | 983620 | 21.84 | 581278 | 24.99 |
| OP18461-MS | 364600 | 6.86 | 1276433 | 8.85 | 694997 | 12.29 | 1055606 | 15.58 | 912207 | 21.85 | 545050 | 24.99 |
| OP18461-MSD | 334533 | 6.86 | 1159352 | 8.85 | 627200 | 12.29 | 946161 | 15.57 | 815032 | 21.84 | 484176 | 24.99 |
| ZZZZZZ | 346288 | 6.86 | 1209408 | 8.85 | 635203 | 12.29 | 996326 | 15.57 | 809461 | 21.83 | 411337 | 24.98 |
| ZZZZZZ | 355240 | 6.86 | 1226901 | 8.85 | 652259 | 12.28 | 1026417 | 15.57 | 816222 | 21.83 | 414720 | 24.99 |
| ZZZZZZ | 368083 | 6.86 | 1293195 | 8.85 | 714406 | 12.29 | 1156528 | 15.57 | 979641 | 21.84 | 494769 | 24.99 |
| OP18489-BS2 | 332467 | 6.86 | 1167813 | 8.85 | 644165 | 12.28 | 1010279 | 15.58 | 901579 | 21.84 | 509679 | 24.99 |
| ZZZZZZ | 365317 | 6.86 | 1278896 | 8.85 | 679790 | 12.28 | 1061751 | 15.57 | 842997 | 21.84 | 405586 | 24.99 |
| ZZZZZZ | 338811 | 6.86 | 1162025 | 8.85 | 605078 | 12.28 | 961212 | 15.57 | 772294 | 21.84 | 384870 | 24.99 |
| ZZZZZZ | 327536 | 6.86 | 1138230 | 8.85 | 588463 | 12.28 | 923556 | 15.57 | 748519 | 21.83 | 357234 | 24.99 |
| ZZZZZZ | 335644 | 6.86 | 1186027 | 8.85 | 639716 | 12.28 | 1012266 | 15.57 | 805179 | 21.84 | 376129 | 24.99 |
| ZZZZZZ | 335040 | 6.86 | 1173852 | 8.85 | 616860 | 12.29 | 975331 | 15.57 | 755096 | 21.83 | 355378 | 24.99 |
| ZZZZZZ | 351555 | 6.86 | 1214377 | 8.85 | 642304 | 12.29 | 998703 | 15.57 | 811076 | 21.84 | 396572 | 24.99 |
| ZZZZZZ | 358900 | 6.86 | 1272812 | 8.85 | 679075 | 12.29 | 1047826 | 15.57 | 755910 | 21.84 | 330530 | 24.99 |

**IS 1** = 1,4-Dichlorobenzene-d4
**IS 2** = Naphthalene-d8
**IS 3** = Acenaphthene-D10
**IS 4** = Phenanthrene-d10
**IS 5** = Chrysene-d12
**IS 6** = Perylene-d12

# Semivolatile Internal Standard Area Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Check Std:** | EM1086-CC1070 | **Injection Date:** | 11/05/04 |
| **Lab File ID:** | M35483.D | **Injection Time:** | 09:02 |
| **Instrument ID:** | GCMSM | **Method:** | SW846 8270C |

| Lab | IS 1 | | IS 2 | | IS 3 | | IS 4 | | IS 5 | | IS 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT |

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Internal Standard Area Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | |
|---|---|---|---|
| **Check Std:** | EP420-CC383 | **Injection Date:** | 11/05/04 |
| **Lab File ID:** | P10151.D | **Injection Time:** | 10:31 |
| **Instrument ID:** | GCMSP | **Method:** | SW846 8270C |

| | IS 1 | | IS 2 | | IS 3 | | IS 4 | | IS 5 | | IS 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT | AREA | RT |
| Check Std | 211579 | 5.19 | 796967 | 7.70 | 401640 | 11.70 | 622524 | 15.13 | 523641 | 20.90 | 321520 | 23.20 |
| Upper Limit [a] | 423158 | 5.69 | 1593934 | 8.20 | 803280 | 12.20 | 1245048 | 15.63 | 1047282 | 21.40 | 643040 | 23.70 |
| Lower Limit [b] | 105790 | 4.69 | 398484 | 7.20 | 200820 | 11.20 | 311262 | 14.63 | 261821 | 20.40 | 160760 | 22.70 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT | IS 6 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ZZZZZZ | 228008 | 5.20 | 901305 | 7.70 | 456129 | 11.70 | 755176 | 15.12 | 489965 | 20.89 | 183159 | 23.20 |
| ZZZZZZ | 215957 | 5.19 | 832185 | 7.70 | 414144 | 11.70 | 637518 | 15.13 | 440776 | 20.90 | 160032* | 23.21 |
| ZZZZZZ | 208101 | 5.19 | 794261 | 7.70 | 401204 | 11.71 | 620349 | 15.15 | 372740 | 20.92 | 130361* | 23.21 |
| N82011-1 | 223424 | 5.20 | 847960 | 7.70 | 413090 | 11.70 | 620806 | 15.12 | 446546 | 20.89 | 171528 | 23.20 |
| ZZZZZZ | 210926 | 5.20 | 791228 | 7.70 | 385429 | 11.70 | 581878 | 15.13 | 432351 | 20.89 | 171660 | 23.20 |
| OP18553-MB1 | 204613 | 5.20 | 787592 | 7.69 | 397090 | 11.70 | 612257 | 15.12 | 463168 | 20.88 | 175828 | 23.19 |
| ZZZZZZ | 188607 | 5.19 | 732992 | 7.70 | 361292 | 11.70 | 566553 | 15.14 | 345231 | 20.90 | 116023* | 23.20 |
| ZZZZZZ | 205349 | 5.20 | 789460 | 7.70 | 394576 | 11.70 | 585472 | 15.13 | 402879 | 20.90 | 152797* | 23.20 |
| ZZZZZZ | 200261 | 5.20 | 765408 | 7.70 | 381427 | 11.70 | 597248 | 15.13 | 399411 | 20.89 | 151727* | 23.19 |
| OP18465-MB1 | 229429 | 5.19 | 894287 | 7.70 | 457300 | 11.70 | 739640 | 15.13 | 496432 | 20.89 | 172566 | 23.19 |
| OP18476-MB1 | 223273 | 5.20 | 855314 | 7.70 | 424737 | 11.70 | 666091 | 15.13 | 461837 | 20.89 | 177541 | 23.19 |
| ZZZZZZ | 223294 | 5.20 | 838112 | 7.70 | 411271 | 11.70 | 642013 | 15.13 | 465960 | 20.89 | 187981 | 23.19 |
| ZZZZZZ | 231657 | 5.20 | 871562 | 7.70 | 429443 | 11.70 | 679142 | 15.12 | 469988 | 20.89 | 183233 | 23.19 |
| ZZZZZZ | 215765 | 5.20 | 826928 | 7.70 | 417497 | 11.70 | 668718 | 15.13 | 453692 | 20.89 | 166514 | 23.19 |
| ZZZZZZ | 194338 | 5.21 | 740998 | 7.71 | 366714 | 11.70 | 592909 | 15.12 | 395407 | 20.89 | 150845* | 23.19 |
| ZZZZZZ | 216037 | 5.19 | 824514 | 7.70 | 426063 | 11.70 | 683422 | 15.12 | 469410 | 20.89 | 165644 | 23.19 |
| ZZZZZZ | 203932 | 5.19 | 790976 | 7.70 | 404520 | 11.70 | 647247 | 15.12 | 445272 | 20.89 | 160930 | 23.19 |
| ZZZZZZ | 226454 | 5.20 | 884813 | 7.70 | 450645 | 11.70 | 721171 | 15.12 | 495163 | 20.89 | 185734 | 23.19 |

**IS 1** = 1,4-Dichlorobenzene-d4
**IS 2** = Naphthalene-d8
**IS 3** = Acenaphthene-D10
**IS 4** = Phenanthrene-d10
**IS 5** = Chrysene-d12
**IS 6** = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Surrogate Recovery Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Method:** SW846 8270C **Matrix:** AQ

**Samples and QC shown here apply to the above method**

| Lab Sample ID | Lab File ID | S1 | S2 | S3 |
|---|---|---|---|---|
| N81296-1 | M35485.D | 66.0 | 69.0 | 71.0 |
| OP18476-BS1 | M35484.D | 71.0 | 72.0 | 73.0 |
| OP18476-MB1 | M35236.D | 62.0 | 66.0 | 56.0 |
| OP18476-MB1 | P10162.D | 58.0 | 69.0 | 79.0 |
| OP18476-MS | M35486.D | 75.0 | 74.0 | 77.0 |
| OP18476-MSD | M35487.D | 74.0 | 74.0 | 78.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = Nitrobenzene-d5 | 32-128% |
| S2 = 2-Fluorobiphenyl | 34-121% |
| S3 = Terphenyl-d14 | 41-129% |

# Initial Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EM1070-ICC1070
**Lab FileID:** M35082.D

Response Factor Report MSM

Method : C:\HPCHEM\1\METHODS\MM1070TP.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Mon Nov 08 15:34:29 2004
Response via : Initial Calibration

Calibration Files
2 =M35088.D 5 =M35087.D 100 =M35083.D
50 =M35082.D 10 =M35086.D 80 =M35084.D 25 =M35537.D

| Compound | 2 | 5 | 100 | 50 | 10 | 80 | 25 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) I 1,4-Dichlorobenzene-d | ISTD | | | | | | | | |
| 2)t 1,4-Dioxane | 0.597 | 0.579 | 0.554 | 0.631 | 0.622 | 0.555 | 0.572 | 0.587 | 5.24 |
| 3)t Pyridine | 1.452 | 1.453 | 1.336 | 1.576 | 1.618 | 1.343 | 1.477 | 1.465 | 7.25 |
| 4)t N-Nitrosodimethyl | 0.979 | 0.988 | 0.851 | 1.071 | 1.103 | 0.882 | 0.998 | 0.982 | 9.31 |
| 5)S 2-Fluorophenol | 1.424 | 1.383 | 1.152 | 1.387 | 1.454 | 1.186 | 1.347 | 1.333 | 8.82 |
| 6)t Indene | 2.305 | 2.366 | 2.011 | 2.371 | 2.568 | 2.083 | 2.311 | 2.288 | 8.20 |
| 7)t Cumene | 3.060 | 3.070 | 2.748 | 3.167 | 3.335 | 2.809 | 3.031 | 3.031 | 6.64 |
| 8)S Phenol-d5 | 1.660 | 1.661 | 1.317 | 1.580 | 1.708 | 1.372 | 1.546 | 1.549 | 9.73 |
| 9)t Phenol | 1.755 | 1.810 | 1.380 | 1.627 | 1.978 | 1.439 | 1.687 | 1.668 | 12.50 |
| 10)t Aniline | 1.988 | 2.061 | 1.524 | 1.862 | 2.167 | 1.563 | 1.893 | 1.865 | 13.00 |
| 11)t bis(2-Chloroethyl | 1.251 | 1.260 | 1.066 | 1.273 | 1.369 | 1.111 | 1.221 | 1.222 | 8.39 |
| 12) Benzaldehyde | 0.299 | 0.909 | | 0.680 | 1.014 | | 0.665 | 0.713 | 38.67 |
| 13)t 2-Chlorophenol | 1.408 | 1.419 | 1.139 | 1.364 | 1.539 | 1.183 | 1.358 | 1.344 | 10.35 |
| 14)t Decane | 2.271 | 2.279 | 1.851 | 2.136 | 2.430 | 1.913 | 2.157 | 2.148 | 9.60 |
| 15)t 1,3-Dichlorobenze | 1.659 | 1.682 | 1.434 | 1.685 | 1.814 | 1.472 | 1.615 | 1.623 | 8.09 |
| 16)t 1,4-Dichlorobenze | 1.656 | 1.632 | 1.392 | 1.624 | 1.741 | 1.439 | 1.578 | 1.580 | 7.82 |
| 17)t Benzyl alcohol | 0.798 | 0.862 | 0.760 | 0.901 | 0.977 | 0.789 | 0.882 | 0.853 | 8.88 |
| 18)t 1,2-Dichlorobenze | 1.523 | 1.530 | 1.266 | 1.500 | 1.666 | 1.309 | 1.477 | 1.467 | 9.37 |
| 19)t Acetophenone | 1.788 | 1.840 | 1.545 | 1.849 | 2.006 | 1.625 | 1.803 | 1.780 | 8.56 |
| 20)t 2-Methylphenol | 1.243 | 1.275 | 1.027 | 1.217 | 1.367 | 1.071 | 1.206 | 1.201 | 9.76 |
| 21)T 2,2'-oxybis(1-Chl | 0.451 | 0.459 | 0.376 | 0.440 | 0.478 | 0.389 | 0.428 | 0.432 | 8.66 |
| 22)t 3&4-Methylphenol | 1.289 | 1.353 | 1.088 | 1.276 | 1.454 | 1.132 | 1.281 | 1.267 | 9.83 |
| 23)t n-Nitroso-di-n-pr | 0.762 | 0.852 | 0.734 | 0.853 | 0.917 | 0.760 | 0.802 | 0.812 | 8.04 |
| 24)t Hexachloroethane | 0.565 | 0.567 | 0.516 | 0.606 | 0.631 | 0.529 | 0.582 | 0.571 | 7.06 |
| 25) I Naphthalene-d8 | ISTD | | | | | | | | |
| 26)S Nitrobenzene-d5 | 0.380 | 0.388 | 0.377 | 0.415 | 0.431 | 0.383 | 0.406 | 0.397 | 5.21 |
| 27)t Nitrobenzene | 0.179 | 0.180 | 0.168 | 0.184 | 0.199 | 0.172 | 0.183 | 0.181 | 5.51 |
| 28)t Quinoline | 0.685 | 0.724 | 0.666 | 0.729 | 0.782 | 0.684 | 0.722 | 0.713 | 5.44 |
| 29)t Isophorone | 0.606 | 0.658 | 0.611 | 0.666 | 0.722 | 0.621 | 0.663 | 0.650 | 6.29 |
| 30)t 2-Nitrophenol | 0.160 | 0.191 | 0.202 | 0.220 | 0.225 | 0.208 | 0.219 | 0.203 | 11.09 |
| 31)t 2,4-Dimethylpheno | 0.335 | 0.348 | 0.324 | 0.354 | 0.378 | 0.329 | 0.355 | 0.346 | 5.36 |
| 32)t Benzoic acid | | | 0.259 | 0.231 | 0.080 | 0.241 | 0.171 | 0.197 | 37.10 |
| ----- Linear regression ----- Coefficient = 0.9981 | | | | | | | | | |
| Response Ratio = -0.05899 + 0.27798 *A | | | | | | | | | |
| 33)t bis(2-Chloroethox | 0.397 | 0.415 | 0.371 | 0.406 | 0.439 | 0.376 | 0.401 | 0.401 | 5.78 |
| 34)t 2,4-Dichloropheno | 0.286 | 0.310 | 0.293 | 0.325 | 0.346 | 0.299 | 0.320 | 0.311 | 6.62 |
| 35)t 1,3,5-Trichlorobe | 0.391 | 0.382 | 0.339 | 0.376 | 0.415 | 0.346 | 0.376 | 0.375 | 6.91 |
| 36)t 1,2,4-Trichlorobe | 0.368 | 0.368 | 0.337 | 0.373 | 0.401 | 0.341 | 0.365 | 0.365 | 5.87 |
| 37)t 1,2,3-Trichlorobe | 0.337 | 0.350 | 0.316 | 0.348 | 0.379 | 0.324 | 0.348 | 0.343 | 5.95 |
| 38)t alpha-Terpineol | 0.344 | 0.364 | 0.324 | 0.352 | 0.394 | 0.331 | 0.357 | 0.352 | 6.59 |
| 39)t Naphthalene | 1.113 | 1.101 | 0.933 | 1.029 | 1.180 | 0.961 | 1.063 | 1.054 | 8.26 |
| 40)t 4-Chloroaniline | 0.441 | 0.465 | 0.390 | 0.445 | 0.496 | 0.412 | 0.448 | 0.442 | 7.76 |
| 41)t 2,3-Dichloroanili | 0.385 | 0.400 | 0.351 | 0.378 | 0.421 | 0.357 | 0.381 | 0.382 | 6.27 |
| 42)t Caprolactam | 0.161 | 0.184 | 0.145 | 0.155 | 0.207 | 0.151 | 0.160 | 0.166 | [illegible]7 |

# Initial Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EM1070-ICC1070
**Lab FileID:** M35082.D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43)t Hexachlorobutadie | 0.212 | 0.211 | 0.192 | 0.212 | 0.226 | 0.194 | 0.206 | 0.207 | 5.67 |
| 44)t 4-Chloro-3-methyl | 0.260 | 0.295 | 0.287 | 0.312 | 0.324 | 0.291 | 0.306 | 0.296 | 6.91 |
| 45)t 2-Methylnaphthale | 0.765 | 0.792 | 0.716 | 0.788 | 0.864 | 0.736 | 0.793 | 0.779 | 6.12 |
| 46)t 1-Methylnaphthale | 0.758 | 0.782 | 0.700 | 0.769 | 0.843 | 0.717 | 0.762 | 0.761 | 6.07 |
| 47)t Dimethylnaphthale | 0.660 | 0.705 | 0.623 | 0.660 | 0.748 | 0.637 | 0.678 | 0.673 | 6.32 |
| 48) I Acenaphthene-d10 | ----------ISTD---------- | | | | | | | | |
| 49)t Hexachlorocyclope | 0.270 | 0.313 | 0.378 | 0.421 | 0.386 | 0.379 | 0.386 | 0.362 | 14.24 |
| 50)t 2,4,6-Trichloroph | 0.338 | 0.395 | 0.399 | 0.427 | 0.454 | 0.409 | 0.433 | 0.408 | 9.07 |
| 51)t 2,4,5-Trichloroph | 0.419 | 0.463 | 0.459 | 0.485 | 0.517 | 0.467 | 0.495 | 0.472 | 6.59 |
| 52)S 2-Fluorobiphenyl | 1.706 | 1.745 | 1.475 | 1.608 | 1.838 | 1.525 | 1.631 | 1.647 | 7.66 |
| 53)t 2-Chloronaphthale | 1.322 | 1.328 | 1.185 | 1.259 | 1.427 | 1.217 | 1.295 | 1.290 | 6.22 |
| 54)t Biphenyl | 1.771 | 1.790 | 1.502 | 1.622 | 1.909 | 1.556 | 1.690 | 1.692 | 8.45 |
| 55)t 2-Nitroaniline | 0.297 | 0.360 | 0.345 | 0.372 | 0.416 | 0.360 | 0.386 | 0.362 | 10.20 |
| 56)t Dimethylphthalate | 1.447 | 1.493 | 1.379 | 1.473 | 1.627 | 1.414 | 1.496 | 1.476 | 5.37 |
| 57)t Acenaphthylene | 1.913 | 2.088 | 1.851 | 2.005 | 2.326 | 1.931 | 2.088 | 2.029 | 7.81 |
| 58)t 2,6-Dinitrotoluen | 0.248 | 0.286 | 0.313 | 0.327 | 0.345 | 0.320 | 0.328 | 0.310 | 10.51 |
| 59)t 3-Nitroaniline | 0.274 | 0.339 | 0.349 | 0.360 | 0.389 | 0.359 | 0.367 | 0.348 | 10.36 |
| 60)t Acenaphthene | 1.324 | 1.357 | 1.195 | 1.271 | 1.441 | 1.235 | 1.309 | 1.304 | 6.22 |
| 61)t 2,4-Dinitrophenol | | | 0.177 | 0.153 | 0.063 | 0.178 | 0.118 | 0.138 | 34.91 |

----- Linear regression ----- Coefficient = 0.9979
Response Ratio = -0.08223 + 0.19378 *A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 62)t 4-Nitrophenol | | | 0.183 | 0.192 | 0.179 | 0.188 | 0.185 | 0.185 | 2.65 |
| 63)t Dibenzofuran | 1.897 | 1.915 | 1.620 | 1.744 | 2.041 | 1.672 | 1.822 | 1.816 | 8.15 |
| 64)t 2,4-Dinitrotoluen | 0.274 | 0.374 | 0.426 | 0.444 | 0.452 | 0.438 | 0.442 | 0.407 | 15.75 |

----- Linear regression ----- Coefficient = 0.9993
Response Ratio = 0.00092 + 0.43215 *A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 65) 2,3,4,6-Tetrachlo | | 0.304 | 0.364 | 0.386 | 0.375 | 0.371 | 0.369 | 0.362 | 8.04 |
| 66)t Diethylphthalate | 1.357 | 1.438 | 1.260 | 1.353 | 1.558 | 1.314 | 1.417 | 1.385 | 6.99 |
| 67)t Fluorene | 1.503 | 1.574 | 1.377 | 1.458 | 1.692 | 1.419 | 1.503 | 1.504 | 6.97 |
| 68)t 4-Chlorophenyl-ph | 0.753 | 0.793 | 0.666 | 0.715 | 0.806 | 0.686 | 0.735 | 0.737 | 7.06 |
| 69)t 4-Nitroaniline | 0.242 | 0.317 | 0.347 | 0.363 | 0.361 | 0.360 | 0.358 | 0.335 | 13.14 |
| 70) I Phenanthrene-d10 | ----------ISTD---------- | | | | | | | | |
| 71)t 4,6-Dinitro-2-met | | | 0.160 | 0.147 | 0.087 | 0.161 | 0.126 | 0.136 | 22.74 |

----- Linear regression ----- Coefficient = 0.9993
Response Ratio = -0.02505 + 0.17091 *A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72)t Atrazine | 0.098 | 0.106 | 0.107 | 0.116 | 0.125 | 0.112 | 0.115 | 0.111 | 7.88 |
| 73)t n-Nitrosodiphenyl | 0.608 | 0.635 | 0.613 | 0.640 | 0.705 | 0.624 | 0.647 | 0.639 | 5.05 |
| 74)t 1,2-Diphenylhydra | 0.738 | 0.774 | 0.718 | 0.726 | 0.853 | 0.703 | 0.758 | 0.753 | 6.69 |
| 75)S 2,4,6-Tribromophe | 0.088 | 0.099 | 0.110 | 0.118 | 0.111 | 0.110 | 0.109 | 0.106 | 9.19 |
| 76)t 4-Bromophenyl-phe | 0.238 | 0.245 | 0.253 | 0.263 | 0.275 | 0.255 | 0.257 | 0.255 | 4.64 |
| 77)t Hexachlorobenzene | 0.261 | 0.263 | 0.250 | 0.265 | 0.288 | 0.251 | 0.259 | 0.262 | 4.84 |
| 78)t Pentachlorophenol | | 0.106 | 0.179 | 0.180 | 0.150 | 0.180 | 0.164 | 0.160 | 18.07 |

----- Linear regression ----- Coefficient = 0.9997
Response Ratio = -0.01771 + 0.18352 *A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 79)t Phenanthrene | 1.296 | 1.289 | 1.185 | 1.233 | 1.377 | 1.215 | 1.257 | 1.265 | 5.01 |
| 80)t Anthracene | 1.240 | 1.289 | 1.201 | 1.258 | 1.411 | 1.237 | 1.292 | 1.275 | 5.29 |
| 81)t Carbazole | 1.056 | 1.135 | 1.076 | 1.125 | 1.236 | 1.093 | 1.146 | 1.124 | 5.26 |
| 82)t Di-n-butylphthala | 1.060 | 1.304 | 1.401 | 1.421 | 1.503 | 1.446 | 1.458 | 1.370 | 10.95 |
| 83)t Fluoranthene | 1.266 | 1.402 | 1.384 | 1.427 | 1.563 | 1.420 | 1.445 | 1.415 | 6.21 |
| 84)t Octadecane | 0.535 | 0.592 | 0.605 | 0.616 | 0.676 | 0.620 | 0.632 | 0.611 | 6.99 |
| 85) I Chrysene-d12 | ----------ISTD---------- | | | | | | | | |
| 86)t Benzidine | 0.203 | 0.375 | | 0.411 | 0.410 | | 0.386 | 0.357 | 24.44 |

----- Linear regression ----- Coefficient = 0.9990

# Initial Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EM1070-ICC1070
**Lab FileID:** M35082.D

```
                Response Ratio = -0.01526 + 0.41416 *A

 87)t Pyrene              1.480 1.569 1.460 1.561 1.715 1.488 1.570 1.549   5.60
 88)  Butyl stearate      0.272 0.349 0.426 0.425 0.475 0.432 0.431 0.401  16.96
              ----- Linear regression -----  Coefficient =  0.9996
                Response Ratio = -0.00169 + 0.42885 *A

 89)S Terphenyl-d14       1.014 1.063 1.060 1.121 1.209 1.062 1.118 1.092   5.78
 90)t Butylbenzylphthal 0.368 0.502 0.675 0.671 0.631 0.681 0.647 0.596  19.78
              ----- Linear regression -----  Coefficient =  0.9999
                Response Ratio = -0.01813 + 0.68481 *A

 91)t Benzo[a]anthracen 1.151 1.276 1.342 1.401 1.458 1.371 1.382 1.340   7.47
 92)t 3,3'-Dichlorobenz 0.274 0.363 0.366 0.419 0.433 0.383 0.398 0.377  13.82
 93)t Chrysene          1.210 1.241 1.180 1.227 1.366 1.204 1.246 1.239   4.86
 94)t bis(2-Ethylhexyl) 0.455 0.650 0.874 0.853 0.812 0.882 0.834 0.766  20.59
              ----- Linear regression -----  Coefficient =  0.9998
                Response Ratio = -0.02671 + 0.88681 *A


 95) I   Perylene-d12            ----------------ISTD--------------------
 96)t Di-n-octylphthala 0.833 1.386 2.200 2.085 1.874 2.198 2.027 1.800  28.35
              ----- Linear regression -----  Coefficient =  0.9996
                Response Ratio = -0.10713 + 2.23577 *A

 97)t Benzo[b]fluoranth 1.712 1.870 2.180 2.100 2.140 2.032 1.997 2.005   8.20
 98)t Benzo[k]fluoranth 1.864 2.092 1.726 1.906 2.338 1.915 2.058 1.986   9.95
 99)t Benzo[a]pyrene    1.578 1.693 1.730 1.775 1.901 1.765 1.762 1.744   5.58
100)t Indeno[1,2,3-cd]p 0.871 1.042 1.463 1.451 1.331 1.497 1.345 1.286  18.52
              ----- Linear regression -----  Coefficient =  0.9995
                Response Ratio = -0.05128 + 1.49565 *A

101)t Dibenz(a,h)acridi 0.768 0.963 1.301 1.333 1.241 1.336 1.247 1.170  18.69
              ----- Linear regression -----  Coefficient =  0.9995
                Response Ratio = -0.02946 + 1.32993 *A

102)t Dibenz[a,h]anthra 0.923 1.075 1.289 1.356 1.333 1.340 1.298 1.231  13.48
103)t 7,12-Dimethylbenz 0.714 0.839 0.905 0.899 0.991 0.902 0.903 0.879   9.71
104)t Benzo[g,h,i]peryl 0.944 1.054 1.304 1.385 1.313 1.365 1.297 1.238  13.67

105)     Chrysene-d12a          ----------------ISTD--------------------
106)t ortho-tricresyl p 0.271 0.268       0.267 0.280 0.266 0.287 0.273   3.10
107)t Tri-p-cresyl phos 0.164 0.176       0.197 0.186 0.204 0.203 0.188   8.48
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          MM1070TP.M        Mon Nov 08 16:09:32 2004   GCMSM
```

# Continuing Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EM1077-CC1070
**Lab FileID:** M35232.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\EM1077\M35232.D
Acq On : 26 Oct 2004 11:05 am
Sample : CC1070-25
Misc : OP18358,EM1077
MS Integration Params: LSCINT.P

Vial: 2
Operator: WENDYS
Inst : MSM
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Oct 22 09:44:11 2004
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 124 | 0.00 | 6.89 |
| 2 | t | 1,4-Dioxane | 0.587 | 0.611 | -4.1 | 132 | 0.00 | 3.05 |
| 3 | t | Pyridine | 1.465 | 1.526 | -4.2 | 128 | -0.02 | 3.48 |
| 4 | t | N-Nitrosodimethylamine | 0.982 | 0.991 | -0.9 | 123 | -0.02 | 3.45 |
| 5 | S | 2-Fluorophenol | 1.333 | 1.304 | 2.2 | 120 | 0.00 | 5.16 |
| 6 | t | Indene | 2.288 | 2.351 | -2.8 | 126 | 0.00 | 7.31 |
| 7 | t | Cumene | 3.031 | 3.113 | -2.7 | 127 | -0.02 | 5.82 |
| 8 | S | Phenol-d5 | 1.549 | 1.380 | 10.9 | 111 | 0.00 | 6.46 |
| 9 | t | Phenol | 1.668 | 1.500 | 10.1 | 110 | 0.00 | 6.47 |
| 10 | t | Aniline | 1.865 | 1.815 | 2.7 | 119 | -0.02 | 6.48 |
| 11 | t | bis(2-Chloroethyl)ether | 1.222 | 1.217 | 0.4 | 123 | -0.02 | 6.57 |
| 12 | | Benzaldehyde | 0.713 | 0.809 | -13.5 | 151 | -0.02 | 6.27 |
| 13 | t | 2-Chlorophenol | 1.344 | 1.300 | 3.3 | 119 | 0.00 | 6.63 |
| 14 | t | Decane | 2.148 | 2.108 | 1.9 | 121 | -0.02 | 6.71 |
| 15 | t | 1,3-Dichlorobenzene | 1.623 | 1.655 | -2.0 | 127 | -0.02 | 6.83 |
| 16 | t | 1,4-Dichlorobenzene | 1.580 | 1.578 | 0.1 | 124 | -0.02 | 6.91 |
| 17 | t | Benzyl alcohol | 0.853 | 0.805 | 5.6 | 113 | 0.00 | 7.14 |
| 18 | t | 1,2-Dichlorobenzene | 1.467 | 1.501 | -2.3 | 126 | 0.00 | 7.19 |
| 19 | t | Acetophenone | 1.780 | 1.749 | 1.7 | 120 | 0.00 | 7.54 |
| 20 | t | 2-Methylphenol | 1.201 | 1.110 | 7.6 | 114 | 0.00 | 7.34 |
| 21 | T | 2,2'-oxybis(1-Chloropropa | 0.432 | 0.431 | 0.2 | 125 | 0.00 | 7.38 |
| 22 | t | 3&4-Methylphenol | 1.267 | 1.146 | 9.6 | 111 | 0.00 | 7.56 |
| 23 | t | n-Nitroso-di-n-propylamin | 0.812 | 0.831 | -2.3 | 128 | -0.02 | 7.58 |
| 24 | t | Hexachloroethane | 0.571 | 0.597 | -4.6 | 127 | 0.00 | 7.65 |
| 25 | I | Naphthalene-d8 | 1.000 | 1.000 | 0.0 | 122 | -0.02 | 8.88 |
| 26 | S | Nitrobenzene-d5 | 0.397 | 0.397 | 0.0 | 120 | 0.00 | 7.76 |
| 27 | t | Nitrobenzene | 0.181 | 0.180 | 0.6 | 120 | 0.00 | 7.79 |
| 28 | t | Quinoline | 0.713 | 0.723 | -1.4 | 122 | 0.00 | 9.52 |
| 29 | t | Isophorone | 0.650 | 0.688 | -5.8 | 127 | 0.00 | 8.16 |
| 30 | t | 2-Nitrophenol | 0.203 | 0.212 | -4.4 | 119 | 0.00 | 8.29 |
| 31 | t | 2,4-Dimethylphenol | 0.346 | 0.340 | 1.7 | 117 | 0.00 | 8.38 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 32 | t | Benzoic acid | 25.000 | 31.572 | -26.3# | 183 | 0.02 | 8.58 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 33 | t | bis(2-Chloroethoxy)methan | 0.401 | 0.395 | 1.5 | 121 | -0.02 | 8.53 |
| 34 | t | 2,4-Dichlorophenol | 0.311 | 0.298 | 4.2 | 114 | 0.00 | 8.67 |
| 35 | t | 1,3,5-Trichlorobenzene | 0.375 | 0.384 | -2.4 | 125 | 0.00 | 8.30 |
| 36 | t | 1,2,4-Trichlorobenzene | 0.365 | 0.382 | -4.7 | 128 | -0.02 | 8.81 |
| 37 | t | 1,2,3-Trichlorobenzene | 0.343 | 0.356 | -3.8 | 125 | -0.02 | 9.23 |

# Continuing Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EM1077-CC1070
**Lab FileID:** M35232.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 38 | t | alpha-Terpineol | 0.352 | 0.365 | -3.7 | 125 | 0.00 | 8.93 |
| 39 | t | Naphthalene | 1.054 | 1.068 | -1.3 | 123 | -0.02 | 8.91 |
| 40 | t | 4-Chloroaniline | 0.442 | 0.403 | 8.8 | 110 | 0.00 | 9.06 |
| 41 | t | 2,3-Dichloroaniline | 0.382 | 0.374 | 2.1 | 120 | 0.00 | 10.80 |
| 42 | t | Caprolactam | 0.166 | 0.201 | -21.1# | 154 | 0.00 | 9.64 |
| 43 | t | Hexachlorobutadiene | 0.207 | 0.220 | -6.3 | 131 | 0.00 | 9.25 |
| 44 | t | 4-Chloro-3-methylphenol | 0.296 | 0.302 | -2.0 | 121 | 0.00 | 9.98 |
| 45 | t | 2-Methylnaphthalene | 0.779 | 0.809 | -3.9 | 125 | 0.00 | 10.17 |
| 46 | t | 1-Methylnaphthalene | 0.761 | 0.785 | -3.2 | 126 | 0.00 | 10.37 |
| 47 | t | Dimethylnaphthalene | 0.673 | 0.694 | -3.1 | 125 | 0.00 | 11.43 |
| 48 | I | Acenaphthene-d10 | 1.000 | 1.000 | 0.0 | 126 | -0.02 | 12.32 |
| 49 | t | Hexachlorocyclopentadiene | 0.362 | 0.416 | -14.9 | 136 | 0.00 | 10.63 |
| 50 | t | 2,4,6-Trichlorophenol | 0.408 | 0.427 | -4.7 | 124 | 0.00 | 10.79 |
| 51 | t | 2,4,5-Trichlorophenol | 0.472 | 0.510 | -8.1 | 130 | 0.00 | 10.87 |
| 52 | S | 2-Fluorobiphenyl | 1.647 | 1.635 | 0.7 | 126 | 0.00 | 10.95 |
| 53 | t | 2-Chloronaphthalene | 1.290 | 1.239 | 4.0 | 121 | 0.00 | 11.12 |
| 54 | t | Biphenyl | 1.692 | 1.662 | 1.8 | 124 | 0.00 | 11.12 |
| 55 | t | 2-Nitroaniline | 0.362 | 0.368 | -1.7 | 120 | 0.00 | 11.42 |
| 56 | t | Dimethylphthalate | 1.476 | 1.509 | -2.2 | 127 | 0.00 | 11.92 |
| 57 | t | Acenaphthylene | 2.029 | 2.104 | -3.7 | 127 | 0.00 | 11.99 |
| 58 | t | 2,6-Dinitrotoluene | 0.310 | 0.330 | -6.5 | 127 | 0.00 | 12.03 |
| 59 | t | 3-Nitroaniline | 0.348 | 0.338 | 2.9 | 116 | 0.00 | 12.32 |
| 60 | t | Acenaphthene | 1.304 | 1.326 | -1.7 | 128 | 0.00 | 12.39 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 61 | t | 2,4-Dinitrophenol | 50.000 | 60.123 | -20.2# | 179 | 0.00 | 12.54 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 62 | t | 4-Nitrophenol | 0.185 | 0.163 | 11.9 | 111 | 0.02 | 12.75 |
| 63 | t | Dibenzofuran | 1.816 | 1.816 | 0.0 | 126 | 0.00 | 12.74 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 64 | t | 2,4-Dinitrotoluene | 25.000 | 25.560 | -2.2 | 126 | 0.00 | 12.88 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 65 | | 2,3,4,6-Tetrachlorophenol | 0.362 | 0.397 | -9.7 | 136 | 0.00 | 13.13 |
| 66 | t | Diethylphthalate | 1.385 | 1.410 | -1.8 | 125 | 0.00 | 13.49 |
| 67 | t | Fluorene | 1.504 | 1.534 | -2.0 | 129 | 0.00 | 13.50 |
| 68 | t | 4-Chlorophenyl-phenylethe | 0.737 | 0.740 | -0.4 | 127 | 0.00 | 13.56 |
| 69 | t | 4-Nitroaniline | 0.335 | 0.326 | 2.7 | 115 | 0.00 | 13.67 |
| 70 | I | Phenanthrene-d10 | 1.000 | 1.000 | 0.0 | 124 | 0.00 | 15.62 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 71 | t | 4,6-Dinitro-2-methylpheno | 25.000 | 28.680 | -14.7 | 154 | 0.00 | 13.78 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 72 | t | Atrazine | 0.111 | 0.121 | -9.0 | 131 | 0.00 | 15.21 |
| 73 | t | n-Nitrosodiphenylamine | 0.639 | 0.645 | -0.9 | 124 | 0.00 | 13.84 |
| 74 | t | 1,2-Diphenylhydrazine | 0.753 | 0.742 | 1.5 | 122 | 0.00 | 13.90 |
| 75 | S | 2,4,6-Tribromophenol | 0.106 | 0.123 | -16.0 | 140 | 0.00 | 14.09 |
| 76 | t | 4-Bromophenyl-phenylether | 0.255 | 0.271 | -6.3 | 131 | 0.00 | 14.65 |
| 77 | t | Hexachlorobenzene | 0.262 | 0.282 | -7.6 | 135 | 0.00 | 14.93 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 78 | t | Pentachlorophenol | 50.000 | 53.927 | -7.9 | 139 | 0.00 | 15.37 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 79 | t | Phenanthrene | 1.265 | 1.295 | -2.4 | 128 | 0.00 | 100 |

# Continuing Calibration Summary

**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EM1077-CC1070
**Lab FileID:** M35232.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 80 | t | Anthracene | 1.275 | 1.332 | -4.5 | 128 | 0.00 | 15.77 |
| 81 | t | Carbazole | 1.124 | 1.103 | 1.9 | 120 | 0.00 | 16.20 |
| 82 | t | Di-n-butylphthalate | 1.370 | 1.492 | -8.9 | 127 | 0.00 | 17.31 |
| 83 | t | Fluoranthene | 1.415 | 1.519 | -7.3 | 131 | 0.00 | 18.46 |
| 84 | t | Octadecane | 0.611 | 0.634 | -3.8 | 125 | 0.00 | 15.60 |
| 85 | I | Chrysene-d12 | 1.000 | 1.000 | 0.0 | 132 | 0.00 | 21.89 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 86 | t | Benzidine | 50.000 | 42.954 | 14.1 | 118 | 0.00 | 18.88 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 87 | t | Pyrene | 1.549 | 1.561 | -0.8 | 132 | 0.00 | 18.97 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 88 | | Butyl stearate | 25.000 | 23.369 | 6.5 | 122 | 0.00 | 21.01 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 89 | S | Terphenyl-d14 | 1.092 | 1.067 | 2.3 | 126 | 0.00 | 19.49 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 90 | t | Butylbenzylphthalate | 25.000 | 24.306 | 2.8 | 130 | 0.00 | 20.83 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 91 | t | Benzo[a]anthracene | 1.340 | 1.373 | -2.5 | 131 | 0.00 | 21.85 |
| 92 | t | 3,3'-Dichlorobenzidine | 0.377 | 0.372 | 1.3 | 124 | 0.00 | 21.91 |
| 93 | t | Chrysene | 1.239 | 1.234 | 0.4 | 131 | 0.00 | 21.94 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 94 | t | bis(2-Ethylhexyl)phthalat | 25.000 | 25.565 | -2.3 | 137 | 0.00 | 22.34 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 95 | I | Perylene-d12 | 1.000 | 1.000 | 0.0 | 141 | 0.00 | 25.04 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 96 | t | Di-n-octylphthalate | 25.000 | 24.658 | 1.4 | 142 | 0.00 | 23.72 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 97 | t | Benzo[b]fluoranthene | 2.005 | 1.952 | 2.6 | 138 | 0.00 | 24.27 |
| 98 | t | Benzo[k]fluoranthene | 1.986 | 1.976 | 0.5 | 135 | 0.00 | 24.32 |
| 99 | t | Benzo[a]pyrene | 1.744 | 1.755 | -0.6 | 140 | 0.00 | 24.91 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 100 | t | Indeno[1,2,3-cd]pyrene | 25.000 | 24.420 | 2.3 | 145 | 0.00 | 27.17 |
| 101 | t | Dibenz(a,h)acridine | 25.000 | 25.462 | -1.8 | 148 | 0.00 | 26.72 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 102 | t | Dibenz[a,h]anthracene | 1.231 | 1.382 | -12.3 | 150 | 0.00 | 27.22 |
| 103 | t | 7,12-Dimethylbenz(a)anthr | 0.879 | 0.893 | -1.6 | 140 | 0.00 | 24.33 |
| 104 | t | Benzo[g,h,i]perylene | 1.238 | 1.388 | -12.1 | 151 | 0.00 | 27.73 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
M35085.D  MM1070.M  Tue Oct 26 12:37:53 2004  GCMSM

# Continuing Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EM1086-CC1070
**Lab FileID:** M35483.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\EM1086\M35483.D
Acq On : 5 Nov 2004 9:02 am
Sample : CC1070-50
Misc : OP18485,EM1086
MS Integration Params: LSCINT.P

Vial: 2
Operator: WENDYS
Inst : MSM
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Wed Nov 03 10:39:31 2004
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 110 | -0.04 | 6.87 |
| 2 | t | 1,4-Dioxane | 0.587 | 0.579 | 1.4 | 101 | -0.05 | 3.02 |
| 3 | t | Pyridine | 1.465 | 1.330 | 9.2 | 93 | -0.04 | 3.45 |
| 4 | t | N-Nitrosodimethylamine | 0.982 | 0.882 | 10.2 | 91 | -0.06 | 3.42 |
| 5 | S | 2-Fluorophenol | 1.333 | 1.190 | 10.7 | 94 | -0.04 | 5.15 |
| 6 | t | Indene | 2.288 | 2.166 | 5.3 | 100 | -0.04 | 7.28 |
| 7 | t | Cumene | 3.031 | 2.905 | 4.2 | 101 | -0.04 | 5.79 |
| 8 | S | Phenol-d5 | 1.549 | 1.302 | 15.9 | 91 | -0.03 | 6.45 |
| 9 | t | Phenol | 1.668 | 1.354 | 18.8 | 91 | -0.03 | 6.47 |
| 10 | t | Aniline | 1.865 | 1.671 | 10.4 | 99 | -0.05 | 6.46 |
| 11 | t | bis(2-Chloroethyl)ether | 1.222 | 1.105 | 9.6 | 95 | -0.04 | 6.55 |
| 12 | | Benzaldehyde | 0.713 | 0.175 | 75.5# | 28# | -0.04 | 6.25 |
| 13 | t | 2-Chlorophenol | 1.344 | 1.173 | 12.7 | 94 | -0.04 | 6.62 |
| 14 | t | Decane | 2.148 | 1.894 | 11.8 | 97 | -0.04 | 6.69 |
| 15 | t | 1,3-Dichlorobenzene | 1.623 | 1.537 | 5.3 | 100 | -0.04 | 6.81 |
| 16 | t | 1,4-Dichlorobenzene | 1.580 | 1.478 | 6.5 | 100 | -0.04 | 6.89 |
| 17 | t | Benzyl alcohol | 0.853 | 0.752 | 11.8 | 92 | -0.04 | 7.12 |
| 18 | t | 1,2-Dichlorobenzene | 1.467 | 1.369 | 6.7 | 100 | -0.04 | 7.17 |
| 19 | t | Acetophenone | 1.780 | 1.653 | 7.1 | 98 | -0.05 | 7.51 |
| 20 | t | 2-Methylphenol | 1.201 | 0.999 | 16.8 | 90 | -0.03 | 7.33 |
| 21 | T | 2,2'-oxybis(1-Chloropropa | 0.432 | 0.384 | 11.1 | 96 | -0.04 | 7.35 |
| 22 | t | 3&4-Methylphenol | 1.267 | 1.053 | 16.9 | 91 | -0.03 | 7.55 |
| 23 | t | n-Nitroso-di-n-propylamin | 0.812 | 0.729 | 10.2 | 94 | -0.05 | 7.57 |
| 24 | t | Hexachloroethane | 0.571 | 0.551 | 3.5 | 100 | -0.04 | 7.62 |
| 25 | I | Naphthalene-d8 | 1.000 | 1.000 | 0.0 | 103 | -0.04 | 8.85 |
| 26 | S | Nitrobenzene-d5 | 0.397 | 0.371 | 6.5 | 92 | -0.05 | 7.74 |
| 27 | t | Nitrobenzene | 0.181 | 0.173 | 4.4 | 97 | -0.04 | 7.77 |
| 28 | t | Quinoline | 0.713 | 0.682 | 4.3 | 97 | -0.06 | 9.50 |
| 29 | t | Isophorone | 0.650 | 0.617 | 5.1 | 96 | -0.05 | 8.14 |
| 30 | t | 2-Nitrophenol | 0.203 | 0.205 | -1.0 | 96 | -0.04 | 8.27 |
| 31 | t | 2,4-Dimethylphenol | 0.346 | 0.328 | 5.2 | 96 | -0.04 | 8.37 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 32 | t | Benzoic acid | 50.000 | 47.310 | 5.4 | 97 | -0.06 | 8.60 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 33 | t | bis(2-Chloroethoxy)methan | 0.401 | 0.373 | 7.0 | 95 | -0.04 | 8.52 |
| 34 | t | 2,4-Dichlorophenol | 0.311 | 0.301 | 3.2 | 96 | -0.03 | 8.66 |
| 35 | t | 1,3,5-Trichlorobenzene | 0.375 | 0.360 | 4.0 | 99 | -0.04 | 8.28 |
| 36 | t | 1,2,4-Trichlorobenzene | 0.365 | 0.354 | 3.0 | 98 | -0.04 | 8.79 |
| 37 | t | 1,2,3-Trichlorobenzene | 0.343 | 0.336 | 2.0 | 100 | -0.04 | 9.02 |

# Continuing Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EM1086-CC1070
**Lab FileID:** M35483.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 38 | t | alpha-Terpineol | 0.352 | 0.327 | 7.1 | 96 | -0.04 | 8.91 |
| 39 | t | Naphthalene | 1.054 | 0.985 | 6.5 | 99 | -0.05 | 8.89 |
| 40 | t | 4-Chloroaniline | 0.442 | 0.405 | 8.4 | 94 | -0.05 | 9.04 |
| 41 | t | 2,3-Dichloroaniline | 0.382 | 0.359 | 6.0 | 98 | -0.05 | 10.77 |
| 42 | t | Caprolactam | 0.166 | 0.185 | -11.4 | 123 | -0.01 | 9.64 |
| 43 | t | Hexachlorobutadiene | 0.207 | 0.199 | 3.9 | 97 | -0.05 | 9.22 |
| 44 | t | 4-Chloro-3-methylphenol | 0.296 | 0.289 | 2.4 | 96 | -0.03 | 9.97 |
| 45 | t | 2-Methylnaphthalene | 0.779 | 0.748 | 4.0 | 98 | -0.05 | 10.14 |
| 46 | t | 1-Methylnaphthalene | 0.761 | 0.723 | 5.0 | 97 | -0.06 | 10.34 |
| 47 | t | Dimethylnaphthalene | 0.673 | 0.647 | 3.9 | 101 | -0.05 | 11.40 |
| 48 | I | Acenaphthene-d10 | 1.000 | 1.000 | 0.0 | 104 | -0.06 | 12.29 |
| 49 | t | Hexachlorocyclopentadiene | 0.362 | 0.397 | -9.7 | 98 | -0.05 | 10.60 |
| 50 | t | 2,4,6-Trichlorophenol | 0.408 | 0.406 | 0.5 | 99 | -0.04 | 10.77 |
| 51 | t | 2,4,5-Trichlorophenol | 0.472 | 0.448 | 5.1 | 96 | -0.04 | 10.85 |
| 52 | S | 2-Fluorobiphenyl | 1.647 | 1.478 | 10.3 | 95 | -0.06 | 10.93 |
| 53 | t | 2-Chloronaphthalene | 1.290 | 1.181 | 8.4 | 97 | -0.05 | 11.09 |
| 54 | t | Biphenyl | 1.692 | 1.523 | 10.0 | 97 | -0.06 | 11.09 |
| 55 | t | 2-Nitroaniline | 0.362 | 0.345 | 4.7 | 96 | -0.05 | 11.40 |
| 56 | t | Dimethylphthalate | 1.476 | 1.375 | 6.8 | 97 | -0.06 | 11.89 |
| 57 | t | Acenaphthylene | 2.029 | 1.971 | 2.9 | 102 | -0.06 | 11.96 |
| 58 | t | 2,6-Dinitrotoluene | 0.310 | 0.312 | -0.6 | 99 | -0.06 | 12.01 |
| 59 | t | 3-Nitroaniline | 0.348 | 0.326 | 6.3 | 94 | -0.06 | 12.29 |
| 60 | t | Acenaphthene | 1.304 | 1.219 | 6.5 | 100 | -0.06 | 12.36 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 61 | t | 2,4-Dinitrophenol | 100.000 | 98.527 | 1.5 | 107 | -0.05 | 12.51 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 62 | t | 4-Nitrophenol | 0.185 | 0.164 | 11.4 | 89 | -0.03 | 12.74 |
| 63 | t | Dibenzofuran | 1.816 | 1.683 | 7.3 | 100 | -0.06 | 12.71 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 64 | t | 2,4-Dinitrotoluene | 50.000 | 49.086 | 1.8 | 99 | -0.06 | 12.85 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 65 | | 2,3,4,6-Tetrachlorophenol | 0.362 | 0.364 | -0.6 | 98 | -0.05 | 13.11 |
| 66 | t | Diethylphthalate | 1.385 | 1.246 | 10.0 | 96 | -0.06 | 13.46 |
| 67 | t | Fluorene | 1.504 | 1.378 | 8.4 | 98 | -0.06 | 13.47 |
| 68 | t | 4-Chlorophenyl-phenylethe | 0.737 | 0.679 | 7.9 | 99 | -0.06 | 13.52 |
| 69 | t | 4-Nitroaniline | 0.335 | 0.316 | 5.7 | 90 | -0.07 | 13.66 |
| 70 | I | Phenanthrene-d10 | 1.000 | 1.000 | 0.0 | 100 | -0.06 | 15.59 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 71 | t | 4,6-Dinitro-2-methylpheno | 50.000 | 50.173 | -0.3 | 103 | -0.06 | 13.75 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 72 | t | Atrazine | 0.111 | 0.121 | -9.0 | 105 | -0.06 | 15.18 |
| 73 | t | n-Nitrosodiphenylamine | 0.639 | 0.626 | 2.0 | 98 | -0.06 | 13.82 |
| 74 | t | 1,2-Diphenylhydrazine | 0.753 | 0.689 | 8.5 | 95 | -0.06 | 13.88 |
| 75 | S | 2,4,6-Tribromophenol | 0.106 | 0.117 | -10.4 | 99 | -0.05 | 14.06 |
| 76 | t | 4-Bromophenyl-phenylether | 0.255 | 0.261 | -2.4 | 100 | -0.06 | 14.61 |
| 77 | t | Hexachlorobenzene | 0.262 | 0.262 | 0.0 | 99 | -0.06 | 14.90 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 78 | t | Pentachlorophenol | 100.000 | 97.296 | 2.7 | 96 | -0.05 | 15.35 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 79 | t | Phenanthrene | 1.265 | 1.210 | 4.3 | 98 | -0.06 | 15.68 |

# Continuing Calibration Summary



**Job Number:** N81296 **Sample:** EM1086-CC1070
**Account:** GODNJP Dewberry **Lab FileID:** M35483.D
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 80 | t | Anthracene | 1.275 | 1.243 | 2.5 | 99 | -0.06 | 15.74 |
| 81 | t | Carbazole | 1.124 | 1.064 | 5.3 | 95 | -0.05 | 16.17 |
| 82 | t | Di-n-butylphthalate | 1.370 | 1.352 | 1.3 | 96 | -0.06 | 17.27 |
| 83 | t | Fluoranthene | 1.415 | 1.360 | 3.9 | 96 | -0.06 | 18.43 |
| 84 | t | Octadecane | 0.611 | 0.580 | 5.1 | 94 | -0.05 | 15.57 |
| 85 | I | Chrysene-d12 | 1.000 | 1.000 | 0.0 | 100 | -0.06 | 21.85 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 86 | t | Benzidine | 100.000 | 69.139 | 30.9# | 68 | -0.05 | 18.84 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 87 | t | Pyrene | 1.549 | 1.523 | 1.7 | 98 | -0.06 | 18.94 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 88 | | Butyl stearate | 50.000 | 44.436 | 11.1 | 90 | -0.05 | 20.97 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 89 | S | Terphenyl-d14 | 1.092 | 1.024 | 6.2 | 92 | -0.06 | 19.45 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 90 | t | Butylbenzylphthalate | 50.000 | 47.114 | 5.8 | 94 | -0.06 | 20.79 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 91 | t | Benzo[a]anthracene | 1.340 | 1.320 | 1.5 | 95 | -0.05 | 21.81 |
| 92 | t | 3,3'-Dichlorobenzidine | 0.377 | 0.362 | 4.0 | 87 | -0.05 | 21.88 |
| 93 | t | Chrysene | 1.239 | 1.178 | 4.9 | 96 | -0.06 | 21.91 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 94 | t | bis(2-Ethylhexyl)phthalat | 50.000 | 46.600 | 6.8 | 95 | -0.05 | 22.30 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 95 | I | Perylene-d12 | 1.000 | 1.000 | 0.0 | 103 | -0.05 | 25.00 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 96 | t | Di-n-octylphthalate | 50.000 | 44.611 | 10.8 | 95 | -0.05 | 23.69 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 97 | t | Benzo[b]fluoranthene | 2.005 | 1.829 | 8.8 | 90 | -0.05 | 24.24 |
| 98 | t | Benzo[k]fluoranthene | 1.986 | 1.889 | 4.9 | 102 | -0.06 | 24.29 |
| 99 | t | Benzo[a]pyrene | 1.744 | 1.691 | 3.0 | 98 | -0.05 | 24.89 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 100 | t | Indeno[1,2,3-cd]pyrene | 50.000 | 47.668 | 4.7 | 99 | -0.06 | 27.13 |
| 101 | t | Dibenz(a,h)acridine | 50.000 | 49.104 | 1.8 | 99 | -0.06 | 26.69 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 102 | t | Dibenz[a,h]anthracene | 1.231 | 1.342 | -9.0 | 102 | -0.06 | 27.19 |
| 103 | t | 7,12-Dimethylbenz(a)anthr | 0.879 | 0.866 | 1.5 | 99 | -0.06 | 24.30 |
| 104 | t | Benzo[g,h,i]perylene | 1.238 | 1.398 | -12.9 | 104 | -0.07 | 27.69 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
M35082.D MM1070.M Fri Nov 05 10:17:30 2004 GCMSM

# Initial Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EP383-ICC383
**Lab FileID:** P09141.D

Response Factor Report MSP

Method : C:\MSDCHEM\1\METHODS\MP0383.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Mon Sep 20 15:56:39 2004
Response via : Initial Calibration

Calibration Files
100 =P09142.D 80 =P09143.D 50 =P09141.D 25 =P09144.D
10 =P09145.D 5 =P09146.D 2 =P09147.D

| Compound | 100 | 80 | 50 | 25 | 10 | 5 | 2 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1) I 1,4-Dichlorobenzene-d | ISTD | | | | | | | | |
| 2)t 1,4-Dioxane | 0.572 | 0.555 | 0.593 | 0.658 | 0.653 | 0.543 | 0.726 | 0.614 | 10.87 |
| 3)t Pyridine | 1.433 | 1.440 | 1.546 | 1.668 | 1.621 | 1.434 | 1.400 | 1.506 | 7.02 |
| 4)t N-Nitrosodimethyl | 0.726 | 0.725 | 0.780 | 0.811 | 0.775 | 0.643 | 0.587 | 0.721 | 11.11 |
| 5)S 2-Fluorophenol | 1.249 | 1.257 | 1.423 | 1.493 | 1.434 | 1.261 | 1.335 | 1.350 | 7.38 |
| 6)t Indene | 2.324 | 2.370 | 2.642 | 2.679 | 2.623 | 2.400 | 2.288 | 2.475 | 6.72 |
| 7)t Cumene | 3.032 | 3.054 | 3.372 | 3.500 | 3.385 | 3.083 | 3.122 | 3.221 | 5.94 |
| 8)S Phenol-d5 | 1.498 | 1.530 | 1.770 | 1.790 | 1.711 | 1.599 | 1.690 | 1.655 | 6.94 |
| 9)t Phenol | 1.717 | 1.751 | 2.002 | 2.044 | 2.031 | 1.790 | 1.715 | 1.864 | 8.23 |
| 10)t Aniline | 1.866 | 1.915 | 2.209 | 2.254 | 2.187 | 1.891 | 1.557 | 1.983 | 12.60 |
| 11)t bis(2-Chloroethyl | 1.237 | 1.256 | 1.403 | 1.465 | 1.429 | 1.342 | 1.314 | 1.350 | 6.44 |
| 12)t Benzaldehyde | | | 0.249 | 0.729 | 0.957 | 0.541 | 0.217 | 0.539 | 58.57 |
| 13)t 2-Chlorophenol | 1.347 | 1.381 | 1.557 | 1.614 | 1.608 | 1.421 | 1.359 | 1.470 | 8.10 |
| 14)t Decane | 1.463 | 1.535 | 1.689 | 1.852 | 1.792 | 1.704 | 1.688 | 1.675 | 8.12 |
| 15)t 1,3-Dichlorobenze | 1.493 | 1.527 | 1.685 | 1.755 | 1.701 | 1.547 | 1.485 | 1.599 | 6.96 |
| 16)t 1,4-Dichlorobenze | 1.524 | 1.549 | 1.714 | 1.786 | 1.751 | 1.608 | 1.604 | 1.648 | 6.20 |
| 17)t Benzyl alcohol | 0.801 | 0.823 | 0.919 | 0.907 | 0.828 | 0.772 | 0.688 | 0.820 | 9.66 |
| 18)t 1,2-Dichlorobenze | 1.438 | 1.467 | 1.619 | 1.662 | 1.613 | 1.467 | 1.417 | 1.526 | 6.63 |
| 19)t Acetophenone | 1.669 | 1.728 | 1.934 | 1.966 | 1.985 | 1.812 | 1.738 | 1.833 | 6.98 |
| 20)t 2-Methylphenol | 1.171 | 1.207 | 1.381 | 1.401 | 1.402 | 1.231 | 1.239 | 1.290 | 7.76 |
| 21)t 2,2'-oxybis(1-Chl | 0.401 | 0.413 | 0.461 | 0.477 | 0.467 | 0.427 | 0.419 | 0.438 | 6.84 |
| 22)t 3&4-Methylphenol | 1.237 | 1.297 | 1.452 | 1.466 | 1.424 | 1.261 | 1.218 | 1.336 | 8.00 |
| 23)t n-Nitroso-di-n-pr | 0.649 | 0.676 | 0.754 | 0.756 | 0.762 | 0.694 | 0.640 | 0.704 | 7.46 |
| 24)t Hexachloroethane | 0.481 | 0.498 | 0.539 | 0.568 | 0.558 | 0.524 | 0.502 | 0.524 | 6.15 |
| 25) I Naphthalene-d8 | ISTD | | | | | | | | |
| 26)S Nitrobenzene-d5 | 0.394 | 0.398 | 0.420 | 0.432 | 0.438 | 0.392 | 0.370 | 0.406 | 6.08 |
| 27)t Nitrobenzene | 0.185 | 0.183 | 0.191 | 0.193 | 0.194 | 0.166 | 0.149 | 0.180 | 9.30 |
| 28)t Quinoline | 0.666 | 0.675 | 0.708 | 0.704 | 0.726 | 0.640 | 0.607 | 0.675 | 6.20 |
| 29)t Isophorone | 0.597 | 0.608 | 0.636 | 0.648 | 0.662 | 0.598 | 0.595 | 0.621 | 4.45 |
| 30)t 2-Nitrophenol | 0.218 | 0.219 | 0.224 | 0.218 | 0.216 | 0.177 | 0.166 | 0.205 | 11.42 |
| 31)t 2,4-Dimethylpheno | 0.334 | 0.341 | 0.360 | 0.366 | 0.377 | 0.329 | 0.324 | 0.347 | 5.88 |
| 32)t Benzoic acid | 0.264 | 0.261 | 0.279 | 0.257 | 0.238 | | | 0.260 | 5.67 |
| 33)t bis(2-Chloroethox | 0.363 | 0.369 | 0.388 | 0.391 | 0.396 | 0.360 | 0.343 | 0.373 | 5.20 |
| 34)t 2,4-Dichloropheno | 0.284 | 0.287 | 0.301 | 0.300 | 0.305 | 0.258 | 0.237 | 0.282 | 8.94 |
| 35)t 1,3,5-Trichlorobe | 0.340 | 0.346 | 0.353 | 0.357 | 0.359 | 0.327 | 0.313 | 0.342 | 4.94 |
| 36)t 1,2,4-Trichlorobe | 0.319 | 0.322 | 0.334 | 0.340 | 0.344 | 0.309 | 0.313 | 0.326 | 4.11 |
| 37)t 1,2,3-Trichlorobe | 0.304 | 0.308 | 0.319 | 0.323 | 0.324 | 0.299 | 0.289 | 0.309 | 4.28 |
| 38)t alpha-Terpineol | 0.270 | 0.278 | 0.295 | 0.305 | 0.312 | 0.285 | 0.272 | 0.288 | 5.65 |
| 39)t Naphthalene | 1.099 | 1.111 | 1.167 | 1.171 | 1.184 | 1.067 | 1.066 | 1.124 | 4.46 |
| 40)t 4-Chloroaniline | 0.400 | 0.421 | 0.447 | 0.452 | 0.458 | 0.395 | 0.338 | 0.416 | 10.24 |
| 41)t 2,3-Dichloroanili | 0.341 | 0.344 | 0.355 | 0.354 | 0.370 | 0.326 | 0.311 | 0.343 | 5.69 |
| 42)t Caprolactam | 0.138 | 0.142 | 0.146 | 0.149 | 0.155 | 0.127 | 0.106 | 0.138 | 11.99 |
| 43)t Hexachlorobutadie | 0.175 | 0.181 | 0.185 | 0.192 | 0.193 | 0.179 | 0.176 | 0.183 | 3.82 |
| 44)t 4-Chloro-3-methyl | 0.275 | 0.282 | 0.297 | 0.290 | 0.299 | 0.254 | 0.232 | 0.276 | 8.89 |
| 45)t 2-Methylnaphthale | 0.714 | 0.731 | 0.759 | 0.756 | 0.778 | 0.712 | 0.706 | 0.736 | |

# Initial Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EP383-ICC383
**Lab FileID:** P09141.D

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 46)t | 1-Methylnaphthale | 0.688 | 0.711 | 0.733 | 0.726 | 0.739 | 0.682 | 0.656 | 0.705 | 4.32 |
| 47)t | Dimethylnaphthale | 0.587 | 0.608 | 0.626 | 0.615 | 0.623 | 0.554 | 0.506 | 0.589 | 7.50 |
| 48) I | Acenaphthene-d10 | ----------ISTD---------- | | | | | | | | |
| 49)t | Hexachlorocyclope | 0.360 | 0.361 | 0.362 | 0.312 | 0.262 | 0.185 | | 0.307 | 23.35 |

----- Linear regression ----- Coefficient = 0.9995
Response Ratio = -0.05339 + 0.37318 *A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 50)t | 2,4,6-Trichloroph | 0.397 | 0.409 | 0.405 | 0.401 | 0.415 | 0.344 | 0.306 | 0.382 | 10.77 |
| 51)t | 2,4,5-Trichloroph | 0.444 | 0.451 | 0.454 | 0.445 | 0.484 | 0.370 | 0.372 | 0.432 | 10.04 |
| 52)S | 2-Fluorobiphenyl | 1.535 | 1.562 | 1.582 | 1.582 | 1.672 | 1.481 | 1.474 | 1.556 | 4.37 |
| 53)t | 2-Chloronaphthale | 1.266 | 1.285 | 1.298 | 1.283 | 1.338 | 1.198 | 1.170 | 1.263 | 4.65 |
| 54)t | Biphenyl | 1.705 | 1.752 | 1.753 | 1.746 | 1.832 | 1.627 | 1.593 | 1.715 | 4.77 |
| 55)t | 2-Nitroaniline | 0.367 | 0.390 | 0.383 | 0.389 | 0.392 | 0.294 | 0.279 | 0.356 | 13.58 |
| 56)t | Dimethylphthalate | 1.303 | 1.364 | 1.352 | 1.369 | 1.464 | 1.310 | 1.274 | 1.348 | 4.60 |
| 57)t | Acenaphthylene | 2.116 | 2.174 | 2.172 | 2.144 | 2.200 | 1.942 | 1.817 | 2.081 | 6.95 |
| 58)t | 2,6-Dinitrotoluen | 0.305 | 0.309 | 0.308 | 0.297 | 0.307 | 0.258 | 0.210 | 0.285 | 13.13 |
| 59)t | 3-Nitroaniline | 0.323 | 0.343 | 0.348 | 0.348 | 0.361 | 0.290 | 0.230 | 0.321 | 14.39 |
| 60)t | Acenaphthene | 1.338 | 1.368 | 1.360 | 1.353 | 1.411 | 1.260 | 1.249 | 1.334 | 4.43 |
| 61)t | 2,4-Dinitrophenol | 0.202 | 0.199 | 0.189 | 0.151 | 0.122 | | | 0.173 | 20.08 |

----- Linear regression ----- Coefficient = 0.9992
Response Ratio = -0.05987 + 0.21330 *A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 62)t | 4-Nitrophenol | 0.189 | 0.196 | 0.183 | 0.170 | 0.156 | | | 0.179 | 8.95 |
| 63)t | Dibenzofuran | 1.702 | 1.756 | 1.744 | 1.734 | 1.852 | 1.670 | 1.579 | 1.720 | 4.88 |
| 64)t | 2,4-Dinitrotoluen | 0.410 | 0.418 | 0.418 | 0.401 | 0.417 | 0.343 | 0.268 | 0.382 | 14.93 |
| 65) | 2,3,4,6-Tetrachlo | 0.320 | 0.330 | 0.322 | 0.312 | 0.317 | 0.279 | | 0.313 | 5.74 |
| 66)t | Diethylphthalate | 1.269 | 1.343 | 1.306 | 1.323 | 1.431 | 1.301 | 1.234 | 1.315 | 4.74 |
| 67)t | Fluorene | 1.422 | 1.466 | 1.452 | 1.421 | 1.513 | 1.320 | 1.262 | 1.408 | 6.20 |
| 68)t | 4-Chlorophenyl-ph | 0.611 | 0.644 | 0.634 | 0.626 | 0.667 | 0.606 | 0.586 | 0.625 | 4.28 |
| 69)t | 4-Nitroaniline | 0.291 | 0.306 | 0.329 | 0.328 | 0.348 | 0.282 | 0.219 | 0.300 | 14.18 |
| 70) I | Phenanthrene-d10 | ----------ISTD---------- | | | | | | | | |
| 71)t | 4,6-Dinitro-2-met | 0.162 | 0.159 | 0.153 | 0.133 | 0.119 | | | 0.145 | 12.81 |
| 72)t | Atrazine | 0.086 | 0.090 | 0.088 | 0.088 | 0.094 | 0.079 | 0.069 | 0.085 | 9.79 |
| 73)t | n-Nitrosodiphenyl | 0.597 | 0.611 | 0.604 | 0.593 | 0.631 | 0.562 | 0.538 | 0.591 | 5.30 |
| 74)t | 1,2-Diphenylhydra | 0.845 | 0.881 | 0.871 | 0.905 | 0.971 | 0.889 | 0.850 | 0.887 | 4.81 |
| 75)S | 2,4,6-Tribromophe | 0.110 | 0.111 | 0.112 | 0.110 | 0.111 | 0.103 | 0.097 | 0.108 | 5.27 |
| 76)t | 4-Bromophenyl-phe | 0.228 | 0.232 | 0.227 | 0.225 | 0.231 | 0.213 | 0.198 | 0.222 | 5.49 |
| 77)t | Hexachlorobenzene | 0.234 | 0.240 | 0.237 | 0.236 | 0.257 | 0.229 | 0.233 | 0.238 | 3.79 |
| 78)t | Pentachlorophenol | 0.167 | 0.168 | 0.164 | 0.153 | 0.146 | 0.103 | | 0.150 | 16.52 |

----- Linear regression ----- Coefficient = 0.9999
Response Ratio = -0.01701 + 0.17085 *A

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 79)t | Phenanthrene | 1.280 | 1.300 | 1.280 | 1.252 | 1.319 | 1.198 | 1.159 | 1.255 | 4.58 |
| 80)t | Anthracene | 1.301 | 1.312 | 1.305 | 1.279 | 1.363 | 1.192 | 1.156 | 1.273 | 5.71 |
| 81)t | Carbazole | 0.925 | 0.977 | 1.063 | 1.094 | 1.191 | 1.012 | 0.948 | 1.030 | 9.04 |
| 82)t | Di-n-butylphthala | 1.306 | 1.364 | 1.300 | 1.272 | 1.314 | 1.140 | 1.003 | 1.243 | 10.16 |
| 83)t | Fluoranthene | 1.321 | 1.331 | 1.296 | 1.242 | 1.301 | 1.126 | 1.027 | 1.235 | 9.35 |
| 84)t | Octadecane | 0.479 | 0.511 | 0.505 | 0.510 | 0.525 | 0.486 | 0.429 | 0.492 | 6.50 |
| 85) I | Chrysene-d12 | ----------ISTD---------- | | | | | | | | |
| 86)t | Benzidine | 0.173 | 0.203 | 0.201 | 0.282 | 0.291 | 0.216 | | 0.227 | 20.95 |
| 87)t | Pyrene | 1.447 | 1.475 | 1.486 | 1.477 | 1.540 | 1.349 | 1.259 | 1.433 | 6.71 |
| 88) | Butyl stearate | 0.279 | 0.302 | 0.298 | 0.278 | 0.279 | 0.218 | | 0.276 | 10.97 |
| 89)S | Terphenyl-d14 | 0.926 | 0.959 | 0.968 | 0.951 | 1.012 | 0.896 | 0.840 | 0.936 | 5.91 |
| 90)t | Butylbenzylphthal | 0.578 | 0.599 | 0.587 | 0.557 | 0.561 | 0.469 | 0.395 | 0.535 | 14.02 |
| 91)t | Benzo[a]anthracen | 1.249 | 1.257 | 1.254 | 1.205 | 1.279 | 1.105 | 1.061 | 1.201 | 7.05 |
| 92)t | 3,3'-Dichlorobenz | 0.338 | 0.367 | 0.367 | 0.374 | 0.401 | 0.307 | | 0.359 | 9.10 |
| 93)t | Chrysene | 1.237 | 1.247 | 1.255 | 1.241 | 1.356 | 1.206 | 1.192 | 1.248 | |

# Continuing Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EP420-CC383
**Lab FileID:** P10151.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\EP0420\P10151.D  Vial: 2
Acq On : 5 Nov 2004 10:31 am  Operator: NINAP
Sample : CC383-50  Inst : MSP
Misc : OP18548,EP420  Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\MP0383.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Wed Nov 03 11:22:05 2004
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 148 | -0.02 | 5.19 |
| 2 | t | 1,4-Dioxane | 0.614 | 0.531 | 13.5 | 132 | -0.02 | 1.89 |
| 3 | t | Pyridine | 1.506 | 1.346 | 10.6 | 129 | -0.02 | 2.14 |
| 4 | t | N-Nitrosodimethylamine | 0.721 | 0.643 | 10.8 | 122 | 0.00 | 2.13 |
| 5 | S | 2-Fluorophenol | 1.350 | 1.421 | -5.3 | 148 | -0.02 | 3.41 |
| 6 | t | Indene | 2.475 | 2.581 | -4.3 | 144 | -0.02 | 5.70 |
| 7 | t | Cumene | 3.221 | 2.899 | 10.0 | 127 | -0.02 | 4.00 |
| 8 | S | Phenol-d5 | 1.655 | 1.636 | 1.1 | 137 | -0.01 | 4.77 |
| 9 | t | Phenol | 1.864 | 1.791 | 3.9 | 132 | -0.01 | 4.79 |
| 10 | t | Aniline | 1.983 | 1.778 | 10.3 | 119 | -0.02 | 4.74 |
| 11 | t | bis(2-Chloroethyl)ether | 1.350 | 1.365 | -1.1 | 144 | -0.02 | 4.85 |
| 12 | t | Benzaldehyde | 0.539 | 0.662 | -22.8# | 392# | -0.01 | 4.51 |
| 13 | t | 2-Chlorophenol | 1.470 | 1.540 | -4.8 | 146 | -0.01 | 4.92 |
| 14 | t | Decane | 1.675 | 1.391 | 17.0 | 122 | -0.02 | 5.00 |
| 15 | t | 1,3-Dichlorobenzene | 1.599 | 1.681 | -5.1 | 147 | -0.01 | 5.13 |
| 16 | t | 1,4-Dichlorobenzene | 1.648 | 1.721 | -4.4 | 148 | -0.02 | 5.22 |
| 17 | t | Benzyl alcohol | 0.820 | 0.832 | -1.5 | 134 | -0.01 | 5.54 |
| 18 | t | 1,2-Dichlorobenzene | 1.526 | 1.608 | -5.4 | 147 | -0.02 | 5.55 |
| 19 | t | Acetophenone | 1.833 | 1.849 | -0.9 | 141 | -0.02 | 6.02 |
| 20 | t | 2-Methylphenol | 1.290 | 1.273 | 1.3 | 136 | -0.01 | 5.84 |
| 21 | t | 2,2'-oxybis(1-Chloropropa | 0.438 | 0.461 | -5.3 | 148 | -0.01 | 5.83 |
| 22 | t | 3&4-Methylphenol | 1.336 | 1.364 | -2.1 | 139 | -0.01 | 6.14 |
| 23 | t | n-Nitroso-di-n-propylamin | 0.704 | 0.663 | 5.8 | 130 | -0.01 | 6.10 |
| 24 | t | Hexachloroethane | 0.524 | 0.535 | -2.1 | 147 | -0.02 | 6.11 |
| 25 | I | Naphthalene-d8 | 1.000 | 1.000 | 0.0 | 146 | -0.02 | 7.70 |
| 26 | S | Nitrobenzene-d5 | 0.406 | 0.385 | 5.2 | 134 | -0.02 | 6.30 |
| 27 | t | Nitrobenzene | 0.180 | 0.192 | -6.7 | 147 | -0.01 | 6.33 |
| 28 | t | Quinoline | 0.675 | 0.716 | -6.1 | 148 | -0.02 | 8.52 |
| 29 | t | Isophorone | 0.621 | 0.597 | 3.9 | 137 | -0.01 | 6.81 |
| 30 | t | 2-Nitrophenol | 0.205 | 0.227 | -10.7 | 148 | -0.02 | 6.98 |
| 31 | t | 2,4-Dimethylphenol | 0.347 | 0.340 | 2.0 | 138 | -0.01 | 7.19 |
| 32 | t | Benzoic acid | 0.260 | 0.239 | 8.1 | 125 | 0.00 | 7.63 |
| 33 | t | bis(2-Chloroethoxy)methan | 0.373 | 0.376 | -0.8 | 141 | -0.02 | 7.36 |
| 34 | t | 2,4-Dichlorophenol | 0.282 | 0.307 | -8.9 | 149 | -0.02 | 7.51 |
| 35 | t | 1,3,5-Trichlorobenzene | 0.342 | 0.350 | -2.3 | 145 | -0.02 | 6.98 |
| 36 | t | 1,2,4-Trichlorobenzene | 0.326 | 0.338 | -3.7 | 148 | -0.02 | 7.64 |
| 37 | t | 1,2,3-Trichlorobenzene | 0.309 | 0.320 | -3.6 | 146 | -0.02 | 8.15 |
| 38 | t | alpha-Terpineol | 0.288 | 0.260 | 9.7 | 129 | -0.02 | 7.82 |
| 39 | t | Naphthalene | 1.124 | 1.142 | -1.6 | 143 | -0.02 | 7.74 |
| 40 | t | 4-Chloroaniline | 0.416 | 0.414 | 0.5 | 135 | -0.02 | 8.00 |
| 41 | t | 2,3-Dichloroaniline | 0.343 | 0.363 | -5.8 | 149 | -0.02 | [illegible] |

# Continuing Calibration Summary



**Job Number:** N81296
**Account:** GODNJP Dewberry
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

**Sample:** EP420-CC383
**Lab FileID:** P10151.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 42 | t | Caprolactam | 0.138 | 0.129 | 6.5 | 129 | 0.03 | 8.76 |
| 43 | t | Hexachlorobutadiene | 0.183 | 0.180 | 1.6 | 142 | -0.02 | 8.19 |
| 44 | t | 4-Chloro-3-methylphenol | 0.276 | 0.292 | -5.8 | 143 | -0.01 | 9.24 |
| 45 | t | 2-Methylnaphthalene | 0.736 | 0.809 | -9.9 | 156 | -0.02 | 9.29 |
| 46 | t | 1-Methylnaphthalene | 0.705 | 0.752 | -6.7 | 150 | -0.02 | 9.52 |
| 47 | t | Dimethylnaphthalene | 0.589 | 0.641 | -8.8 | 149 | -0.02 | 10.75 |
| 48 | I | Acenaphthene-d10 | 1.000 | 1.000 | 0.0 | 149 | -0.02 | 11.70 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 49 | t | Hexachlorocyclopentadiene | 100.000 | 84.210 | 15.8 | 120 | -0.02 | 9.83 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 50 | t | 2,4,6-Trichlorophenol | 0.382 | 0.400 | -4.7 | 147 | -0.02 | 10.08 |
| 51 | t | 2,4,5-Trichlorophenol | 0.432 | 0.462 | -6.9 | 151 | -0.02 | 10.19 |
| 52 | S | 2-Fluorobiphenyl | 1.556 | 1.602 | -3.0 | 150 | -0.02 | 10.24 |
| 53 | t | 2-Chloronaphthalene | 1.263 | 1.276 | -1.0 | 146 | -0.02 | 10.38 |
| 54 | t | Biphenyl | 1.715 | 1.748 | -1.9 | 148 | -0.02 | 10.41 |
| 55 | t | 2-Nitroaniline | 0.356 | 0.327 | 8.1 | 127 | -0.02 | 10.79 |
| 56 | t | Dimethylphthalate | 1.348 | 1.323 | 1.9 | 145 | -0.02 | 11.36 |
| 57 | t | Acenaphthylene | 2.081 | 2.140 | -2.8 | 146 | -0.02 | 11.33 |
| 58 | t | 2,6-Dinitrotoluene | 0.285 | 0.321 | -12.6 | 155 | -0.02 | 11.48 |
| 59 | t | 3-Nitroaniline | 0.321 | 0.308 | 4.0 | 132 | -0.02 | 11.79 |
| 60 | t | Acenaphthene | 1.334 | 1.340 | -0.4 | 146 | -0.02 | 11.77 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 61 | t | 2,4-Dinitrophenol | 100.000 | 107.431 | -7.4 | 161 | -0.01 | 12.05 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 62 | t | 4-Nitrophenol | 0.179 | 0.124 | 30.7# | 100 | 0.00 | 12.45 |
| 63 | t | Dibenzofuran | 1.720 | 1.754 | -2.0 | 149 | -0.02 | 12.16 |
| 64 | t | 2,4-Dinitrotoluene | 0.382 | 0.435 | -13.9 | 155 | -0.01 | 12.40 |
| 65 | | 2,3,4,6-Tetrachlorophenol | 0.313 | 0.320 | -2.2 | 148 | -0.02 | 12.63 |
| 66 | t | Diethylphthalate | 1.315 | 1.278 | 2.8 | 145 | -0.02 | 13.04 |
| 67 | t | Fluorene | 1.408 | 1.479 | -5.0 | 151 | -0.02 | 12.96 |
| 68 | t | 4-Chlorophenyl-phenylethe | 0.625 | 0.637 | -1.9 | 149 | -0.02 | 13.05 |
| 69 | t | 4-Nitroaniline | 0.300 | 0.276 | 8.0 | 125 | -0.02 | 13.25 |
| 70 | I | Phenanthrene-d10 | 1.000 | 1.000 | 0.0 | 153 | -0.02 | 15.13 |
| 71 | t | 4,6-Dinitro-2-methylpheno | 0.145 | 0.162 | -11.7 | 161 | 0.00 | 13.35 |
| 72 | t | Atrazine | 0.085 | 0.071 | 16.5 | 123 | -0.02 | 14.82 |
| 73 | t | n-Nitrosodiphenylamine | 0.591 | 0.607 | -2.7 | 153 | -0.02 | 13.38 |
| 74 | t | 1,2-Diphenylhydrazine | 0.887 | 0.776 | 12.5 | 136 | -0.02 | 13.42 |
| 75 | S | 2,4,6-Tribromophenol | 0.108 | 0.108 | 0.0 | 148 | -0.02 | 13.59 |
| 76 | t | 4-Bromophenyl-phenylether | 0.222 | 0.231 | -4.1 | 155 | -0.02 | 14.18 |
| 77 | t | Hexachlorobenzene | 0.238 | 0.232 | 2.5 | 150 | -0.02 | 14.45 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 78 | t | Pentachlorophenol | 100.000 | 91.255 | 8.7 | 139 | -0.02 | 14.94 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 79 | t | Phenanthrene | 1.255 | 1.263 | -0.6 | 151 | -0.02 | 15.18 |
| 80 | t | Anthracene | 1.273 | 1.276 | -0.2 | 149 | -0.02 | 15.29 |
| 81 | t | Carbazole | 1.030 | 0.849 | 17.6 | 122 | -0.02 | 15.77 |
| 82 | t | Di-n-butylphthalate | 1.243 | 1.293 | -4.0 | 152 | -0.02 | 16.92 |
| 83 | t | Fluoranthene | 1.235 | 1.291 | -4.5 | 152 | -0.02 | 17.98 |
| 84 | t | Octadecane | 0.492 | 0.469 | 4.7 | 142 | -0.02 | 15.23 |
| 85 | I | Chrysene-d12 | 1.000 | 1.000 | 0.0 | 139 | -0.01 | 20.90 |
| 86 | t | Benzidine | 0.227 | 0.074 | 67.4# | 51 | -0.02 | [illegible] |

# Continuing Calibration Summary

**Job Number:** N81296 **Sample:** EP420-CC383
**Account:** GODNJP Dewberry **Lab FileID:** P10151.D
**Project:** Atlantic States Cast Iron Pipe, Phillipsburg, NJ

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 87 | t | Pyrene | 1.433 | 1.588 | -10.8 | 148 | -0.02 | 18.45 |
| 88 | | Butyl stearate | 0.276 | 0.305 | -10.5 | 142 | -0.01 | 20.27 |
| 89 | S | Terphenyl-d14 | 0.936 | 1.042 | -11.3 | 150 | -0.02 | 18.96 |
| 90 | t | Butylbenzylphthalate | 0.535 | 0.593 | -10.8 | 141 | -0.02 | 20.10 |
| 91 | t | Benzo[a]anthracene | 1.201 | 1.270 | -5.7 | 141 | -0.01 | 20.87 |
| 92 | t | 3,3'-Dichlorobenzidine | 0.359 | 0.327 | 8.9 | 124 | -0.01 | 20.94 |
| 93 | t | Chrysene | 1.248 | 1.220 | 2.2 | 135 | -0.01 | 20.94 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 94 | t | bis(2-Ethylhexyl)phthalat | 50.000 | 48.071 | 3.9 | 134 | -0.02 | 21.26 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 95 | I | Perylene-d12 | 1.000 | 1.000 | 0.0 | 126 | -0.01 | 23.20 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 96 | t | Di-n-octylphthalate | 50.000 | 51.966 | -3.9 | 130 | -0.02 | 22.26 |
| 97 | t | Benzo[b]fluoranthene | 50.000 | 52.945 | -5.9 | 133 | -0.01 | 22.66 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 98 | t | Benzo[k]fluoranthene | 1.935 | 1.794 | 7.3 | 120 | 0.00 | 22.70 |
| 99 | t | Benzo[a]pyrene | 1.604 | 1.639 | -2.2 | 125 | -0.01 | 23.12 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 100 | t | Indeno[1,2,3-cd]pyrene | 50.000 | 45.700 | 8.6 | 115 | -0.01 | 24.72 |
| 101 | t | Dibenz(a,h)acridine | 50.000 | 46.404 | 7.2 | 118 | -0.01 | 24.39 |
| 102 | t | Dibenz[a,h]anthracene | 50.000 | 46.104 | 7.8 | 116 | -0.02 | 24.74 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 103 | t | 7,12-Dimethylbenz(a)anthr | 0.776 | 0.776 | 0.0 | 121 | 0.00 | 22.69 |
| 104 | t | Benzo[g,h,i]perylene | 1.440 | 1.413 | 1.9 | 115 | -0.01 | 25.12 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
P10107.D MP0383.M Fri Nov 05 11:04:01 2004 MSP

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\EM1086\M35485.D
Acq On : 5 Nov 2004 10:14 am
Sample : N81296-1
Misc : OP18476,EM1086,1000
MS Integration Params: LSCINT.P
Quant Time: Nov 5 13:24 2004

Vial: 4
Operator: WENDYS
Inst : MSM
Multiplr: 1.00

Quant Results File: MM1070.RES

Quant Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Thu Nov 04 12:54:25 2004
Response via : Initial Calibration
DataAcq Meth : MM1070

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 6.86 | 152 | 344217 | 40.00 ppb | -0.05 |
| 25) Naphthalene-d8 | 8.85 | 136 | 1226004 | 40.00 ppb | -0.05 |
| 48) Acenaphthene-d10 | 12.29 | 164 | 672915 | 40.00 ppb | -0.05 |
| 70) Phenanthrene-d10 | 15.58 | 188 | 1092060 | 40.00 ppb | -0.06 |
| 85) Chrysene-d12 | 21.85 | 240 | 989680 | 40.00 ppb | -0.06 |
| 95) Perylene-d12 | 25.00 | 264 | 613863 | 40.00 ppb | -0.05 |

System Monitoring Compounds

| | | | | | |
|---|---|---|---|---|---|
| 5) 2-Fluorophenol | 0.00 | 112 | 0 | 0.00 ppb | |
| Spiked Amount 50.000 | | | Recovery = | 0.00% | |
| 8) Phenol-d5 | 0.00 | 99 | 0 | 0.00 ppb | |
| Spiked Amount 50.000 | | | Recovery = | 0.00% | |
| 26) Nitrobenzene-d5 | 7.74 | 82 | 399034 | 32.77 ppb | -0.05 |
| Spiked Amount 50.000 | | | Recovery = | 65.54% | |
| 52) 2-Fluorobiphenyl | 10.92 | 172 | 955811 | 34.50 ppb | -0.06 |
| Spiked Amount 50.000 | | | Recovery = | 69.00% | |
| 75) 2,4,6-Tribromophenol | 0.00 | 330 | 0 | 0.00 ppb | |
| Spiked Amount 50.000 | | | Recovery = | 0.00% | |
| 89) Terphenyl-d14 | 19.46 | 244 | 954305 | 35.31 ppb | -0.05 |
| Spiked Amount 50.000 | | | Recovery = | 70.62% | |

Target Compounds Qvalue

0 ug/ton

(#) = qualifier out of range (m) = manual integration
M35485.D MM1070.M Fri Nov 05 13:24:25 2004 GCMSM

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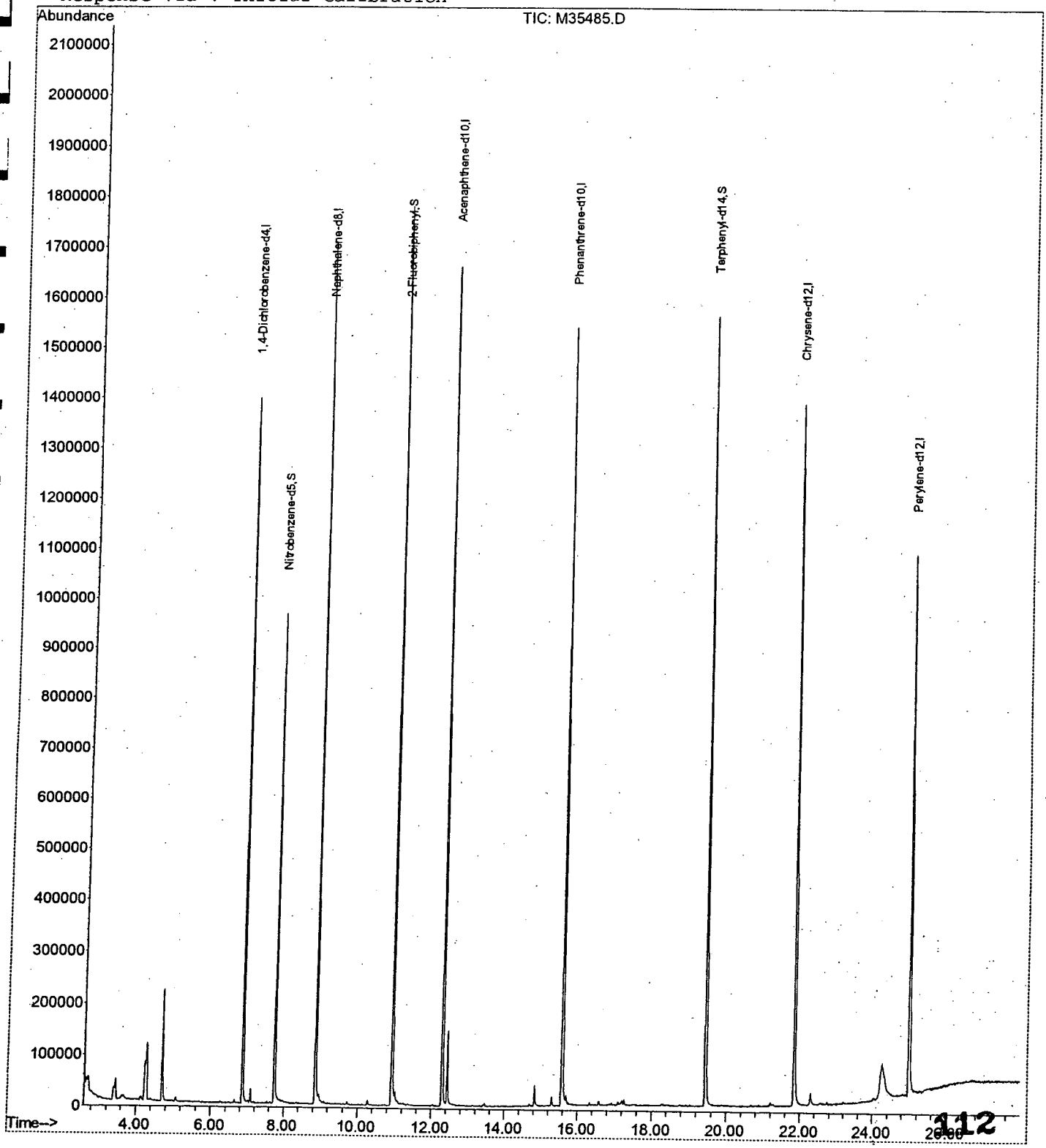
Quantitation Report

Data File : C:\HPCHEM\1\DATA\EM1086\M35485.D
Acq On : 5 Nov 2004 10:14 am
Sample : N81296-1
Misc : OP18476,EM1086,1000
MS Integration Params: LSCINT.P
Quant Time: Nov 5 13:24 2004

Vial: 4
Operator: WENDYS
Inst : MSM
Multiplr: 1.00
Quant Results File: MM1070.RES

Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Thu Nov 04 12:54:25 2004
Response via : Initial Calibration

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LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\EM1086\M35485.D  Vial: 4
Acq On : 5 Nov 2004 10:14 am  Operator: WENDYS
Sample : N81296-1  Inst : MSM
Misc : OP18476,EM1086,1000  Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Smoothing : ON  Filtering: 5
Sampling : 1  Min Area: 1000 Area counts
Start Thrs: 0.02  Max Peaks: 100
Stop Thrs : 0  Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.633 | 5 | 8 | 15 | rBV7 | 11586 | 31343 | 1.08% | 0.125% |
| 2 | 2.697 | 15 | 20 | 37 | rVB5 | 30317 | 103037 | 3.56% | 0.412% |
| 3 | 2.804 | 38 | 40 | 50 | rVB10 | 7298 | 13147 | 0.45% | 0.053% |
| 4 | 3.023 | 75 | 81 | 87 | rBV9 | 2166 | 5431 | 0.19% | 0.022% |
| 5 | 3.173 | 107 | 109 | 120 | rVB9 | 2472 | 6785 | 0.23% | 0.027% |
| 6 | 3.403 | 142 | 152 | 156 | rBV2 | 26224 | 59909 | 2.07% | 0.240% |
| 7 | 3.456 | 156 | 162 | 172 | rVV4 | 41102 | 105031 | 3.63% | 0.420% |
| 8 | 3.568 | 179 | 183 | 186 | rVV6 | 3037 | 4805 | 0.17% | 0.019% |
| 9 | 3.627 | 189 | 194 | 198 | rVV7 | 7379 | 15323 | 0.53% | 0.061% |
| 10 | 3.675 | 198 | 203 | 219 | rVB7 | 8296 | 25942 | 0.90% | 0.104% |
| 11 | 3.819 | 224 | 230 | 234 | rVB8 | 2230 | 4307 | 0.15% | 0.017% |
| 12 | 4.140 | 282 | 290 | 301 | rVV9 | 6928 | 17477 | 0.60% | 0.070% |
| 13 | 4.236 | 301 | 308 | 311 | rVV3 | 76432 | 149933 | 5.18% | 0.600% |
| 14 | 4.279 | 311 | 316 | 329 | rVV4 | 110997 | 277091 | 9.58% | 1.109% |
| 15 | 4.391 | 332 | 337 | 351 | rVB6 | 4016 | 11075 | 0.38% | 0.044% |
| 16 | 4.695 | 387 | 394 | 413 | rBV | 216021 | 371952 | 12.86% | 1.488% |
| 17 | 5.069 | 456 | 464 | 476 | rBV5 | 8463 | 23051 | 0.80% | 0.092% |
| 18 | 6.261 | 680 | 687 | 698 | rBV9 | 4185 | 8956 | 0.31% | 0.036% |
| 19 | 6.485 | 722 | 729 | 741 | rVB9 | 2770 | 8858 | 0.31% | 0.035% |
| 20 | 6.656 | 757 | 761 | 768 | rVV3 | 6648 | 8979 | 0.31% | 0.036% |
| 21 | 6.752 | 776 | 779 | 784 | rVB6 | 2700 | 4113 | 0.14% | 0.016% |
| 22 | 6.864 | 792 | 800 | 824 | rBV | 1392317 | 2086389 | 72.12% | 8.349% |
| 23 | 7.014 | 824 | 828 | 834 | rVV9 | 6134 | 12725 | 0.44% | 0.051% |
| 24 | 7.089 | 834 | 842 | 853 | rVV | 27816 | 43502 | 1.50% | 0.174% |
| 25 | 7.169 | 853 | 857 | 865 | rVB9 | 3002 | 4530 | 0.16% | 0.018% |
| 26 | 7.548 | 924 | 928 | 933 | rVB4 | 4184 | 5413 | 0.19% | 0.022% |
| 27 | 7.633 | 938 | 944 | 949 | rVB6 | 4238 | 6742 | 0.23% | 0.027% |
| 28 | 7.735 | 954 | 963 | 986 | rBV | 962876 | 1325623 | 45.82% | 5.305% |
| 29 | 7.959 | 1002 | 1005 | 1017 | rVB | 3719 | 9687 | 0.33% | 0.039% |
| 30 | 8.120 | 1032 | 1035 | 1042 | rVB8 | 2871 | 5790 | 0.20% | 0.023% |
| 31 | 8.846 | 1162 | 1171 | 1187 | rBV | 1704837 | 2473608 | 85.51% | 9.898% |
| 32 | 8.948 | 1187 | 1190 | 1199 | rVB2 | 13600 | 29750 | 1.03% | 0.119% |
| 33 | 9.092 | 1213 | 1217 | 1231 | rVB2 | 4256 | 9730 | 0.34% | 0.039% |
| 34 | 9.722 | 1328 | 1335 | 1342 | rVB3 | 6471 | 10195 | 0.35% | 0.041% |
| 35 | 10.278 | 1432 | 1439 | 1452 | rBV2 | 10177 | 21291 | 0.74% | 0.085% |
| 36 | 10.684 | 1504 | 1515 | 1517 | rBV8 | 2287 | 5060 | 0.17% | 0.020% |
| 37 | 10.924 | 1546 | 1560 | 1572 | rBV | 1775936 | 2734262 | 94.52% | 10.941% |
| 38 | 11.010 | 1572 | 1576 | 1588 | rVV3 | 24840 | 66375 | 2.29% | 0.266% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39 | 11.095 | 1588 | 1592 | 1598 | rVB8 | 5054 | 9235 | 0.32% | 0.037% |
| 40 | 11.234 | 1615 | 1618 | 1623 | rVB7 | 3706 | 5282 | 0.18% | 0.021% |
| 41 | 11.357 | 1635 | 1641 | 1644 | rBV8 | 3232 | 5671 | 0.20% | 0.023% |
| 42 | 11.410 | 1649 | 1651 | 1661 | rVV8 | 1930 | 4530 | 0.16% | 0.018% |
| 43 | 12.046 | 1759 | 1770 | 1777 | rVB8 | 4736 | 11601 | 0.40% | 0.046% |
| 44 | 12.292 | 1804 | 1816 | 1834 | rBV2 | 1657397 | 2821654 | 97.54% | 11.291% |
| 45 | 12.431 | 1834 | 1842 | 1858 | rVV | 142672 | 260212 | 8.99% | 1.041% |
| 46 | 12.532 | 1859 | 1861 | 1869 | rVB9 | 2451 | 5102 | 0.18% | 0.020% |
| 47 | 13.131 | 1969 | 1973 | 1982 | rVB9 | 2473 | 4877 | 0.17% | 0.020% |
| 48 | 13.414 | 2020 | 2026 | 2027 | rBV5 | 3403 | 4763 | 0.16% | 0.019% |
| 49 | 13.462 | 2027 | 2035 | 2043 | rVB5 | 6321 | 13740 | 0.47% | 0.055% |
| 50 | 14.065 | 2140 | 2148 | 2154 | rBV5 | 2282 | 5609 | 0.19% | 0.022% |
| 51 | 14.685 | 2255 | 2264 | 2271 | rBV5 | 5379 | 8775 | 0.30% | 0.035% |
| 52 | 14.824 | 2283 | 2290 | 2307 | rBV2 | 39874 | 81511 | 2.82% | 0.326% |
| 53 | 15.177 | 2352 | 2356 | 2364 | rVB2 | 2469 | 6042 | 0.21% | 0.024% |
| 54 | 15.246 | 2364 | 2369 | 2371 | rBV6 | 2452 | 4122 | 0.14% | 0.016% |
| 55 | 15.299 | 2371 | 2379 | 2386 | rBV2 | 18166 | 30908 | 1.07% | 0.124% |
| 56 | 15.577 | 2419 | 2431 | 2446 | rBV2 | 1534557 | 2842106 | 98.24% | 11.373% |
| 57 | 15.684 | 2446 | 2451 | 2462 | rVV2 | 19828 | 52110 | 1.80% | 0.209% |
| 58 | 15.754 | 2462 | 2464 | 2470 | rVB7 | 3418 | 4368 | 0.15% | 0.017% |
| 59 | 16.090 | 2523 | 2527 | 2532 | rBV8 | 2220 | 4328 | 0.15% | 0.017% |
| 60 | 16.336 | 2565 | 2573 | 2578 | rBV4 | 5699 | 8426 | 0.29% | 0.034% |
| 61 | 16.592 | 2613 | 2621 | 2630 | rBV | 8489 | 18256 | 0.63% | 0.073% |
| 62 | 16.929 | 2679 | 2684 | 2688 | rVB8 | 4868 | 5902 | 0.20% | 0.024% |
| 63 | 17.100 | 2710 | 2716 | 2722 | rVV8 | 7040 | 13791 | 0.48% | 0.055% |
| 64 | 17.159 | 2722 | 2727 | 2730 | rVV7 | 4723 | 8515 | 0.29% | 0.034% |
| 65 | 17.212 | 2731 | 2737 | 2742 | rVV9 | 9325 | 19778 | 0.68% | 0.079% |
| 66 | 17.265 | 2742 | 2747 | 2754 | rVV2 | 10646 | 20373 | 0.70% | 0.082% |
| 67 | 17.549 | 2794 | 2800 | 2807 | rVB2 | 2850 | 7517 | 0.26% | 0.030% |
| 68 | 18.275 | 2930 | 2936 | 2941 | rBV9 | 4857 | 9686 | 0.33% | 0.039% |
| 69 | 18.419 | 2957 | 2963 | 2968 | rBV10 | 3261 | 6550 | 0.23% | 0.026% |
| 70 | 18.767 | 3022 | 3028 | 3036 | rVB10 | 3434 | 7652 | 0.26% | 0.031% |
| 71 | 18.927 | 3052 | 3058 | 3063 | rVB9 | 3671 | 7312 | 0.25% | 0.029% |
| 72 | 19.034 | 3071 | 3078 | 3081 | rBV8 | 3487 | 5934 | 0.21% | 0.024% |
| 73 | 19.456 | 3145 | 3157 | 3180 | rBV2 | 1556507 | 2892904 | 100.00% | 11.576% |
| 74 | 20.684 | 3381 | 3387 | 3393 | rVV4 | 3891 | 7940 | 0.27% | 0.032% |
| 75 | 21.203 | 3473 | 3484 | 3488 | rBV4 | 8447 | 20008 | 0.69% | 0.080% |
| 76 | 21.240 | 3488 | 3491 | 3493 | rVV4 | 3898 | 4945 | 0.17% | 0.020% |
| 77 | 21.272 | 3493 | 3497 | 3504 | rVB10 | 4568 | 9877 | 0.34% | 0.040% |
| 78 | 21.849 | 3592 | 3605 | 3629 | rBV | 1379961 | 2705432 | 93.52% | 10.826% |
| 79 | 22.292 | 3673 | 3688 | 3701 | rBV3 | 24345 | 71306 | 2.46% | 0.285% |
| 80 | 22.538 | 3728 | 3734 | 3736 | rBV6 | 4238 | 5895 | 0.20% | 0.024% |
| 81 | 22.757 | 3765 | 3775 | 3780 | rVB6 | 5827 | 14142 | 0.49% | 0.057% |
| 82 | 23.040 | 3823 | 3828 | 3831 | rBV7 | 4777 | 8642 | 0.30% | 0.035% |
| 83 | 23.206 | 3855 | 3859 | 3864 | rBV8 | 4857 | 8856 | 0.31% | 0.035% |
| 84 | 23.703 | 3947 | 3952 | 3957 | rBV9 | 2714 | 4941 | 0.17% | 0.020% |
| 85 | 23.863 | 3976 | 3982 | 3984 | rBV7 | 2191 | 4190 | 0.14% | 0.017% |
| 86 | 23.943 | 3993 | 3997 | 4001 | rBV7 | 3627 | 6833 | 0.24% | 0.027% |
| 87 | 24.039 | 4005 | 4015 | 4022 | rBV7 | 6086 | 17482 | 0.60% | 0.070% |
| 88 | 24.269 | 4030 | 4058 | 4082 | rBV6 | 66926 | 552080 | 19.08% | 2.209% |
| 89 | 24.824 | 4157 | 4162 | 4168 | rBV10 | 3804 | 7661 | 0.26% | 0.031% |
| 90 | 25.001 | 4184 | 4195 | 4213 | rBV2 | 1060985 | 2154851 | 74.49% | 8.623% |
| 91 | 25.268 | 4240 | 4245 | 4248 | rVB5 | 3773 | 4622 | 0.16% | 0.018% |
| 92 | 25.305 | 4248 | 4252 | 4257 | rVB7 | 3666 | 7314 | 0.25% | 0.029% |
| 93 | 25.615 | 4306 | 4310 | 4314 | rBV7 | 4043 | 6288 | 0.22% | 0.025% |
| 94 | 25.647 | 4314 | 4316 | 4319 | rBV4 | 4112 | 4284 | 0.15% | 0.017% |
| 95 | 25.701 | 4324 | 4326 | 4330 | rBV5 | 3634 | 4456 | 0.15% | 0.018% |

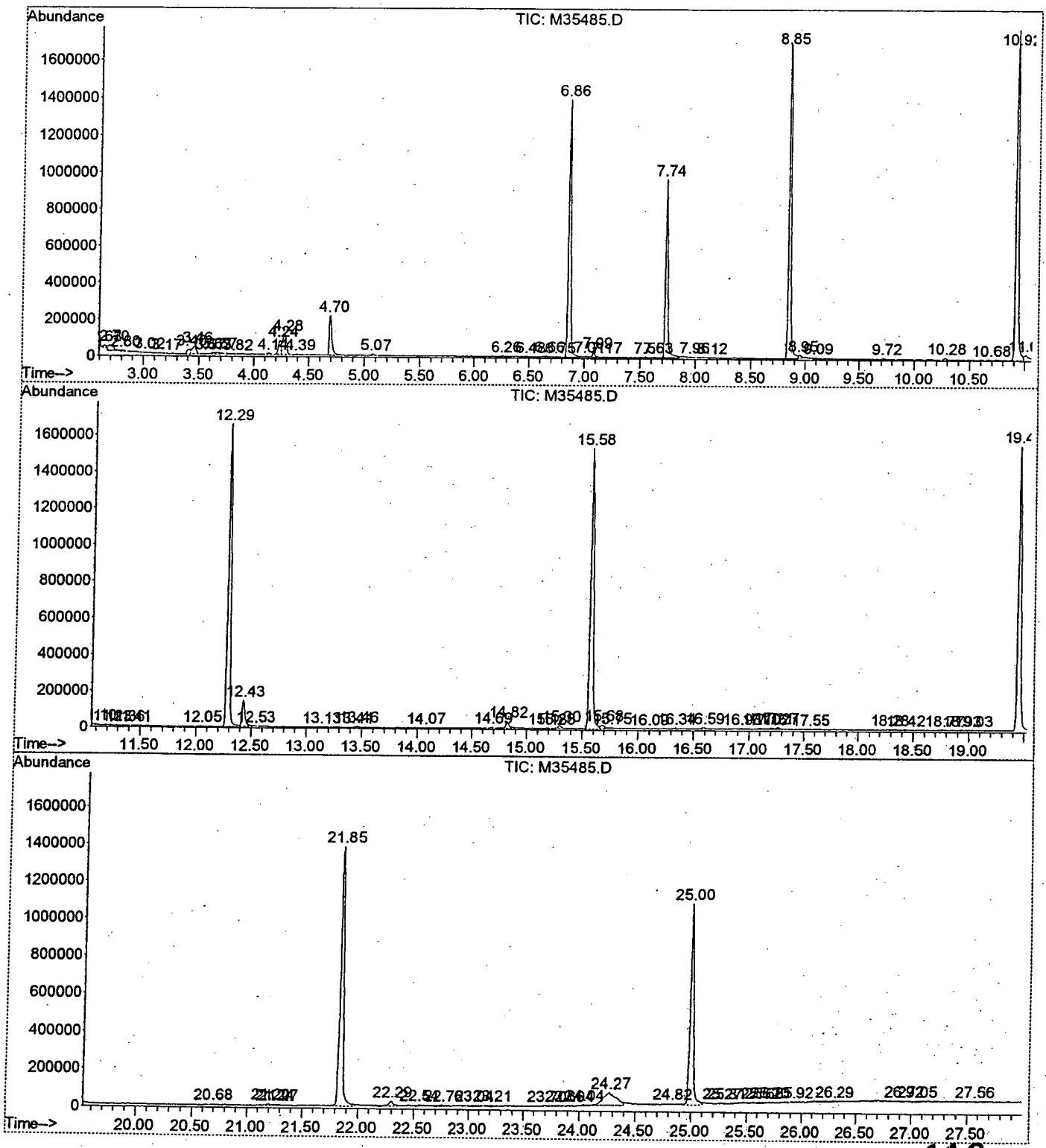
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 96 | 25.920 | 4363 | 4367 | 4369 | rBV5 | 4449 | 4790 | 0.17% | 0.019% |
| 97 | 26.294 | 4429 | 4437 | 4438 | rBV8 | 5592 | 9805 | 0.34% | 0.039% |
| 98 | 26.924 | 4552 | 4555 | 4557 | rVB4 | 4248 | 4647 | 0.16% | 0.019% |
| 99 | 27.047 | 4577 | 4578 | 4584 | rBV6 | 5415 | 7251 | 0.25% | 0.029% |
| 00 | 27.560 | 4672 | 4674 | 4678 | rBV3 | 3762 | 5271 | 0.18% | 0.021% |

Sum of corrected areas: 24990168

M35485.D MM1070.M Fri Nov 05 13:24:38 2004 GCMSM

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\EM1086\M35485.D
Operator : WENDYS
Acquired : 5 Nov 2004 10:14 am using AcqMethod MM1070
Instrument : MSM
Sample Name: N81296-1
Misc Info : OP18476,EM1086,1000
Vial Number: 4
Quant File :MM1070.RES (RTE Integrator)






M35485.D MM1070.M Fri Nov 05 13:24:39 2004 GCMSM

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\EM1086\M35485.D  Vial: 4
Acq On : 5 Nov 2004 10:14 am  Operator: WENDYS
Sample : N81296-1  Inst : MSM
Misc : OP18476,EM1086,1000  Multiplr: 1.00
MS Integration Params: LSCINT.P

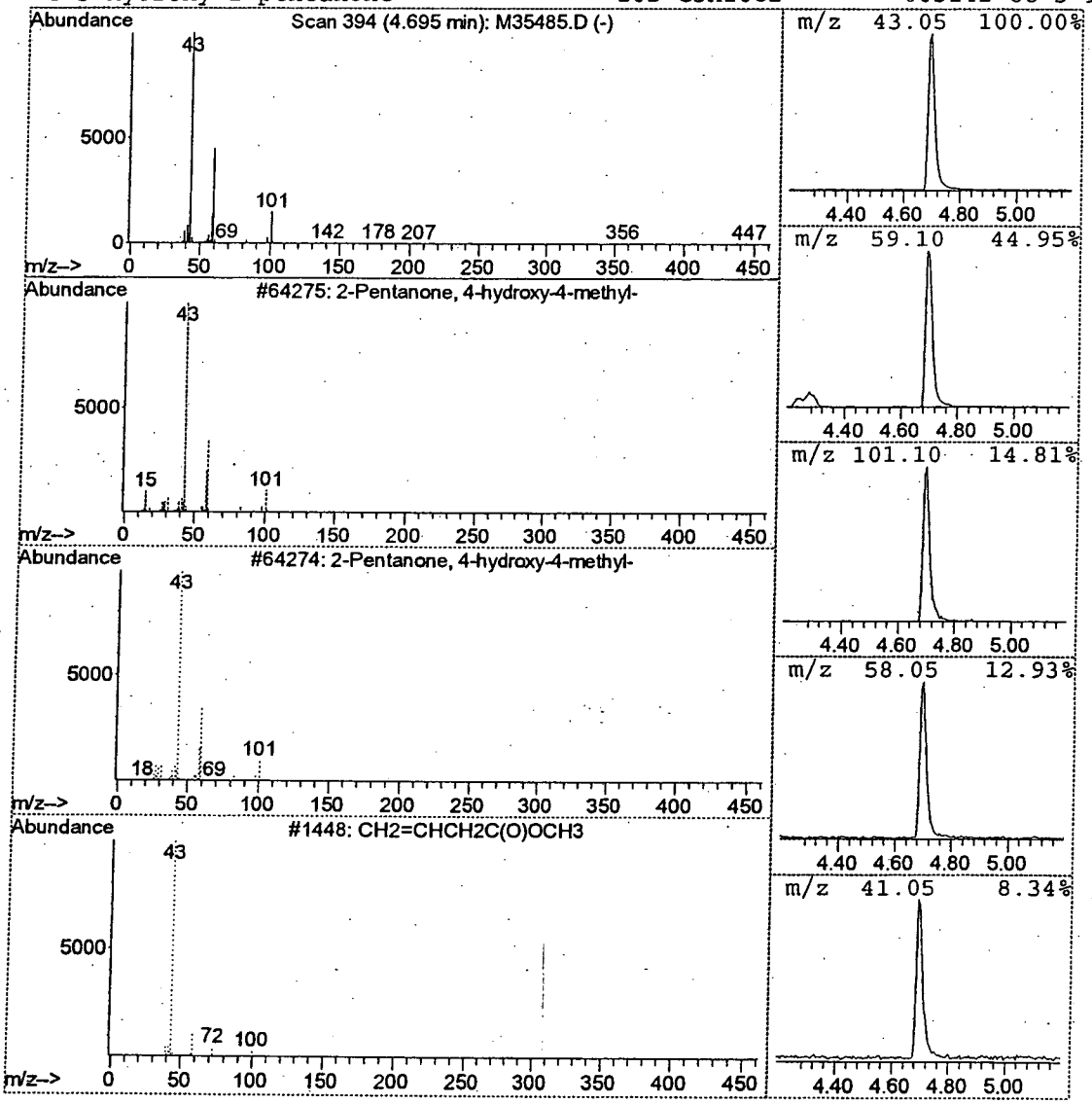
Quant Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Library : C:\DATABASE\NBS75K.L

**********

Peak Number 2 2-Pentanone, 4-hydroxy-4-methy Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 4.70 | 7.13 ppb | 371952 | 1,4-Dichlorobenzene-d4 | 6.86 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 64 |
| 2 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 45 |
| 3 | CH2=CHCH2C(O)OCH3 | 100 | C5H8O2 | 003724-55-8 | 12 |
| 4 | 3-Hydroxy-2-pentanone | 102 | C5H10O2 | 003142-66-3 | 9 |



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\EM1086\M35485.D  Vial: 4
Acq On : 5 Nov 2004 10:14 am  Operator: WENDYS
Sample : N81296-1  Inst : MSM
Misc : OP18476,EM1086,1000  Multiplr: 1.00
MS Integration Params: LSCINT.P

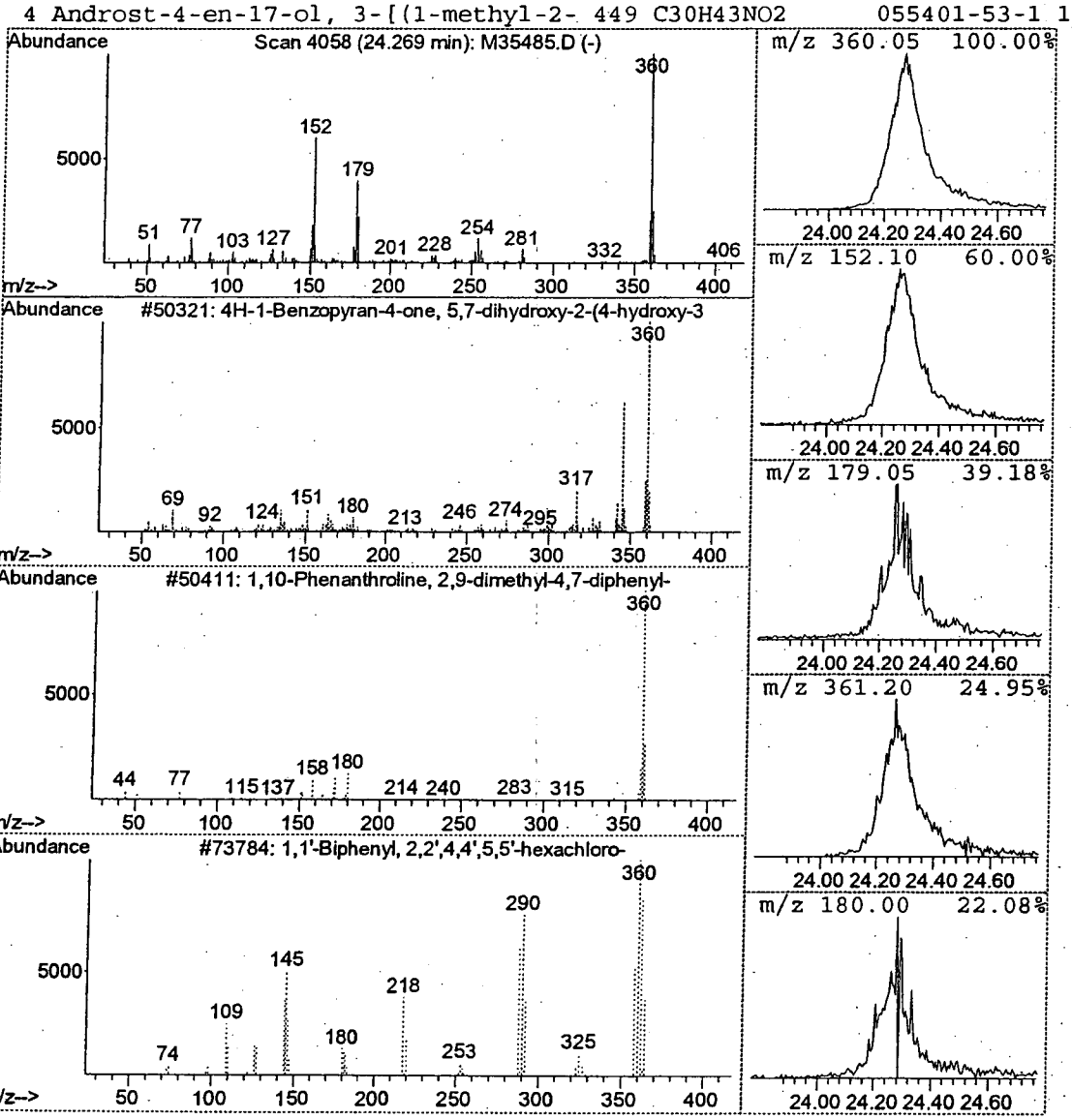
Quant Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Library : C:\DATABASE\NBS75K.L

**********

Peak Number 3 4H-1-Benzopyran-4-one, 5,7-dih Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 24.27 | 10.25 ppb | 552080 | Perylene-d12 | 25.00 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4H-1-Benzopyran-4-one, 5,7-dihydrox | 360 | C18H16O8 | 010173-01-0 | 43 |
| 2 | 1,10-Phenanthroline, 2,9-dimethyl-4 | 360 | C26H20N2 | 004733-39-5 | 43 |
| 3 | 1,1'-Biphenyl, 2,2',4,4',5,5'-hexac | 358 | C12H4Cl6 | 035065-27-1 | 22 |
| 4 | Androst-4-en-17-ol, 3-[(1-methyl-2- | 449 | C30H43NO2 | 055401-53-1 | 12 |

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\EM1077\M35236.D
Acq On : 26 Oct 2004 1:29 pm
Sample : OP18476-MB1
Misc : OP18476,EM1077,1000
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:24 2004

Vial: 6
Operator: WENDYS
Inst : MSM
Multiplr: 1.00

Quant Results File: MM1070.RES

Quant Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Oct 22 09:44:11 2004
Response via : Initial Calibration
DataAcq Meth : MM1070

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 6.88 | 152 | 318320 | 40.00 ppb | -0.02 |
| 25) Naphthalene-d8 | 8.87 | 136 | 1094574 | 40.00 ppb | -0.02 |
| 48) Acenaphthene-d10 | 12.32 | 164 | 549926 | 40.00 ppb | -0.02 |
| 70) Phenanthrene-d10 | 15.61 | 188 | 991828 | 40.00 ppb | -0.02 |
| 85) Chrysene-d12 | 21.88 | 240 | 953275 | 40.00 ppb | -0.01 |
| 95) Perylene-d12 | 25.03 | 264 | 580968 | 40.00 ppb | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 5) 2-Fluorophenol | 0.00 | 112 | 0 | 0.00 ppb | |
| Spiked Amount 50.000 | | | Recovery = | 0.00% | |
| 8) Phenol-d5 | 0.00 | 99 | 0 | 0.00 ppb | |
| Spiked Amount 50.000 | | | Recovery = | 0.00% | |
| 26) Nitrobenzene-d5 | 7.76 | 82 | 337825 | 31.08 ppb | -0.01 |
| Spiked Amount 50.000 | | | Recovery = | 62.16% | |
| 52) 2-Fluorobiphenyl | 10.95 | 172 | 745505 | 32.93 ppb | -0.02 |
| Spiked Amount 50.000 | | | Recovery = | 65.86% | |
| 75) 2,4,6-Tribromophenol | 0.00 | 330 | 0 | 0.00 ppb | |
| Spiked Amount 50.000 | | | Recovery = | 0.00% | |
| 89) Terphenyl-d14 | 19.49 | 244 | 730748 | 28.07 ppb | 0.00 |
| Spiked Amount 50.000 | | | Recovery = | 56.14% | |

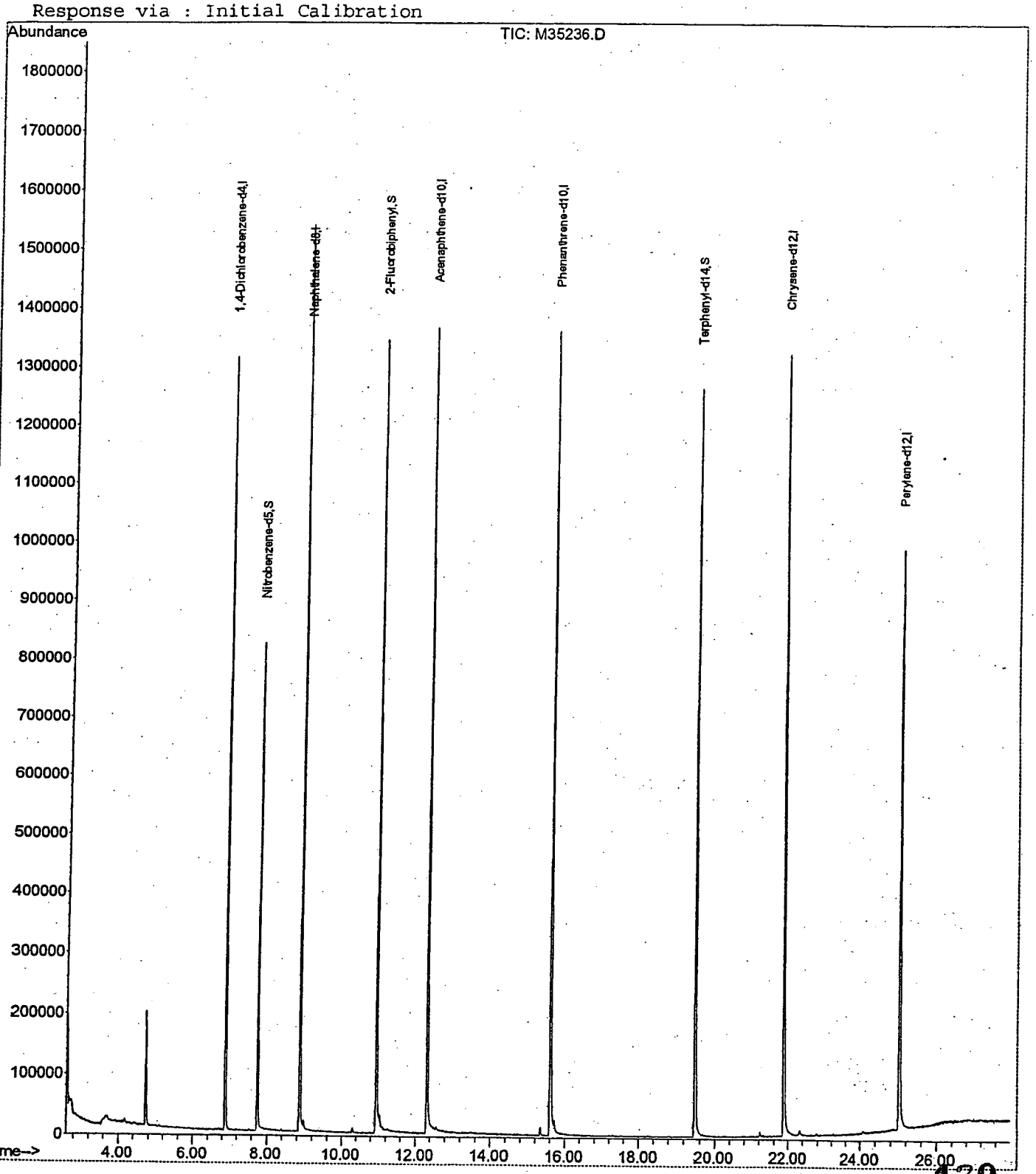
Target Compounds Qvalue

10/26/04

(#) = qualifier out of range (m) = manual integration
M35236.D MM1070.M Tue Oct 26 16:24:56 2004 GCMSM

Data File : C:\HPCHEM\1\DATA\EM1077\M35236.D  Vial: 6
Acq On : 26 Oct 2004 1:29 pm  Operator: WENDYS
Sample : OP18476-MB1  Inst : MSM
Misc : OP18476,EM1077,1000  Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:24 2004  Quant Results File: MM1070.RES

Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Fri Oct 22 09:44:11 2004
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\EM1077\M35236.D
Acq On : 26 Oct 2004 1:29 pm
Sample : OP18476-MB1
Misc : OP18476,EM1077,1000
MS Integration Params: LSCINT.P

Vial: 6
Operator: WENDYS
Inst : MSM
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Smoothing : ON
Sampling : 1
Start Thrs: 0.02
Stop Thrs : 0

Filtering: 5
Min Area: 1000 Area counts
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

| eak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.670 | 11 | 15 | 23 | rBV2 | 12804 | 40297 | 1.56% | 0.200% |
| 2 | 2.729 | 23 | 26 | 38 | rVB3 | 25404 | 69696 | 2.70% | 0.346% |
| 3 | 3.210 | 113 | 116 | 120 | rVB5 | 3092 | 4179 | 0.16% | 0.021% |
| 4 | 3.237 | 120 | 121 | 125 | rVB4 | 3513 | 2832 | 0.11% | 0.014% |
| 5 | 3.616 | 179 | 192 | 193 | rBV5 | 8339 | 25819 | 1.00% | 0.128% |
| 6 | 3.659 | 193 | 200 | 205 | rVV8 | 8707 | 26016 | 1.01% | 0.129% |
| 7 | 3.701 | 207 | 208 | 217 | rVB7 | 6474 | 11943 | 0.46% | 0.059% |
| 8 | 3.931 | 249 | 251 | 256 | rVB5 | 3700 | 3716 | 0.14% | 0.018% |
| 9 | 3.995 | 260 | 263 | 267 | rVB5 | 2173 | 3144 | 0.12% | 0.016% |
| 10 | 4.086 | 278 | 280 | 284 | rBV4 | 2733 | 2733 | 0.11% | 0.014% |
| 1 | 4.161 | 284 | 294 | 304 | rVB7 | 7227 | 21247 | 0.82% | 0.105% |
| 2 | 4.417 | 333 | 342 | 344 | rBV7 | 2363 | 3237 | 0.13% | 0.016% |
| 13 | 4.524 | 356 | 362 | 363 | rVB5 | 1564 | 2388 | 0.09% | 0.012% |
| 14 | 4.711 | 392 | 397 | 415 | rVV | 189369 | 322833 | 12.52% | 1.602% |
| 5 | 4.818 | 415 | 417 | 422 | rVB6 | 2217 | 2527 | 0.10% | 0.013% |
| 16 | 5.096 | 466 | 469 | 473 | rVB5 | 2732 | 3128 | 0.12% | 0.016% |
| 7 | 5.368 | 515 | 520 | 521 | rBV4 | 2141 | 2422 | 0.09% | 0.012% |
| 8 | 5.496 | 542 | 544 | 549 | rVB4 | 2227 | 3264 | 0.13% | 0.016% |
| 9 | 5.566 | 553 | 557 | 560 | rBV6 | 2493 | 2814 | 0.11% | 0.014% |
| 20 | 5.892 | 610 | 618 | 622 | rVB8 | 1664 | 3847 | 0.15% | 0.019% |
| 1 | 6.282 | 682 | 691 | 695 | rVB10 | 2335 | 5258 | 0.20% | 0.026% |
| 2 | 6.458 | 719 | 724 | 727 | rBV7 | 1873 | 3287 | 0.13% | 0.016% |
| 23 | 6.645 | 753 | 759 | 762 | rVB8 | 1910 | 2910 | 0.11% | 0.014% |
| 1 | 6.677 | 762 | 765 | 768 | rVV5 | 2001 | 2717 | 0.11% | 0.013% |
| 5 | 6.720 | 771 | 773 | 779 | rVV5 | 2610 | 3138 | 0.12% | 0.016% |
| 26 | 6.773 | 779 | 783 | 791 | rVB9 | 3207 | 5005 | 0.19% | 0.025% |
| 7 | 6.880 | 796 | 803 | 823 | rBV | 1308457 | 1938569 | 75.17% | 9.623% |
| 3 | 7.040 | 829 | 833 | 840 | rBV6 | 2150 | 3457 | 0.13% | 0.017% |
| 29 | 7.526 | 919 | 924 | 931 | rBV9 | 2218 | 3793 | 0.15% | 0.019% |
| 30 | 7.639 | 944 | 945 | 954 | rVB8 | 1744 | 2686 | 0.10% | 0.013% |
| 1 | 7.756 | 960 | 967 | 989 | rBV | 819591 | 1111294 | 43.09% | 5.516% |
| 32 | 7.895 | 989 | 993 | 1002 | rVV | 3755 | 10102 | 0.39% | 0.050% |
| 1 | 7.959 | 1002 | 1005 | 1012 | rVB9 | 1456 | 3011 | 0.12% | 0.015% |
| 1 | 8.386 | 1078 | 1085 | 1089 | rVB9 | 2579 | 4057 | 0.16% | 0.020% |
| 5 | 8.873 | 1168 | 1176 | 1191 | rBV | 1534220 | 2216993 | 85.96% | 11.005% |
| 1 | 8.974 | 1191 | 1195 | 1209 | rVV2 | 15707 | 39538 | 1.53% | 0.196% |
| 1 | 9.065 | 1211 | 1212 | 1219 | rVB5 | 1805 | 2730 | 0.11% | 0.014% |
| 38 | 9.140 | 1225 | 1226 | 1232 | rVB6 | 2193 | 2412 | 0.09% | 0.012% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 0 | 9.434 | 1274 | 1281 | 1285 | rBV10 | 2025 | 3379 | 0.13% | 0.017% |
| 41 | 10.304 | 1436 | 1444 | 1452 | rBV3 | 8317 | 16195 | 0.63% | 0.080% |
| 42 | 10.774 | 1525 | 1532 | 1536 | rBV8 | 1640 | 3877 | 0.15% | 0.019% |
| 3 | 10.945 | 1556 | 1564 | 1578 | rBV | 1342275 | 2085759 | 80.87% | 10.353% |
| 4 | 11.036 | 1578 | 1581 | 1591 | rVV4 | 25157 | 61198 | 2.37% | 0.304% |
| 45 | 11.116 | 1591 | 1596 | 1604 | rVB10 | 5345 | 15354 | 0.60% | 0.076% |
| 6 | 11.266 | 1623 | 1624 | 1630 | rVB6 | 3555 | 4365 | 0.17% | 0.022% |
| 7 | 11.314 | 1630 | 1633 | 1639 | rVB8 | 2252 | 3552 | 0.14% | 0.018% |
| 48 | 11.362 | 1639 | 1642 | 1647 | rBV7 | 1799 | 2483 | 0.10% | 0.012% |
| 9 | 12.067 | 1772 | 1774 | 1779 | rBV5 | 1760 | 2378 | 0.09% | 0.012% |
| 0 | 12.318 | 1811 | 1821 | 1837 | rBV | 1362821 | 2314821 | 89.76% | 11.490% |
| 51 | 12.569 | 1864 | 1868 | 1876 | rVB7 | 5875 | 11261 | 0.44% | 0.056% |
| 2 | 13.360 | 2014 | 2016 | 2025 | rVB10 | 1651 | 3111 | 0.12% | 0.015% |
| 3 | 13.440 | 2025 | 2031 | 2033 | rBV7 | 1947 | 2389 | 0.09% | 0.012% |
| 54 | 13.515 | 2040 | 2045 | 2053 | rVB7 | 1659 | 3222 | 0.12% | 0.016% |
| 55 | 15.021 | 2323 | 2327 | 2332 | rBV7 | 1533 | 3098 | 0.12% | 0.015% |
| 6 | 15.331 | 2377 | 2385 | 2394 | rBV2 | 13128 | 26954 | 1.05% | 0.134% |
| 57 | 15.609 | 2425 | 2437 | 2453 | rBV2 | 1358337 | 2573621 | 99.79% | 12.775% |
| 58 | 15.721 | 2453 | 2458 | 2473 | rVB | 19770 | 53605 | 2.08% | 0.266% |
| 9 | 17.302 | 2748 | 2754 | 2758 | rBV3 | 2214 | 3344 | 0.13% | 0.017% |
| 0 | 18.809 | 3029 | 3036 | 3039 | rBV7 | 2438 | 4094 | 0.16% | 0.020% |
| 1 | 19.487 | 3153 | 3163 | 3191 | rBV2 | 1262086 | 2217584 | 85.99% | 11.008% |
| 2 | 19.658 | 3191 | 3195 | 3197 | rVV6 | 2376 | 3755 | 0.15% | 0.019% |
| 3 | 19.674 | 3197 | 3198 | 3205 | rVB7 | 2620 | 3446 | 0.13% | 0.017% |
| 64 | 20.524 | 3349 | 3357 | 3358 | rBV6 | 1197 | 2391 | 0.09% | 0.012% |
| 5 | 21.224 | 3481 | 3488 | 3495 | rBV4 | 7151 | 14500 | 0.56% | 0.072% |
| 66 | 21.309 | 3495 | 3504 | 3510 | rVB10 | 3311 | 7330 | 0.28% | 0.036% |
| 67 | 21.592 | 3549 | 3557 | 3560 | rBV10 | 1595 | 3351 | 0.13% | 0.017% |
| 8 | 21.678 | 3568 | 3573 | 3576 | rBV6 | 1470 | 3022 | 0.12% | 0.015% |
| 9 | 21.881 | 3599 | 3611 | 3635 | rBV | 1319039 | 2579033 | 100.00% | 12.802% |
| 70 | 22.020 | 3635 | 3637 | 3650 | rVB10 | 4955 | 13566 | 0.53% | 0.067% |
| 1 | 22.313 | 3683 | 3692 | 3704 | rBV8 | 8221 | 25270 | 0.98% | 0.125% |
| 2 | 22.645 | 3752 | 3754 | 3760 | rBV7 | 1453 | 2445 | 0.09% | 0.012% |
| 73 | 22.789 | 3771 | 3781 | 3785 | rBV7 | 3314 | 7612 | 0.30% | 0.038% |
| 74 | 23.248 | 3861 | 3867 | 3874 | rBV7 | 3432 | 7236 | 0.28% | 0.036% |
| 5 | 23.804 | 3968 | 3971 | 3976 | rVB7 | 1568 | 2742 | 0.11% | 0.014% |
| 76 | 23.852 | 3976 | 3980 | 3982 | rBV5 | 2102 | 3290 | 0.13% | 0.016% |
| 7 | 23.969 | 3999 | 4002 | 4005 | rBV5 | 1541 | 2367 | 0.09% | 0.012% |
| 8 | 24.082 | 4014 | 4023 | 4029 | rBV5 | 4658 | 11394 | 0.44% | 0.057% |
| 79 | 24.258 | 4051 | 4056 | 4059 | rBV7 | 2508 | 3788 | 0.15% | 0.019% |
| 80 | 24.440 | 4084 | 4090 | 4093 | rVV8 | 2220 | 3757 | 0.15% | 0.019% |
| 1 | 24.781 | 4148 | 4154 | 4156 | rBV7 | 2051 | 2934 | 0.11% | 0.015% |
| 82 | 24.856 | 4160 | 4168 | 4170 | rVV9 | 2501 | 3723 | 0.14% | 0.018% |
| 83 | 25.033 | 4189 | 4201 | 4226 | rBV3 | 972542 | 2042464 | 79.19% | 10.138% |
| 4 | 25.246 | 4240 | 4241 | 4247 | rVB6 | 2096 | 3397 | 0.13% | 0.017% |
| 5 | 25.631 | 4310 | 4313 | 4316 | rBV5 | 3900 | 2798 | 0.11% | 0.014% |
| 86 | 25.807 | 4340 | 4346 | 4348 | rBV7 | 2799 | 4105 | 0.16% | 0.020% |
| 7 | 25.941 | 4369 | 4371 | 4373 | rBV3 | 2218 | 2464 | 0.10% | 0.012% |
| 8 | 26.202 | 4417 | 4420 | 4423 | rBV5 | 3189 | 3699 | 0.14% | 0.018% |
| 89 | 26.411 | 4458 | 4459 | 4464 | rVB5 | 3372 | 3904 | 0.15% | 0.019% |
| 0 | 26.518 | 4478 | 4479 | 4485 | rBV6 | 2586 | 2624 | 0.10% | 0.013% |
| 1 | 26.721 | 4513 | 4517 | 4521 | rBV7 | 2639 | 3786 | 0.15% | 0.019% |
| 92 | 26.753 | 4521 | 4523 | 4526 | rBV4 | 2578 | 2463 | 0.10% | 0.012% |
| 3 | 27.004 | 4567 | 4570 | 4575 | rVB7 | 3651 | 3592 | 0.14% | 0.018% |
| 4 | 27.137 | 4592 | 4595 | 4598 | rVB5 | 3024 | 3081 | 0.12% | 0.015% |
| 5 | 27.191 | 4598 | 4605 | 4607 | rBV8 | 3302 | 6830 | 0.26% | 0.034% |

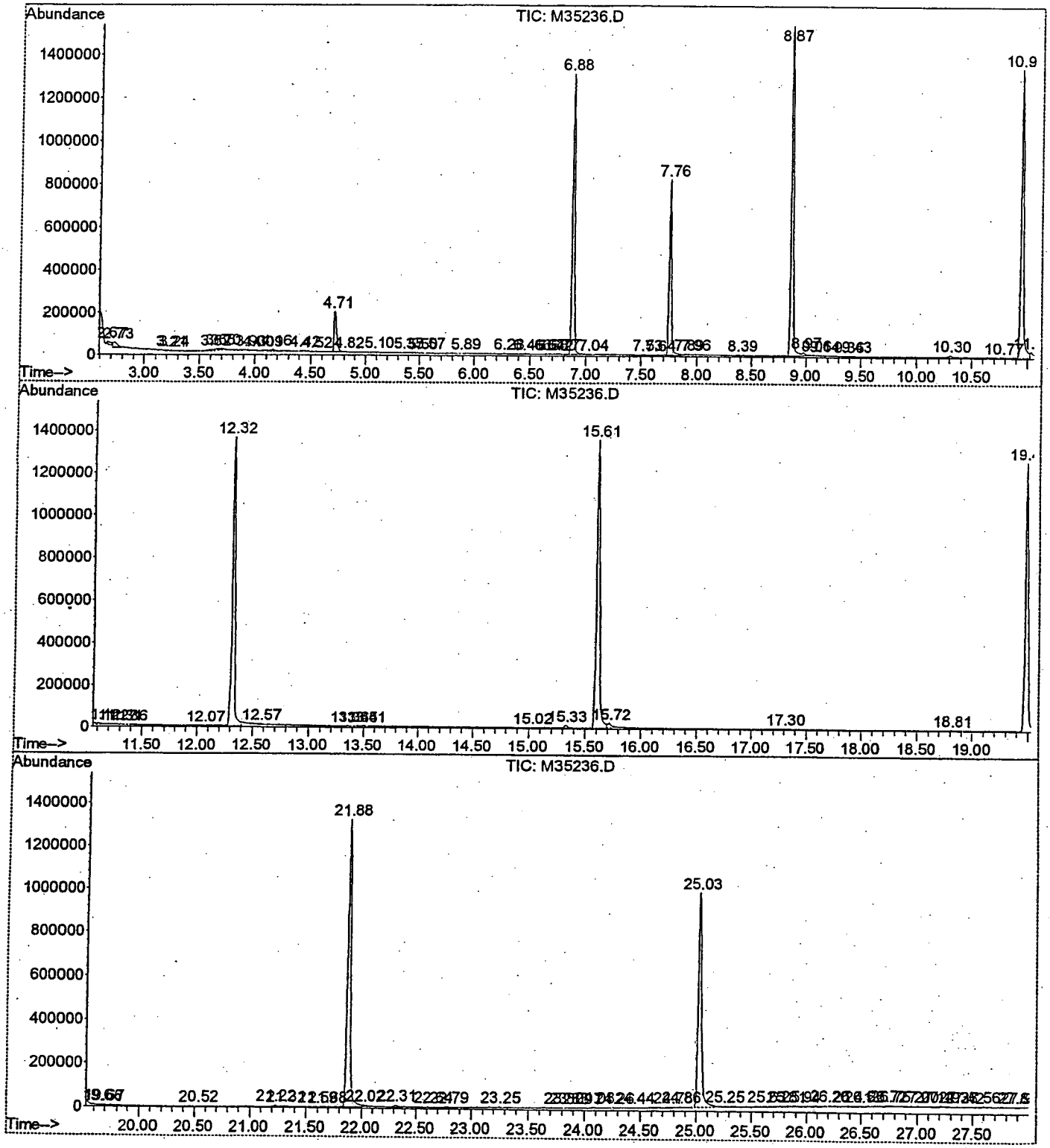
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6 | 27.356 | 4632 | 4636 | 4641 | rVB8 | 3083 | 5266 | 0.20% | 0.026% |
| 7 | 27.415 | 4642 | 4647 | 4650 | rVB7 | 1877 | 3227 | 0.13% | 0.016% |
| 98 | 27.559 | 4673 | 4674 | 4677 | rBV3 | 3247 | 3060 | 0.12% | 0.015% |
| 99 | 27.885 | 4733 | 4735 | 4737 | rBV3 | 2862 | 2718 | 0.11% | 0.013% |
| 0 | 27.912 | 4739 | 4740 | 4744 | rVV4 | 3177 | 2518 | 0.10% | 0.012% |

Sum of corrected areas: 20146084

M35236.D MM1070.M Tue Oct 26 16:25:17 2004 GCMSM

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\EM1077\M35236.D
Operator : WENDYS
Acquired : 26 Oct 2004 1:29 pm using AcqMethod MM1070
Instrument : MSM
Sample Name: OP18476-MB1
Misc Info : OP18476,EM1077,1000
Vial Number: 6
Quant File :MM1070.RES (RTE Integrator)






M35236.D MM1070.M Tue Oct 26 16:25:17 2004 GCMSM

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\EM1077\M35236.D  Vial: 6
Acq On : 26 Oct 2004 1:29 pm  Operator: WENDYS
Sample : OP18476-MB1  Inst : MSM
Misc : OP18476,EM1077,1000  Multiplr: 1.00
MS Integration Params: LSCINT.P

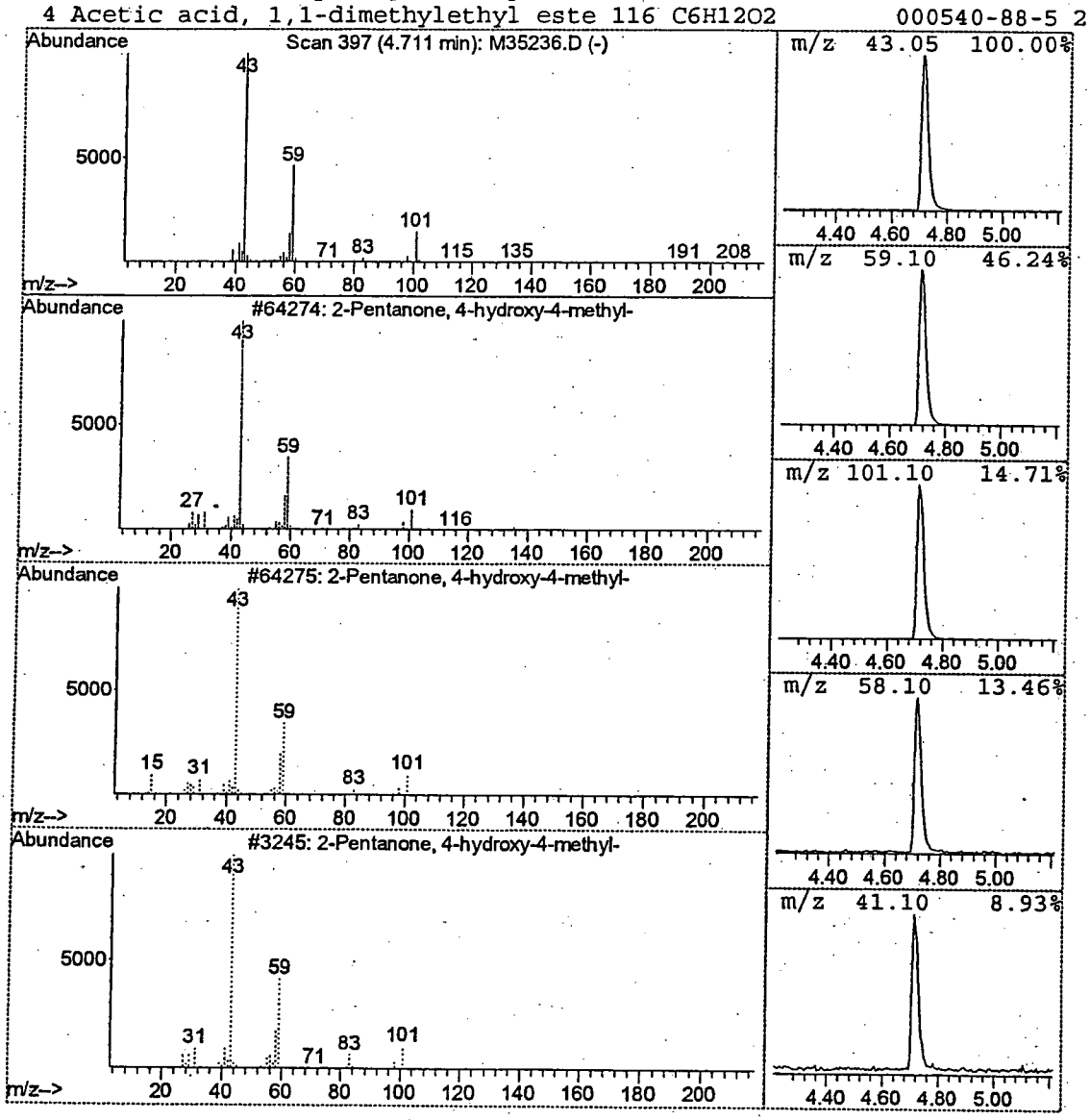
Quant Method : C:\HPCHEM\1\METHODS\MM1070.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Library : C:\DATABASE\NBS75K.L

**********

Peak Number 1 2-Pentanone, 4-hydroxy-4-methy Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 4.71 | 6.66 ppb | 322833 | 1,4-Dichlorobenzene-d4 | 6.88 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 53 |
| 2 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 50 |
| 3 | 2-Pentanone, 4-hydroxy-4-methyl- | 116 | C6H12O2 | 000123-42-2 | 45 |
| 4 | Acetic acid, 1,1-dimethylethyl este | 116 | C6H12O2 | 000540-88-5 | 28 |

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Quantitation Report (QT Reviewed)

ata File : C:\MSDCHEM\1\DATA\EP0420\P10162.D Vial: 13
Acq On : 5 Nov 2004 5:59 pm Operator: NINAP
Sample : OP18476-MB1 Inst : MSP
isc : OP18476,EP420,1000 Multiplr: 1.00
S Integration Params: LSCINT.P
Quant Time: Nov 05 18:25:22 2004 Quant Results File: MP0383.RES

uant Method : C:\MSDCHEM\1\METHODS\MP0383.M (RTE Integrator)
itle : Semi Volatile Extractables by GC/MS
Last Update : Wed Nov 03 11:22:05 2004
esponse via : Initial Calibration
ataAcq Meth : MP0383

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 5.20 | 152 | 223273 | 40.00 ppb | -0.01 |
| 25) Naphthalene-d8 | 7.70 | 136 | 855314 | 40.00 ppb | -0.02 |
| 48) Acenaphthene-d10 | 11.70 | 164 | 424737 | 40.00 ppb | -0.02 |
| 70) Phenanthrene-d10 | 15.13 | 188 | 666091 | 40.00 ppb | -0.02 |
| 85) Chrysene-d12 | 20.89 | 240 | 461837 | 40.00 ppb | -0.02 |
| 95) Perylene-d12 | 23.19 | 264 | 177541 | 40.00 ppb | -0.02 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 5) 2-Fluorophenol | 0.00 | 112 | 0 | 0.00 ppb | |
| Spiked Amount 50.000 | | | Recovery | = 0.00% | |
| 8) Phenol-d5 | 0.00 | 99 | 0 | 0.00 ppb | |
| Spiked Amount 50.000 | | | Recovery | = 0.00% | |
| 26) Nitrobenzene-d5 | 6.30 | 82 | 251407 | 28.92 ppb | -0.02 |
| Spiked Amount 50.000 | | | Recovery | = 57.84% | |
| 52) 2-Fluorobiphenyl | 10.23 | 172 | 568110 | 34.39 ppb | -0.02 |
| Spiked Amount 50.000 | | | Recovery | = 68.78% | |
| 75) 2,4,6-Tribromophenol | 0.00 | 330 | 0 | 0.00 ppb | |
| Spiked Amount 50.000 | | | Recovery | = 0.00% | |
| 89) Terphenyl-d14 | 18.96 | 244 | 428485 | 39.65 ppb | -0.02 |
| Spiked Amount 50.000 | | | Recovery | = 79.30% | |

Target Compounds Qvalue

YL 11/08/04

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#) = qualifier out of range (m) = manual integration (+) = signals summed

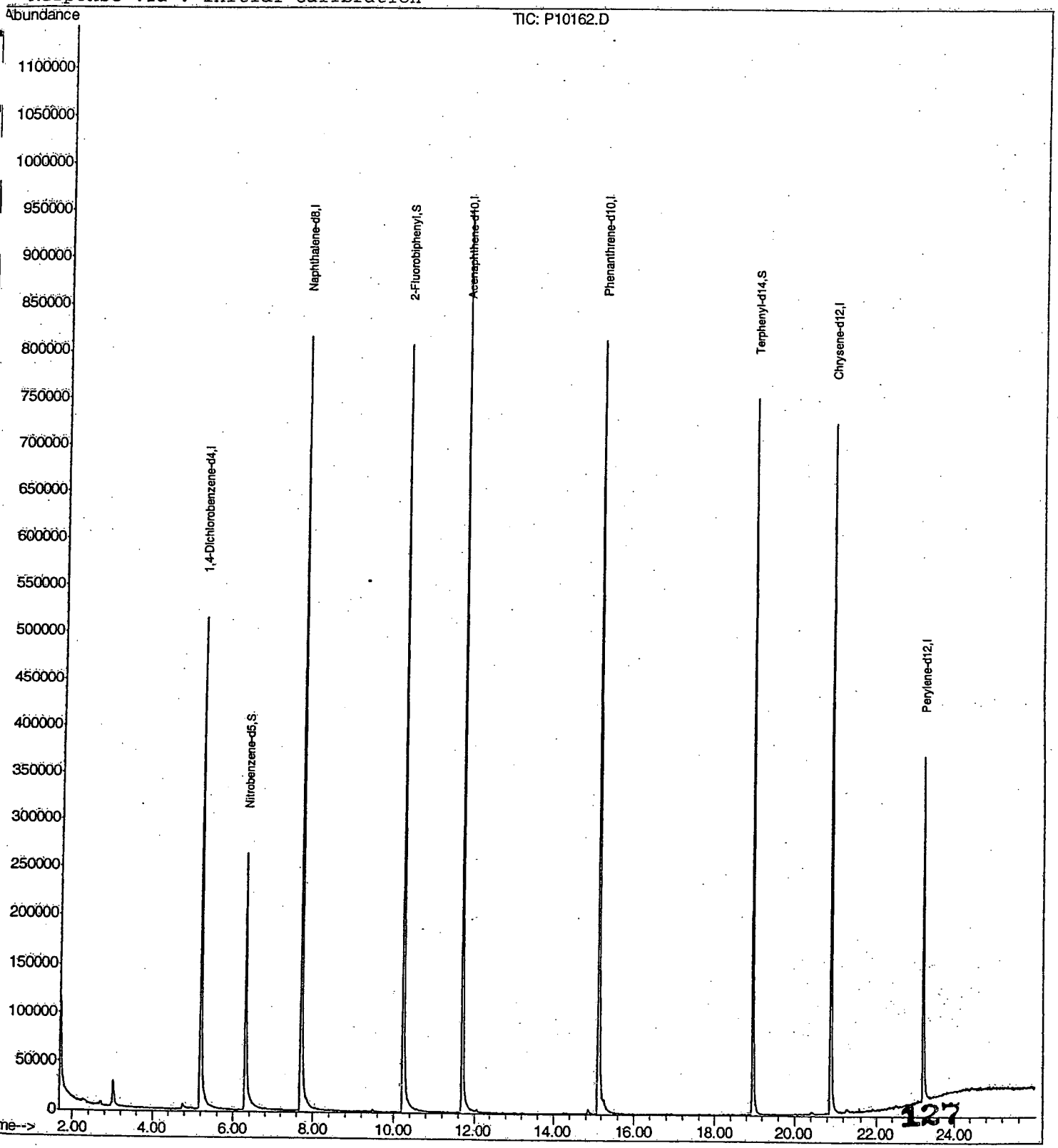
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\EP0420\P10162.D
Acq On : 5 Nov 2004 5:59 pm
Sample : OP18476-MB1
Misc : OP18476,EP420,1000
MS Integration Params: LSCINT.P
Quant Time: Nov 8 8:41 2004

Vial: 13
Operator: NINAP
Inst : MSP
Multiplr: 1.00

Quant Results File: MP0383.RES

Method : C:\MSDCHEM\1\METHODS\MP0383.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Wed Nov 03 11:22:05 2004
Response via : Initial Calibration



ata File : C:\MSDCHEM\1\DATA\EP0420\P10162.D  Vial: 13
Acq On : 5 Nov 2004 5:59 pm  Operator: NINAP
Sample : OP18476-MB1  Inst : MSP
isc : OP18476,EP420,1000  Multiplr: 1.00
S Integration Params: LSCINT.P

ethod : C:\MSDCHEM\1\METHODS\MP0383.M (RTE Integrator)
itle : Semi Volatile Extractables by GC/MS
moothing : ON  Filtering: 5
Sampling : 1  Min Area: 1500 Area counts
tart Thrs: 0.05  Max Peaks: 125
top Thrs : 0  Peak Location: TOP

Tf leading or trailing edge < 100 prefer < Baseline drop else tangent >
eak separation: 5

Signal : TIC

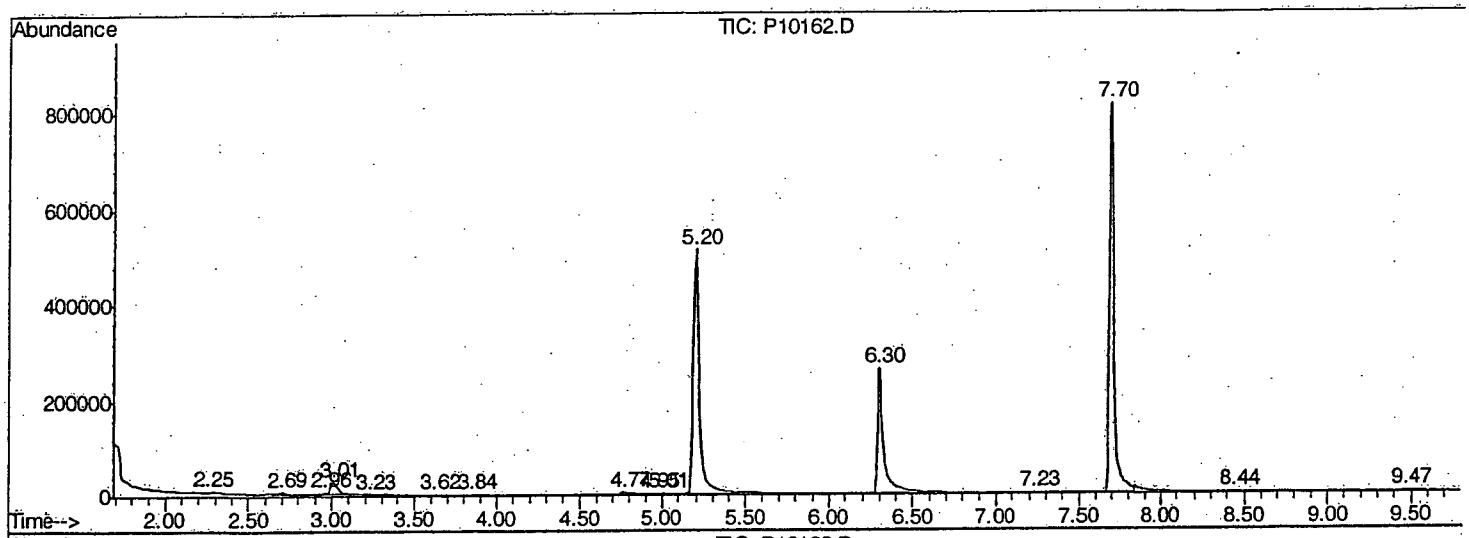
| ak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| | 2.251 | 100 | 107 | 110 | rBV9 | 1893 | 3904 | 0.22% | 0.032% |
| | 2.695 | 183 | 190 | 202 | rVB3 | 4106 | 12284 | 0.70% | 0.102% |
| 3 | 2.962 | 236 | 240 | 243 | rBV3 | 4459 | 6875 | 0.39% | 0.057% |
| 4 | 3.010 | 243 | 249 | 270 | rVB2 | 24744 | 79802 | 4.55% | 0.660% |
| | 3.229 | 288 | 290 | 297 | rVB7 | 834 | 1873 | 0.11% | 0.015% |
| 6 | 3.624 | 359 | 364 | 367 | rBV5 | 1035 | 1678 | 0.10% | 0.014% |
| 7 | 3.843 | 401 | 405 | 414 | rVB7 | 899 | 1726 | 0.10% | 0.014% |
| | 4.768 | 571 | 578 | 598 | rBV2 | 5097 | 20967 | 1.20% | 0.173% |
| | 4.955 | 607 | 613 | 616 | rBV7 | 1096 | 2151 | 0.12% | 0.018% |
| 0 | 5.008 | 618 | 623 | 627 | rBV5 | 1293 | 1860 | 0.11% | 0.015% |
| | 5.200 | 648 | 659 | 704 | rBV | 512780 | 1252249 | 71.40% | 10.359% |
| 2 | 6.301 | 856 | 865 | 925 | rBV | 262701 | 730511 | 41.65% | 6.043% |
| 3 | 7.230 | 1032 | 1039 | 1047 | rVB10 | 1011 | 2355 | 0.13% | 0.019% |
| | 7.700 | 1116 | 1127 | 1152 | rBV | 815114 | 1584324 | 90.34% | 13.106% |
| | 8.438 | 1257 | 1265 | 1274 | rBV10 | 1127 | 3411 | 0.19% | 0.028% |
| | 9.469 | 1449 | 1458 | 1468 | rBV4 | 2336 | 5864 | 0.33% | 0.049% |
| | 10.233 | 1591 | 1601 | 1633 | rBV | 806678 | 1563748 | 89.16% | 12.936% |
| | 10.575 | 1662 | 1665 | 1677 | rVB | 1518 | 3685 | 0.21% | 0.030% |
| 9 | 11.696 | 1866 | 1875 | 1913 | rBV | 951302 | 1753811 | 100.00% | 14.508% |
| | 12.060 | 1937 | 1943 | 1950 | rVB4 | 2880 | 5469 | 0.31% | 0.045% |
| 1 | 13.053 | 2120 | 2129 | 2134 | rVB7 | 1121 | 2601 | 0.15% | 0.022% |
| 2 | 14.261 | 2348 | 2355 | 2364 | rVB7 | 1323 | 2773 | 0.16% | 0.023% |
| | 14.859 | 2456 | 2467 | 2481 | rBV2 | 4471 | 12101 | 0.69% | 0.100% |
| | 15.126 | 2505 | 2517 | 2538 | rBV2 | 812884 | 1679900 | 95.79% | 13.896% |
| 5 | 16.921 | 2848 | 2853 | 2862 | rBV | 1460 | 2718 | 0.15% | 0.022% |
| | 17.167 | 2890 | 2899 | 2904 | rBV6 | 591 | 1602 | 0.09% | 0.013% |
| | 18.332 | 3111 | 3117 | 3123 | rBV7 | 1229 | 2097 | 0.12% | 0.017% |
| 8 | 18.957 | 3226 | 3234 | 3269 | rBV | 750964 | 1317604 | 75.13% | 10.899% |
| | 20.025 | 3428 | 3434 | 3439 | rBV5 | 1220 | 2580 | 0.15% | 0.021% |
| | 20.404 | 3498 | 3505 | 3511 | rBV4 | 2796 | 5478 | 0.31% | 0.045% |
| 1 | 20.442 | 3511 | 3512 | 3519 | rVB5 | 2035 | 2318 | 0.13% | 0.019% |
| | 20.890 | 3587 | 3596 | 3620 | rBV | 723050 | 1295834 | 73.89% | 10.719% |
| | 21.275 | 3659 | 3668 | 3685 | rVB | 3680 | 16615 | 0.95% | 0.137% |
| 4 | 21.393 | 3685 | 3690 | 3692 | rBV5 | 1193 | 1982 | 0.11% | 0.016% |
| | 21.569 | 3717 | 3723 | 3728 | rVB9 | 3448 | 4879 | 0.28% | 0.040% |
| | 21.906 | 3782 | 3786 | 3792 | rBV8 | 2292 | 3375 | 0.19% | 0.028% |
| 7 | 22.028 | 3804 | 3809 | 3812 | rBV6 | 1092 | 1954 | 0.11% | 0.016% |
| | 22.167 | 3829 | 3835 | 3839 | rBV9 | 1818 | 3380 | 0.19% | 0.028% |

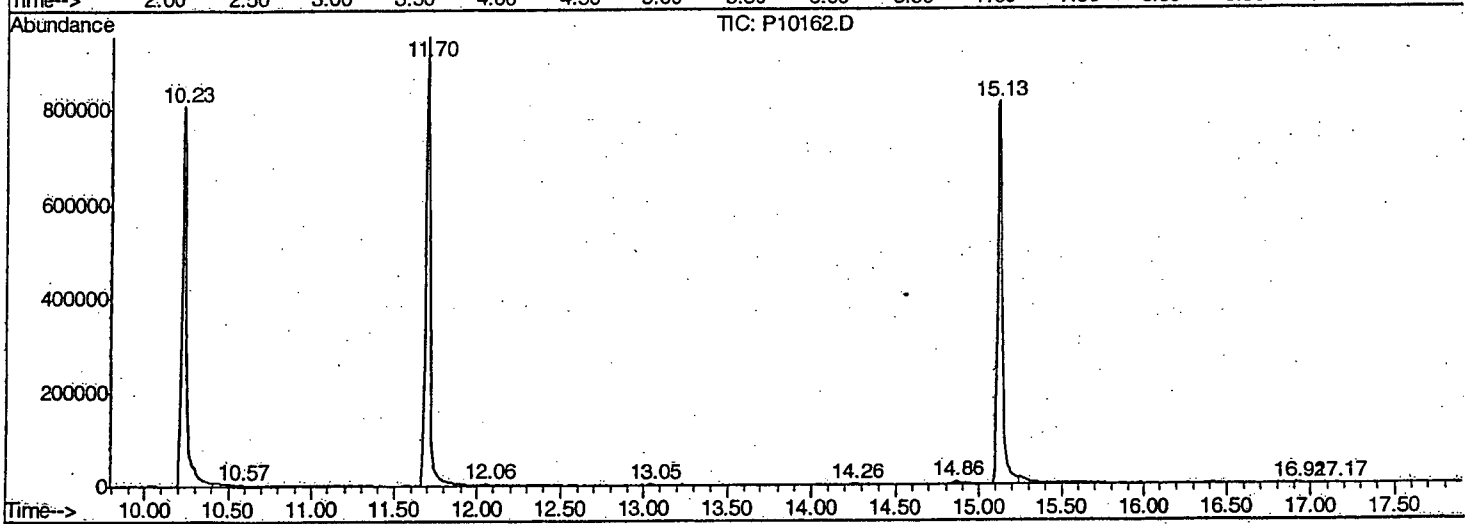
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9 | 22.344 | 3865 | 3866 | 3871 | rBV5 | 1795 | 1566 | 0.09% | 0.012% |
| 1 | 22.504 | 3887 | 3898 | 3902 | rBV5 | 3324 | 7960 | 0.45% | 0.066% |
| 11 | 22.723 | 3934 | 3939 | 3941 | rBV6 | 1214 | 1831 | 0.10% | 0.015% |
| 12 | 22.937 | 3975 | 3979 | 3981 | rBV5 | 1539 | 2127 | 0.12% | 0.018% |
| | 23.054 | 3998 | 4001 | 4007 | rBV8 | 1904 | 3116 | 0.18% | 0.026% |
| | 23.193 | 4019 | 4027 | 4055 | rBV | 356566 | 671374 | 38.28% | 5.554% |
| 15 | 23.594 | 4099 | 4102 | 4104 | rBV3 | 2158 | 2462 | 0.14% | 0.020% |

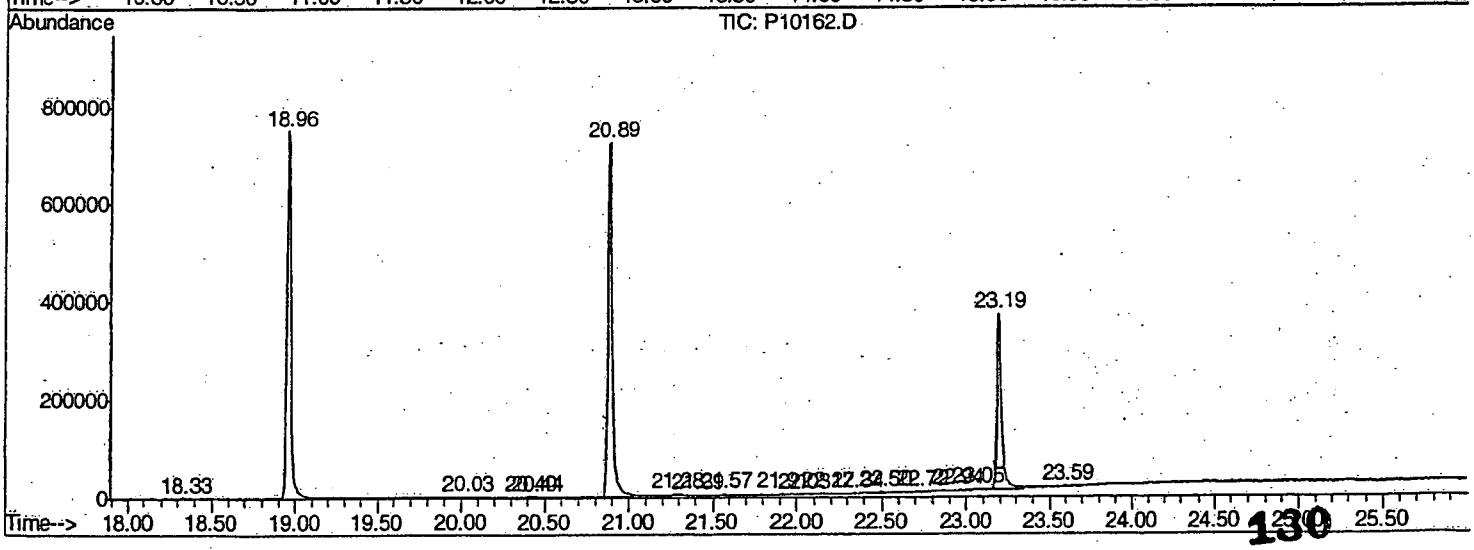
Sum of corrected areas: 12088716

LSC Report - Integrated Chromatogram

File : C:\MSDCHEM\1\DATA\EP0420\P10162.D
Operator : NINAP
Acquired : 5 Nov 2004 5:59 pm using AcqMethod MP0383
Instrument : MSP
Sample Name: OP18476-MB1
Misc Info : OP18476,EP420,1000
Vial Number: 13
Quant File :MP0383.RES (RTE Integrator)



rator ID: NINAP  Date Acquired:  5 Nov 2004  5:59 pm
a File: C:\MSDCHEM\1\DATA\EP0420\P10162.D
me: OP18476-MB1
: OP18476,EP420,1000
od: C:\MSDCHEM\1\METHODS\MP0383.M (RTE Integrator)
tle: Semi Volatile Extractables by GC/MS
brary Searched: C:\DATABASE\NBS75K.L

| C Top Hit name | RT | EstConc | Units | Response | --Internal Standard--- # | RT | Resp | Conc |
|---|---|---|---|---|---|---|---|---|

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# APPENDIX B

# DEWBERRY-GOODKIND, INC.

299 Webro Road Parsippany, NJ 0754-2880 (973) 428-4909

# WELL LOG

**WELL NUMBER**

**MW-1**

**CLIENT:** Atlantic States Cast Iron Pipe Company
**PROJECT NAME:** Atlantic States Cast Iron Pipe Company
**LOCATION:** 183 Sitgreaves Street, Phillipsburg, NJ
**CONTRACTOR:** Summit Drilling
**PROJECT NO.:** 3852

**DATE DRILLED:** 8/22/2004
**DRILLER:** Jeff Segreaves
**LOGGED BY:** T. Waldron

**SAMPLER TYPE/DIA.:** 2" Diameter Stainless Steel Split Spoon
**DEPTH TO WATER:** 50 feet
**DRILLING METHOD:** Hollow-Stem Auger
**TOTAL DEPTH DRILLED:** 57 feet

| DEPTH FROM SURFACE (FEET) | BLOW COUNT PER 6 IN. | RECOVERY (INCHES) | PID (ppm) | SAMPLE DESIGNATION | WELL DIAGRAM | LITHOLOGIC CLASSIFICATION AND COMMENTS |
|---|---|---|---|---|---|---|
| 0 | | | | | | |
| 2 | | | | | | Fill: Brown silt and sand with white porcelain fragments. No odor or PID readings. (cuttings 0-5') |
| 4 | | | | | | |
| 6 | 3,4 | 18 | ND | | | Brown fine to coarse sand with trace rounded coarse gravel. Moist. |
| | 5,8 | | | | | |
| 8 | | | ND | | | Brown fine to coarse sand with coarse gravel. Moist. (cuttings 5'-10') |
| 10 | | | | | | |
| | 2,4 | 3 | ND | | | Brown fine to coarse sand and fine to coarse gravel. Moist. |
| 12 | 4,6 | | | | | |
| | | | ND | | | Brown fine to coarse sand and fine to coarse gravel. (cuttings 10'-15') |
| 14 | | | | | | |
| 16 | 4,8 | 15 | ND | | | Brown fine to coarse sand with rounded coarse gravel. Moist to dry. |
| | 8,10 | | | | | |
| 18 | | | | | | |
| | | | ND | | | Fine to coarse sand with trace gravel. (cuttings 15'-20') |
| 20 | | | | | | |
| | 15,50/3 | | ND | | | Brown fine to coarse sand with rounded coarse gravel. Moist to dry. |
| 22 | | | | | | |
| | | | ND | | | Sand and gravel. Moist. (cuttings 20'-25') |
| 24 | | | | | | |
| 26 | | | | | | |
| | | | ND | | | Sand and gravel. Moist. (cuttings 25'-30') |
| 28 | | | | | | |
| 30 | | | | | | |
| | | | ND | | | Medium to coarse well sorted sand. (cuttings 30'-35') |
| 32 | | | | | | |

# DEWBERRY-GOODKIND, INC.

299 Webro Road Parsippany, NJ 0754-2880 (973) 428-4909

## WELL LOG

WELL NUMBER

**MW-1**

| DEPTH FROM SURFACE (FEET) | BLOW COUNT PER 6 IN. | RECOVERY (INCHES) | PID (ppm) | SAMPLE DESIGNATION | WELL DIAGRAM | LITHOLOGIC CLASSIFICATION AND COMMENTS |
|---|---|---|---|---|---|---|
| 32 | | | | | | |
| 34 | | | | | | |
| 36 | | | ND | | | Medium to coarse well sorted sand. (cuttings 35'-40') |
| 38 | | | | | | |
| 40 | | | | | | |
| | 5,5 | 6 | ND | | | Sand and cobbles moist to wet. |
| 42 | 8,12 | | | | | |
| 44 | | | ND | | | Medium to coarse well sorted sand. (cuttings 40'-45') |
| 46 | | | | | | |
| 48 | | | ND | | | Medium to coarse well sorted sand. (cuttings 45'-50') |
| 50 | | | | | | |
| | WOR | 6 | ND | | | Medium to coarse well sorted sand. (cuttings 50-55') |
| 52 | | | | | | |
| 54 | | | | | | |
| 56 | | | | | | Medium to coarse well sorted sand. (cuttings 55'-57') |
| 58 | | | | | | EOB= 57' |
| 60 | | | | | | |
| 62 | | | | | | |
| 64 | | | | | | |
| 66 | | | | | | |
| 68 | | | | | | |
| 70 | | | | | | |
| 72 | | | | | | |
| 74 | | | | | | |
| 76 | | | | | | |
| 78 | | | | | | |
| 80 | | | | | | **WELL CONSTRUCTION** |
| 82 | | | | | | Well Material = 2" dia. PVC |
| 84 | | | | | | Screen material = 2" dia. 20-slot PVC |
| 86 | | | | | | Screened interval = 37-57 ft bgs |
| 88 | | | | | | Sand Pack Interval = 35-57ft bgs |
| | | | | | | Total Depth = 57 ft |
| | | | | | | Flushmount with locking cap. |

MONITORING WELL CERTIFICATION FORM B
LOCATION CERTIFICATION

Name of Owner Atlantic States Cast Iron.

Name of Facility Atlantic States Cast Iron

Location Sitgreaves Street, Phillipsburg Township, Warren County

UST Number: _____ SRP Case No.: _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
This number must be permanently affixed to the well casing.
Owners Well Number (As shown on application or plans) MW1
Geographic Coordinates NAD 83 (to the nearest 1/10 of second)

Longitude: West 75° 11' 11.02" Latitude: North 40° 41' 07.10"
New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 675,296 East 301,777
Elevation of Top of Inner Casing (Cap off) at
Reference mark (to nearest 0.01' in relation to permanent
on-site datum) Rim 211.63 PVC 211.43

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximate actual elevation. Please note that, if information from the well is to be submitted electronically, the EDSA manual specifies the well elevation to be reported according to NAVD 1988 to an accuracy of 0.2'.)

NAVD 1988 as Calculated from NGVD 1929

Significant observations and notes: _____

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false, inaccurate, and incomplete information and that I am committing a crime in the fourth degree if I make a false statement that I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

SEAL

Richard C. Mathews

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 11/4/04 DATE

RICHARD C. MATHEWS GS29353
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER

43 WEST HIGH STREET, SOMERVILLE, NEW JERSEY 908 725 0230
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

## MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

Name of Owner: ___Atlantic States Cast Iron Pipe Company, Inc._____

Name of Facility: ___ Atlantic States Cast Iron Pipe Company, Inc _____

Location: ____183 Sitgreaves Street, Phillipsburg, NJ_____

UST Registration No.: ____0059934_____ BUST case No.: 98 – 08 - 20 – 1158 - 41

### CERTIFICATION

Well Permit Number: 24 - 00043572 Owner's Well Number MW-5 (Now known as MW-1)

Well Completion Date: __August 22, 2004_____ Lithologic Log: Attach

| | |
|---|---|
| Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot): | ____0.20_____ |
| Total Depth of Well to the nearest 1/2 foot: | ____57.0_____ |
| Depth to Top of Screen (or Top of Open Hole) From Top of Casing (one-hundredth of a foot): | ____37.00_____ |
| Screen Length (or length of open hole) in feet: | ____20_____ |
| Screen or Slot Size: | ____0.020_____ |
| Screen or Slot Material: | ____PVC_____ |
| Casing Material: (PVC, Steel or Other-Specify): | ____PVC_____ |
| Casing Diameter (inches): | ____2_____ |
| Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot): | ____50.00_____ |
| Yield (gallons per minute): | ____1_____ |
| Development Technique (specify): | ____Pump_____ |
| Length of Time Well is Developed/Pumped or Bailed: | 1 Hours 0 Minutes |

### Authentication

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Technical Certification:

THOMAS B. WALDRON _____

Name (Type or Print) Signature

PG-002440-G

Certification or License No.

Seal

Certification by Executive Officer or Duly Authorized Representative:

_____ _____ _____

Name (Type or Print) Signature Date

Title: _____

# APPENDIX C

State of New Jersey
Department of Environmental Protection
*Bureau of Underground Storage Tanks*
*P.O. Box 433*
*401 East State Street*
*Trenton, NJ 08625*
*Fax (609) 633-1454*

Christine Todd Whitman
*Governor*

Robert C. Shinn, Jr.
*Commissioner*

Atlantic States Cast Iron Pipe Company (A Division of McWane, Inc.)
183 Sitgreaves Street
Phillipsburg, New Jersey 08865

JAN 08 1999

Attn: Mr. Daniel J. Yadzinski
Manager of Engineering

Re: Atlantic States Cast Iron Pipe Company
183 Sitgreaves Street
Phillipsburg, Warren County
Block 2001; Lot 1
Case No. 98-08-20-1158-41
Closure Nos. N98-1273; C98-1289
UST No. 0059934

Dear Mr. Yadzinski:

On August 20, 1998, the New Jersey Department of Environmental Protection (Department) received notification of a discharge of hazardous substances from the underground storage tank (UST) system(s) at the above referenced facility which is/are regulated under the Underground Storage of Hazardous Substance Act (N.J.S.A. 58:10A-21 et seq.). The Department received a Remedial Investigation Report (RIR) from Atlantic States Cast Iron Pipe Company dated September 10, 1998 indicating the actions taken in compliance with the Regulations Implementing the Underground Storage of Hazardous Substances Act (N.J.A.C. 7:14B et seq.) and the Technical Requirements for Site Remediation (N.J.A.C. 7:26E et seq.). In addition, Mr. Daniel Bello of the Department conducted a site visit on December 15, 1998 to assess site conditions. Meeting with Mr. Bello were Mr. Joseph Norton of Norcon, Inc. and yourself.

Based upon a review of the RIR submitted, the following deficiencies and requirements shall be addressed as listed below.

I. **Remedial Investigation Requirements**

A. **Soil**

The submitted report indicates that free product and/or a free product-water mixture was entering boring nos. 3 and 4, associated with the abandoned 1-6,000 gallon asphalt paint underground storage tank (UST) #E-4. In addition, xylene was above "Impact to Groundwater" soil cleanup criteria in boring nos. S-1 and S-2, and total petroleum hydrocarbon (TPHC) contamination was greater than 10,000 ppm in soil boring no. S-1. Due to site constraints noted in the text of the report and the "Remedial Investigation Workplan" (RIW) submitted as attachment 1 of the report, further delineation or remediation of contaminated soils did not take place at time of UST abandonment.

To assess site constraints, Mr. Bello of the Department performed the aforementioned site visit. In consultation with Mr. Norton and yourself it was the determined that site constraints include the ongoing manufacturing operations in the vicinity of the 2 abandoned USTs and the presence and movement of heavy equipment in the same area, and the concrete floor is approximately 30" thick. Though site constraints were acknowledged during Mr. Bello's site visit, the Department must still require delineation of the free product, xylene and TPHC contamination in the soils. This is especially true of the free product contamination, since the Department must verify that it is not widespread throughout the building subfloor, prior to consideration of any kind of "Deed Restriction" (discussed at meeting), or free product removal and remediation. It is the Department's opinion that the soil sampling plan presented in the RIW is not sufficient to adequately delineate extent of free product, xylene or TPHC contamination in accordance with N.J.A.C.

7:26E-4. In addition, upon further consideration, soil sampling (delineation) on the outside of the building perimeter is not deemed to be appropriate by the Department (scenario was discussed at the site meeting). Such samples on the building perimeter would be too great a distance from the abandoned USTs and therefore not adequately define free product location and extent underneath the building, and would not adequately define contamination per N.J.A.C. 7:26E-4. As such, the Department would not be able to (potentially) issue a "Deed Restriction" for free product, or would not have enough information to potentially approve a remedial action workplan for free product and contaminated soils.

The Department is requiring soil sampling and laboratory analyses in the following locations for the soil contamination. Sampling should be both horizontal and vertical:

a. Free Product – to the northeast, northwest and west of the 2 abandoned USTs, within a 10 to 20 foot distance of the USTs. If free product is not found, analyses shall be for TPHC, volatile organics and naphthalene.

b. Xylene and TPHC – to the southwest, southeast and east of the 2 USTs, within 10 to 20 feet of the USTs.

Due to site constraints, the Department is willing to be flexible with time frames for the delineation of free product, xylene and TPHC contamination. During the site meeting, you stated that each summer there is a factory shutdown for equipment maintenance and cleaning (USTs abandoned during 1998 shutdown). The Department is willing to wait until the 1999 summer shutdown for soil delineation to take place. **Therefore, within sixty (60) days of the date of this letter, Atlantic States Cast Iron Pipe Company shall submit the following:**

a. A tentative schedule for delineation soil sampling associated with the abandoned USTs, and submission of a Remedial Investigation Report.
b. A site plan with proposed soil sample locations.
c. A discussion of the type of drilling equipment to be utilized for the soil sampling. The discussion should be in-depth enough to explain why such equipment and approach will be successful for sampling purposes. The 60 day time frame should allow Atlantic States Cast Iron Pipe Company adequate time to research the various types of available equipment for drilling through the concrete floor within the building.
d. A site plan with proposed groundwater sampling locations (discussed below).

The submission of A through D should allow adequate time for Department review and comment prior to delineation activities during the 1999 summer shutdown.

**B. Ground Water**

1. Due to the presence of free product, xylene above "Impact to Groundwater" soil cleanup criteria, unknown groundwater flow direction and the potential for a "Deed Restriction" in the future, Atlantic States Cast Iron Pipe Company shall install three (3) ground water monitoring wells on the referenced site. Such wells may be outside the building in the vicinity of the 2 abandoned asphalt paint USTs. The wells shall be sampled for base neutral organic compounds using EPA Method 625 with a library search (BN+15) and volatile organic compounds using EPA Method 624 calibrated for xylenes, with a library search (VO+10). **Groundwater sampling results shall be submitted within one hundred and fifty (150) days of the date of this letter.**

   Atlantic States Cast Iron Pipe Company shall submit boring logs and the monitoring well construction details (Well Certification Forms A and B, enclosed) for all newly installed monitoring wells.

2. In accordance with N.J.A.C. 7:26E-3.13(c)7, the following information shall be reported for each monitoring well sampled for each ground water sampling event. All measurements shall be to the nearest 0.01 feet:

   Before Purging

   • Date, time, and weather conditions
   • Well identification number and State well permit number
   • PID/FID reading taken from the well immediately after the cap is removed
   • The thickness of free product, if present, as determined pursuant to N.J.A.C. 7:26E-2.1(a)11
   • pH, dissolved oxygen, temperature, and specific conductivity

- Total depth of well from top of casing or surveyors mark if present
- Depth from top of casing to the top of screen
- Depth from top of casing to water
- Estimated water volume in well

After Purging

- Start and end time of purging
- Purge method
- Purge rate(s)
- Total volume purged
- Depth from top of casing to water after purging
- pH, dissolved oxygen, temperature, and specific conductivity

Before Sampling

- Depth from top of casing to water before sampling

After Sampling

- Start and end time of sampling
- pH, dissolved oxygen, temperature, and specific conductivity
- the sampling method

Any comments concerning field observations during the sampling event, such as slow recharge, turbidity, odor, sheen, PID/FID readings, model number and ionization potential of PID/FID used, shall also be reported.

3. If groundwater contamination is identified on site, Atlantic States Cast Iron Pipe Company shall conduct a receptor evaluation in accordance with N.J.A.C. 7:26E-4.4(h)3v. through ix. The receptor evaluation shall address any nearby ground water usage, surface water bodies, and subsurface utilities including basements, or other structures that may be impacted from a vapor hazard. The well search shall identify all irrigation, monitoring and domestic wells located within a one-half mile radius of the site (including any such wells located on-site) and all industrial, public supply wells and wells with water allocation permits located within a one mile radius of the site.

Atlantic States Cast Iron Pipe Company shall accurately plot the results of the well search on a scaled map (scale shall be greater than or equal to 1:24,000) in relation to the facility. Atlantic States Cast Iron Pipe Company shall submit the map, a listing of all wells identified cross referenced to the scaled map, and any specific information available on the wells to the Department. This information shall include: the type of well, the status of the well (active, inactive, properly abandoned pursuant to N.J.A.C. 7:9-9 et. seq.), total depth, casing length, open bore hole or screened interval, copies of well records and or well logs on file with the Department's Bureau of Water Allocation, and any additional records available in county or municipal records. Atlantic States Cast Iron Pipe Company shall submit a listing of all sources referenced in performing the well search. If a referenced agency is unable to provide the information requested, written documentation that the source was contacted and that the request for information was either denied or that the information was unavailable shall be provided.

## C. Preliminary Assessment/Site Investigation

Based upon the investigation conducted to date, contaminants which are not related to the material stored in the underground storage tank (UST) system(s), specifically various chlorinated solvents, have been detected in the soil at this site. In order to identify any areas of concern that may be contributing to the noted contamination, or alternatively, to confirm that the source of this contamination is from off-site, a Preliminary Assessment (PA), pursuant to N.J.A.C. 7:26E-3 is necessary. If areas of concern are identified, a site investigation (SI) pursuant to N.J.A.C. 7:26E-3 is also necessary. Pursuant to N.J.A.C. 7:26E, any contamination identified on-site above cleanup criteria would require remediation.

At this time, Atlantic States Cast Iron Pipe Company has the option of conducting the PA/SI, within BUST, utilizing the current case manager. Please be advised, if Atlantic States Cast Iron Pipe Company does not choose to address the contamination at this time, Atlantic States Cast Iron Pipe Company has the option of deferring this investigation and subsequently addressing this issue through a Memorandum of Agreement (MOA) with the Department. It should be noted that conducting the PA/SI is a voluntary process, either in BUST or through an MOA.

If Atlantic States Cast Iron Pipe Company has not investigated this "non-UST" contamination at the time the Department issues a no further action (NFA) determination for the regulated UST(s), the NFA will only address the regulated UST issue(s) and the "non-UST" issue will be referenced as remaining outstanding. Since the compound concentrations are below the soil cleanup criteria, this aspect of the case would be referred to the local health department for their information and follow up.

**D. Ecological Evaluation**

A baseline ecological evaluation shall be completed for each contaminated site or area of concern in accordance with N.J.A.C. 7:26E-3.11. This baseline evaluation shall be qualitative in nature and based on site investigation sample results and a site inspection by a person experienced in the use of techniques and methodologies for conducting ecological risk assessment in accordance with EPA guidance. This evaluation shall be used to determine when further sampling and evaluation is required, pursuant to N.J.A.C. 7:26E-4.7.

**E. Electronic Data Submission**

In accordance with N.J.A.C. 7:26E-3.13(c)3v, a table summarizing all sampling results shall be provided with the report required herein. The table shall be organized by area of concern and shall include sample location, media, sample depth, field and laboratory identification numbers, analytical results, and comparison to applicable remediation standards. The data in the summary table shall be presented both as hard copy and an electronic deliverable using the database format outlined in detail in the current HAZSITE application or appropriate spreadsheet format specified in the Department's Electronic Data Interchange Handbook in effect as of the date the report is prepared. The Electronic Data Interchange Handbook and a copy of the current HAZSITE application software may be obtained from the Department by calling (609) 633-1476.

**F. Quality Assurance**

All data submitted shall conform to the "Reduced Laboratory Deliverables Format" in accordance with N.J.A.C. 7:26E-2, except where specifically indicated. Additionally, in accordance with N.J.A.C. 7:26E-3.13(b)3, a technical overview shall be submitted with all data. As part of that overview, a discussion regarding the reliability of the laboratory analytical data shall be included. Please refer to Appendix 2 of the March 1995 "Guide for the Submission of Remedial Action Workplans" for details.

## II. Administrative Requirements

**A. Disposal Documentation**

The August 28, 1998 letter supplied in Exhibit 2 of the submitted report is not sufficient as disposal documentation for the three (3) barrels of asphalt paint which were to have been disposed of by Casie Protank. Atlantic States Cast Iron Pipe Company shall supply to the Department fully endorsed disposal documentation from the receiving facility.

**B. Condition of UST**

The submitted report does not indicate the condition (i.e. corrosion, holes, etc.) of the abandoned 1-8,000 gallon asphalt paint, UST #E-3. If this condition is available, it shall be submitted to the Department.

**C. UST Site/Remedial Investigation Report Certification Form**

Find enclosed a UST Site/Remedial Investigation Report Certification Form. This form shall be submitted with all reports in place of the Site Assessment Summary (SAS) form and Site Investigation/Remedial Investigation Checklist

form that were previously required by the Department.

**D. Certification Requirements**

Effective April 25, 1992, all persons and firms performing tank services on regulated USTs must be certified per N.J.S.A. 58:10A-24.1-8. All work related to any regulated tank service shall be conducted by, or under the immediate on site supervision of an individual certified in the activity being conducted. All documents (tank closure and permit applications, reports, proposals) submitted to the Department shall be prepared and signed by the certified individual responsible for the project.

**E. Cleanup Costs**

After investigation and remediation of the soil and ground water has been completed, the responsible party is requested to submit an estimate of the total capital costs involved in performing and confirming a cleanup. This estimate shall include the costs associated with the following tasks:

- monitoring systems, equipment and mobilization costs;
- operational and maintenance costs, including all labor, utilities and repairs;
- consulting and labor costs;
- sample costs;
- disposal costs, including transport, waste transfer and facility tipping fees; and
- regulatory review fees.

**F. RI Review Fee**

Pursuant to the UST Fees Rules, N.J.A.C. 7:14B, Atlantic States Cast Iron Pipe Company is required to submit a $1,000.00 fee for the Department's review of the subject RI report. To date only $500.00 has been submitted. **Therefore, Atlantic States Cast Iron Pipe Company shall submit a check for $500.00 made payable to "Treasurer, State of New Jersey."** Please note that pursuant to N.J.A.C. 7:14B-3.5(f), the owner or operator shall not receive a "no further action" letter from the Department unless all fees for work previously billed by the Department for the facility are paid. If payment has been made, please submit a photocopy of both sides of the canceled check.

**G. Remedial Action Selection Report**

Atlantic States Cast Iron Pipe Company shall submit a Remedial Action Selection Report in accordance with N.J.A.C. 7:26E-5. This submission shall be included as a part of the report required herein. Please note, the Remedial Action Selection Report will satisfy the requirement to submit an Effectiveness Analysis and Certification.

**H. Notifications**

Pursuant to N.J.A.C. 7:26E-1.4, Atlantic States Cast Iron Pipe Company shall notify the municipal clerk of each municipality in which the site is located forty-five calendar days prior to the submission of the remedial action selection report to the Department. The notification shall be in writing and shall include all information specified in N.J.A.C. 7:26E-1.4(d)1 through 10.

## III. Reporting Requirements

**A. Field Activity Notification**

Atlantic States Cast Iron Pipe Company shall notify the Case Manager referenced below at least 14 calendar days prior to implementation of field activities. If Atlantic States Cast Iron Pipe Company fails to initiate sampling within 30 calendar days of the receipt of this letter, any requests for an extension of the required time frames may be denied.

**B. Written Report Requirements**

A schedule and an RIR shall be submitted to the Case Manager referenced below in the Bureau of Underground Storage Tanks (BUST) according to the schedule enumerated in Section I of this letter. This RIR shall detail the results and conclusions for all activities conducted in compliance with the requirements listed in this letter. To facilitate processing, please send the RIR to the attention of the assigned Case Manager and list the case number and UST registration number referenced above.

## IV. Financial Assistance

To assist businesses, homeowners and other entities in completing the required investigation and remediation, there is funding available in the form of low interest loans and grants. If financial assistance is needed, please contact your case manager to obtain information and applications for the Hazardous Discharge Site Remediation Fund (HDSRF) and the Petroleum Underground Storage Tanks Remediation, Upgrade & Closure Fund (UST Fund). The information and applications for the HDSRF and UST Fund may also be retrieved from our web site at www.state.nj.us/dep/srp. After reviewing the information and applications, specific questions regarding the HDSRF may be directed toward Edward Stankiewicz at (609) 633-1487. Specific questions regarding the UST Fund may be directed toward Dominic Picardi at (609) 984-4464.

## V. Technical Requirements

The amended version of the Technical Requirements for Site Remediation, N.J.A.C. 7:26E, appeared in the May 19, 1997, New Jersey Register and are effective July 18, 1997. These rules contain the minimum technical requirements concerning the environmental investigation and remediation at contaminated sites or sites at which contamination is suspected. Work conducted after the effective date of the amended rule is to be in full compliance with the amended rule. However, work conducted pursuant to workplans submitted prior to the effective date of the amended rule may be conducted pursuant to the original rule provided the work is completed within six months of the Department's approval of the workplan.

It should be noted that technical requirements are also included in subchapters 7, 8 and 9 of the regulations implementing the Underground Storage of Hazardous Substances Act, N.J.A.C. 7:14B-1-13 and 15. The responsible person(s) that are conducting an environmental investigation/remediation should be following the Technical Requirements for Site Remediation to accomplish the investigation. This will allow for consistent evaluation of any discharges and potential impacts.

## VI. Cleanup Criteria

The Department's most recent general guidance on soil cleanup criteria can be found in Appendix A of the June 1996 edition of the "Guidance Document for the Remediation of Contaminated Soils." It must be remembered, however, that the actual cleanup goal at a particular site is determined by the Department on a case-by-case basis and may be different than that in the above mentioned guidance document. This variation may be due to many factors, including, site specific human health and environmental exposure pathways, the presence of site contaminants not addressed in the guidance document or site specific physical characteristics. In case specific situations, when the cleanup criteria is modified from one previously established for that specific site, the Department will make every effort to expeditiously notify the responsible party. Please consult the Case Manager listed below to discuss any modifications that may affect your remedial options.

If the person conducting a cleanup does not wish to remediate a contaminated site consistent with the guidance document, they shall submit a proposal to the Case Manager listed below that details the site specific circumstances and technical rationale for the proposed cleanup goals.

Please note that the Ground Water Quality Standards, N.J.A.C. 7:9- 6, have been adopted and appeared in the February 1, 1993, New Jersey Register. This rule adoption may affect the requirements for ground water remediation and soil cleanup (i.e. where the soil may contribute contaminants to the ground water above the applicable standards) for a

particular site and should be referenced and discussed with the Case Manager listed below.

## VII. Compliance

Please note, pursuant to N.J.S.A. 58:10A-21 et seq. and N.J.A.C. 7:14B et seq., the owner and operator of the regulated underground storage tanks are strictly liable for compliance with these requirements. In addition, all state regulated USTs, except for heating oil USTs for on-site consumption, are regulated under 40 CFR Part 280. Non-compliance with these federal and state regulations exposes the tank owner and operator to the penalty and liability specified in 40 CFR Part 280, N.J.S.A. 58:10A-21 et seq. and N.J.A.C. 7:14B et seq.

If you require copies of Departmental Guidance Documents or applications, many of these documents are available on the internet at WWW.STATE.NJ.US/DEP/SRP. If you should have any questions regarding this matter please contact Daniel Bello, Case Manager, of the Bureau of Underground Storage Tanks at 609-984-1731.

Sincerely,

Daniel Bello (for)

Elaine DeWan, Supervisor
Bureau of Underground Storage Tanks

enclosures: UST Site/Remedial Investigation Report Certification Form
Well Certification Forms A and B

cc: Warren County Health Department
Phillipsburg City Clerk
Daniel Bello, Bureau of Underground Storage Tanks
Joe Norton at Norcon, Inc.

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