# QUARTERLY MONITORING REPORT
# ACTIVE TREATMENT SYSTEMS
# THIRD QUARTER 2003

## AMERICAN CHEMICAL SERVICE NPL SITE
## GRIFFITH, INDIANA

**MWH File No. 2090601**

**Prepared For:**

**American Chemical Service NPL Site RD/RA Executive Committee**
**Griffith, Indiana**

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**July 2004**

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MWH

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## ABBREVIATIONS AND ACRONYMNS

| | |
|---|---|
| ACS | American Chemical Service |
| AS | air sparge |
| BOD | biological oxygen demand |
| BWES | barrier wall extraction system |
| DPE | dual phase extraction |
| Durr | Durr Engineering |
| FID/PID | Flame/photo ionization detector |
| GAC | granular activated carbon |
| Global | Global Engineering |
| GWTP | groundwater treatment plant |
| HDPE | high-density polyethylene |
| IDEM | Indiana Department of Environmental Management |
| ISVE | in-situ vapor extraction |
| K-P | Kapica-Pazmey |
| LDC | Laboratory Data Consultants |
| NPL | National Priorities List |
| OFCA | Off-Site Containment Area |
| PCB | polychlorinated biphenyls |
| PGCS | Perimeter Groundwater Containment System |
| PSVP | Performance Standard Verification Plan |
| QAPP | Quality Assurance Project Plan |
| RD/RA | Remedial Design/Remedial Action |
| SBPA | Still Bottoms Pond Area |
| SVOC | semivolatile organic compound |
| Therm Ox | thermal oxidizer/scrubber |
| TSS | total suspended solids |
| U.S. EPA | United States Environmental Protection Agency |
| UV | ultraviolet |
| VOC | volatile organic compound |

# 1.0 INTRODUCTION

MWH, on behalf of the American Chemical Service (ACS) Remedial Design/Remedial Action (RD/RA) Executive Committee, started up the on-site groundwater treatment system at the ACS National Priorities List (NPL) Site (ACS Site) in Griffith, Indiana on March 13, 1997. The groundwater treatment plant (GWTP) system was designed to treat groundwater from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). The original treatment consisted of a phase-separator for oil and free product removal, equalization tanks, an ultraviolet (UV) oxidation unit for destruction of organic constituents, and an air stripper to remove methylene chloride and other organics. The treatment also included a chemical precipitation and clarification unit to remove metals, a sand filter to remove suspended solids, and activated carbon vessels for final polishing of the treated groundwater before it was released to the west of the site.

In 2001, an activated sludge treatment unit was added to the process to reduce the volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) in the collected groundwater. The activated sludge treatment process also reduces the amount of activated carbon required to treat the water. An aerated equalization tank was also added to the GWTP in 2001 to remove VOCs from the collected groundwater, oxidize metals to increase metals removal efficiency in the chemical precipitation unit, and equalize groundwater flow through the GWTP. The activated sludge system and aeration tank have been fully integrated into the process along with the other upgrade components. Startup and optimization of the catalytic oxidizer/scrubber air treatment unit was also conducted during 2001.

The treated effluent from the treatment system is discharged to the nearby wetlands, west of the treatment system, in accordance with Agency approvals.

In the fall of 2001, MWH began construction of an In-Situ Vapor Extraction (ISVE) system for the Off-Site Containment Area (OFCA) and the Kapica-Pazmey (K-P) Area, both within the area known as the Off-Site Area. The Off-Site Area ISVE system consists of 42 ISVE wells, six air sparge (AS) points, a blower system, a thermal oxidizer/scrubber unit, and associated mechanical and electrical components. The system construction was completed at the end of March 2002 and the system was started on May 1, 2002 after the startup of the thermal oxidizer and scrubber system was completed. Protocols and goals for the phased startup of the Off-Site System as defined in the Final Remedial Design Report (Montgomery Watson, 1999) were followed.

In the beginning of 2003, MWH began construction of an ISVE system for the Still Bottoms Pond Area (SBPA). The SBPA ISVE system consists of 25 ISVE wells, 21 dual phase extraction (DPE) wells, six AS wells, blower system, and associated mechanical and electrical components. The system construction was completed and the system was started in July of 2003. A new thermal oxidizer/scrubber unit was installed in the GWTP in the spring of 2003. The new unit was installed to treat vapors from either ISVE system or vapors from both ISVE systems simultaneously.

This Active Treatment Systems report summarizes operational data including: effluent analytical data from the GWTP, catalytic oxidizer/scrubber (annually) and thermal oxidizer off-gas analytical data, ISVE process monitoring data, and water level gauging data collected from July 2003 through September 2003. This report also details modifications or upgrades to the active treatment systems during the reporting period.

# 2.0 GWTP COMPLIANCE MONITORING

## 2.1 INTRODUCTION

Effluent samples are collected on a regular schedule from the treatment system to demonstrate compliance with the discharge limits (Table 2.1) established by Indiana Department of Environmental Management (IDEM) and United States Environmental Protection Agency (U.S. EPA). The approved Performance Standard Verification Plan (PSVP) requires quarterly effluent sampling for biological oxygen demand (BOD), total suspended solids (TSS), SVOCs, metals, and polychlorinated biphenyls (PCBs) in the system, and monthly effluent sampling for pH and VOCs, as shown in the table below. In accordance with the PSVP, a full monthly effluent compliance sample was collected during July and analyzed for all of the analytes listed above. During August and September, the monthly effluent compliance samples were analyzed for VOCs and pH only.

Sampling and analyses were performed in accordance with the Quality Assurance Project Plan (QAPP) prepared by MWH for the ACS RD/RA Executive Committee in March 2001 and approved by the Agencies in November 2001. Quality control measures were also instituted in accordance with the PSVP. The following table and paragraphs present details on sampling and analyses, and also summarize the analytical data for the treatment system effluent.

**Sampling Frequency Schedule – Groundwater Treatment System**

| Analytes | Cumulative Time From Startup* | Frequency |
|---|---|---|
| Flowrate | – | Continuous |
| BOD, TSS, SVOCs and Metals | 181 days onward | Once per quarter |
| VOCs and Ph | 31 days onward | Once per month |
| PCBs2 | 181 days onward | Once per quarter |
| PCBs in Sediment (one location) | – | Once per year |

*Note: System was started up on March 13, 1997

## 2.2 EFFLUENT SAMPLING AND ANALYSES

Effluent samples were collected each month during the third quarter 2003. Samples were collected on the following dates and analyzed for the listed analytes for this reporting period:

| | |
|---|---|
| July 30, 2003 | full analysis (pH, TSS, BOD, Metals, VOCs, SVOCs, pentachlorophenol, and PCBs) |
| August 27, 2003 | pH and VOCs |
| September 30, 2003 | pH and VOCs |

The above samples were collected directly from a sample tap located on the effluent discharge line of the treatment system. The samples were placed in contaminant-free containers, in accordance with the *U.S. EPA Specifications and Guidance for Obtaining Contaminant-Free Sample Containers* (U.S. EPA, 1992). Appropriate sample containers and preservatives, as specified in the QAPP, were used to collect and preserve the samples. Following sample collection, the temperature of the sample containers was maintained at or below 4°C in coolers. Chain-of-Custody forms were prepared to track the transfer of samples from the treatment system to the laboratories. In accordance with the approved QAPP, the following analytical methods were used to analyze the required parameters from the effluent water samples:

| Parameter | Analytical Method |
|---|---|
| VOCs | SW-846 8260B |
| SVOCs | SW-846 8270C |
| Pentachlorophenol | SW-846 8270C and SIM |
| Pesticides/PCBs | EPA 608/SW-846 8081/8082 |
| Metals (Excluding Mercury) | SW-846 6010 |
| General Water Quality Parameters (TSS and BOD-5) | EPA 160.2 and 405.1 |
| Mercury | SW-846 7470 |
| pH | EPA 150.1 |

## 2.3 EFFLUENT ANALYTICAL RESULTS

The GWTP effluent monitoring data, summarized in Table 2.2, verify that the system effluent was compliant with the discharge limits presented in Table 2.1. No exceedences occurred during this reporting period. The analytical data sheets for the compliance samples are provided in Appendix A.

Compuchem Laboratory of Cary, North Carolina analyzed the samples. Laboratory Data Consultants (LDC) of Carlsbad, California performed third party data validation in accordance with the U.S. EPA National Functional Guidelines for Organic/Inorganic Data Review. Validation qualifiers are listed in Table 2.2 and are written in the margin of the analytical data sheets provided in Appendix A.

## 2.4 CATALYTIC OXIDIZER/SCRUBBER SAMPLING AND ANALYSIS

MWH began eight initial rounds of off-gas sampling of the catalytic oxidizer/scrubber described in the PSVP (MWH, April 1997) in April 2002. The eight rounds of sampling were completed during the third quarter of 2002. One sample was collected in October 2002 to verify the continued performance of the system. The off-gas was also sampled in December 2002 after repairs were made to the catalytic oxidizer/scrubber unit to ensure the unit was working properly. As discussed in the November 2002 monthly status report, the off-gas sample from the catalytic oxidizer/scrubber will be sampled annually, in accordance

with IDEM regulations and the PSVP. However, since the vapors generated by the GWTP are being treated by Therm Ox 2 and the catalytic oxidizer is not being operated, annual samples of the catalytic oxidizer will only be collected if the unit operates within that year. The 2003 annual sample was collected on June 5, 2003 and analyzed for VOCs and SVOCs. The 2004 annual sample is scheduled to be collected in June 2004.

# 3.0 ISVE SYSTEM MONITORING

## 3.1 THERMAL OXIDIZER OFF-GAS SAMPLING

In May 2003, a second thermal oxidizer/scrubber (therm ox) unit was installed at the Site. The unit was manufactured by Global Engineering (Global) and is designated as Therm Ox 2. Therm Ox 2 was installed at the GWTP and initially treated vapors collected by the Off-Site Area ISVE system. Beginning in the third quarter of 2003, vapors from the SBPA ISVE system were treated by the new unit. Monthly compliance sampling of Therm Ox 2 began in July 2003 when the system was fully operational. The thermal ox unit manufactured by Durr Engineering (Durr), designated as Therm Ox 1, operated intermittently during July and August. Occasional shutdowns were due to fouling of the spray nozzles. Therm Ox 1 was shut down during September in order to perform repairs on the unit. Due to the intermittent operation of Therm Ox 1 during the third quarter, no compliance samples were collected.

In the third quarter of 2003, compliance samples were collected from Therm Ox 2 on July 17th, July 31st, September 4th, September 15th, September 18th, and September 25th. During August, no compliance samples were collected because the GWTP and Therm Ox 2 were not operating for most of the month due to maintenance. Influent and effluent off-gas samples were collected directly from sample taps on the influent pipe to the thermal oxidizer and the discharge stack of the scrubber. One influent sample (labeled IN1) and one effluent sample (EF1) were collected. A duplicate influent sample (IN2) was also collected. The samples were collected to comply with the PSVP and the QAPP and in accordance with laboratory guidelines. The VOC samples were collected using a summa canister and the SVOC samples were collected in sorbent tubes.

**Sampling Frequency Schedule – ISVE System**

| | |
|---|---|
| Startup | Weekly for a four week period |
| Post-Startup | Monthly in accordance with the IDEM Air Permit Equivalency |

Following sample collection, the SVOC, sample containers were maintained at or below 4°C in coolers. Chain-of-Custody forms were prepared to track the transfer of samples from the treatment system to the laboratories for extraction and analysis. In accordance with the approved QAPP, the off-gas samples were analyzed by the following analytical methods:

| Parameter | Analytical Method |
|---|---|
| VOCs | TO-14 |
| SVOCs | TO-13 |

## 3.2 SAMPLING RESULTS

The influent and effluent off-gas data summarized in Tables 3.1 and 3.2 verify that the off-gas from the thermal oxidizer was less than the IDEM discharge limit of three pounds of VOCs per hour for July and September. For example, the VOC discharge reported from the September 15, 2003 sample was 0.03 pounds per hour, one percent of the discharge limit. The analytical data sheets for the compliance samples are provided in Appendix B.

Air Toxics Laboratories of Folsom, California analyzed the samples. The analytical results are summarized in Tables 3.1 and 3.2. MWH performed data validation in accordance with the QAPP and the National Functional Guidelines for Organic/Inorganic Data Review. Validation qualifiers are listed in Tables 3.1 and 3.2 and are written in the margin of the analytical data sheets provided in Appendix B.

## 3.3 ISVE SYSTEM MONITORING

Performance monitoring of the ISVE system was conducted in accordance with the PSVP (Montgomery Watson, June 1999). Extracted vapor flow rates and vacuums at individual ISVE wells and headers were collected on a routine basis. Additionally, VOC concentrations were measured at individual wells and headers using a flame/photo ionization detector (FID/PID).

The information collected during performance monitoring is used to evaluate and optimize the ISVE system. Data collected from the Off-Site ISVE system during the third quarter of 2003 is presented in Tables 3.3 and 3.4. Data that was collected from the SBPA ISVE system during the third quarter of 2003 is presented in Tables 3.5 and 3.6. Process monitoring was not performed during July for either ISVE system due to the intermittent operation of the systems.

## 4.0 GWTP TREATMENT SYSTEM PROCESS MODIFICATIONS

During the third quarter of 2003, minor modifications were made in the GWTP treatment system process. Effluent piping was reconfigured to direct plant effluent to a newly installed nanofiltration unit. The effluent from the nanofiltration unit was used for the scrubber make-up quench water. The nanofiltration unit is discussed further in Section 5.0 of this report.

Eight-inch diameter high-density polyethylene (HDPE) piping was installed between T-102 and the thermal oxidizer header system so that the vapors from T-102 could be treated by either thermal oxidizer unit or by the catalytic oxidizer.

## 5.0 ISVE PROCESS MODIFICATION

Regular maintenance was performed on the Off-Site Area ISVE System components during the third quarter of 2003. The SBPA ISVE system was started in July 2003. Vapors from both systems were treated by Therm Ox 2.

It is believed that the quality of the city water used for the thermal oxidizers' scrubbers was causing fouling within the scrubbers. Therefore, a nanofiltration unit was installed on September 15th in the GWTP to treat the city water. The nanofiltration unit is an E4H-Series water purification unit manufactured by Osmonics. The unit was installed next to the granular activated carbon (GAC) vessels and the plant piping was reconfigured so that effluent water could be directed to the unit. A cut sheet for the unit is included in Appendix C.

## 6.0 PGCS AND BWES GAUGING ACTIVITIES

The PGCS groundwater extraction trenches were operated in "auto" mode during the third quarter of 2003 during operational periods of the GWTP. In "auto" mode, the PGCS extraction wells will pump continuously unless there is a high water level in Aeration Equalization Tank (T-102), a low water level in individual extraction wells, or if the GWTP was not operating. This mode is used to control the flowrate through the treatment system while at the same time creating an inward gradient along the PGCS trench. The GWTP also received influent from the On-Site and Off-Site components of the Barrier Wall Extraction System (BWES) and the SBPA dual-phase extraction (DPE) wells during the third quarter of 2003.

As required by the PSVP for the system, a discussion on the effect of the PGCS and BWES on the water table near the Site is presented in each quarterly monitoring report. This section summarizes the groundwater elevations at the site during July, August, and September 2003. Groundwater elevation measurements were collected throughout the Site on September 15, 2003 as part of the groundwater monitoring program. The groundwater elevations and resulting contours outside the barrier wall are shown in Table 6.1 and on Figure 6.1. The water table contours shown on Figure 6.1 indicate that the PGCS continues to create a "trough" in the water table, which stops migration of the benzene plume further toward the wetland.

The barrier wall was constructed to contain a contaminated zone under the Site, and the BWES was installed to lower water levels inside the barrier wall. Piezometers were installed in pairs, one piezometer of each pair on either side of the barrier wall, spaced along the barrier wall alignment. This allows measurement and tracking of water levels in order to ensure that the barrier wall is serving its designed function.

Table 6.1, BWES Water Level and Piezometer Pairs, presents the groundwater elevations inside and outside the barrier wall on September 15, 2003. They are illustrated on Figure 6.2. The groundwater elevations range from 0.16 feet to 5.99 feet higher outside the barrier wall. The data demonstrate that the barrier wall is successfully performing the intended function of isolating and protecting the groundwater outside the barrier wall from the known source areas of the Site inside the barrier wall. In the past, conditions at the Site have caused the water levels to be higher inside the barrier wall than the levels outside the barrier wall at piezometer pair P-107 and P-108. However, continued dewatering of the area by extraction trench EW-18 has lowered the water level inside the barrier wall at this pair. In addition, the completion of the interim cover in the Still Bottoms Pond Area (SBPA) and the startup of the dual phase extraction wells in the SBPA have also aided the dewatering in the On-Site Area. MWH will continue to collect regular water level measurements across the Site as required in the PSVP.

As part of the optimization of the GWTP and BWES upgrades, MWH began active dewatering of the Off-Site Area through increased groundwater pumping rates on September 25, 2001. MWH began active dewatering of the SBPA on February 11, 2003.

To keep track of the dewatering progress inside the barrier wall, water levels were collected from the various piezometers and AS wells on a regular basis, as shown in Table 6.2. Water levels regularly were measured at seven piezometers in the On-Site Area regularly throughout the quarter (P29, P31, P32, P36, P49, P-106, and P-108) and at seven piezometers and three AS wells in the Off-Site Area (P96, P110, P112, P113, P114, P116, P118, AS-7, AS-8, and AS-9). The water level data from these piezometers and AS wells are depicted graphically on Figures 6.3 and 6.4, which also reference the target water levels for each area. The target water levels were established to enhance the operation of the ISVE system.

## 7.0 SYSTEM OPERATION

The GWTP operated as designed for approximately 50 percent of the third quarter of 2003 (based on days of operation). The system operated normally throughout July, drawing influent from the On-Site Area BWES (including the SBPA ISVE system dual phase extraction wells), the Off-Site Area BWES, the PGCS, and monitoring wells MW10C and MW56. In the beginning of August, the GWTP building was struck by lightning, damaging some of the control and communication systems and shutting the GWTP down. The GWTP was brought back online shortly after being struck by lightning at a reduced flowrate while repairs were being made. Towards the end of August, a high turbidity level in the effluent was observed, therefore, the GWTP was placed into recirculation mode until the source of the turbidity was identified. The turbidity was determined to be caused by floating microbes from ME-101, which had fouled the GAC units. While in recirculation mode, the lamella clarifier was used to remove the floating particulates in the waste stream. On September 8$^{th}$, the GAC in the lead vessel was replaced. In addition, on September 8$^{th}$, MWH began adding additional microbes to supplement the remaining microbe population in ME-101. Addition of microbes into ME-101 continued through the end of September. The GWTP was put back into normal operating mode on September 20$^{th}$ when the corrective measures were completed.

The Off-Site Area ISVE system continued to operate as designed for approximately 70 percent of the third quarter of 2003 (based on days of operation). The system was shut down for routine maintenance of the thermal oxidizer unit.

The initial startup testing of the SBPA ISVE system was completed on July 15$^{th}$ and vapors from the system were directed to Therm Ox 2. The system operated as designed for approximately 65 percent of the third quarter of 2003 (based on days of operation).

# 8.0 REFERENCES


1. *Performance Standard Verification Plan, ACS NPL Site*, Montgomery Watson, June 1999.

2. *Quality Assurance Project Plan, ACS NPL Site*, Montgomery Watson, March 2001.

3. *U.S. EPA Specifications and Guidance for Obtaining Contaminant-Free Sample Containers*, United States Environmental Protection Agency, 1992.


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# Tables

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**Table 2.1**
**Groundwater Treatment System Effluent Discharge Limits**
**American Chemical Service NPL Site**
**Griffith, Indiana**

| Groundwater Quality Parameter | Effluent Standard (Limit) |
|---|---|
| ***General Water Quality Parameters*** | |
| PH | 6 - 9 S.U. |
| BOD-5 | 30 mg/L |
| TSS | 30 mg/L |
| ***Inorganics*** | |
| Arsenic | 50 µg/L |
| Beryllium | NE |
| Cadmium | 4.1 µg/L |
| Manganese | NE |
| Mercury | 0.02 µg/L (w/DL = 0.64) |
| Selenium | 8.2 µg/L |
| Thallium | NE |
| Zinc | 411 µg/L |
| ***Volatile Organics*** | |
| Acetone | 6,800 µg/L |
| Benzene | 5 µg/L |
| 2-Butanone | 210 µg/L |
| Chloromethane | NE |
| 1,4 – Dichlorobenzene | NE |
| 1,1 – Dichloroethane | NE |
| 1,2 – Dichloroethene – cis | 70 µg/L |
| Ethylbenzene | 34 µg/L |
| Methylene chloride | 5 µg/L |
| Tetrachloroethene | 5 µg/L |
| Trichloroethene | 5 µg/L |
| Vinyl chloride | 2 µg/L |
| 4 – Methyl - 2 – pentanone | 15 µg/L |
| ***Semi-Volatile Organics*** | |
| bis(2 – Chloroethyl) ether | 9.6 µg/L |
| bis(2 – Ethylhexyl) phthalate | 6 µg/L |
| Isophorone | 50 µg/L |
| 4 – Methylphenol | 34 µg/L |
| Pentachlorophenol | 1 µg/L |
| ***PCBs*** | |
| PCBs | 0.00056 µg/L (w/DL = 0.1 to 0.9) |

Notes:
NE = No effluent limit established.
DL = Detection limit

**Table 2.2**
**Summary of Effluent Analytical Results - Third Quarter 2003**
**Groundwater Treatment System**
**American Chemical Service NPL Site**
**Griffith, Indiana**

| Event<br>Date | Month 74<br>7/30/2003 | Month 75<br>8/27/2003 | Month 76<br>9/30/2003 | Effluent Limits | Lab Reporting Limits |
|---|---|---|---|---|---|
| pH | 7.65 | 7.60 | 7.42 | 6-9 | none |
| TSS | ND | NS | NS | 30 | 10 |
| BOD | ND | NS | NS | 30 | 2 |
| Arsenic | ND | NS | NS | 50 | 3.4 |
| Beryllium | 0.14 B/ | NS | NS | NE | 0.2 |
| Cadmium | ND | NS | NS | 4.1 | 0.3 |
| Manganese | 80.9 | NS | NS | NE | 10 |
| Mercury | ND | NS | NS | 0.02 (w/DL = 0.64) | 0.64 |
| Selenium | ND | NS | NS | 8.2 | 4.3 |
| Thallium | ND | NS | NS | NE | 5.7 |
| Zinc | ND | NS | NS | 411 | 1.2 |
| Benzene | ND | 0.29 J/ | 0.049 JB/0.5UB | 5 | 0.5 |
| Acetone | 2.5 J/ | 3.1 | ND | 6,800 | 3 |
| 2-Butanone | ND | ND | ND | 210 | 3 |
| Chloromethane | ND | 0.73 | ND | NE | 0.5 |
| 1,4-Dichlorobenzene | ND | ND | ND | NE | 0.5 |
| 1,1-Dichloroethane | ND | ND | ND | NE | 0.5 |
| cis-1,2-Dichloroethene | ND | 0.23 J/ | 0.031 J | 70 | 0.5 |
| Ethylbenzene | ND | 0.088 J/ | ND | 34 | 0.5 |
| Methylene chloride | 0.11 J/ | 0.13 J/ | ND | 5 | 0.6 |
| Tetrachloroethene | ND | 0.24 JB/ | ND | 5 | 0.5 |
| Trichloroethene | ND | 0.19 J/ | ND | 5 | 0.5 |
| Vinyl chloride | ND | ND | ND | 2 | 0.5 |
| 4-Methyl-2-pentanone | ND | ND | ND | 15 | 3 |
| bis (2-Chloroethyl) ether | ND | NS | NS | 9.6 | 9.6 |
| bis(2-Ethylhexyl) - phthalate | ND | NS | NS | 6 | 6 |
| 4 - Methylphenol | ND | NS | NS | 34 | 10 |
| Isophorone | ND | NS | NS | 50 | 10 |
| Pentachlorophenol | 0.8 J/ | NS | NS | 1 | 1 |
| PCB/Aroclor-1016 | ND | NS | NS | 0.00056 (w/DL = 0.1 to 0.9) | 0.5 |
| PCB/Aroclor-1221 | ND | NS | NS | 0.00056 (w/DL = 0.1 to 0.9) | 0.92* |
| PCB/Aroclor-1232 | ND | NS | NS | 0.00056 (w/DL = 0.1 to 0.9) | 0.5 |
| PCB/Aroclor-1242 | ND | NS | NS | 0.00056 (w/DL = 0.1 to 0.9) | 0.5 |
| PCB/Aroclor-1248 | ND | NS | NS | 0.00056 (w/DL = 0.1 to 0.9) | 0.5 |
| PCB/Aroclor-1254 | ND | NS | NS | 0.00056 (w/DL = 0.1 to 0.9) | 0.5 |
| PCB/Aroclor-1260 | ND | NS | NS | 0.00056 (w/DL = 0.1 to 0.9) | 0.5 |

Notes:
pH data is expressed in S.U.
TSS and BOD5 data is expressed in mg/L
Inorganic, Volatile Organic, Semi-Volatile Organic, and PCB data is expressed as µg/l.
ND = Not detected
NS = This analyte was not sampled or analyzed for
NE = No effluent limit established.
NA = Sample not analyzed for this compound
* = Approved SW-846 method is incapable of achieving effluent limit.
DL = Detection Limit

Suffix Definitions:
_/ = Data qualifier added by laboratory
/_ = Data qualifier added by data validator
B = Compound is also detected in the blank
J = Result is detected below the reporting limit and is an estimated concentration
JB = Analyte is detected in the compliance sample below the reporting limit and is an estimated concentration and the compound is also detected in the method blank resulting in a potential high bias
UB = Analyte is not detected at or above the indicated concentration due to blank contamination

## Table 3.2
## Summary of Thermal Oxidizer Off-Gas Analytical Results for SVOCs (Method TO-13) - Third Quarter 2003
## Thermal Oxidizer Sampling
## American Chemical Service, Griffith, Indiana

| | | Sampled 7/17/2003 | | | | | | | | | Sampled 7/31/2003 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Off-Site ISVE System | | | | Therm Ox 2 | | Destruction Efficiency | | | On-Site ISVE System | | | | Therm Ox 2 | | Destruction Efficiency | | |
| Compounds | Units | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low (%) | High (%) | Average (%) | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low (%) | High (%) | Average (%) |
| **Method TO-13** | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg | 0.71 | J/J | 0.8 | J/J | ND | U | NC | NC | NC | 0.54 | J/J | 0.6 | J/J | ND | U | NC | NC | NC |
| 1,2-Dichlorobenzene | µg | 31 | | 32 | | ND | U | 100.00% | 100.00% | 100.00% | 20 | | 19 | | ND | U | 100.00% | 100.00% | 100.00% |
| 1,3-Dichlorobenzene | µg | 0.97 | J/J | 0.94 | J/J | ND | U | NC | NC | NC | 0.65 | J/J | 0.64 | J/J | ND | U | NC | NC | NC |
| 1,4-Dichlorobenzene | µg | 3.2 | | 3.3 | | ND | U | 100.00% | 100.00% | 100.00% | 2.3 | | 2.3 | | ND | U | 100.00% | 100.00% | 100.00% |
| 2,4,5-Trichlorophenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4,6-Trichlorophenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dichlorophenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dimethylphenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dinitrophenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dinitrotoluene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,6-Dinitrotoluene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Chloronaphthalene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Chlorophenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Methylnaphthalene | µg | 4.9 | | 5.6 | | ND | U | 100.00% | 100.00% | 100.00% | 5.1 | | 5.2 | | ND | U | 100.00% | 100.00% | 100.00% |
| 2-Methylphenol (o-Cresol) | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Nitroaniline | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Nitrophenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 3,3'-Dichlorobenzidine | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 3-Nitroaniline | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4,6-Dinitro-2-methylphenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Bromophenyl-phenyl Ether | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chloro-3-methylphenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chloroaniline | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chlorophenyl-phenyl Ether | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Methylphenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Nitroaniline | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Nitrophenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Acenaphthene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Acenaphthylene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Anthracene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(a)anthracene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(a)pyrene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(b)fluoranthene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(g,h,i)perylene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(k)fluoranthene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Chloroethoxy) Methane | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Chloroethyl) Ether | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Ethylhexyl)phthalate | µg | 0.73 | J/J | 0.72 | J/J | 3.5 | J/J | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Butylbenzylphthalate | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Chrysene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |

## Table 3.1
## Summary of Thermal Oxidizer Off-Gas Analytical Results for VOCs (Method TO-14) - Third Quarter 2003
## American Chemical Service, Griffith, Indiana

| | | Sampled 7/17/2003 | | | | | | | | | Sampled 7/31/2003 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Analytical Data | | | | | | Destruction Efficiency | | | Analytical Data | | | | | | Destruction Efficiency | | |
| | | Off-Site ISVE System | | | | ThermOx 2 | | | | | On-Site ISVE System | | | | ThermOx 2 | | | | |
| Compounds | Units | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low | High | Average | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low | High | Average |
| **Method TO-14** | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | ppbv | 75,000 | | 74,000 | | 330 | | 99.55% | 99.56% | 99.56% | 2,900 | | 3,300 | | 1.4 | | 99.95% | 99.96% | 99.95% |
| 1,1,2,2-Tetrachloroethane | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 1,1,2-Trichloroethane | ppbv | 550 | J/J | 490 | J/J | 1.7 | J/J | NC | NC | NC | ND | U | 80 | J/J | ND | U | NC | NC | NC |
| 1,1-Dichloroethane | ppbv | 12,000 | | 12,000 | | 52 | | 99.57% | 99.57% | 99.57% | 380 | | 420 | | 0.1 | J/J | NC | NC | NC |
| 1,1-Dichloroethene | ppbv | 3,000 | | 2,700 | | 87 | | 96.78% | 97.10% | 96.94% | 340 | J/J | 350 | | 32 | | NC | NC | NC |
| 1,2-Dichloroethane | ppbv | 2,300 | | 2,000 | | 8.9 | | 99.56% | 99.61% | 99.58% | 180 | J/J | 200 | J/J | ND | U | NC | NC | NC |
| 1,2-Dichloropropane | ppbv | 890 | J/J | 960 | J/J | 3.4 | | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Butanone (Methyl Ethyl Ketone) | ppbv | 70,000 | | 70,000 | | 180 | | 99.74% | 99.74% | 99.74% | 3,500 | | 3,600 | | 3.4 | | 99.90% | 99.91% | 99.90% |
| 2-Hexanone | ppbv | 1,100 | J/J | 1,100 | J/J | 2.8 | J/J | NC | NC | NC | 170 | J/J | 180 | J/J | ND | U | NC | NC | NC |
| 4-Methyl-2-pentanone | ppbv | 24,000 | | 24,000 | | 43 | | 99.82% | 99.82% | 99.82% | 2,100 | | 2,400 | | 0.3 | J/J | NC | NC | NC |
| Acetone | ppbv | 83,000 | | 81,000 | | 240 | | 99.70% | 99.71% | 99.71% | 2,600 | | 2,800 | | 43 | | 98.35% | 98.46% | 98.41% |
| Benzene | ppbv | 56,000 | | 56,000 | | 400 | | 99.29% | 99.29% | 99.29% | 6,200 | | 7,100 | | 8.7 | | 99.86% | 99.88% | 99.87% |
| Bromodichloromethane | ppbv | ND | U | ND | U | 0.65 | J/J | NC | NC | NC | ND | U | ND | U | 2.9 | | NC | NC | NC |
| Bromoform | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Bromomethane | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Carbon Disulfide | ppbv | 1,400 | J/J | 1,400 | J/J | 0.8 | J/J | NC | NC | NC | ND | U | ND | U | 1.4 | J/J | NC | NC | NC |
| Carbon Tetrachloride | ppbv | ND | U | ND | U | 0.73 | J/J | NC | NC | NC | ND | U | ND | U | 17 | | NC | NC | NC |
| Chlorobenzene | ppbv | ND | U | ND | U | 3.2 | | NC | NC | NC | ND | U | ND | U | 1.2 | | NC | NC | NC |
| Chloroethane | ppbv | ND | U | ND | U | 2.3 | J/J | NC | NC | NC | ND | U | ND | U | 0.37 | J/J | NC | NC | NC |
| Chloroform | ppbv | 3,900 | | 3,900 | | 21 | | 99.46% | 99.46% | 99.46% | 230 | J/J | 240 | J/J | 8 | | NC | NC | NC |
| Chloromethane | ppbv | ND | U | ND | U | 23 | | NC | NC | NC | ND | U | ND | U | 6.4 | | NC | NC | NC |
| cis-1,2-Dichloroethene | ppbv | 23,000 | | 23,000 | | 100 | | 99.57% | 99.57% | 99.57% | 3,200 | | 3,700 | | 11 | | 99.66% | 99.70% | 99.68% |
| cis-1,3-Dichloropropene | ppbv | ND | U | ND | U | 0.94 | J/J | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Dibromochloromethane | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | 0.97 | | NC | NC | NC |
| Ethyl Benzene | ppbv | 37,000 | | 37,000 | | 92 | | 99.75% | 99.75% | 99.75% | 13,000 | | 15,000 | | 0.3 | J/J | NC | NC | NC |
| m,p-Xylene | ppbv | 150,000 | | 150,000 | | 310 | | 99.79% | 99.79% | 99.79% | 58,000 | | 65,000 | | 1.4 | | 100.00% | 100.00% | 100.00% |
| Methylene Chloride | ppbv | 89,000 | | 89,000 | | 430 | | 99.52% | 99.52% | 99.52% | 2,900 | | 3,200 | | 1.9 | | 99.93% | 99.94% | 99.94% |
| o-Xylene | ppbv | 47,000 | | 48,000 | | 94 | | 99.80% | 99.80% | 99.80% | 19,000 | | 21,000 | | 0.48 | J/J | NC | NC | NC |
| Styrene | ppbv | 2,300 | | 2,300 | | 42 | | 98.17% | 98.17% | 98.17% | ND | U | ND | U | 0.16 | J/J | NC | NC | NC |
| Tetrachloroethene | ppbv | 46,000 | | 46,000 | | 260 | | 99.43% | 99.43% | 99.43% | 14,000 | | 16,000 | | 30 | | 99.79% | 99.81% | 99.80% |
| Toluene | ppbv | 360,000 | | 360,000 | | 1,100 | | 99.69% | 99.69% | 99.69% | 90,000 | | 100,000 | | 1.3 | | 100.00% | 100.00% | 100.00% |
| trans-1,2-Dichloroethene | ppbv | ND | U | ND | U | 23 | | NC | NC | NC | ND | U | ND | U | 7.5 | | NC | NC | NC |
| trans-1,3-Dichloropropene | ppbv | ND | U | ND | U | 0.69 | J/J | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Trichloroethene | ppbv | 47,000 | | 47,000 | | 240 | | 99.49% | 99.49% | 99.49% | 7,800 | | 8,800 | | 16 | | 99.79% | 99.82% | 99.81% |
| Vinyl Chloride | ppbv | 890 | J/J | 760 | J/J | 28 | | NC | NC | NC | ND | U | ND | U | 2.1 | | NC | NC | NC |
| | | | | | | | | | | | | | | | | | | | |
| **Total[1]** | **ppbv** | **1,135,330** | | **1,132,610** | | **4,121.11** | | **99.64%** | **99.64%** | **99.64%** | **226,500** | | **253,370** | | **199.28** | | **99.91%** | **99.92%** | **99.92%** |
| **Total[1]** | **lb/hr** | **15.76** | | **15.73** | | **0.06** | | **99.63%** | **99.63%** | **99.63%** | **3.31** | | **3.71** | | **0.003** | | **99.91%** | **99.92%** | **99.91%** |

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
NC - Not calculated
ND - Non-detect
ppbv - parts per billion volume
lb/hr - pounds per hour

Destruction efficiency is not calculated where influent and/or effluent values are estimated.
1. The total concentration and mass loading were calculated using all detected concentrations including estimated detections (denoted with J or UJ qualifiers). Therefore, this total should be considered an estimated total.
7/17/03 and 7/24/03 VOCs in lb/hr calculated based on 914 scfm (6/27/03)

Qualifiers:
J - Result is estimated
U - Indicates the compound was not detected at or above the indicated concentration
UJ - Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
R - Quality control indicates the data is not usable

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## Table 3.1
## Summary of Thermal Oxidizer Off-Gas Analytical Results for VOCs (Method TO-14) - Third Quarter 2003
## American Chemical Service, Griffith, Indiana

| | | Sampled 9/04/2003 | | | | | | | | | Sampled 9/15/2003 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Analytical Data | | | | | | Destruction Efficiency | | | Analytical Data | | | | | | Destruction Efficiency | | |
| | | Off-Site ISVE System | | | | ThermOx 2 | | | | | On-Site ISVE System | | | | ThermOx 2 | | | | |
| Compounds | Units | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low | High | Average | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low | High | Average |
| Method TO-14 | | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | ppbv | 120,000 | | 110,000 | | 0.06 | J/J | NC | NC | NC | 95,000 | | 100,000 | | 0.83 | | 100.00% | 100.00% | 100.00% |
| 1,1,2,2-Tetrachloroethane | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 1,1,2-Trichloroethane | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 1,1-Dichloroethane | ppbv | 5,800 | | 5,400 | | ND | U | 100.00% | 100.00% | 100.00% | 5,500 | | 7,200 | | ND | U | 100.00% | 100.00% | 100.00% |
| 1,1-Dichloroethene | ppbv | 4,000 | | 3,100 | | 24 | | 99.23% | 99.40% | 99.31% | 1,700 | J/J | 2,200 | J/J | 92 | | NC | NC | NC |
| 1,2-Dichloroethane | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 1,2-Dichloropropane | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | 2,100 | J/J | ND | U | NC | NC | NC |
| 2-Butanone (Methyl Ethyl Ketone) | ppbv | 3,100 | J/J | 2,900 | J/J | 3.2 | | NC | NC | NC | 5,400 | J/J | 5,700 | J/J | 1.4 | J/J | NC | NC | NC |
| 2-Hexanone | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Methyl-2-pentanone | ppbv | 7,500 | J/J | 6,700 | J/J | ND | U | NC | NC | NC | ND | U | ND | U | 0.35 | J/J | NC | NC | NC |
| Acetone | ppbv | 6,400 | J/J | 7,400 | J/J | 20 | | NC | NC | NC | 5,600 | J/J | 5,100 | J/J | 13 | | NC | NC | NC |
| Benzene | ppbv | 77,000 | | 70,000 | | 17 | | 99.98% | 99.98% | 99.98% | 61,000 | | 63,000 | | 110 | | 99.82% | 99.83% | 99.82% |
| Bromodichloromethane | ppbv | ND | U | ND | U | 5.5 | | NC | NC | NC | ND | U | ND | U | 6.5 | | NC | NC | NC |
| Bromoform | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Bromomethane | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | 1 | /J | NC | NC | NC |
| Carbon Disulfide | ppbv | 720 | J/J | 850 | J/J | 8.3 | | NC | NC | NC | ND | U | 1,200 | J/J | 1.6 | J/J | NC | NC | NC |
| Carbon Tetrachloride | ppbv | ND | U | ND | U | 0.24 | J/J | NC | NC | NC | ND | U | ND | U | 9.2 | | NC | NC | NC |
| Chlorobenzene | ppbv | 620 | J/J | ND | U | 0.95 | | NC | NC | NC | ND | U | ND | U | 10 | | NC | NC | NC |
| Chloroethane | ppbv | ND | U | ND | U | 0.31 | J/J | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Chloroform | ppbv | 3,700 | | 3,400 | | 34 | | 99.00% | 99.08% | 99.04% | 3,900 | J/J | 4,400 | J/J | 41 | | NC | NC | NC |
| Chloromethane | ppbv | ND | U | ND | U | 1.7 | J/J | NC | NC | NC | ND | U | ND | U | 37 | | NC | NC | NC |
| cis-1,2-Dichloroethene | ppbv | 100,000 | | 92,000 | | 7.3 | | 99.99% | 99.99% | 99.99% | 84,000 | | 92,000 | | 21 | | 99.98% | 99.98% | 99.98% |
| cis-1,3-Dichloropropene | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | 0.83 | | NC | NC | NC |
| Dibromochloromethane | ppbv | ND | U | ND | U | 1.4 | | NC | NC | NC | ND | U | ND | U | 1.4 | | NC | NC | NC |
| Ethyl Benzene | ppbv | 83,000 | | 74,000 | | 0.22 | J/J | NC | NC | NC | 98,000 | | 97,000 | | 1.4 | | 100.00% | 100.00% | 100.00% |
| m,p-Xylene | ppbv | 270,000 | | 240,000 | | 0.61 | J/J | NC | NC | NC | 370,000 | | 360,000 | | 7 | | 100.00% | 100.00% | 100.00% |
| Methylene Chloride | ppbv | 16,000 | | 15,000 | | 2.3 | | 99.98% | 99.99% | 99.99% | 22,000 | | 27,000 | | 23 | | 99.90% | 99.91% | 99.91% |
| o-Xylene | ppbv | 63,000 | | 55,000 | | 0.26 | J/J | NC | NC | NC | 94,000 | | 88,000 | | 1.6 | | 100.00% | 100.00% | 100.00% |
| Styrene | ppbv | ND | U | ND | U | 0.16 | J/J | NC | NC | NC | ND | U | ND | U | 7.6 | | NC | NC | NC |
| Tetrachloroethene | ppbv | 120,000 | | 110,000 | | 28 | | 99.97% | 99.98% | 99.98% | 170,000 | | 170,000 | | 170 | | 99.90% | 99.90% | 99.90% |
| Toluene | ppbv | 880,000 | | 800,000 | | 0.94 | | 100.00% | 100.00% | 100.00% | 1,000,000 | | 1,100,000 | | 13 | | 100.00% | 100.00% | 100.00% |
| trans-1,2-Dichloroethene | ppbv | ND | U | ND | U | 1.5 | J/J | NC | NC | NC | ND | U | ND | U | 16 | | NC | NC | NC |
| trans-1,3-Dichloropropene | ppbv | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Trichloroethene | ppbv | 150,000 | | 140,000 | | 9.1 | | 99.99% | 99.99% | 99.99% | 140,000 | | 160,000 | | 88 | | 99.94% | 99.95% | 99.94% |
| Vinyl Chloride | ppbv | 4,100 | | 3,800 | | 3.7 | | 99.90% | 99.91% | 99.91% | 3,300 | J/J | 4,400 | J/J | 27 | | NC | NC | NC |
| | | | | | | | | | | | | | | | | | | | |
| **Total[1]** | **ppbv** | **1,914,940** | | **1,739,550** | | **170.75** | | **99.99%** | **99.99%** | **99.99%** | **2,159,400** | | **2,289,300** | | **701.71** | | **99.97%** | **99.97%** | **99.97%** |
| **Total[1]** | **lb/hr** | **32.92** | | **29.91** | | **0.01** | | **99.98%** | **99.98%** | **99.98%** | **41.56** | | **43.88** | | **0.03** | | **99.94%** | **99.94%** | **99.94%** |

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
NC - Not calculated
ND - Non-detect
ppbv - parts per billion volume
lb/hr - pounds per hour

Destruction efficiency is not calculated where influent and/or effluent values are estimated.
1. The total concentration and mass loading were calculated using all detected concentrations including estimated detections (denoted with J or UJ qualifiers). Therefore, this total should be considered an estimated total.
9/4/03 VOCs in lb/hr calculated based on 1055 scfm from the Off-Site (9/8/03)
9/15/03 VOCs in lb/hr calculated based on 1175 scfm from the On-Site (9/18/03)

Qualifiers:
J - Result is estimated
U - Indicates the compound was not detected at or above the indicated concentration
UJ - Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
R - Quality control indicates the data is not usable

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## Table 3.1
## Summary of Thermal Oxidizer Off-Gas Analytical Results for VOCs (Method TO-14) - Third Quarter 2003
## American Chemical Service, Griffith, Indiana

| | | Sampled 9/18/2003 | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Analytical Data | | | | | | | | | | | | | | Destruction Efficiency | | |
| | | Off-Site ISVE System | | | | On-Site ISVE System | | | | ThermOx 2 | | Influent | | Influent | | | | |
| Compounds | Units | Influent IN1 | | Influent IN2 | | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low | | High | | Low | High | Average |
| **Method TO-14** | | | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | ppbv | 120,000 | | 110,000 | | 96,000 | | 93,000 | | 45 | | 203,000 | | 216,000 | | 99.98% | 99.98% | 99.98% |
| 1,1,2,2-Tetrachloroethane | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| 1,1,2-Trichloroethane | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| 1,1-Dichloroethane | ppbv | 14,000 | | 13,000 | | 6,000 | | 6,400 | | 3 | | 19,000 | | 20,400 | | 99.98% | 99.99% | 99.98% |
| 1,1-Dichloroethene | ppbv | 1,600 | J/J | 1,500 | J/J | 1,400 | J/J | 1,600 | J/J | 89 | | 2,900 | J | 3,200 | J | NC | NC | NC |
| 1,2-Dichloroethane | ppbv | 3,300 | | 3,900 | | ND | U | ND | U | 0.81 | J/J | 3,300 | | 3,900 | | 99.98% | 99.98% | 99.98% |
| 1,2-Dichloropropane | ppbv | 1,100 | J/J | 1,300 | J/J | ND | U | 2,000 | J/J | 0.99 | J/J | 1,100 | J | 3,300 | J | NC | NC | NC |
| 2-Butanone (Methyl Ethyl Ketone) | ppbv | 62,000 | | 62,000 | | 3,900 | J/J | 3,500 | J/J | 6.4 | J/J | 65,500 | J | 65,900 | J | NC | NC | NC |
| 2-Hexanone | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Methyl-2-pentanone | ppbv | 23,000 | | 25,000 | | 9,600 | J/J | 9,400 | J/J | 5.5 | J/J | 32,400 | J | 34,600 | J | NC | NC | NC |
| Acetone | ppbv | 77,000 | | 72,000 | | 7,300 | J/J | 7,400 | J/J | 24 | | 79,300 | J | 84,400 | J | NC | NC | NC |
| Benzene | ppbv | 78,000 | | 82,000 | | 57,000 | | 58,000 | | 150 | | 135,000 | | 140,000 | | 99.89% | 99.89% | 99.89% |
| Bromodichloromethane | ppbv | ND | U | ND | U | ND | U | ND | U | 11 | | ND | U | ND | U | NC | NC | NC |
| Bromoform | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| Bromomethane | ppbv | ND | U | ND | U | ND | U | ND | U | 0.92 | J/J | ND | U | ND | U | NC | NC | NC |
| Carbon Disulfide | ppbv | 820 | J/J | 730 | J/J | ND | U | ND | U | 0.96 | J/J | 730 | J | 820 | J | NC | NC | NC |
| Carbon Tetrachloride | ppbv | ND | U | ND | U | ND | U | ND | U | 8.9 | | ND | U | ND | U | NC | NC | NC |
| Chlorobenzene | ppbv | ND | U | ND | U | ND | U | ND | U | 11 | | ND | U | ND | U | NC | NC | NC |
| Chloroethane | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| Chloroform | ppbv | 6,300 | | 6,200 | | 5,900 | | 4,400 | J/J | 40 | | 10,600 | J | 12,200 | | 99.62% | 99.67% | 99.65% |
| Chloromethane | ppbv | 1,200 | J/J | 1,600 | J/J | ND | U | ND | U | 58 | | 1,200 | J | 1,600 | J | NC | NC | NC |
| cis-1,2-Dichloroethene | ppbv | 33,000 | | 32,000 | | 85,000 | | 81,000 | | 69 | | 113,000 | | 118,000 | | 99.94% | 99.94% | 99.94% |
| cis-1,3-Dichloropropene | ppbv | ND | U | ND | U | ND | U | ND | U | 0.98 | J/J | ND | U | ND | U | NC | NC | NC |
| Dibromochloromethane | ppbv | ND | U | ND | U | ND | U | ND | U | 2.7 | | ND | U | ND | U | NC | NC | NC |
| Ethyl Benzene | ppbv | 46,000 | | 51,000 | | 100,000 | | 100,000 | | 85 | | 146,000 | | 151,000 | | 99.94% | 99.94% | 99.94% |
| m,p-Xylene | ppbv | 220,000 | | 240,000 | | 400,000 | | 390,000 | | 350 | | 610,000 | | 640,000 | | 99.94% | 99.95% | 99.94% |
| Methylene Chloride | ppbv | 88,000 | | 85,000 | | 24,000 | | 22,000 | | 38 | | 107,000 | | 112,000 | | 99.96% | 99.97% | 99.97% |
| o-Xylene | ppbv | 68,000 | | 77,000 | | 98,000 | | 95,000 | | 78 | | 163,000 | | 175,000 | | 99.95% | 99.96% | 99.95% |
| Styrene | ppbv | ND | U | ND | U | ND | U | ND | U | 13 | | ND | U | ND | U | NC | NC | NC |
| Tetrachloroethene | ppbv | 89,000 | | 93,000 | | 180,000 | | 180,000 | | 340 | | 269,000 | | 273,000 | | 99.87% | 99.88% | 99.87% |
| Toluene | ppbv | 490,000 | | 520,000 | | 1,000,000 | | 1,000,000 | | 730 | | 1,490,000 | | 1,520,000 | | 99.95% | 99.95% | 99.95% |
| trans-1,2-Dichloroethene | ppbv | ND | U | 550 | J/J | ND | U | ND | U | 17 | | ND | U | 550 | J | NC | NC | NC |
| trans-1,3-Dichloropropene | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| Trichloroethene | ppbv | 68,000 | | 70,000 | | 140,000 | | 140,000 | | 190 | | 208,000 | | 210,000 | | 99.91% | 99.91% | 99.91% |
| Vinyl Chloride | ppbv | 670 | J/J | 790 | J/J | 4,200 | J/J | 3,500 | J/J | 32 | | 4,170 | J | 4,990 | J | NC | NC | NC |
| | | | | | | | | | | | | | | | | | | |
| **Total[1]** | **ppbv** | **1,490,990** | | **1,548,570** | | **2,218,300** | | **2,197,200** | | **2,401.16** | | **3,664,200** | | **3,790,860** | | **99.84%** | **99.84%** | **99.84%** |
| **Total[1]** | **lb/hr** | **21.99** | | **22.94** | | **36.93** | | **36.38** | | **0.08** | | **58.37** | | **59.87** | | **99.87%** | **99.87%** | **99.87%** |

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
NC - Not calculated
ND - Non-detect
ppbv - parts per billion volume
lb/hr - pounds per hour

Destruction efficiency is not calculated where influent and/or effluent values are estimated.
1. The total concentration and mass loading were calculated using all detected concentrations including estimated detections (denoted with J or UJ qualifiers). Therefore, this total should be considered an estimated total.
9/18/03 VOCs in lb/hr calculated based on 1175 scfm from On-Site and 1009 scfm from Off-Site (9/18/03)

Qualifiers:
J - Result is estimated
U - Indicates the compound was not detected at or above the indicated concentration
UJ - Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
R - Quality control indicates the data is not usable

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## Table 3.1
## Summary of Thermal Oxidizer Off-Gas Analytical Results for VOCs (Method TO-14) - Third Quarter 2003
## American Chemical Service, Griffith, Indiana

| | | Sampled 9/25/2003 | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Analytical Data | | | | | | | | | | | | Destruction Efficiency | | |
| | | Off-Site ISVE System | | On-Site ISVE System | | | | ThermOx 2 | | Influent | | Influent | | | | |
| Compounds | Units | Influent IN1 | | Influent IN1 | | Influent IN2 | | Effluent EF1-1500 | | Low | | High | | Low | High | Average |
| Method TO-14 | | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | ppbv | 72,000 | | 54,000 | | 55,000 | | 0.98 | J/J | 126,000 | | 127,000 | | NC | NC | NC |
| 1,1,2,2-Tetrachloroethane | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| 1,1,2-Trichloroethane | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| 1,1-Dichloroethane | ppbv | 10,000 | | 4,400 | | 4,500 | | ND | U | 14,400 | | 14,500 | | 100.00% | 100.00% | 100.00% |
| 1,1-Dichloroethene | ppbv | 20,000 | | 16,000 | | 15,000 | | 430 | | 35,000 | | 36,000 | | 98.77% | 98.81% | 98.79% |
| 1,2-Dichloroethane | ppbv | 2,400 | | 1,000 | J/J | 820 | J/J | 2.7 | J/J | 3,220 | J | 3,400 | J | NC | NC | NC |
| 1,2-Dichloropropane | ppbv | 1,200 | J/J | ND | U | 1,500 | J/J | ND | U | 1,200 | J | 2,700 | J | NC | NC | NC |
| 2-Butanone (Methyl Ethyl Ketone) | ppbv | 60,000 | | 8,800 | J/J | 9,100 | J/J | 7.6 | J/J | 68,800 | J | 69,100 | J | NC | NC | NC |
| 2-Hexanone | ppbv | 990 | J/J | ND | U | ND | U | ND | U | 990 | J | 990 | J | NC | NC | NC |
| 4-Methyl-2-pentanone | ppbv | 24,000 | | 9,000 | J/J | 9,000 | J/J | ND | U | 33,000 | J | 33,000 | J | NC | NC | NC |
| Acetone | ppbv | 68,000 | | 6,600 | J/J | 7,800 | J/J | 64 | | 74,600 | J | 75,800 | J | NC | NC | NC |
| Benzene | ppbv | 63,000 | | 43,000 | | 41,000 | | 750 | | 104,000 | | 106,000 | | 99.28% | 99.29% | 99.29% |
| Bromodichloromethane | ppbv | ND | U | ND | U | ND | U | 11 | | ND | U | ND | U | NC | NC | NC |
| Bromoform | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| Bromomethane | ppbv | ND | U | ND | U | ND | U | 31 | | ND | U | ND | U | NC | NC | NC |
| Carbon Disulfide | ppbv | 1,400 | J/J | 1,900 | J/J | 1,400 | J/J | 4.1 | J/J | 2,800 | J | 3,300 | J | NC | NC | NC |
| Carbon Tetrachloride | ppbv | ND | U | ND | U | ND | U | 32 | | ND | U | ND | U | NC | NC | NC |
| Chlorobenzene | ppbv | 320 | J/J | 850 | J/J | 920 | J/J | 16 | | 1,170 | J | 1,240 | J | NC | NC | NC |
| Chloroethane | ppbv | ND | U | ND | U | ND | U | ND | U | ND | U | ND | U | NC | NC | NC |
| Chloroform | ppbv | 5,000 | | 3,500 | | 3,600 | | 92 | | 8,500 | | 8,600 | | 98.92% | 98.93% | 98.92% |
| Chloromethane | ppbv | ND | U | ND | U | ND | U | 170 | | ND | U | ND | U | NC | NC | NC |
| cis-1,2-Dichloroethene | ppbv | 27,000 | | 59,000 | | 62,000 | | 59 | | 86,000 | | 89,000 | | 99.93% | 99.93% | 99.93% |
| cis-1,3-Dichloropropene | ppbv | ND | U | ND | U | ND | U | 2.1 | J/J | ND | U | ND | U | NC | NC | NC |
| Dibromochloromethane | ppbv | ND | U | ND | U | ND | U | 3.3 | | ND | U | ND | U | NC | NC | NC |
| Ethyl Benzene | ppbv | 41,000 | | 90,000 | | 93,000 | | 13 | | 131,000 | | 134,000 | | 99.99% | 99.99% | 99.99% |
| m,p-Xylene | ppbv | 180,000 | | 330,000 | | 340,000 | | 21 | | 510,000 | | 520,000 | | 100.00% | 100.00% | 100.00% |
| Methylene Chloride | ppbv | 56,000 | | 16,000 | | 16,000 | | 180 | | 72,000 | | 72,000 | | 99.75% | 99.75% | 99.75% |
| o-Xylene | ppbv | 58,000 | | 88,000 | | 94,000 | | 6 | | 146,000 | | 152,000 | | 100.00% | 100.00% | 100.00% |
| Styrene | ppbv | ND | U | ND | U | ND | U | 76 | | ND | U | ND | U | NC | NC | NC |
| Tetrachloroethene | ppbv | 68,000 | | 160,000 | | 160,000 | | 730 | | 228,000 | | 228,000 | | 99.68% | 99.68% | 99.68% |
| Toluene | ppbv | 380,000 | | 750,000 | | 760,000 | | 210 | | 1,130,000 | | 1,140,000 | | 99.98% | 99.98% | 99.98% |
| trans-1,2-Dichloroethene | ppbv | ND | U | ND | U | ND | U | 48 | | ND | U | ND | U | NC | NC | NC |
| trans-1,3-Dichloropropene | ppbv | ND | U | ND | U | ND | U | 1.6 | J/J | ND | U | ND | U | NC | NC | NC |
| Trichloroethene | ppbv | 54,000 | | 99,000 | | 98,000 | | 280 | | 152,000 | | 153,000 | | 99.82% | 99.82% | 99.82% |
| Vinyl Chloride | ppbv | 1,800 | | 3,600 | | 3,500 | | 170 | | 5,300 | | 5,400 | | 96.79% | 96.85% | 96.82% |
| | | | | | | | | | | | | | | | | |
| **Total[1]** | **ppbv** | **1,194,110** | | **1,744,650** | | **1,776,140** | | **3,411.38** | | **2,933,980** | | **2,975,030** | | **99.88%** | **99.89%** | **99.88%** |
| **Total[1]** | **lb/hr** | **18.47** | | **34.85** | | **35.45** | | **0.12** | | **53.31** | | **53.92** | | **99.77%** | **99.77%** | **99.77%** |

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
NC - Not calculated
ND - Non-detect
ppbv - parts per billion volume
lb/hr - pounds per hour

Destruction efficiency is not calculated where influent and/or effluent values are estimated.
1. The total concentration and mass loading were calculated using all detected concentrations including estimated detections (denoted with J or UJ qualifiers). Therefore, this total should be considered an estimated total.
9/25/03 VOCs in lb/hr calculated based on 1213 scfm from On-Site and 993 scfm from Off-Site (9/23/03)

Qualifiers:
J - Result is estimated
U - Indicates the compound was not detected at or above the indicated concentration
UJ - Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
R - Quality control indicates the data is not usable

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## Table 3.2
## Summary of Thermal Oxidizer Off-Gas Analytical Results for SVOCs (Method TO-13) - Third Quarter 2003
## Thermal Oxidizer Sampling
## American Chemical Service, Griffith, Indiana

| | | Sampled 7/17/2003 | | | | | | | | | Sampled 7/31/2003 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Off-Site ISVE System | | | | Therm Ox 2 | | Destruction Efficiency | | | On-Site ISVE System | | | | Therm Ox 2 | | Destruction Efficiency | | |
| Compounds | Units | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low (%) | High (%) | Average (%) | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low (%) | High (%) | Average (%) |
| **Method TO-13** | | | | | | | | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Dibenzofuran | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Diethylphthalate | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | 0.38 | J/J | ND | U | NC | NC | NC |
| Dimethylphthalate | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| di-n-Butylphthalate | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Di-n-Octylphthalate | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Fluoranthene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Fluorene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachlorobenzene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachlorobutadiene | µg | 0.84 | J/J | 0.89 | J/J | ND | U | NC | NC | NC | ND | U | 0.66 | J/J | ND | U | NC | NC | NC |
| Hexachlorocyclopentadiene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachloroethane | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Indeno(1,2,3-c,d)pyrene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Isophorone | µg | 16 | | 16 | | ND | U | 100.00% | 100.00% | 100.00% | 7.8 | | 7.2 | | ND | U | 100.00% | 100.00% | 100.00% |
| Naphthalene | µg | 37 | | 41 | | ND | U | 100.00% | 100.00% | 100.00% | 32 | | 32 | | ND | U | 100.00% | 100.00% | 100.00% |
| Nitrobenzene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| N-Nitroso-di-n-propylamine | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| N-Nitrosodiphenylamine | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Pentachlorophenol | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Phenanthrene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Phenol | µg | 3.6 | J/J | 3.6 | J/J | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Pyrene | µg | ND | U | ND | U | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| | | | | | | | | | | | | | | | | | | | |
| **Total[1]** | **µg** | **98.95** | | **104.85** | | **3.50** | | **96.46%** | **96.66%** | **96.56%** | **68.39** | | **67.98** | | **ND** | | **100.00%** | **100.00%** | **100.00%** |

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
µg - Microgram
NC - Not calculated
ND - Non-detect
Destruction efficiency is not calculated where influent and/or effluent values are estimated.
1. The total concentration and mass loading were calculated using estimated detections (denoted with J or UJ qualifiers). Therefore, this total should be considered an estimated total.

Qualifiers:
J - Result is estimated
JB - Analyte detected in the method blank resulting in potential bias high. Reported concentration is estimated.
U - below reported quantitation limit
R - Quality control indicates the data is not usable

## Table 3.2
## Summary of Thermal Oxidizer Off-Gas Analytical Results for SVOCs (Method TO-13) - Third Quarter 2003
## Thermal Oxidizer Sampling
## American Chemical Service, Griffith, Indiana

| | | Sampled 9/04/2003 | | | | | | | | | Sampled 9/15/2003 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Off-Site ISVE System | | | | Therm Ox 2 | | Destruction Efficiency | | | On-Site ISVE System | | | | ThermOx 2 | | Destruction Efficiency | | |
| Compounds | Units | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low (%) | High (%) | Average (%) | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low | High | Average |
| **Method TO-13** | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 1,2-Dichlorobenzene | µg | 29 | /J | 21 | /J | ND | U | NC | NC | NC | 18 | | 10 | | ND | U | 100.00% | 100.00% | 100.00% |
| 1,3-Dichlorobenzene | µg | 1.6 | /J | 1.2 | /J | ND | U | NC | NC | NC | 1 | J/J | 0.67 | J/J | ND | U | NC | NC | NC |
| 1,4-Dichlorobenzene | µg | 5 | /J | 3.5 | /J | ND | U | NC | NC | NC | 3.2 | | 1.9 | | ND | U | 100.00% | 100.00% | 100.00% |
| 2,4,5-Trichlorophenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4,6-Trichlorophenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dichlorophenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dimethylphenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dinitrophenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dinitrotoluene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,6-Dinitrotoluene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Chloronaphthalene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Chlorophenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Methylnaphthalene | µg | 4.3 | /J | 2.9 | /J | ND | U | NC | NC | NC | 4.4 | | 2.2 | | ND | U | 100.00% | 100.00% | 100.00% |
| 2-Methylphenol (o-Cresol) | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Nitroaniline | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Nitrophenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 3,3'-Dichlorobenzidine | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 3-Nitroaniline | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4,6-Dinitro-2-methylphenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Bromophenyl-phenyl Ether | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chloro-3-methylphenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chloroaniline | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chlorophenyl-phenyl Ether | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Methylphenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Nitroaniline | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Nitrophenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Acenaphthene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Acenaphthylene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Anthracene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(a)anthracene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(a)pyrene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(b)fluoranthene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(g,h,i)perylene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(k)fluoranthene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Chloroethoxy) Methane | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Chloroethyl) Ether | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Ethylhexyl)phthalate | µg | 1 | J/JB | 1.2 | J/JB | 0.68 | J/JB | NC | NC | NC | 4.4 | J/J | 2.3 | J/J | ND | U | NC | NC | NC |
| Butylbenzylphthalate | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | 2.9 | J/JB | 4.1 | J/JB | 1.5 | J/JB | NC | NC | NC |
| Chrysene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |

## Table 3.2
## Summary of Thermal Oxidizer Off-Gas Analytical Results for SVOCs (Method TO-13) - Third Quarter 2003
## Thermal Oxidizer Sampling
## American Chemical Service, Griffith, Indiana

| | | Sampled 9/04/2003 | | | | | | | | | Sampled 9/15/2003 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Off-Site ISVE System | | | | Therm Ox 2 | | Destruction Efficiency | | | On-Site ISVE System | | | | ThermOx 2 | | Destruction Efficiency | | |
| Compounds | Units | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low (%) | High (%) | Average (%) | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low | High | Average |
| **Method TO-13** | | | | | | | | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Dibenzofuran | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Diethylphthalate | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | 0.4 | J/J | ND | U | ND | U | NC | NC | NC |
| Dimethylphthalate | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| di-n-Butylphthalate | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Di-n-Octylphthalate | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Fluoranthene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Fluorene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachlorobenzene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachlorobutadiene | µg | 0.47 | J/J | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachlorocyclopentadiene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachloroethane | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Indeno(1,2,3-c,d)pyrene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Isophorone | µg | 1.9 | /J | 1.3 | /J | ND | U | NC | NC | NC | 0.87 | J/J | 0.6 | J/J | ND | U | NC | NC | NC |
| Naphthalene | µg | 23 | /J | 16 | /J | ND | U | NC | NC | NC | 14 | | 7.8 | | ND | U | 100.00% | 100.00% | 100.00% |
| Nitrobenzene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| N-Nitroso-di-n-propylamine | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| N-Nitrosodiphenylamine | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Pentachlorophenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Phenanthrene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Phenol | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| Pyrene | µg | ND | U/R | ND | U/R | ND | U | NC | NC | NC | ND | U | ND | U | ND | U | NC | NC | NC |
| | | | | | | | | | | | | | | | | | | | |
| **Total[1]** | µg | **66.27** | | **47.10** | | **0.68** | | **98.56%** | **98.97%** | **98.77%** | **49.17** | | **19.57** | | **1.50** | | **92.34%** | **96.95%** | **94.64%** |

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
µg - Microgram
NC - Not calculated
ND - Non-detect
Destruction efficiency is not calculated where influent and/or effluent values are estimated.
1. The total concentration and mass loading were calculated using estimated detections (denoted with J or UJ qualifiers). Therefore, this total should be considered an estimated total.

Qualifiers:
J - Result is estimated
JB - Analyte detected in the method blank resulting in potential bias high. Reported concentration is estimated.
U - below reported quantitation limit
R - Quality control indicates the data is not usable

## Table 3.2
## Summary of Thermal Oxidizer Off-Gas Analytical Results for SVOCs (Method TO-13) - Third Quarter 2003
## Thermal Oxidizer Sampling
## American Chemical Service, Griffith, Indiana

| | | Sampled 9/18/2003 | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Off-Site ISVE System | | | | On-Site ISVE System | | | | ThermOx 2 | | Influent | | Influent | | Destruction Efficiency | | |
| Compounds | Units | Influent IN1 | | Influent IN2 | | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low | | High | | Low | High | Average |
| **Method TO-13** | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg | 1.5 | /J | 1.2 | /J | 0.43 | J/J | ND | U/R | ND | U | 1.2 | | 1.93 | J | NC | NC | NC |
| 1,2-Dichlorobenzene | µg | 140 | /J | 120 | /J | 37 | /J | 34 | /J | ND | U | 154 | | 177 | | 100.00% | 100.00% | 100.00% |
| 1,3-Dichlorobenzene | µg | 7.6 | /J | 6.4 | /J | 2.3 | /J | 2.2 | /J | ND | U | 8.6 | | 9.9 | | 100.00% | 100.00% | 100.00% |
| 1,4-Dichlorobenzene | µg | 23 | /J | 20 | /J | 6.9 | /J | 6.6 | /J | ND | U | 26.6 | | 29.9 | | 100.00% | 100.00% | 100.00% |
| 2,4,5-Trichlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 2,4,6-Trichlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 2,4-Dichlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 2,4-Dimethylphenol | µg | 2.8 | J/J | 2.6 | J/J | ND | U/R | ND | U/R | ND | U/UJ | 2.6 | J | 2.8 | J | NC | NC | NC |
| 2,4-Dinitrophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dinitrotoluene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 2,6-Dinitrotoluene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 2-Chloronaphthalene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 2-Chlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 2-Methylnaphthalene | µg | 12 | /J | 9.4 | /J | 5.4 | /J | 4.2 | /J | ND | U | 13.6 | | 17.4 | | 100.00% | 100.00% | 100.00% |
| 2-Methylphenol (o-Cresol) | µg | ND | U/R | 3.1 | J/J | ND | U/R | ND | U/R | ND | U/UJ | ND | U | 3.1 | J | NC | NC | NC |
| 2-Nitroaniline | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 2-Nitrophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 3,3'-Dichlorobenzidine | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 3-Nitroaniline | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 4,6-Dinitro-2-methylphenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 4-Bromophenyl-phenyl Ether | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 4-Chloro-3-methylphenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 4-Chloroaniline | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chlorophenyl-phenyl Ether | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Methylphenol | µg | 5.5 | /J | 4.4 | J/J | ND | U/R | ND | U/R | ND | U | 4.4 | J | 5.5 | | NC | NC | NC |
| 4-Nitroaniline | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| 4-Nitrophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Acenaphthene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Acenaphthylene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Anthracene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Benzo(a)anthracene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(a)pyrene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Benzo(b)fluoranthene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Benzo(g,h,i)perylene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Benzo(k)fluoranthene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Chloroethoxy) Methane | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Chloroethyl) Ether | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Ethylhexyl)phthalate | µg | 0.64 | J/JB | 1.2 | J/JB | 2.2 | J/JB | 1.1 | J/JB | 0.65 | J/JB | 1.74 | J | 3.4 | J | NC | NC | NC |
| Butylbenzylphthalate | µg | ND | U/R | ND | U/R | 2.9 | J/JB | ND | J/JB | ND | U/UJ | ND | U | 2.9 | J | NC | NC | NC |
| Chrysene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |

## Table 3.2
## Summary of Thermal Oxidizer Off-Gas Analytical Results for SVOCs (Method TO-13) - Third Quarter 2003
## Thermal Oxidizer Sampling
## American Chemical Service, Griffith, Indiana

| | | Sampled 9/18/2003 | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Off-Site ISVE System | | | | On-Site ISVE System | | | | ThermOx 2 | | Influent | | Influent | | Destruction Efficiency | | |
| Compounds | Units | Influent IN1 | | Influent IN2 | | Influent IN1 | | Influent IN2 | | Effluent EF1 | | Low | | High | | Low | High | Average |
| **Method TO-13** | | | | | | | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Dibenzofuran | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Diethylphthalate | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Dimethylphthalate | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| di-n-Butylphthalate | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Di-n-Octylphthalate | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Fluoranthene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Fluorene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachlorobenzene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachlorobutadiene | µg | 4.2 | /J | 3.4 | /J | 0.51 | J/J | 0.53 | J/J | ND | U | 3.91 | J | 4.73 | J | NC | NC | NC |
| Hexachlorocyclopentadiene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachloroethane | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Indeno(1,2,3-c,d)pyrene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Isophorone | µg | 25 | /J | 21 | /J | ND | U/R | ND | U/R | ND | U/UJ | 21 | | 25 | | 100.00% | 100.00% | 100.00% |
| Naphthalene | µg | 67 | /J | 57 | /J | 19 | /J | 17 | /J | ND | U | 74 | | 86 | | 100.00% | 100.00% | 100.00% |
| Nitrobenzene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| N-Nitroso-di-n-propylamine | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| N-Nitrosodiphenylamine | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Pentachlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| Phenanthrene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Phenol | µg | 10 | /J | 8.3 | /J | ND | U/R | ND | U/R | ND | U | 8.3 | | 10 | | 100.00% | 100.00% | 100.00% |
| Pyrene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U/R | ND | U/UJ | ND | U | ND | U | NC | NC | NC |
| | | | | | | | | | | | | | | | | | | |
| **Total[1]** | **µg** | **298.60** | | **258.00** | | **76.64** | | **65.63** | | **0.65** | | **319.95** | | **379.56** | | **99.80%** | **99.83%** | **99.81%** |

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
µg - Microgram
NC - Not calculated
ND - Non-detect
Destruction efficiency is not calculated where influent and/or effluent values are estimated.
1. The total concentration and mass loading were calculated using estimated detections (denoted with J or UJ qualifiers). Therefore, this total should be considered an estimated total.

Qualifiers:
J - Result is estimated
JB - Analyte detected in the method blank resulting in potential bias high. Reported concentration is estimated.
U - below reported quantitation limit
R - Quality control indicates the data is not usable

## Table 3.2
## Summary of Thermal Oxidizer Off-Gas Analytical Results for SVOCs (Method TO-13) - Third Quarter 2003
## Thermal Oxidizer Sampling
## American Chemical Service, Griffith, Indiana

| | | Sampled 9/25/2003 | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Off-Site ISVE System | | On-Site ISVE System | | | | ThermOx 2 | | Influent | | Influent | | Destruction Efficiency | | |
| Compounds | Units | Influent IN1 | | Influent IN1 | | Influent IN2 | | Effluent EF1 - 1500 | | Low | | High | | Low | High | Average |
| **Method TO-13** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg | 0.93 | J/J | ND | U/R | ND | U/R | ND | U | 0.93 | J | 0.93 | J | NC | NC | NC |
| 1,2-Dichlorobenzene | µg | 120 | /J | 37 | /J | 54 | /J | ND | U | 157 | | 174 | | 100.00% | 100.00% | 100.00% |
| 1,3-Dichlorobenzene | µg | 5.7 | /J | 2.7 | /J | 3.8 | /J | ND | U | 8.4 | | 9.5 | | 100.00% | 100.00% | 100.00% |
| 1,4-Dichlorobenzene | µg | 17 | /J | 7.6 | /J | 11 | /J | ND | U | 24.6 | | 28 | | 100.00% | 100.00% | 100.00% |
| 2,4,5-Trichlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4,6-Trichlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dichlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dimethylphenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dinitrophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,4-Dinitrotoluene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2,6-Dinitrotoluene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Chloronaphthalene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Chlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Methylnaphthalene | µg | 6.8 | /J | 3 | /J | 4.9 | /J | ND | U | 9.8 | | 11.7 | | 100.00% | 100.00% | 100.00% |
| 2-Methylphenol (o-Cresol) | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Nitroaniline | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 2-Nitrophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 3,3'-Dichlorobenzidine | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 3-Nitroaniline | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4,6-Dinitro-2-methylphenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Bromophenyl-phenyl Ether | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chloro-3-methylphenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chloroaniline | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Chlorophenyl-phenyl Ether | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Methylphenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Nitroaniline | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| 4-Nitrophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Acenaphthene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Acenaphthylene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Anthracene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(a)anthracene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(a)pyrene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(b)fluoranthene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(g,h,i)perylene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Benzo(k)fluoranthene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Chloroethoxy) Methane | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Chloroethyl) Ether | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| bis(2-Ethylhexyl)phthalate | µg | ND | U/R | ND | U/R | 0.69 | J/JB | ND | U | ND | U | 0.69 | J | NC | NC | NC |
| Butylbenzylphthalate | µg | 2.3 | J/JB | ND | U/R | 1.2 | J/JB | ND | U | 2.3 | J | 3.5 | J | NC | NC | NC |
| Chrysene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |

## Table 3.2
## Summary of Thermal Oxidizer Off-Gas Analytical Results for SVOCs (Method TO-13) - Third Quarter 2003
## Thermal Oxidizer Sampling
## American Chemical Service, Griffith, Indiana

| | | Sampled 9/25/2003 | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Off-Site ISVE System | | On-Site ISVE System | | | | ThermOx 2 | | Influent | | Influent | | Destruction Efficiency | | |
| Compounds | Units | Influent IN1 | | Influent IN1 | | Influent IN2 | | Effluent EF1 - 1500 | | Low | | High | | Low | High | Average |
| **Method TO-13** | | | | | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Dibenzofuran | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Diethylphthalate | µg | ND | U/R | 0.67 | J/JB | 0.69 | J/JB | ND | U | 0.67 | J | 0.69 | J | NC | NC | NC |
| Dimethylphthalate | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| di-n-Butylphthalate | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Di-n-Octylphthalate | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Fluoranthene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Fluorene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachlorobenzene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachlorobutadiene | µg | 2.9 | /J | ND | U/R | 0.59 | J/J | ND | U | 2.9 | | 3.49 | J | NC | NC | NC |
| Hexachlorocyclopentadiene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Hexachloroethane | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Indeno(1,2,3-c,d)pyrene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Isophorone | µg | 14 | /J | ND | U/R | ND | U/R | ND | U | 14 | | 14 | | 100.00% | 100.00% | 100.00% |
| Naphthalene | µg | 44 | /J | 13 | /J | 21 | /J | ND | U | 57 | | 65 | | 100.00% | 100.00% | 100.00% |
| Nitrobenzene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| N-Nitroso-di-n-propylamine | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| N-Nitrosodiphenylamine | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Pentachlorophenol | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Phenanthrene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| Phenol | µg | 7.1 | /J | ND | U/R | ND | U/R | ND | U | 7.1 | | 7.1 | | 100.00% | 100.00% | 100.00% |
| Pyrene | µg | ND | U/R | ND | U/R | ND | U/R | ND | U | ND | U | ND | U | NC | NC | NC |
| | | | | | | | | | | | | | | | | |
| **Total[1]** | **µg** | **220.73** | | **63.97** | | **97.87** | | **ND** | | **284.70** | | **318.60** | | **100.00%** | **100.00%** | **100.00%** |

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
µg - Microgram
NC - Not calculated
ND - Non-detect
Destruction efficiency is not calculated where influent and/or effluent values are estimated.
1. The total concentration and mass loading were calculated using estimated detections (denoted with J or UJ qualifiers). Therefore, this total should be considered an estimated total.

Qualifiers:
J - Result is estimated
JB - Analyte detected in the method blank resulting in potential bias high. Reported concentration is estimated.
U - below reported quantitation limit
R - Quality control indicates the data is not usable

**Table 3.3**
**Off-Site In-Situ Vapor Extraction (ISVE) System Well Monitoring Data - Third Quarter 2003**
**ACS NPL Site**
**Griffith, Indiana**

| Well ID | Date | Flow (cfm) | Vacuum (" $H_2O$) | VOCs (ppm) | Comments |
|---|---|---|---|---|---|
| SVE-03 | 9/8/2003 | 0 | 20 | 123 | |
| | 9/9/2003 | 0 | 38 | 130 | |
| | 9/10/2003 | 0 | 38 | 100 | |
| | 9/11/2003 | 0 | 40 | 255 | |
| | 9/12/2003 | 0 | 58 | 225 | |
| | 9/18/2003 | 0 | 39 | 52 | |
| | 9/23/2003 | 0 | 40 | 2 | |
| SVE-04 | 9/8/2003 | 72 | 34 | 123 | |
| | 9/9/2003 | 91 | 46 | 190 | |
| | 9/10/2003 | 78 | 46 | 135 | |
| | 9/11/2003 | 87 | 48 | 245 | |
| | 9/12/2003 | 79 | 46 | 215 | |
| | 9/18/2003 | 88 | 50 | 95 | |
| | 9/23/2003 | 68 | 37 | 1 | |
| SVE-05 | 9/8/2003 | - | 20 | 80 | Differential pressure not measured |
| | 9/9/2003 | 0 | 37 | 127 | |
| | 9/10/2003 | 0 | 37 | 105 | |
| | 9/11/2003 | 0 | 40 | - | PID value not measured |
| | 9/12/2003 | 0 | 36 | 280 | |
| | 9/18/2003 | 0 | 37 | 63 | |
| | 9/23/2003 | 712 | 37 | 1 | |
| SVE-11 | 9/8/2003 | - | 20 | 180 | |
| | 9/9/2003 | - | 34 | 240 | |
| | 9/10/2003 | - | 35 | 150 | |
| | 9/11/2003 | - | 38 | 381 | |
| | 9/12/2003 | - | 36 | 180 | |
| | 9/18/2003 | - | 36 | 75 | |
| | 9/23/2003 | - | 38 | 1 | |
| SVE-13 | 9/8/2003 | 0 | 22 | 95 | |
| | 9/9/2003 | 0 | 34 | 104 | |
| | 9/10/2003 | 0 | 33 | 105 | |
| | 9/11/2003 | 0 | 32 | 380 | |
| | 9/12/2003 | 0 | 36 | 240 | |
| | 9/18/2003 | 0 | 33 | 103 | |
| | 9/23/2003 | 748 | 33 | 4 | |
| SVE-16 | 9/8/2003 | 56 | 20 | 275 | |
| | 9/9/2003 | 56 | 33 | 340 | |
| | 9/10/2003 | 56 | 32 | 320 | |
| | 9/11/2003 | 62 | 30 | 370 | |
| | 9/12/2003 | 62 | 32 | 535 | |
| | 9/18/2003 | 64 | 34 | 235 | |
| | 9/23/2003 | 691 | 34 | 9 | |
| SVE-20 | 9/8/2003 | 0 | 30 | 75 | |
| | 9/9/2003 | 29 | 45 | 105 | |
| | 9/10/2003 | 40 | 45 | 115 | |
| | 9/11/2003 | 40 | 43 | 280 | |
| | 9/12/2003 | 0 | 42 | 190 | |
| | 9/18/2003 | 0 | 47 | 83 | |
| | 9/23/2003 | 603 | 46 | 2 | |
| SVE-23 | 9/8/2003 | 112 | 24 | 410 | |
| | 9/9/2003 | 105 | 34 | 520 | |
| | 9/10/2003 | 105 | 35 | 495 | |
| | 9/11/2003 | 113 | 37 | 550 | |
| | 9/12/2003 | 103 | 36 | 925 | |
| | 9/18/2003 | 104 | 36 | 280 | |
| | 9/23/2003 | 609 | 35 | 7 | |

**Table 3.3**
**Off-Site In-Situ Vapor Extraction (ISVE) System Well Monitoring Data - Third Quarter 2003**
**ACS NPL Site**
**Griffith, Indiana**

| Well ID | Date | Flow (cfm) | Vacuum (" $H_2O$) | VOCs (ppm) | Comments |
|---|---|---|---|---|---|
| SVE-25 | 9/8/2003 | 122 | 32 | 330 | |
| | 9/9/2003 | 118 | 44 | 380 | |
| | 9/10/2003 | 118 | 43 | 410 | |
| | 9/11/2003 | 118 | 32 | 370 | |
| | 9/12/2003 | 122 | 41 | 782 | |
| | 9/18/2003 | 128 | 44 | 197 | |
| | 9/23/2003 | 756 | 34 | 10 | |
| SVE-26 | 9/8/2003 | 29 | 20 | 51 | |
| | 9/9/2003 | 29 | 36 | 105 | |
| | 9/10/2003 | 29 | 36 | 85 | |
| | 9/11/2003 | 0 | 40 | 380 | |
| | 9/12/2003 | 0 | 36 | 260 | |
| | 9/18/2003 | 0 | 37 | 54 | |
| | 9/23/2003 | 645 | 36 | 2 | |
| SVE-29 | 9/8/2003 | 0 | 18 | 280 | |
| | 9/9/2003 | 0 | 31 | 370 | |
| | 9/10/2003 | 0 | 30 | 400 | |
| | 9/11/2003 | 0 | 31 | 376 | |
| | 9/12/2003 | 0 | 30 | 530 | |
| | 9/18/2003 | 0 | 32 | 200 | |
| | 9/23/2003 | 773 | 42 | 5 | |
| SVE-38 | 9/8/2003 | 39 | 28 | 375 | |
| | 9/9/2003 | 39 | 38 | 400 | |
| | 9/10/2003 | 39 | 39 | 450 | |
| | 9/11/2003 | 55 | 41 | 500 | |
| | 9/12/2003 | 41 | 41 | 780 | |
| | 9/18/2003 | 41 | 40 | 225 | |
| | 9/23/2003 | 778 | 30 | 7 | |
| SVE-39 | 9/8/2003 | 100 | 28 | 210 | |
| | 9/9/2003 | 100 | 38 | 290 | |
| | 9/10/2003 | 99 | 38 | 340 | |
| | 9/11/2003 | 106 | 41 | 380 | |
| | 9/12/2003 | 113 | 41 | 540 | |
| | 9/18/2003 | 106 | 38 | 170 | |
| | 9/23/2003 | 734 | 38 | 5 | |
| SVE-42 | 9/8/2003 | 0 | 22 | 380 | |
| | 9/9/2003 | 0 | 33 | 475 | |
| | 9/10/2003 | 0 | 33 | 465 | |
| | 9/11/2003 | - | - | - | Not measured |
| | 9/12/2003 | - | - | - | Not measured |
| | 9/18/2003 | 0 | 35 | 290 | |
| | 9/23/2003 | -- | 34 | 7 | |

Notes:
"-" = data not collected
cfm = cubic feet per minute
"H20 = inches of water
ppm = parts per million

Table 3.4
Off-Site In-Situ Vapor Extraction (ISVE) System Header Monitoring Data - Third Quarter 2003
ACS NPL Site
Griffith, Indiana

| Date | KP1 Line Pressure (psia) | KP1 Vacuum (" $H_2O$) | KP2 Line Pressure (psia) | KP2 Flow (scfm) | KP2 Vacuum (" $H_2O$) | OFCA1 Vacuum (" $H_2O$) | OFCA2 Vacuum (" $H_2O$) | OFCA3 Vacuum (" $H_2O$) | Dilution Flow (cfm) | Blower Influent Line Pressure (psia) | Blower Influent Flow (scfm) | Blower Influent Vacuum (" H2O) | Blower Influent VOC (ppm) | Blower Influent Temperature (°F) | Blower Effluent Line Pressure (psia) | Blower Effluent Flow (scfm) | Blower Effluent Pressure (" $H_2O$) | Blower Effluent VOC (ppm) | Blower Effluent Temperature (°F) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9/8/2003 | 13.7 | 30 | 13.8 | 236 | 28 | 26 | 20 | 26 | 0 | 13.5 | 774 | 36 | - | 76 | 15.8 | 1055 | 28.0 | - | 124 |
| 9/9/2003 | 13.4 | 39 | 13.5 | 234 | 37 | 36 | 29 | 35 | 0 | 13.2 | 803 | 44 | - | 74 | 15.8 | 1025 | 26.0 | - | 128 |
| 9/10/2003 | 13.4 | 40 | 13.5 | 0 | 37 | 38 | 29 | 35 | 0 | 13.2 | 593 | 44 | - | 70 | 15.8 | 1010 | 26.5 | - | 127 |
| 9/11/2003 | - | - | - | - | - | - | - | - | 0 | 13.2 | 328 | 44 | - | 75 | 15.8 | 1007 | 26.0 | | 130 |
| 9/12/2003 | - | - | - | - | - | - | - | - | 0 | 13.2 | 543 | 42 | - | 74 | 15.7 | 992 | 26.0 | | 127 |
| 9/18/2003 | 13.4 | 40 | 13.5 | 234 | 37 | 38 | 29 | 36 | 0 | 13.1 | 566 | 46 | - | 73 | 15.7 | 1009 | 26.0 | - | 127 |
| 9/23/2003 | 13.3 | 40 | 13.4 | 0 | 36 | 36 | 28 | 36 | 0 | 13.1 | 566 | 45 | - | 72 | 15.7 | 993 | 26.0 | - | 125 |

Notes:
"-" = data not collected
psia - pounds per square inch, atmosphere
scfm - standard cubic feet per minute
"H20 - inches of water
VOC - volatile organic compound
ppm - parts per million
KP1 & KP1 are headers in the KP Area
OFCA1, OFCA2, & OFCA3 are headers in the OFCA

**Table 3.5**
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data - Third Quarter 2003**
**ACS NPL Site**
**Griffith, Indiana**

| Well ID | Date | Flow (cfm) | Vacuum (" $H_2O$) | VOCs (ppm) | Comments |
|---|---|---|---|---|---|
| SVE-43 | 8/8/2003 | 0 | 29 | NM | |
| | 8/21/2003 | 0 | 32 | 85 | |
| | 9/8/2003 | 0 | 17 | 103 | |
| | 9/9/2003 | 0 | 36 | 183 | |
| | 9/10/2003 | 0 | 39 | 78 | |
| | 9/11/2003 | 0 | 41 | 295 | |
| | 9/12/2003 | 0 | 41 | 275 | |
| | 9/18/2003 | 0 | 49 | 100 | |
| | 9/23/2003 | 0 | 48 | 146 | |
| SVE-44 | 8/8/2003 | 0 | 29 | NM | |
| | 8/21/2003 | 0 | 31 | 49 | |
| | 9/8/2003 | 0 | 17 | 75 | |
| | 9/9/2003 | 0 | 35 | 211 | |
| | 9/10/2003 | 0 | 38 | 59 | |
| | 9/11/2003 | 0 | 40 | 190 | |
| | 9/12/2003 | 0 | 41 | 170 | |
| | 9/18/2003 | 0 | 48 | 73 | |
| | 9/23/2003 | 0 | 48 | 135 | |
| SVE-45 | 8/8/2003 | 0 | 29 | NM | |
| | 8/21/2003 | 0 | 32 | 59 | |
| | 9/8/2003 | 0 | 17 | 90 | |
| | 9/9/2003 | 0 | 37 | 180 | |
| | 9/10/2003 | 12 | 39 | 63 | |
| | 9/11/2003 | 0 | 40 | 345 | |
| | 9/12/2003 | 0 | 41 | 265 | |
| | 9/18/2003 | 0 | 48 | 82 | |
| | 9/23/2003 | 13 | 50 | 132 | |
| SVE-46 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 31 | 58 | |
| | 9/8/2003 | 0 | 17 | 60 | |
| | 9/9/2003 | 0 | 36 | 155 | |
| | 9/10/2003 | 0 | 39 | 50 | |
| | 9/11/2003 | 0 | 40 | 380 | |
| | 9/12/2003 | 0 | 40 | 235 | |
| | 9/18/2003 | 0 | 48 | 62 | |
| | 9/23/2003 | 0 | 48 | 95 | |
| SVE-47 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 30 | 735 | |
| | 9/8/2003 | 0 | 15 | 510 | |
| | 9/9/2003 | 0 | 34 | 580 | |
| | 9/10/2003 | 0 | 37 | 360 | |
| | 9/11/2003 | 0 | 38 | 490 | |
| | 9/12/2003 | 0 | 39 | 675 | |
| | 9/18/2003 | 0 | 46 | 520 | |
| | 9/23/2003 | 0 | 47 | 400 | |
| SVE-48 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 31 | 718 | |
| | 9/8/2003 | 0 | 16 | 570 | |
| | 9/9/2003 | 0 | 38 | 590 | |
| | 9/10/2003 | 0 | 38 | 260 | |
| | 9/11/2003 | 0 | 39 | 515 | |
| | 9/12/2003 | 0 | 40 | 720 | |
| | 9/18/2003 | 0 | 48 | 427 | |
| | 9/23/2003 | 0 | 49 | 322 | |
| SVE-49 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 30 | 290 | |
| | 9/8/2003 | 0 | 16 | 217 | |
| | 9/9/2003 | 0 | 34 | 240 | |
| | 9/10/2003 | 0 | 37 | 165 | |
| | 9/11/2003 | 0 | 38 | 310 | |
| | 9/12/2003 | 0 | 39 | 490 | |
| | 9/18/2003 | 0 | 46 | 225 | |
| | 9/23/2003 | 0 | 47 | 320 | |

**Table 3.5**
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data - Third Quarter 2003**
**ACS NPL Site**
**Griffith, Indiana**

| Well ID | Date | Flow (cfm) | Vacuum (" $H_2O$) | VOCs (ppm) | Comments |
|---|---|---|---|---|---|
| SVE-50 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 32 | 70 | |
| | 9/8/2003 | 18 | 16 | 151 | |
| | 9/9/2003 | 0 | 38 | 215 | |
| | 9/10/2003 | 0 | 40 | 125 | |
| | 9/11/2003 | 0 | 41 | 295 | |
| | 9/12/2003 | 0 | 41 | 315 | |
| | 9/18/2003 | 0 | 49 | 164 | |
| | 9/23/2003 | 0 | 50 | 265 | |
| SVE-51 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 32 | 160 | |
| | 9/8/2003 | 0 | 18 | 107 | |
| | 9/9/2003 | 0 | 36 | 205 | |
| | 9/10/2003 | 0 | 40 | 82 | |
| | 9/11/2003 | 0 | 40 | 400 | |
| | 9/12/2003 | 0 | 41 | 330 | |
| | 9/18/2003 | 0 | 48 | 125 | |
| | 9/23/2003 | 0 | 48 | 204 | |
| SVE-52 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 32 | 540 | |
| | 9/8/2003 | 0 | 18 | 405 | |
| | 9/9/2003 | 0 | 38 | 340 | |
| | 9/10/2003 | 0 | 39 | 210 | |
| | 9/11/2003 | 0 | 40 | 470 | |
| | 9/12/2003 | 0 | 41 | 595 | |
| | 9/18/2003 | 0 | 48 | 325 | |
| | 9/23/2003 | 0 | 50 | 313 | |
| SVE-53 | 8/8/2003 | 13 | 28 | NM | |
| | 8/21/2003 | 0 | 31 | 97 | |
| | 9/8/2003 | 0 | 17 | 85 | |
| | 9/9/2003 | 12 | 38 | 205 | |
| | 9/10/2003 | 12 | 38 | 105 | |
| | 9/11/2003 | 12 | 39 | 470 | |
| | 9/12/2003 | 0 | 40 | 440 | |
| | 9/18/2003 | 12 | 47 | 100 | |
| | 9/23/2003 | 13 | 48 | 235 | |
| SVE-54 | 8/8/2003 | 0 | 31 | NM | |
| | 8/21/2003 | 0 | 34 | 580 | |
| | 9/8/2003 | 0 | 18 | 475 | |
| | 9/9/2003 | 0 | 38 | 450 | |
| | 9/10/2003 | 0 | 41 | 190 | |
| | 9/11/2003 | 0 | 42 | 565 | |
| | 9/12/2003 | 0 | 43 | 540 | |
| | 9/18/2003 | 0 | 50 | 220 | |
| | 9/23/2003 | 0 | 52 | 156 | |
| SVE-55 | 8/8/2003 | 18 | 30 | NM | |
| | 8/21/2003 | 18 | 32 | 910 | |
| | 9/8/2003 | 0 | 18 | 460 | |
| | 9/9/2003 | 12 | 37 | 320 | |
| | 9/10/2003 | 13 | 40 | 190 | |
| | 9/11/2003 | 11 | 41 | 590 | |
| | 9/12/2003 | 0 | 41 | 540 | |
| | 9/18/2003 | 0 | 49 | 245 | |
| | 9/23/2003 | 0 | 50 | 201 | |
| SVE-56 | 8/8/2003 | 18 | 32 | NM | |
| | 8/21/2003 | 25 | 34 | 1005 | |
| | 9/8/2003 | 12 | 19 | 570 | |
| | 9/9/2003 | 28 | 39 | 395 | |
| | 9/10/2003 | 30 | 42 | 220 | |
| | 9/11/2003 | 27 | 42 | 610 | |
| | 9/12/2003 | 27 | 44 | 680 | |
| | 9/18/2003 | 34 | 50 | 183 | |
| | 9/23/2003 | 31 | 51 | 218 | |

**Table 3.5**
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data - Third Quarter 2003**
**ACS NPL Site**
**Griffith, Indiana**

| Well ID | Date | Flow (cfm) | Vacuum (" $H_2O$) | VOCs (ppm) | Comments |
|---|---|---|---|---|---|
| SVE-57 | 8/8/2003 | 42 | 32 | NM | |
| | 8/21/2003 | 44 | 34 | 609 | |
| | 9/8/2003 | 11 | 20 | 475 | |
| | 9/9/2003 | 30 | 40 | 390 | |
| | 9/10/2003 | 28 | 42 | 205 | |
| | 9/11/2003 | 0 | 43 | 600 | |
| | 9/12/2003 | 37 | 45 | 630 | |
| | 9/18/2003 | 0 | 51 | 180 | |
| | 9/23/2003 | 0 | 52 | 187 | |
| SVE-58 | 8/8/2003 | 13 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 125 | |
| | 9/8/2003 | 0 | 18 | 475 | |
| | 9/9/2003 | 28 | 34 | 240 | |
| | 9/10/2003 | 33 | 40 | 180 | |
| | 9/11/2003 | 35 | 41 | 550 | |
| | 9/12/2003 | 33 | 42 | 365 | |
| | 9/18/2003 | 40 | 50 | 185 | |
| | 9/23/2003 | 40 | 50 | 78 | |
| SVE-59 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 30 | 350 | |
| | 9/8/2003 | 0 | 16 | 344 | |
| | 9/9/2003 | 0 | 35 | 370 | |
| | 9/10/2003 | 0 | 38 | 275 | |
| | 9/11/2003 | 0 | 39 | 620 | |
| | 9/12/2003 | 0 | 40 | 435 | |
| | 9/18/2003 | 0 | 48 | 405 | |
| | 9/23/2003 | 0 | 49 | 295 | |
| SVE-60 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 32 | 392 | |
| | 9/8/2003 | 0 | 16 | 440 | |
| | 9/9/2003 | 0 | 34 | 370 | |
| | 9/10/2003 | 0 | 39 | 250 | |
| | 9/11/2003 | 0 | 40 | 615 | |
| | 9/12/2003 | 0 | 40 | 495 | |
| | 9/18/2003 | 0 | 49 | 125 | |
| | 9/23/2003 | 0 | 50 | 59 | |
| SVE-61 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 30 | 730 | |
| | 9/8/2003 | 0 | 16 | 960 | |
| | 9/9/2003 | 0 | 30 | 525 | |
| | 9/10/2003 | 0 | 38 | 435 | |
| | 9/11/2003 | 0 | 38 | 720 | |
| | 9/12/2003 | 0 | 39 | 615 | |
| | 9/18/2003 | 0 | 46 | 280 | |
| | 9/23/2003 | 0 | 48 | 96 | |
| SVE-62 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 30 | 405 | |
| | 9/8/2003 | 0 | 16 | 620 | |
| | 9/9/2003 | 0 | 36 | 460 | |
| | 9/10/2003 | 0 | 37 | 455 | |
| | 9/11/2003 | 0 | 38 | 780 | |
| | 9/12/2003 | 0 | 38 | 645 | |
| | 9/18/2003 | 0 | 46 | 380 | |
| | 9/23/2003 | 0 | 47 | 130 | |
| SVE-63 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 33 | 485 | |
| | 9/8/2003 | 0 | 18 | 775 | |
| | 9/9/2003 | 0 | 39 | 620 | |
| | 9/10/2003 | 0 | 40 | 480 | |
| | 9/11/2003 | 0 | 41 | 790 | |
| | 9/12/2003 | 0 | 42 | 645 | |
| | 9/18/2003 | 0 | 49 | 330 | |
| | 9/23/2003 | 0 | 47 | 130 | |

**Table 3.5**
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data - Third Quarter 2003**
**ACS NPL Site**
**Griffith, Indiana**

| Well ID | Date | Flow (cfm) | Vacuum (" $H_2O$) | VOCs (ppm) | Comments |
|---|---|---|---|---|---|
| SVE-64 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 31 | 560 | |
| | 9/8/2003 | 0 | 16 | 810 | |
| | 9/9/2003 | 0 | 36 | 820 | |
| | 9/10/2003 | 0 | 38 | 510 | |
| | 9/11/2003 | 0 | 40 | 815 | |
| | 9/12/2003 | 0 | 40 | 630 | |
| | 9/18/2003 | 0 | 48 | 420 | |
| | 9/23/2003 | 0 | 49 | 195 | |
| SVE-65 | 8/8/2003 | 0 | 28 | NM | |
| | 8/21/2003 | 0 | 30 | 650 | |
| | 9/8/2003 | 0 | 14 | 1060 | |
| | 9/9/2003 | 0 | 35 | 995 | |
| | 9/10/2003 | 0 | 37 | 605 | |
| | 9/11/2003 | 0 | 39 | 1000 | |
| | 9/12/2003 | 0 | 38 | 745 | |
| | 9/18/2003 | 0 | 47 | 520 | |
| | 9/23/2003 | 0 | 48 | 198 | |
| SVE-66 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 730 | |
| | 9/8/2003 | 0 | 19 | 870 | |
| | 9/9/2003 | 0 | 39 | 845 | |
| | 9/10/2003 | 0 | 41 | 450 | |
| | 9/11/2003 | 0 | 42 | 1030 | |
| | 9/12/2003 | 0 | 43 | 725 | |
| | 9/18/2003 | 0 | 51 | 490 | |
| | 9/23/2003 | 0 | 52 | 331 | |
| SVE-67 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 13 | 33 | 875 | |
| | 9/8/2003 | 0 | 19 | 960 | |
| | 9/9/2003 | 12 | 38 | 830 | |
| | 9/10/2003 | 12 | 40 | 500 | |
| | 9/11/2003 | 0 | 41 | 1080 | |
| | 9/12/2003 | 0 | 42 | 745 | |
| | 9/18/2003 | 0 | 50 | 535 | |
| | 9/23/2003 | 13 | 51 | 345 | |
| SVE-68 | 8/8/2003 | 45 | 32 | NM | |
| | 8/21/2003 | 55 | 34 | 830 | |
| | 9/8/2003 | 27 | 19 | 1010 | |
| | 9/9/2003 | 43 | 40 | 790 | |
| | 9/10/2003 | 41 | 41 | 445 | |
| | 9/11/2003 | 37 | 42 | 1170 | |
| | 9/12/2003 | 34 | 44 | 775 | |
| | 9/18/2003 | 46 | 50 | 490 | |
| | 9/23/2003 | 42 | 52 | 336 | |
| SVE-69 | 8/8/2003 | 38 | 28 | NM | |
| | 8/21/2003 | 51 | 30 | 784 | |
| | 9/8/2003 | 28 | 16 | 770 | |
| | 9/9/2003 | 40 | 36 | 680 | |
| | 9/10/2003 | 38 | 38 | 345 | |
| | 9/11/2003 | 40 | 40 | 1210 | |
| | 9/12/2003 | 33 | 40 | 780 | |
| | 9/18/2003 | 30 | 48 | 370 | |
| | 9/23/2003 | 43 | 48 | 260 | |
| SVE-70 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 304 | |
| | 9/8/2003 | 0 | 18 | 740 | |
| | 9/9/2003 | 0 | 35 | 405 | |
| | 9/10/2003 | 0 | 39 | 400 | |
| | 9/11/2003 | 0 | 41 | 1115 | |
| | 9/12/2003 | 0 | 42 | 525 | |
| | 9/18/2003 | 0 | 48 | 290 | |
| | 9/23/2003 | 0 | 51 | 74 | |

**Table 3.5**
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data - Third Quarter 2003**
**ACS NPL Site**
**Griffith, Indiana**

| Well ID | Date | Flow (cfm) | Vacuum (" $H_2O$) | VOCs (ppm) | Comments |
|---|---|---|---|---|---|
| SVE-71 | 8/8/2003 | 0 | 32 | NM | |
| | 8/21/2003 | 0 | 35 | 352 | |
| | 9/8/2003 | 0 | 18 | 630 | |
| | 9/9/2003 | 0 | 37 | 393 | |
| | 9/10/2003 | 0 | 42 | 317 | |
| | 9/11/2003 | 0 | 43 | 1090 | |
| | 9/12/2003 | 0 | 43 | 445 | |
| | 9/18/2003 | 0 | 51 | 180 | |
| | 9/23/2003 | 0 | 52 | 68 | |
| SVE-72 | 8/8/2003 | 0 | 31 | NM | |
| | 8/21/2003 | 0 | 35 | 230 | |
| | 9/8/2003 | 0 | 19 | 205 | |
| | 9/9/2003 | - | 37 | 220 | |
| | 9/10/2003 | 0 | 42 | 197 | |
| | 9/11/2003 | 0 | 43 | 1370 | |
| | 9/12/2003 | 0 | 43 | 580 | |
| | 9/18/2003 | 0 | 51 | 93 | |
| | 9/23/2003 | 0 | 52 | 54 | |
| SVE-73 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 510 | |
| | 9/8/2003 | 0 | 17 | 1120 | |
| | 9/9/2003 | 0 | 37 | 595 | |
| | 9/10/2003 | 0 | 40 | 520 | |
| | 9/11/2003 | 0 | 41 | 1370 | |
| | 9/12/2003 | 0 | 41 | 585 | |
| | 9/18/2003 | 0 | 49 | 126 | |
| | 9/23/2003 | 0 | 51 | 75 | |
| SVE-74 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 630 | |
| | 9/8/2003 | 0 | 16 | 1015 | |
| | 9/9/2003 | 0 | 37 | 560 | |
| | 9/10/2003 | 0 | 40 | 520 | |
| | 9/11/2003 | 0 | 41 | 1450 | |
| | 9/12/2003 | 0 | 42 | 610 | |
| | 9/18/2003 | 0 | 49 | 115 | |
| | 9/23/2003 | 0 | 51 | 73 | |
| SVE-75 | 8/8/2003 | 38 | 28 | NM | |
| | 8/21/2003 | 0 | 30 | 840 | |
| | 9/8/2003 | 20 | 15 | 1130 | |
| | 9/9/2003 | 30 | 35 | 940 | |
| | 9/10/2003 | 28 | 37 | 525 | |
| | 9/11/2003 | 25 | 38 | 1810 | |
| | 9/12/2003 | 0 | 39 | 640 | |
| | 9/18/2003 | 25 | 47 | 485 | |
| | 9/23/2003 | 35 | 48 | 204 | |
| SVE-76 | 8/8/2003 | 72 | 28 | NM | |
| | 8/21/2003 | 68 | 30 | 788 | |
| | 9/8/2003 | 41 | 16 | 1040 | |
| | 9/9/2003 | 55 | 35 | 915 | |
| | 9/10/2003 | 60 | 37 | 475 | |
| | 9/11/2003 | 58 | 39 | 1820 | |
| | 9/12/2003 | 0 | 39 | 740 | |
| | 9/18/2003 | 58 | 46 | 500 | |
| | 9/23/2003 | 60 | 47 | 318 | |
| SVE-77 | 8/8/2003 | 33 | 28 | NM | |
| | 8/21/2003 | 0 | 31 | 722 | |
| | 9/8/2003 | 17 | 16 | 1025 | |
| | 9/9/2003 | 20 | 36 | 910 | |
| | 9/10/2003 | 22 | 38 | 470 | |
| | 9/11/2003 | 20 | 39 | 1610 | |
| | 9/12/2003 | 16 | 40 | 700 | |
| | 9/18/2003 | 16 | 48 | 475 | |
| | 9/23/2003 | 11 | 50 | 216 | |

**Table 3.5**
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data - Third Quarter 2003**
**ACS NPL Site**
**Griffith, Indiana**

| Well ID | Date | Flow (cfm) | Vacuum (" $H_2O$) | VOCs (ppm) | Comments |
|---|---|---|---|---|---|
| SVE-78 | 8/8/2003 | 30 | 28 | NM | |
| | 8/21/2003 | 0 | 31 | 700 | |
| | 9/8/2003 | 17 | 17 | 1020 | |
| | 9/9/2003 | 34 | 36 | 915 | |
| | 9/10/2003 | 41 | 39 | 460 | |
| | 9/11/2003 | 44 | 39 | 1490 | |
| | 9/12/2003 | 27 | 39 | 675 | |
| | 9/18/2003 | 51 | 48 | 480 | |
| | 9/23/2003 | 41 | 48 | 255 | Clear liquid bubbling in riser |
| SVE-79 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 375 | |
| | 9/8/2003 | 0 | 18 | 625 | |
| | 9/9/2003 | 0 | 35 | 370 | |
| | 9/10/2003 | 0 | 40 | 330 | |
| | 9/11/2003 | 0 | 41 | 700 | |
| | 9/12/2003 | 0 | 42 | 370 | |
| | 9/18/2003 | 0 | 49 | 170 | |
| | 9/23/2003 | 0 | 51 | 67 | |
| SVE-80 | 8/8/2003 | 0 | 31 | NM | |
| | 8/21/2003 | 0 | 36 | 350 | |
| | 9/8/2003 | 0 | 20 | 305 | |
| | 9/9/2003 | 0 | 38 | 250 | |
| | 9/10/2003 | 0 | 43 | 215 | |
| | 9/11/2003 | 0 | 43 | 620 | |
| | 9/12/2003 | 0 | 43 | 775 | |
| | 9/18/2003 | 0 | 52 | 117 | |
| | 9/23/2003 | 0 | 54 | 61 | |
| SVE-81 | 8/8/2003 | 0 | 31 | NM | |
| | 8/21/2003 | 0 | 34 | 440 | |
| | 9/8/2003 | 0 | 18 | 440 | |
| | 9/9/2003 | 0 | 37 | 360 | |
| | 9/10/2003 | 0 | 40 | 365 | |
| | 9/11/2003 | 0 | 42 | 1090 | |
| | 9/12/2003 | 0 | 42 | 530 | |
| | 9/18/2003 | 0 | 50 | 163 | |
| | 9/23/2003 | 0 | 51 | 79 | |
| SVE-82 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 463 | |
| | 9/8/2003 | 0 | 20 | 740 | |
| | 9/9/2003 | 0 | 36 | 445 | |
| | 9/10/2003 | 0 | 41 | 230 | |
| | 9/11/2003 | 0 | 42 | 960 | |
| | 9/12/2003 | 0 | 42 | 440 | |
| | 9/18/2003 | 0 | 50 | 150 | |
| | 9/23/2003 | 0 | 52 | 73 | |
| SVE-83 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 32 | 505 | |
| | 9/8/2003 | 0 | 16 | 1120 | |
| | 9/9/2003 | 0 | 34 | 637 | |
| | 9/10/2003 | 0 | 38 | 565 | |
| | 9/11/2003 | 0 | 49 | 1450 | |
| | 9/12/2003 | 0 | 39 | 710 | |
| | 9/18/2003 | 0 | 47 | 220 | |
| | 9/23/2003 | 0 | 49 | 84 | |
| SVE-84 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 33 | 632 | |
| | 9/8/2003 | 0 | 17 | 550 | |
| | 9/9/2003 | 0 | 36 | 440 | |
| | 9/10/2003 | 0 | 40 | 252 | |
| | 9/11/2003 | 0 | 40 | 1015 | |
| | 9/12/2003 | 0 | 42 | 550 | |
| | 9/18/2003 | 0 | 49 | 140 | |
| | 9/23/2003 | 0 | 50 | 67 | |

**Table 3.5**
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data - Third Quarter 2003**
**ACS NPL Site**
**Griffith, Indiana**

| Well ID | Date | Flow (cfm) | Vacuum (" $H_2O$) | VOCs (ppm) | Comments |
|---|---|---|---|---|---|
| SVE-85 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 568 | |
| | 9/8/2003 | 0 | 16 | 1260 | |
| | 9/9/2003 | 0 | 36 | 660 | |
| | 9/10/2003 | 0 | 40 | 510 | |
| | 9/11/2003 | 0 | 42 | 1300 | |
| | 9/12/2003 | 0 | 42 | 660 | |
| | 9/18/2003 | 0 | 50 | 125 | |
| | 9/23/2003 | 0 | 51 | 54 | |
| SVE-86 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 717 | |
| | 9/8/2003 | 0 | 18 | 635 | |
| | 9/9/2003 | 0 | 36 | 380 | |
| | 9/10/2003 | 0 | 40 | 235 | |
| | 9/11/2003 | 0 | 42 | 1040 | |
| | 9/12/2003 | 0 | 42 | 700 | |
| | 9/18/2003 | 0 | 49 | 97 | |
| | 9/23/2003 | 0 | 51 | 52 | |
| SVE-87 | 8/8/2003 | 28 | 20 | NM | |
| | 8/21/2003 | 0 | 23 | 671 | |
| | 9/8/2003 | 12 | 23 | 1250 | |
| | 9/9/2003 | 13 | 42 | 610 | |
| | 9/10/2003 | 12 | 46 | 440 | |
| | 9/11/2003 | 17 | 48 | 1200 | |
| | 9/12/2003 | 12 | 48 | 775 | |
| | 9/18/2003 | 12 | 56 | 80 | |
| | 9/23/2003 | 0 | 57 | 43 | |
| SVE-88 | 8/8/2003 | 0 | 30 | NM | |
| | 8/21/2003 | 0 | 34 | 470 | |
| | 9/8/2003 | 0 | 18 | 1010 | |
| | 9/9/2003 | 0 | 37 | 560 | |
| | 9/10/2003 | 0 | 40 | 440 | |
| | 9/11/2003 | 0 | 42 | 1060 | |
| | 9/12/2003 | 0 | 42 | 610 | |
| | 9/18/2003 | 0 | 49 | 100 | |
| | 9/23/2003 | 0 | 50 | 61 | |

Notes:
"-" = data not collected
cfm = cubic feet per minute
"H20 = inches of water
ppm = parts per million
NM = not measured

Table 3.6
SBPA In-Situ Vapor Extraction (ISVE) System Header Monitoring Data - Third Quarter 2003
ACS NPL Site
Griffith, Indiana

| Date | North Header | | | South Header | | | Dilution | Blower Influent | Blower Influent | Blower Influent | Blower Influent | Blower Influent | Blower Effluent | Blower Effluent | Blower Effluent | Blower Effluent | Blower Effluent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Line Pressure (psia) | Flow (scfm) | Vacuum (" $H_2O$) | Line Pressure (psia) | Flow (scfm) | Vacuum (" $H_2O$) | Flow (cfm) | Line Pressure (psia) | Flow (scfm) | Vacuum (" H2O) | VOC (ppm) | Temperature (°F) | Line Pressure (psia) | Flow (scfm) | Pressure (" $H_2O$) | VOC (ppm) | Temperature (°F) |
| 9/8/2003 | 14.2 | 240 | 16 | 14.2 | 170 | 15 | 0 | 13.6 | 234 | 34 | - | 76 | 15.4 | 1155 | 16.0 | - | 114 |
| 9/9/2003 | 13.6 | 370 | 34 | 13.5 | 165 | 37 | 0 | 12.9 | 323 | 52 | - | 78 | 15.3 | 1040 | 13.0 | - | 122 |
| 9/10/2003 | 13.5 | 371 | 37 | 13.4 | 165 | 40 | 0 | 12.8 | 324 | 56 | - | 70 | 15.3 | 1064 | 13.0 | - | 126 |
| 9/11/2003 | 13.4 | 367 | 39 | 13.3 | 164 | 41 | 0 | 12.7 | 168 | 58 | - | 80 | 15.3 | 1125 | 13.0 | - | 130 |
| 9/12/2003 | 13.3 | 328 | 40 | 13.2 | 52 | 41 | 0 | 12.6 | 320 | 58 | - | 76 | 15.3 | 1112 | 16.0 | - | 130 |
| 9/18/2003 | 13.1 | 366 | 46 | 13.0 | 163 | 49 | 0 | 12.5 | 356 | 65 | - | 72 | 15.3 | 1175 | 13.0 | - | 128 |
| 9/23/2003 | 13.0 | 367 | 48 | 12.9 | 0 | 50 | 0 | 12.3 | 357 | 67 | - | 62 | 15.2 | 1213 | 13.0 | - | 122 |

Notes:
"-" = data not collected
psia - pounds per square inch, atmosphere
scfm - standard cubic feet per minute
"$H_20$ - inches of water
VOC - volatile organic compound
ppm - parts per million

**Table 6.1**
**Water Table Elevations Across the Barrier Wall and Near the PGCS - Third Quarter 2003**
**American Chemical Service NPL Site**
**Griffith, Indiana**

**Upper Aquifer Wells**

| Well Designation | Reference Points | | | 9/15/2003 | | Notes | Difference Across Barrier Wall (if applicable)[1] |
|---|---|---|---|---|---|---|---|
| | East | North | TOC | level | Elevation | | |
| MW11 | 6377 | 7329 | 640.47 | 8.05 | 632.42 | | n/a |
| MW13 | 5050 | 7814 | 634.08 | 4.22 | 629.86 | | n/a |
| MW37 | 5395 | 7976 | 636.78 | 6.70 | 630.08 | | n/a |
| MW46 | 4526 | 7424 | 633.32 | 3.20 | 630.12 | | n/a |
| MW48 | 5669 | 7814 | 636.36 | 6.15 | 630.21 | | n/a |
| MW49 | 5551 | 7650 | 637.00 | 6.52 | 630.48 | | n/a |

**Staff Gauges & Piezometers**

| Well Designation | Reference Points | | | 9/15/2003 | | Notes | Difference Across Barrier Wall (if applicable)[1] |
|---|---|---|---|---|---|---|---|
| | East | North | TOC | level | Elevation | | |
| P23 | 4689 | 7018 | 636.18 | 7.17 | 629.01 | | n/a |
| P25 | 5131 | 7510 | 635.01 | 5.78 | 629.23 | | n/a |
| P26 | 4764 | 7309 | 634.23 | 4.42 | 629.81 | | n/a |
| P27 | 4904 | 7020 | 639.70 | 10.70 | 629.00 | | n/a |
| P28 | 5883 | 7486 | 644.53 | 12.95 | 631.58 | | n/a |
| P32 | 5746 | 7026 | 642.32 | 10.60 | 631.72 | | n/a |
| P40 | 5931 | 7241 | 638.77 | 6.41 | 632.36 | | n/a |
| P41 | 5663 | 7377 | 637.23 | 5.33 | 631.90 | | n/a |
| P49 | 5145 | 6949 | 638.98 | 8.11 | 630.87 | | n/a |
| SG13 | 4819 | 7209 | 631.53 | 4.48 | 630.01 | TOSG = 6.0' mark | n/a |

**PGCS Piezometer Sets**

| Well Designation | Reference Points | | | 9/15/2003 | | Notes | Difference Across Barrier Wall (if applicable)[1] |
|---|---|---|---|---|---|---|---|
| | East | North | TOC | level | Elevation | | |
| P81 | 5577 | 7581 | 636.19 | 5.87 | 630.32 | | n/a |
| P82 | 5577 | 7572 | 635.77 | 5.44 | 630.33 | | n/a |
| P83 | 5577 | 7561.6 | 635.95 | 5.67 | 630.28 | | n/a |
| P84 | 5322 | 7603 | 634.35 | 4.91 | 629.44 | | n/a |
| P85 | 5326 | 7594 | 634.08 | 4.66 | 629.42 | | n/a |
| P86 | 5329 | 7585 | 634.41 | 4.95 | 629.46 | | n/a |
| P87 | 5121 | 7466 | 633.88 | 4.58 | 629.30 | | n/a |
| P88 | 5130 | 7460 | 633.90 | 4.70 | 629.20 | | n/a |
| P89 | 5137 | 7454 | 634.02 | 4.80 | 629.22 | | n/a |
| P90 | 4881 | 7152 | 634.45 | 5.22 | 629.23 | | n/a |
| P91 | 4889 | 7145 | 634.59 | 5.47 | 629.12 | | n/a |
| P92 | 4896 | 7138.1 | 633.87 | 4.66 | 629.21 | | n/a |

**Table 6.1**
**Water Table Elevations Across the Barrier Wall and Near the PGCS - Third Quarter 2003**
**American Chemical Service NPL Site**
**Griffith, Indiana**

**BWES Water Level and Piezometer Pairs**

| Well Designation | Reference Points | | | 9/15/2003 | | Notes | Difference Across Barrier Wall (if applicable)[1] |
|---|---|---|---|---|---|---|---|
| | East | North | TOC | level | Elevation | | |
| P93 - Outside BW | 5136 | 7067 | 638.79 | CNM | CNM | Does not exist - to be replaced | n/a |
| P94 - Inside BW | 5146 | 7061 | 638.98 | CNM | CNM | Does not exist - to be replaced | |
| P95 - Outside BW | 5146 | 6532 | 638.58 | 9.10 | 629.48 | | -3.36 |
| P96 - Inside BW | 5156 | 6537 | 641.26 | 15.14 | 626.12 | | |
| P105 - Outside BW | 5885 | 6678 | 638.86 | 6.24 | 632.62 | | -1.62 |
| P106 - Inside BW | 5871 | 6685 | 638.10 | 7.10 | 631.00 | | |
| P107 - Outside BW | 5766 | 7339 | 637.42 | 5.85 | 631.57 | | -0.16 |
| P108 - Inside BW | 5757 | 7324 | 638.13 | 6.72 | 631.41 | | |
| P109 - Outside BW | 5740 | 6387 | 644.30 | 11.56 | 632.74 | | -5.18 |
| P110 - Inside BW | 5705 | 6382 | 647.68 | 20.12 | 627.56 | | |
| P111 - Outside BW | 5551 | 5950 | 650.03 | 17.72 | 632.31 | | -5.99 |
| P112 - Inside BW | 5525 | 5960 | 653.36 | 27.04 | 626.32 | | |
| P113 - Inside BW | 5309 | 5693 | 657.53 | 31.30 | 626.23 | | -5.74 |
| ORCPZ102 - Outside | 5331 | 5612 | 652.47 | 20.50 | 631.97 | | |
| P114 - Inside BW | 5035 | 5729 | 653.69 | 27.38 | 626.31 | | -5.77 |
| P115 - Outside BW | 4970 | 5708 | 652.50 | 20.42 | 632.08 | | |
| P116 - Inside BW | 5031 | 6087 | 646.26 | 20.42 | 625.84 | | -5.39 |
| P117 - Outside BW | 5014 | 6087 | 643.93 | 12.70 | 631.23 | | |
| P118 - Inside BW | 5402 | 6539 | 645.52 | 18.94 | 626.58 | | n/a |

Notes:
All depth measurements and elevations are in units of feet.
Elevation is in feet above mean sea level.
BW = Barrier Wall
TOC = top of casing
CNM = could not measure (reason given under "Notes" column)
n/a = not applicable
1 = A positive value indicates that the water level is higher inside the barrier wall. A negative value indicates that the water level is lower inside the barrier wall.
TOSG = Top of Staff Gauge

# Table 6.2
## Water Levels Inside Barrier Wall - Third Quarter 2003
## American Chemical Service NPL Site
## Griffith, Indiana

| Date | On-Site Area | | | | | |
|---|---|---|---|---|---|---|
| | Target Level | P-29 | P-31 | P-32 | P-36 | P-49 |
| 3-Jul-03 | 629.0 | 630.4 | 630.9 | 629.8 | 628.2 | 627.7 |
| 11-Jul-03 | 629.0 | 630.4 | 630.9 | 629.8 | 628.2 | 629.5 |
| 18-Jul-03 | 629.0 | 630.4 | 630.9 | 630.3 | 628.2 | 629.4 |
| 25-Jul-03 | 629.0 | 630.4 | 630.9 | 630.7 | 628.2 | 629.4 |
| 1-Aug-03 | 629.0 | 630.4 | 630.9 | 630.7 | 628.2 | 629.8 |
| 8-Aug-03 | 629.0 | 630.4 | 630.9 | 631.0 | 628.2 | 630.5 |
| 15-Aug-03 | 629.0 | 630.9 | 631.6 | 631.2 | 628.2 | 630.6 |
| 22-Aug-03 | 629.0 | 630.9 | 631.8 | 631.3 | 628.6 | 630.5 |
| 29-Aug-03 | 629.0 | 631.0 | 632.0 | 631.3 | 628.8 | 630.5 |
| 5-Sep-03 | 629.0 | 631.2 | 632.4 | 631.5 | 628.9 | 630.7 |
| 12-Sep-03 | 629.0 | 631.5 | 632.7 | 631.7 | 629.0 | 630.9 |
| 19-Sep-03 | 629.0 | 631.5 | 632.7 | 631.7 | 629.1 | 630.9 |
| 26-Sep-03 | 629.0 | 631.5 | 632.6 | 631.7 | 629.2 | 630.9 |

| Date | Off-Site Area | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Target Level | P-96 | P-110 | P-112 | P-113 | P-114 | P-116 | P-118 | AS-7 | AS-8 | AS-9 |
| 3-Jul-03 | 626.0 | 620.6 | 626.6 | 626.0 | 626.4 | 626.9 | 626.7 | 624.9 | 626.5 | 626.4 | 626.2 |
| 11-Jul-03 | 626.0 | 620.6 | 626.8 | 626.1 | 626.4 | 627.0 | 626.7 | 624.9 | 626.5 | 626.4 | 626.2 |
| 18-Jul-03 | 626.0 | 620.6 | 626.9 | 626.1 | 626.4 | 626.9 | 626.7 | 624.9 | 626.5 | 626.4 | 626.2 |
| 25-Jul-03 | 626.0 | 620.6 | 627.0 | 626.1 | 626.4 | 626.9 | 626.7 | 624.9 | 626.5 | 626.4 | 626.2 |
| 1-Aug-03 | 626.0 | 620.6 | 627.2 | 626.2 | 626.5 | 627.0 | 626.8 | 624.9 | 626.5 | 626.4 | 626.2 |
| 8-Aug-03 | 626.0 | 621.3 | 627.3 | 626.2 | 626.3 | 626.8 | 626.3 | 624.9 | 626.5 | 626.4 | 626.2 |
| 15-Aug-03 | 626.0 | 621.9 | 627.4 | 626.4 | 626.6 | 627.0 | 626.6 | 624.9 | 626.5 | 626.4 | 626.2 |
| 22-Aug-03 | 626.0 | 622.3 | 627.4 | 626.4 | 626.6 | 627.0 | 626.6 | 624.9 | 626.5 | 626.4 | 626.2 |
| 29-Aug-03 | 626.0 | 622.7 | 627.5 | 626.5 | 626.6 | 627.0 | 626.7 | 624.9 | 626.5 | 626.4 | 626.2 |
| 5-Sep-03 | 626.0 | 622.9 | 627.6 | 626.4 | 626.6 | 626.7 | 626.3 | 624.9 | 626.5 | 626.4 | 626.2 |
| 12-Sep-03 | 626.0 | 623.2 | 627.7 | 626.4 | 626.2 | 626.4 | 625.9 | 624.9 | 626.5 | 626.4 | 626.2 |
| 19-Sep-03 | 626.0 | 623.3 | 627.6 | 626.4 | 626.2 | 626.4 | 625.9 | 624.9 | 626.5 | 626.4 | 626.2 |
| 26-Sep-03 | 626.0 | 623.4 | 627.6 | 626.4 | 626.2 | 626.5 | 626.0 | 624.9 | 626.5 | 626.4 | 626.2 |

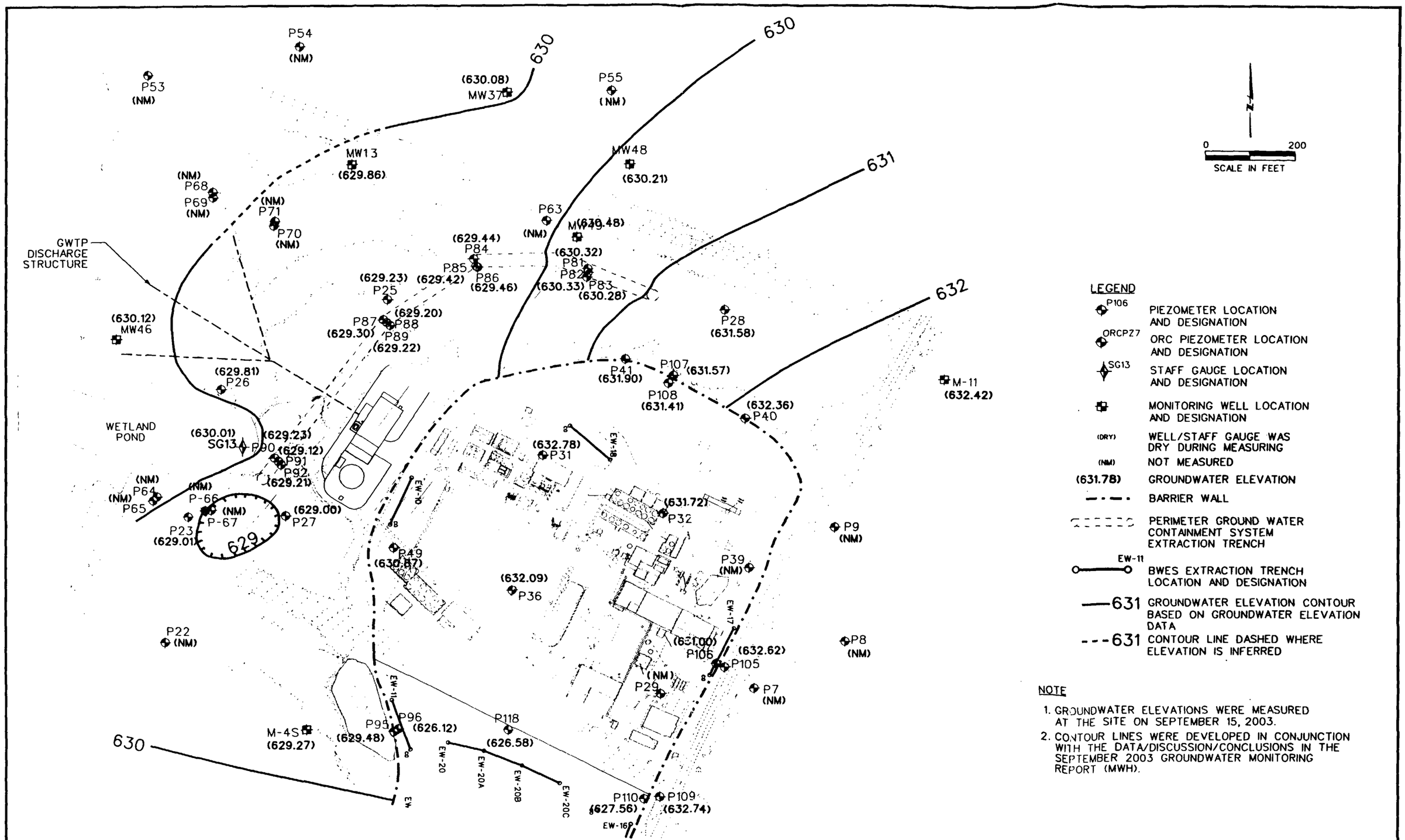
Notes:

All water level elevations are in feet AMSL

-- indicates no water level was recorded on this date

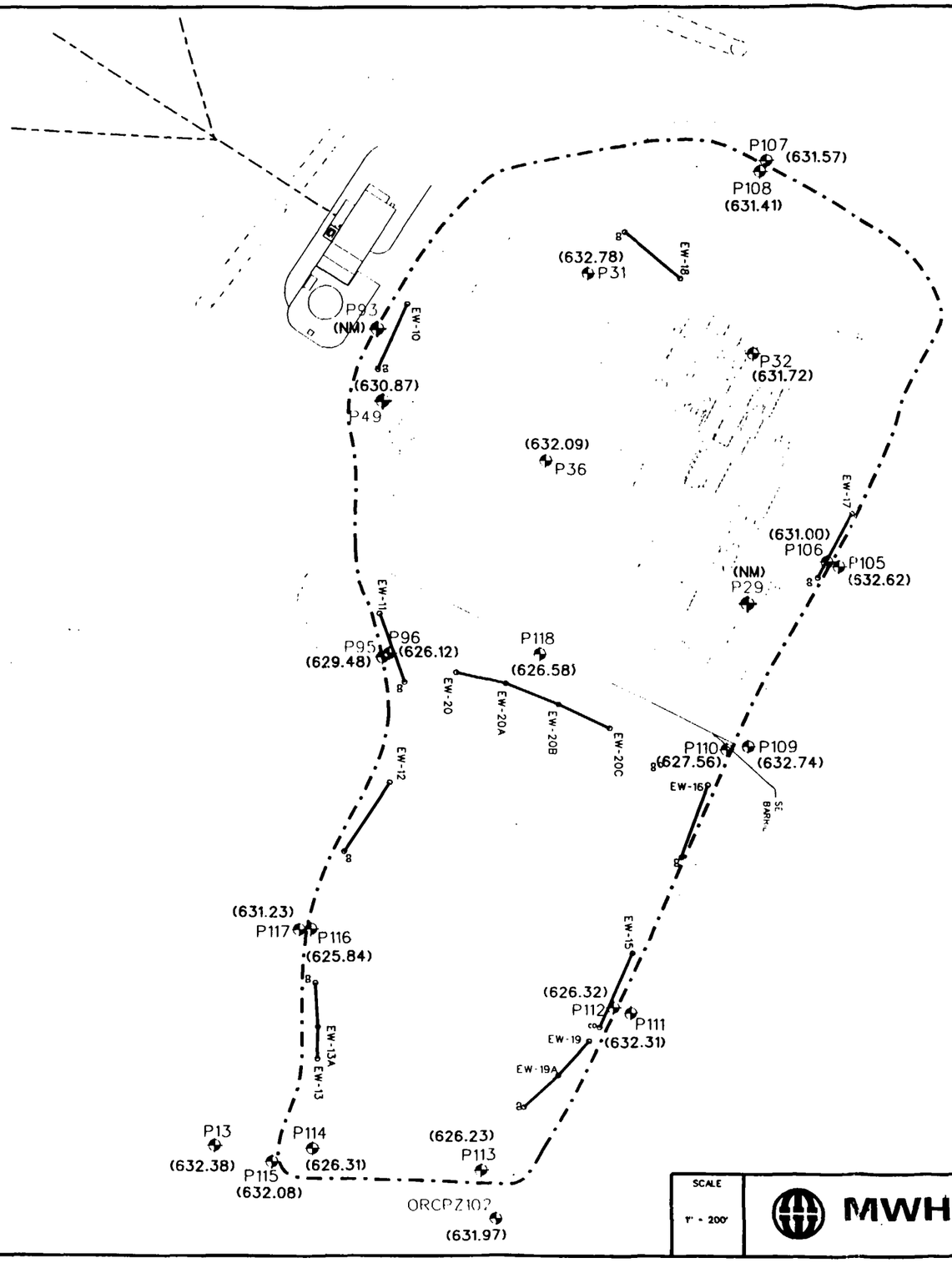
# Figures

MWH




| SCALE | | | | FIGURE |
|---|---|---|---|---|
| 1" = 200' | MWH | AMERICAN CHEMICAL SERVICE, INC. GRIFFITH, INDIANA | WATER TABLE ELEVATIONS NEAR THE PGCS SEPTEMBER 2003 | 6.1 |

JOB No. MW Job No. FILE: J:\209\0603_ACS\0301 GWTP\Drawings\Water Table 1 Sept 03.dgn Plot Date: 27-MAY-2004 15:29 OC: JDP/CAS




N

0 200
SCALE IN FEET

LEGEND

- P106 — PIEZOMETER LOCATION AND DESIGNATION
- ORCPZ7 — ORC PIEZOMETER LOCATION AND DESIGNATION
- MONITORING WELL LOCATION AND DESIGNATION
- STAFF GAUGE LOCATION AND DESIGNATION
- (DRY) — WELL/STAFF GAUGE WAS DRY DURING MEASURING
- (NM) — NOT MEASURED
- (631.78) — GROUNDWATER ELEVATION
- BARRIER WALL
- EW-11 — BWES EXTRACTION TRENCH LOCATION AND DESIGNATION
- PERIMETER GROUND WATER CONTAINMENT SYSTEM EXTRACTION TRENCH

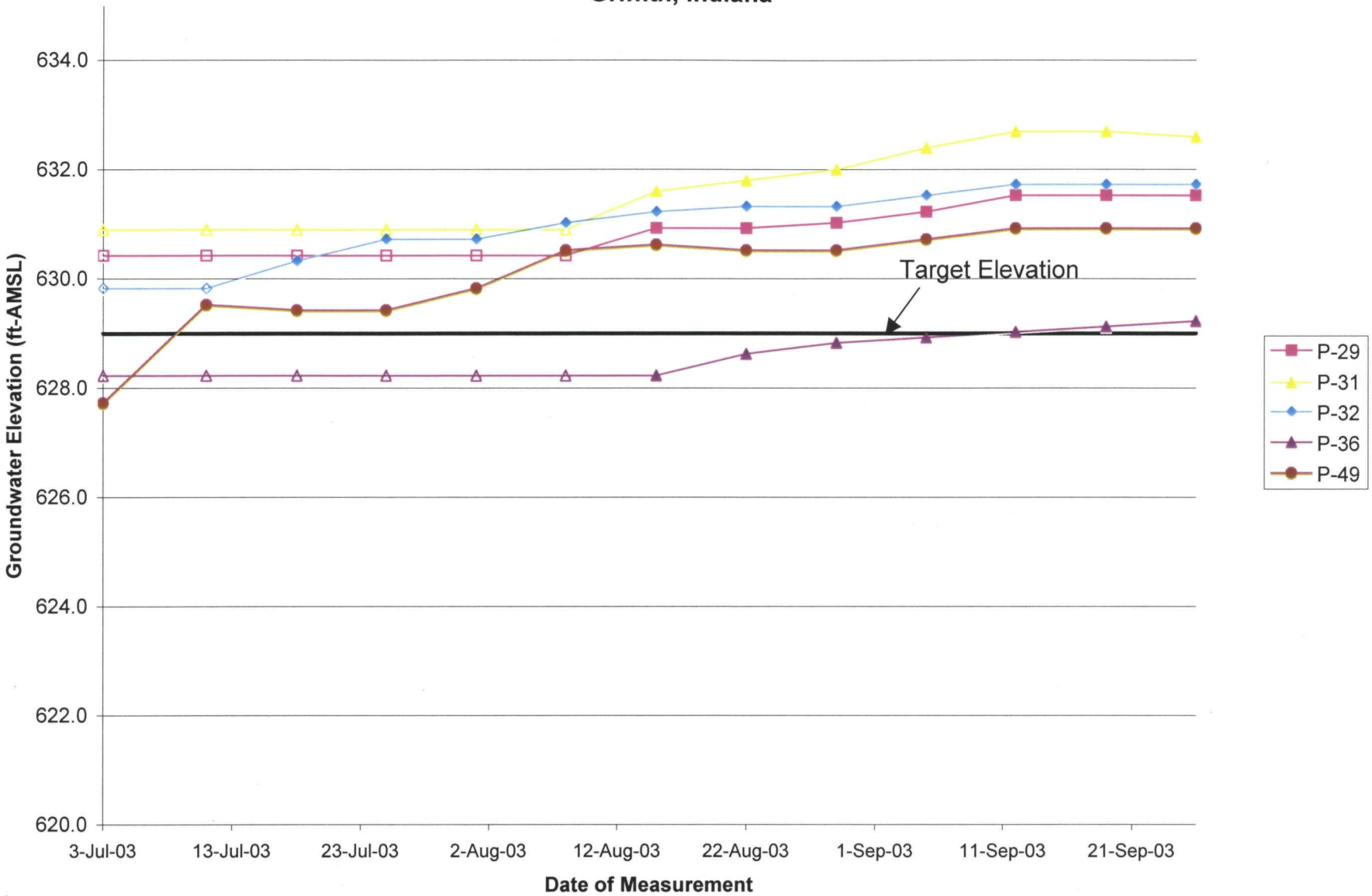
NOTE

1. GROUNDWATER ELEVATIONS WERE MEASURED AT THE SITE ON SEPTEMBER 15, 2003

| SCALE | | | FIGURE |
|---|---|---|---|
| 1" = 200' | MWH | AMERICAN CHEMICAL SERVICE, INC. GRIFFITH, INDIANA | WATER TABLE ELEVATIONS ACROSS THE BARRIER WALL SEPTEMBER 2003 | 6.2 |

JOB No. MW Job No. FILE: J:\209\0603 ACS\0301 GWTP\Drawings\Water Table 2 Sept 03.dgn Plot Date: 03-JAN-2004 08:54 QC: JDP/CAS

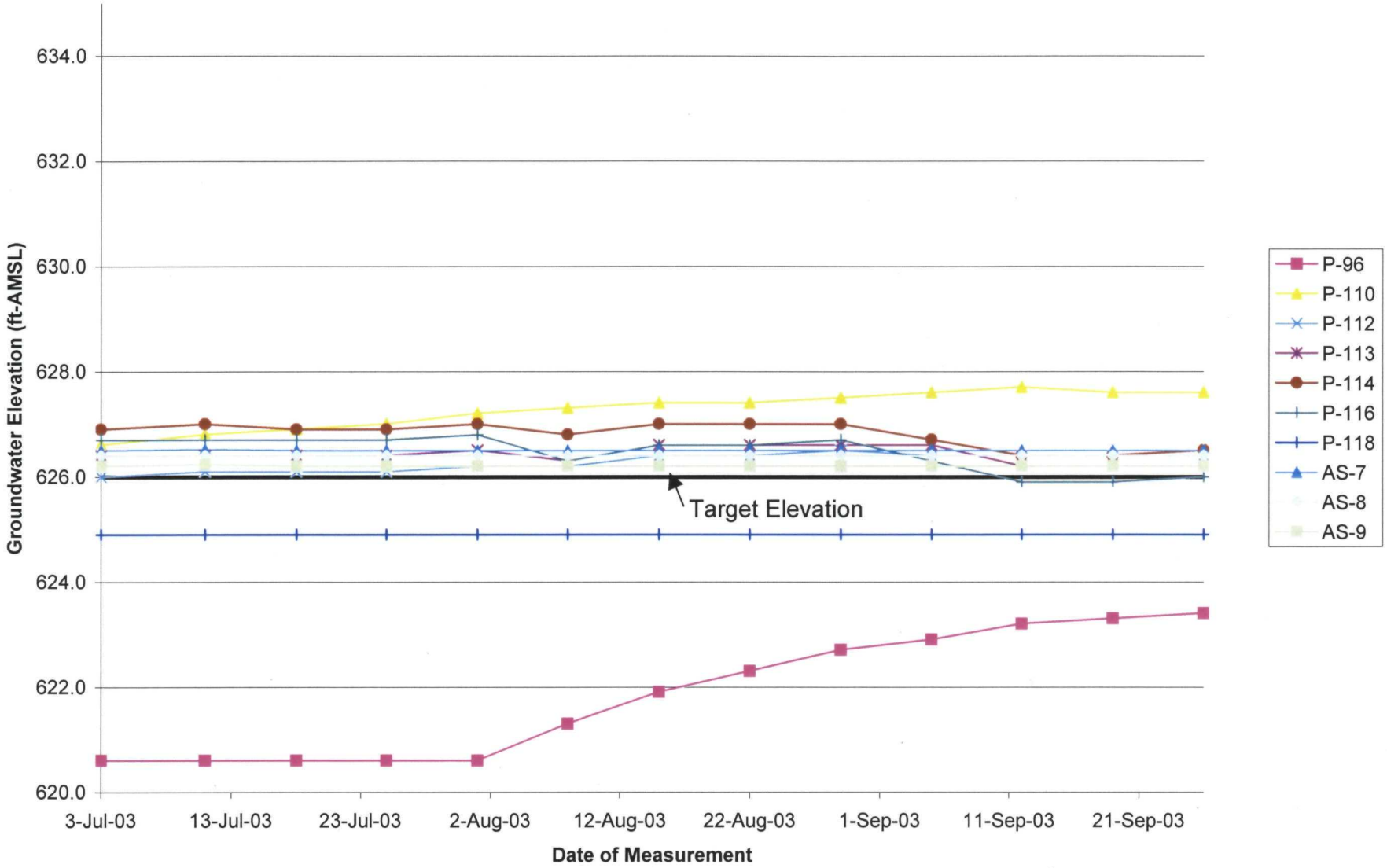
**Figure 6.3**
**Water Level Trends Inside the Barrier Wall (Still Bottoms Pond Area)**
**ACS NPL Site**
**Griffith, Indiana**




**Note:**
Hollow Points represent dry piezometers (data used for graphing purposes only)

JDP/raa/alc
J:\209\0603 ACS\0301 GWTP\6030301a062.xls\SBPA GW Trends

**Figure 6.4**
**Water Level Trends Inside the Barrier Wall (Off-Site Area)**
**ACS NPL Site**
**Griffith, Indiana**




**Note:**
Hollow points represent dry piezometers (data used for graphing purposes only)

JDP/raa/alc
J:\209\0603 ACS\0301GWTP\6030301a062.xls\Off-Site GW Trends

# APPENDIX A

# EFFLUENT ANALYTICAL DATA

**July 30, 2003 Compliance Sample**
**Laboratory Results**

# SW-846

## 1-CC

## CLASSICAL CHEMISTRY ANALYSES DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: CompuChem Contract:

Lab Code: LIBRTY Case No.: NRAS No.:

SDG No.: 353

Matrix (soil/water): WATER Lab Sample ID: 35301

Date Received: 7/31/03 % Solids: 0.00

Concentration Units (mg/L or mg/kg dry weight): mg/L

| PARAMETER | CONCENTRATION | C | Q | M | DATE ANALYZED |
|---|---|---|---|---|---|
| TSS | 1.00 | U | | | 8/6/03 |
| pH | 7.65 | | | | 8/1/03 |

Comments: PH is reported in pH units.

2

# SW846 METALS
-1-
## INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
EFFLUENT

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 353

Matrix (soil/water): WATER Lab Sample ID: 35301

Level (low/med): LOW Date Received: 7/31/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

| CAS No. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 2.2 | U | | P |
| 7440-41-7 | Beryllium | 0.14 | B | | P |
| 7440-43-9 | Cadmium | 0.50 | U | | P |
| 7439-96-5 | Manganese | 80.9 | | | P |
| 7439-97-6 | Mercury | 0.64 | U | | CV |
| 7782-49-2 | Selenium | 3.2 | U | | P |
| 7440-28-0 | Thallium | 3.4 | U | | P |
| 7440-66-6 | Zinc | 10.2 | U | | P |

UB

9/4/03

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

00008

10751A

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM Contract: 8082

Lab Code: COMPU Case No.: SAS No.: SDG No.: 353

Matrix: (soil/water) WATER Lab Sample ID: 35301

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 07/31/03

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 08/04/03

Concentrated Extract Volume: 2500(uL) Date Analyzed: 03/05/03

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 0.50 | U |
| 11104-28-2 | Aroclor-1221 | 0.63 | U |
| 11141-16-5 | Aroclor-1232 | 0.50 | U |
| 53469-21-9 | Aroclor-1242 | 0.31 | U |
| 12672-29-6 | Aroclor-1248 | 0.31 | U |
| 11097-69-1 | Aroclor-1254 | 0.31 | U |
| 11096-82-5 | Aroclor-1260 | 0.50 | U |

9/9/03

FORM I PEST

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 353

Matrix: (soil/water) WATER Lab Sample ID: 35301

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 35301B60

Level: (low/med) LOW Date Received: 07/31/03

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/04/03

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/13/03

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 87-86-5 | Pentachlorophenol | 0.8 | J |



8/4/03

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 353

Matrix: (soil/water) WATER Lab Sample ID: 35301

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 35301A64

Level: (low/med) LOW Date Received: 07/31/03

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 08/04/03

Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/08/03

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 111-44-4 | Bis(2-chloroethyl)ether | 10 | U |
| 106-44-5 | 4-Methylphenol | 10 | U |
| 78-59-1 | Isophorone | 10 | U |
| 117-81-7 | bis(2-ethylhexyl)Phthalate | 10 | U |



9/4/03

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 353

Matrix: (soil/water) WATER Lab Sample ID: 35301

Sample wt/vol: 25 (g/ml) ML Lab File ID: 35301A62

Level: (low/med) LOW Date Received: 07/31/03

% Moisture: not dec. _____ Date Analyzed: 08/13/03

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 0.5 | U |
| 75-01-4 | Vinyl Chloride | 0.5 | U |
| 74-83-9 | Bromomethane | 0.5 | U |
| 75-00-3 | Chloroethane | 0.5 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.5 | U |
| 75-15-0 | Carbon disulfide | 0.5 | U |
| 67-64-1 | Acetone | 2.5 | J |
| 75-09-2 | Methylene Chloride | 0.11 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 0.5 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.5 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 0.5 | U |
| 78-93-3 | 2-butanone | 2.5 | U |
| 67-66-3 | Chloroform | 0.5 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.5 | U |
| 56-23-5 | Carbon Tetrachloride | 0.5 | U |
| 71-43-2 | Benzene | 0.5 | U |
| 107-06-2 | 1,2-Dichloroethane | 0.5 | U |
| 79-01-6 | Trichloroethene | 0.5 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.5 | U |
| 75-27-4 | Bromodichloromethane | 0.5 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.5 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 2.5 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.5 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.5 | U |
| 127-18-4 | Tetrachloroethene | 0.5 | U |
| 591-78-6 | 2-hexanone | 2.5 | U |
| 124-48-1 | Dibromochloromethane | 0.5 | U |
| 108-90-7 | Chlorobenzene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 108-38-3 | m,p-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |
| 100-42-5 | Styrene | 0.5 | U |

FORM I VOA

9/8/03

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 353

Matrix: (soil/water) WATER Lab Sample ID: 35301

Sample wt/vol: 25 (g/ml) ML Lab File ID: 35301A62

Level: (low/med) LOW Date Received: 07/31/03

% Moisture: not dec. _____ Date Analyzed: 08/13/03

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(u

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 75-25-2 | Bromoform | 0.5 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.5 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.5 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.5 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.5 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 0.5 | U |
| 1330-20-7 | Xylene (total) | 0.5 | U |

FORM I VOA

Page 16

**August 27, 2003 Compliance Sample**
**Laboratory Results**

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 684

Matrix: (soil/water) WATER Lab Sample ID: 68401

Sample wt/vol: 25 (g/ml) ML Lab File ID: 68401R2B61

Level: (low/med) LOW Date Received: 09/04/03

% Moisture: not dec. _____ Date Analyzed: 09/10/03

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 0.73 | |
| 75-01-4 | Vinyl Chloride | 0.5 | U |
| 74-83-9 | Bromomethane | 0.5 | U |
| 75-00-3 | Chloroethane | 0.72 | |
| 75-35-4 | 1,1-Dichloroethene | 0.5 | U |
| 75-15-0 | Carbon disulfide | 0.5 | U |
| 67-64-1 | Acetone | 3.1 | |
| 75-09-2 | Methylene Chloride | 0.13 | J |
| 156-60-5 | trans-1,2-Dichloroethene | 0.5 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.5 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 0.23 | J |
| 78-93-3 | 2-butanone | 2.5 | U |
| 67-66-3 | Chloroform | 0.5 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.5 | U |
| 56-23-5 | Carbon Tetrachloride | 0.5 | U |
| 71-43-2 | Benzene | 0.29 | J |
| 107-06-2 | 1,2-Dichloroethane | 0.5 | U |
| 79-01-6 | Trichloroethene | 0.19 | J |
| 78-87-5 | 1,2-Dichloropropane | 0.5 | U |
| 75-27-4 | Bromodichloromethane | 0.5 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.5 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 2.5 | U |
| 108-88-3 | Toluene | 0.066 | JB 0.5UB |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.5 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.5 | U |
| 127-18-4 | Tetrachloroethene | 0.24 | JB 0.5UB |
| 591-78-6 | 2-hexanone | 2.5 | U UJ |
| 124-48-1 | Dibromochloromethane | 0.5 | U |
| 108-90-7 | Chlorobenzene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.088 | J |
| 108-38-3 | m,p-Xylene | 0.23 | J |
| 95-47-6 | o-Xylene | 0.11 | J |
| 100-42-5 | Styrene | 0.5 | U |

FORM I VOA

10/17/03

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 684

Matrix: (soil/water) WATER Lab Sample ID: 68401

Sample wt/vol: 25 (g/ml) ML Lab File ID: 68401R2B61

Level: (low/med) LOW Date Received: 09/04/03

% Moisture: not dec. _____ Date Analyzed: 09/10/03

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 75-25-2 | Bromoform | 0.5 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.5 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.5 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.066 | J |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.5 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 0.19 | J |
| 1330-20-7 | Xylene (total) | 0.38 | J |

FORM I VOA

10/17/03

# SW-846

## 1-CC

## CLASSICAL CHEMISTRY ANALYSES DATA SHEET

EPA SAMPLE NO.

EFFLUENT

ab Name: CompuChem Contract:

Lab Code: LIBRTY Case No.: NRAS No.:

DG No.: 684

Matrix (soil/water): WATER Lab Sample ID: 68401

ate Received: 9/4/03 % Solids: 0.00

Concentration Units (mg/L or mg/kg dry weight): pH units

| PARAMETER | CONCENTRATION | C | Q | M | DATE ANALYZED |
|---|---|---|---|---|---|
| pH | 7.60 | | | | 9/6/03 |

J

10/17/03

Comments:

2

**September 30, 2003 Compliance Sample**
**Laboratory Results**

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 931

Matrix: (soil/water) WATER Lab Sample ID: 93101

Sample wt/vol: 25 (g/ml) ML Lab File ID: 93101RB61

Level: (low/med) LOW Date Received: 10/02/03

% Moisture: not dec. _____ Date Analyzed: 10/14/03

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(u

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 0.5 | U |
| 75-01-4 | Vinyl Chloride | 0.5 | U |
| 74-83-9 | Bromomethane | 0.5 | U |
| 75-00-3 | Chloroethane | 0.5 | U |
| 75-35-4 | 1,1-Dichloroethene | 0.5 | U |
| 75-15-0 | Carbon disulfide | 0.5 | U |
| 67-64-1 | Acetone | 2.5 | U |
| 75-09-2 | Methylene Chloride | 0.5 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 0.5 | U |
| 75-34-3 | 1,1-Dichloroethane | 0.5 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 0.031 | J |
| 78-93-3 | 2-butanone | 2.5 | U |
| 67-66-3 | Chloroform | 0.5 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.5 | U |
| 56-23-5 | Carbon Tetrachloride | 0.5 | U |
| 71-43-2 | Benzene | 0.049 | JB 0.5uB |
| 107-06-2 | 1,2-Dichloroethane | 0.5 | U |
| 79-01-6 | Trichloroethene | 0.5 | U |
| 78-87-5 | 1,2-Dichloropropane | 0.5 | U |
| 75-27-4 | Bromodichloromethane | 0.5 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.5 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 2.5 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.5 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 0.5 | U |
| 127-18-4 | Tetrachloroethene | 0.5 | U |
| 591-78-6 | 2-hexanone | 2.5 | U |
| 124-48-1 | Dibromochloromethane | 0.5 | U |
| 108-90-7 | Chlorobenzene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 108-38-3 | m,p-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.047 | J |
| 100-42-5 | Styrene | 0.5 | U |



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Kobylor

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

EFFLUENT

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 931

Matrix: (soil/water) WATER Lab Sample ID: 93101

Sample wt/vol: 25 (g/ml) ML Lab File ID: 93101RB61

Level: (low/med) LOW Date Received: 10/02/03

% Moisture: not dec. _____ Date Analyzed: 10/14/03

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 75-25-2 | Bromoform | 0.5 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 0.5 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 0.5 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 0.5 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.5 | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 0.03 | J |
| 1330-20-7 | Xylene (total) | 0.047 | JB 1.0 UB |

FORM I VOA

10/07/03

# SW-846

## 1-CC

## CLASSICAL CHEMISTRY ANALYSES DATA SHEET

EPA SAMPLE NO.

EFFLUENT

ab Name: CompuChem Contract:

Lab Code: LIBRTY Case No.: NRAS No.:

DG No.: 931

Matrix (soil/water): WATER Lab Sample ID: 93101

ate Received: 10/2/03 % Solids: 0.00

Concentration Units (mg/L or mg/kg dry weight): pH units

| PARAMETER | CONCENTRATION | C | Q | M | DATE ANALYZED |
|---|---|---|---|---|---|
| pH | 7.42 | | | | 10/2/03 |

10/27/03

Comments:

00002

# APPENDIX B

# THERMAL OXIDIZER OFF-GAS ANALYTICAL DATA

# July 17, 2003 Off-Gas Sample Laboratory Results

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 EF1 JULY17**

**ID#: 0307355A-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **I072013** | **Date of Collection:** | **7/17/03** |
| **Dil. Factor:** | **5.84** | **Date of Analysis:** | **7/20/03** |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 2.9 | 7.6 | 28 | 74 |
| Bromomethane | 2.9 | 12 | Not Detected | Not Detected |
| Chloroethane | 2.9 | 7.8 | 2.3 J | 6.2 J |
| 1,1-Dichloroethene | 2.9 | 12 | 87 | 350 |
| Methylene Chloride | 2.9 | 10 | 430 | 1500 |
| 1,1-Dichloroethane | 2.9 | 12 | 52 | 210 |
| cis-1,2-Dichloroethene | 2.9 | 12 | 100 | 410 |
| Chloroform | 2.9 | 14 | 21 | 100 |
| 1,1,1-Trichloroethane | 2.9 | 16 | 330 | 1800 |
| Carbon Tetrachloride | 2.9 | 19 | 0.73 J | 4.6 J |
| Benzene | 2.9 | 9.5 | 400 | 1300 |
| 1,2-Dichloroethane | 2.9 | 12 | 8.9 | 37 |
| Trichloroethene | 2.9 | 16 | 240 | 1300 |
| 1,2-Dichloropropane | 2.9 | 14 | 3.4 | 16 |
| cis-1,3-Dichloropropene | 2.9 | 13 | 0.94 J | 4.4 J |
| Toluene | 2.9 | 11 | 1100 | 4400 |
| trans-1,3-Dichloropropene | 2.9 | 13 | 0.69 J | 3.2 J |
| 1,1,2-Trichloroethane | 2.9 | 16 | 1.7 J | 9.3 J |
| Tetrachloroethene | 2.9 | 20 | 260 | 1800 |
| Chlorobenzene | 2.9 | 14 | 3.2 | 15 |
| Ethyl Benzene | 2.9 | 13 | 92 | 400 |
| m,p-Xylene | 2.9 | 13 | 310 | 1400 |
| o-Xylene | 2.9 | 13 | 94 | 420 |
| Styrene | 2.9 | 13 | 42 | 180 |
| 1,1,2,2-Tetrachloroethane | 2.9 | 20 | Not Detected | Not Detected |
| Bromodichloromethane | 2.9 | 20 | 0.65 J | 4.4 J |
| Dibromochloromethane | 2.9 | 25 | Not Detected | Not Detected |
| Chloromethane | 12 | 24 | 23 | 49 |
| Acetone | 12 | 28 | 240 | 590 |
| Carbon Disulfide | 12 | 37 | 0.80 J | 2.5 J |
| trans-1,2-Dichloroethene | 12 | 47 | 23 | 93 |
| 2-Butanone (Methyl Ethyl Ketone) | 12 | 35 | 180 | 530 |
| 4-Methyl-2-pentanone | 12 | 49 | 43 | 180 |
| 2-Hexanone | 12 | 49 | 2.8 J | 12 J |
| Bromoform | 12 | 120 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 103 | 70-130 |
| Toluene-d8 | 101 | 70-130 |



9/17/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 EF1 JULY17**

**ID#: 0307355A-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | i072013 | **Date of Collection:** | 7/17/03 |
| **Dil. Factor:** | 5.84 | **Date of Analysis:** | 7/20/03 |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 4-Bromofluorobenzene | 97 | 70-130 |

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9/17/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN1 JULY17**

**ID#: 0307355A-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | I072014 | Date of Collection: | 7/17/03 |
| Dil. Factor: | 2880 | Date of Analysis: | 7/20/03 |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1400 | 3700 | 890 J /J | 2300 J |
| Bromomethane | 1400 | 5700 | Not Detected / U | Not Detected |
| Chloroethane | 1400 | 3900 | Not Detected / U | Not Detected |
| 1,1-Dichloroethene | 1400 | 5800 | 3000 | 12000 |
| Methylene Chloride | 1400 | 5100 | 89000 | 320000 |
| 1,1-Dichloroethane | 1400 | 5900 | 12000 | 50000 |
| cis-1,2-Dichloroethene | 1400 | 5800 | 23000 | 93000 |
| Chloroform | 1400 | 7100 | 3900 | 20000 |
| 1,1,1-Trichloroethane | 1400 | 8000 | 75000 | 420000 |
| Carbon Tetrachloride | 1400 | 9200 | Not Detected / U | Not Detected |
| Benzene | 1400 | 4700 | 56000 | 180000 |
| 1,2-Dichloroethane | 1400 | 5900 | 2300 | 9500 |
| Trichloroethene | 1400 | 7900 | 47000 | 250000 |
| 1,2-Dichloropropane | 1400 | 6800 | 890 J /J | 4200 J |
| cis-1,3-Dichloropropene | 1400 | 6600 | Not Detected / U | Not Detected |
| Toluene | 1400 | 5500 | 360000 | 1400000 |
| trans-1,3-Dichloropropene | 1400 | 6600 | Not Detected / U | Not Detected |
| 1,1,2-Trichloroethane | 1400 | 8000 | 550 J /J | 3000 J |
| Tetrachloroethene | 1400 | 9900 | 46000 | 320000 |
| Chlorobenzene | 1400 | 6700 | Not Detected / U | Not Detected |
| Ethyl Benzene | 1400 | 6400 | 37000 | 160000 |
| m,p-Xylene | 1400 | 6400 | 150000 | 660000 |
| o-Xylene | 1400 | 6400 | 47000 | 210000 |
| Styrene | 1400 | 6200 | 2300 | 10000 |
| 1,1,2,2-Tetrachloroethane | 1400 | 10000 | Not Detected / U | Not Detected |
| Bromodichloromethane | 1400 | 9800 | Not Detected / U | Not Detected |
| Dibromochloromethane | 1400 | 12000 | Not Detected / U | Not Detected |
| Chloromethane | 5800 | 12000 | Not Detected / U | Not Detected |
| Acetone | 5800 | 14000 | 83000 | 200000 |
| Carbon Disulfide | 5800 | 18000 | 1400 J /J | 4600 J |
| trans-1,2-Dichloroethene | 5800 | 23000 | Not Detected / U | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 5800 | 17000 | 70000 | 210000 |
| 4-Methyl-2-pentanone | 5800 | 24000 | 24000 | 100000 |
| 2-Hexanone | 5800 | 24000 | 1100 J /J | 4800 J |
| Bromoform | 5800 | 60000 | Not Detected / U | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 104 | 70-130 |
| Toluene-d8 | 101 | 70-130 |



CS 9/12/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN1 JULY17**

**ID#: 0307355A-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | I072014 | **Date of Collection:** | 7/17/03 |
| **Dil. Factor:** | 2880 | **Date of Analysis:** | 7/20/03 |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 4-Bromofluorobenzene | 98 | 70-130 |

9/12/03

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# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN2 JULY17**

**ID#: 0307355A-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: 1072015 | Date of Collection: 7/17/03 |
| Dil. Factor: 2880 | Date of Analysis: 7/20/03 |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1400 | 3700 | 760 J / 5 | 2000 J |
| Bromomethane | 1400 | 5700 | Not Detected / U | Not Detected |
| Chloroethane | 1400 | 3900 | Not Detected / U | Not Detected |
| 1,1-Dichloroethene | 1400 | 5800 | 2700 | 11000 |
| Methylene Chloride | 1400 | 5100 | 89000 | 310000 |
| 1,1-Dichloroethane | 1400 | 5900 | 12000 | 49000 |
| cis-1,2-Dichloroethene | 1400 | 5800 | 23000 | 93000 |
| Chloroform | 1400 | 7100 | 3900 | 19000 |
| 1,1,1-Trichloroethane | 1400 | 8000 | 74000 | 410000 |
| Carbon Tetrachloride | 1400 | 9200 | Not Detected / U | Not Detected |
| Benzene | 1400 | 4700 | 56000 | 180000 |
| 1,2-Dichloroethane | 1400 | 5900 | 2000 | 8200 |
| Trichloroethene | 1400 | 7900 | 47000 | 260000 |
| 1,2-Dichloropropane | 1400 | 6800 | 960 J / 5 | 4500 J |
| cis-1,3-Dichloropropene | 1400 | 6600 | Not Detected / U | Not Detected |
| Toluene | 1400 | 5500 | 360000 | 1400000 |
| trans-1,3-Dichloropropene | 1400 | 6600 | Not Detected / U | Not Detected |
| 1,1,2-Trichloroethane | 1400 | 8000 | 490 J / 5 | 2700 J |
| Tetrachloroethene | 1400 | 9900 | 46000 | 320000 |
| Chlorobenzene | 1400 | 6700 | Not Detected / U | Not Detected |
| Ethyl Benzene | 1400 | 6400 | 37000 | 160000 |
| m,p-Xylene | 1400 | 6400 | 150000 | 670000 |
| o-Xylene | 1400 | 6400 | 48000 | 210000 |
| Styrene | 1400 | 6200 | 2300 | 9800 |
| 1,1,2,2-Tetrachloroethane | 1400 | 10000 | Not Detected / U | Not Detected |
| Bromodichloromethane | 1400 | 9800 | Not Detected / U | Not Detected |
| Dibromochloromethane | 1400 | 12000 | Not Detected / U | Not Detected |
| Chloromethane | 5800 | 12000 | Not Detected / U | Not Detected |
| Acetone | 5800 | 14000 | 81000 | 190000 |
| Carbon Disulfide | 5800 | 18000 | 1400 J / 5 | 4500 J |
| trans-1,2-Dichloroethene | 5800 | 23000 | Not Detected / U | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 5800 | 17000 | 70000 | 210000 |
| 4-Methyl-2-pentanone | 5800 | 24000 | 24000 | 100000 |
| 2-Hexanone | 5800 | 24000 | 1100 J / 5 | 4700 J |
| Bromoform | 5800 | 60000 | Not Detected / U | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 103 | 70-130 |
| Toluene-d8 | 100 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN2 JULY17**

**ID#: 0307355A-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: I072015 | Date of Collection: 7/17/03 |
| Dil. Factor: 2880 | Date of Analysis: 7/20/03 |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 4-Bromofluorobenzene | 99 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 EF1 JULY17**

**ID#: 0307355B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | |
|---|---|---|
| File Name: k072206 | | Date of Collection: 7/17/03 |
| Dil. Factor: 1.00 | | Date of Analysis: 7/22/03 |
| | | Date of Extraction: 7/18/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected U |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected U |
| 2-Chlorophenol | 5.0 | Not Detected U |
| 1,3-Dichlorobenzene | 1.0 | Not Detected U |
| 1,4-Dichlorobenzene | 1.0 | Not Detected U |
| 1,2-Dichlorobenzene | 1.0 | Not Detected U |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected U |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected U |
| 4-Methylphenol | 5.0 | Not Detected U |
| Hexachloroethane | 1.0 | Not Detected U |
| Nitrobenzene | 1.0 | Not Detected U |
| Isophorone | 1.0 | Not Detected U |
| 2-Nitrophenol | 5.0 | Not Detected U |
| 2,4-Dimethylphenol | 5.0 | Not Detected U |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected U |
| 2,4-Dichlorophenol | 5.0 | Not Detected U |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected U |
| Naphthalene | 1.0 | Not Detected U |
| 4-Chloroaniline | 10 | Not Detected U |
| Hexachlorobutadiene | 1.0 | Not Detected U |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected U |
| 2-Methylnaphthalene | 1.0 | Not Detected U |
| Hexachlorocyclopentadiene | 20 | Not Detected U |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected U |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected U |
| 2-Chloronaphthalene | 1.0 | Not Detected U |
| 2-Nitroaniline | 10 | Not Detected U |
| Dimethylphthalate | 5.0 | Not Detected U |
| Acenaphthylene | 1.0 | Not Detected U |
| 2,6-Dinitrotoluene | 5.0 | Not Detected U |
| 3-Nitroaniline | 10 | Not Detected U |
| Acenaphthene | 1.0 | Not Detected U |
| 2,4-Dinitrophenol | 20 | Not Detected U |
| 4-Nitrophenol | 20 | Not Detected U |
| 2,4-Dinitrotoluene | 5.0 | Not Detected U |
| Dibenzofuran | 1.0 | Not Detected U |
| Diethylphthalate | 5.0 | Not Detected U |
| Fluorene | 1.0 | Not Detected U |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected U |
| 4-Nitroaniline | 10 | Not Detected U |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected U |



CS 9/17/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 EF1 JULY17**

**ID#: 0307355B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | k072206 | | **Date of Collection: 7/17/03** |
| **Dil. Factor:** | 1.00 | | **Date of Analysis: 7/22/03** |
| | | | **Date of Extraction: 7/18/03** |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected / U |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected / U |
| Hexachlorobenzene | 1.0 | Not Detected / U |
| Pentachlorophenol | 20 | Not Detected / U |
| Phenanthrene | 1.0 | Not Detected / U |
| Anthracene | 1.0 | Not Detected / U |
| di-n-Butylphthalate | 5.0 | Not Detected / U |
| Fluoranthene | 1.0 | Not Detected / U |
| Pyrene | 1.0 | Not Detected / U |
| Butylbenzylphthalate | 5.0 | Not Detected / U |
| 3,3'-Dichlorobenzidine | 20 | Not Detected / U |
| Chrysene | 1.0 | Not Detected / U |
| Benzo(a)anthracene | 1.0 | Not Detected / U |
| bis(2-Ethylhexyl)phthalate | 5.0 | 3.5 J / J |
| Di-n-Octylphthalate | 5.0 | Not Detected / U |
| Benzo(b)fluoranthene | 1.0 | Not Detected / U |
| Benzo(k)fluoranthene | 1.0 | Not Detected / U |
| Benzo(a)pyrene | 1.0 | Not Detected / U |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected / U |
| Dibenz(a,h)anthracene | 1.0 | Not Detected / U |
| Benzo(g,h,i)perylene | 1.0 | Not Detected / U |

J = Estimated value.

**Container Type: XAD Tube: VOST**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 72 | 50-150 |
| Phenol-d5 | 74 | 50-150 |
| Nitrobenzene-d5 | 80 | 50-150 |
| 2-Fluorobiphenyl | 78 | 60-120 |
| 2,4,6-Tribromophenol | 76 | 50-150 |
| Terphenyl-d14 | 86 | 60-120 |

CS 9/12/13

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN1 JULY17**

**ID#: 0307355B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | |
|---|---|---|
| File Name: | k072207 | Date of Collection: 7/17/03 |
| Dil. Factor: | 1.00 | Date of Analysis: 7/22/03 |
| | | Date of Extraction: 7/18/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | 3.6 J |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected |
| 2-Chlorophenol | 5.0 | Not Detected |
| 1,3-Dichlorobenzene | 1.0 | 0.97 J |
| 1,4-Dichlorobenzene | 1.0 | 3.2 |
| 1,2-Dichlorobenzene | 1.0 | 31 |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected |
| 4-Methylphenol | 5.0 | Not Detected |
| Hexachloroethane | 1.0 | Not Detected |
| Nitrobenzene | 1.0 | Not Detected |
| Isophorone | 1.0 | 16 |
| 2-Nitrophenol | 5.0 | Not Detected |
| 2,4-Dimethylphenol | 5.0 | Not Detected |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected |
| 2,4-Dichlorophenol | 5.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 1.0 | 0.71 J |
| Naphthalene | 1.0 | 37 |
| 4-Chloroaniline | 10 | Not Detected |
| Hexachlorobutadiene | 1.0 | 0.84 J |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected |
| 2-Methylnaphthalene | 1.0 | 4.9 |
| Hexachlorocyclopentadiene | 20 | Not Detected |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected |
| 2-Chloronaphthalene | 1.0 | Not Detected |
| 2-Nitroaniline | 10 | Not Detected |
| Dimethylphthalate | 5.0 | Not Detected |
| Acenaphthylene | 1.0 | Not Detected |
| 2,6-Dinitrotoluene | 5.0 | Not Detected |
| 3-Nitroaniline | 10 | Not Detected |
| Acenaphthene | 1.0 | Not Detected |
| 2,4-Dinitrophenol | 20 | Not Detected |
| 4-Nitrophenol | 20 | Not Detected |
| 2,4-Dinitrotoluene | 5.0 | Not Detected |
| Dibenzofuran | 1.0 | Not Detected |
| Diethylphthalate | 5.0 | Not Detected |
| Fluorene | 1.0 | Not Detected |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected |
| 4-Nitroaniline | 10 | Not Detected |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN1 JULY17**

**ID#: 0307355B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: k072207 | Date of Collection: 7/17/03 |
| Dil. Factor: 1.00 | Date of Analysis: 7/22/03 |
| | Date of Extraction: 7/18/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected |
| Hexachlorobenzene | 1.0 | Not Detected |
| Pentachlorophenol | 20 | Not Detected |
| Phenanthrene | 1.0 | Not Detected |
| Anthracene | 1.0 | Not Detected |
| di-n-Butylphthalate | 5.0 | Not Detected |
| Fluoranthene | 1.0 | Not Detected |
| Pyrene | 1.0 | Not Detected |
| Butylbenzylphthalate | 5.0 | Not Detected |
| 3,3'-Dichlorobenzidine | 20 | Not Detected |
| Chrysene | 1.0 | Not Detected |
| Benzo(a)anthracene | 1.0 | Not Detected |
| bis(2-Ethylhexyl)phthalate | 5.0 | 0.73 J |
| Di-n-Octylphthalate | 5.0 | Not Detected |
| Benzo(b)fluoranthene | 1.0 | Not Detected |
| Benzo(k)fluoranthene | 1.0 | Not Detected |
| Benzo(a)pyrene | 1.0 | Not Detected |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected |
| Dibenz(a,h)anthracene | 1.0 | Not Detected |
| Benzo(g,h,i)perylene | 1.0 | Not Detected |

J = Estimated value.
Q = Exceeds Quality Control limits.
**Container Type: XAD Tube: VOST**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 11 Q | 50-150 |
| Phenol-d5 | 68 | 50-150 |
| Nitrobenzene-d5 | 94 | 50-150 |
| 2-Fluorobiphenyl | 85 | 60-120 |
| 2,4,6-Tribromophenol | 77 | 50-150 |
| Terphenyl-d14 | 89 | 60-120 |

CS
4/17/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN2 JULY17**

**ID#: 0307355B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: k072209 | Date of Collection: 7/17/03 |
| Dil. Factor: 1.00 | Date of Analysis: 7/22/03 |
| | Date of Extraction: 7/18/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | 3.6 J |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected |
| 2-Chlorophenol | 5.0 | Not Detected |
| 1,3-Dichlorobenzene | 1.0 | 0.94 J |
| 1,4-Dichlorobenzene | 1.0 | 3.3 |
| 1,2-Dichlorobenzene | 1.0 | 32 |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected |
| 4-Methylphenol | 5.0 | Not Detected |
| Hexachloroethane | 1.0 | Not Detected |
| Nitrobenzene | 1.0 | Not Detected |
| Isophorone | 1.0 | 16 |
| 2-Nitrophenol | 5.0 | Not Detected |
| 2,4-Dimethylphenol | 5.0 | Not Detected |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected |
| 2,4-Dichlorophenol | 5.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 1.0 | 0.80 J |
| Naphthalene | 1.0 | 41 |
| 4-Chloroaniline | 10 | Not Detected |
| Hexachlorobutadiene | 1.0 | 0.89 J |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected |
| 2-Methylnaphthalene | 1.0 | 5.6 |
| Hexachlorocyclopentadiene | 20 | Not Detected |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected |
| 2-Chloronaphthalene | 1.0 | Not Detected |
| 2-Nitroaniline | 10 | Not Detected |
| Dimethylphthalate | 5.0 | Not Detected |
| Acenaphthylene | 1.0 | Not Detected |
| 2,6-Dinitrotoluene | 5.0 | Not Detected |
| 3-Nitroaniline | 10 | Not Detected |
| Acenaphthene | 1.0 | Not Detected |
| 2,4-Dinitrophenol | 20 | Not Detected |
| 4-Nitrophenol | 20 | Not Detected |
| 2,4-Dinitrotoluene | 5.0 | Not Detected |
| Dibenzofuran | 1.0 | Not Detected |
| Diethylphthalate | 5.0 | Not Detected |
| Fluorene | 1.0 | Not Detected |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected |
| 4-Nitroaniline | 10 | Not Detected |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN2 JULY17**

**ID#: 0307355B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| **File Name:** K072209 | **Date of Collection: 7/17/03** |
| **Dil. Factor:** 1.00 | **Date of Analysis: 7/22/03** |
| | **Date of Extraction: 7/18/03** |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected U |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected U |
| Hexachlorobenzene | 1.0 | Not Detected U |
| Pentachlorophenol | 20 | Not Detected U |
| Phenanthrene | 1.0 | Not Detected U |
| Anthracene | 1.0 | Not Detected U |
| di-n-Butylphthalate | 5.0 | Not Detected U |
| Fluoranthene | 1.0 | Not Detected U |
| Pyrene | 1.0 | Not Detected U |
| Butylbenzylphthalate | 5.0 | Not Detected U |
| 3,3'-Dichlorobenzidine | 20 | Not Detected U |
| Chrysene | 1.0 | Not Detected U |
| Benzo(a)anthracene | 1.0 | Not Detected U |
| bis(2-Ethylhexyl)phthalate | 5.0 | 0.72 J J |
| Di-n-Octylphthalate | 5.0 | Not Detected U |
| Benzo(b)fluoranthene | 1.0 | Not Detected U |
| Benzo(k)fluoranthene | 1.0 | Not Detected U |
| Benzo(a)pyrene | 1.0 | Not Detected U |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected U |
| Dibenz(a,h)anthracene | 1.0 | Not Detected U |
| Benzo(g,h,i)perylene | 1.0 | Not Detected U |

J = Estimated value.
Q = Exceeds Quality Control limits.
**Container Type: XAD Tube: VOST**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 10 Q | 50-150 |
| Phenol-d5 | 65 | 50-150 |
| Nitrobenzene-d5 | 91 | 50-150 |
| 2-Fluorobiphenyl | 84 | 60-120 |
| 2,4,6-Tribromophenol | 78 | 50-150 |
| Terphenyl-d14 | 88 | 60-120 |



CS 9/17/03

# July 31, 2003 Off-Gas Sample Laboratory Results

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 July31**

**ID#: 0308048A-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | |
|---|---|
| **File Name:** j081113 | **Date of Collection: 7/31/03** |
| **Dil. Factor:** 1.49 | **Date of Analysis: 8/11/03** |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 0.74 | 1.9 | 2.1 | 5.4 |
| Bromomethane | 0.74 | 2.9 | Not Detected /U | Not Detected |
| Chloroethane | 0.74 | 2.0 | 0.37 J /J | 0.98 J |
| 1,1-Dichloroethene | 0.74 | 3.0 | 32 | 130 |
| Methylene Chloride | 0.74 | 2.6 | 1.9 | 6.8 |
| 1,1-Dichloroethane | 0.74 | 3.1 | 0.10 J /J | 0.43 J |
| cis-1,2-Dichloroethene | 0.74 | 3.0 | 11 | 45 |
| Chloroform | 0.74 | 3.7 | 8.0 | 40 |
| 1,1,1-Trichloroethane | 0.74 | 4.1 | 1.4 | 7.6 |
| Carbon Tetrachloride | 0.74 | 4.8 | 17 | 110 |
| Benzene | 0.74 | 2.4 | 8.7 | 28 |
| 1,2-Dichloroethane | 0.74 | 3.1 | Not Detected /U | Not Detected |
| Trichloroethene | 0.74 | 4.1 | 16 | 87 |
| 1,2-Dichloropropane | 0.74 | 3.5 | Not Detected /U | Not Detected |
| cis-1,3-Dichloropropene | 0.74 | 3.4 | Not Detected /U | Not Detected |
| Toluene | 0.74 | 2.8 | 1.3 | 5.1 |
| trans-1,3-Dichloropropene | 0.74 | 3.4 | Not Detected /U | Not Detected |
| 1,1,2-Trichloroethane | 0.74 | 4.1 | Not Detected /U | Not Detected |
| Tetrachloroethene | 0.74 | 5.1 | 30 | 210 |
| Chlorobenzene | 0.74 | 3.5 | 1.2 | 5.6 |
| Ethyl Benzene | 0.74 | 3.3 | 0.30 J /J | 1.3 J |
| m,p-Xylene | 0.74 | 3.3 | 1.4 | 6.4 |
| o-Xylene | 0.74 | 3.3 | 0.48 J /J | 2.1 J |
| Styrene | 0.74 | 3.2 | 0.16 J /J | 0.71 J |
| 1,1,2,2-Tetrachloroethane | 0.74 | 5.2 | Not Detected /U | Not Detected |
| Bromodichloromethane | 0.74 | 5.1 | 2.9 | 20 |
| Dibromochloromethane | 0.74 | 6.4 | 0.97 | 8.4 |
| Chloromethane | 3.0 | 6.2 | 6.4 | 13 |
| Acetone | 3.0 | 7.2 | 43 | 100 |
| Carbon Disulfide | 3.0 | 9.4 | 1.4 J /J | 4.5 J |
| trans-1,2-Dichloroethene | 3.0 | 12 | 7.5 | 30 |
| 2-Butanone (Methyl Ethyl Ketone) | 3.0 | 8.9 | 3.4 | 10 |
| 4-Methyl-2-pentanone | 3.0 | 12 | 0.30 J /J | 1.2 J |
| 2-Hexanone | 3.0 | 12 | Not Detected /U | Not Detected |
| Bromoform | 3.0 | 31 | Not Detected /U | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

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9/12/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 July31**

**ID#: 0308048A-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | I081113 | **Date of Collection:** | 7/31/03 |
| **Dil. Factor:** | 1.49 | **Date of Analysis:** | 8/11/03 |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 109 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 103 | 70-130 |



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# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN1 July31**

**ID#: 0308048A-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **I081114** | **Date of Collection:** | **7/31/03** |
| **Dil. Factor:** | **732** | **Date of Analysis:** | **8/11/03** |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 370 | 950 | Not Detected /U | Not Detected |
| Bromomethane | 370 | 1400 | Not Detected /U | Not Detected |
| Chloroethane | 370 | 980 | Not Detected /U | Not Detected |
| 1,1-Dichloroethene | 370 | 1500 | 340 J /J | 1400 J |
| Methylene Chloride | 370 | 1300 | 2900 | 10000 |
| 1,1-Dichloroethane | 370 | 1500 | 380 | 1600 |
| cis-1,2-Dichloroethene | 370 | 1500 | 3200 | 13000 |
| Chloroform | 370 | 1800 | 230 J /J | 1100 J |
| 1,1,1-Trichloroethane | 370 | 2000 | 2900 | 16000 |
| Carbon Tetrachloride | 370 | 2300 | Not Detected /U | Not Detected |
| Benzene | 370 | 1200 | 6200 | 20000 |
| 1,2-Dichloroethane | 370 | 1500 | 180 J /J | 760 J |
| Trichloroethene | 370 | 2000 | 7800 | 42000 |
| 1,2-Dichloropropane | 370 | 1700 | Not Detected /U | Not Detected |
| cis-1,3-Dichloropropene | 370 | 1700 | Not Detected /U | Not Detected |
| Toluene | 370 | 1400 | 90000 | 340000 |
| trans-1,3-Dichloropropene | 370 | 1700 | Not Detected /U | Not Detected |
| 1,1,2-Trichloroethane | 370 | 2000 | Not Detected /U | Not Detected |
| Tetrachloroethene | 370 | 2500 | 14000 | 95000 |
| Chlorobenzene | 370 | 1700 | Not Detected /U | Not Detected |
| Ethyl Benzene | 370 | 1600 | 13000 | 58000 |
| m,p-Xylene | 370 | 1600 | 58000 | 250000 |
| o-Xylene | 370 | 1600 | 19000 | 83000 |
| Styrene | 370 | 1600 | Not Detected /U | Not Detected |
| 1,1,2,2-Tetrachloroethane | 370 | 2600 | Not Detected /U | Not Detected |
| Bromodichloromethane | 370 | 2500 | Not Detected /U | Not Detected |
| Dibromochloromethane | 370 | 3200 | Not Detected /U | Not Detected |
| Chloromethane | 1500 | 3100 | Not Detected /U | Not Detected |
| Acetone | 1500 | 3500 | 2600 | 6200 |
| Carbon Disulfide | 1500 | 4600 | Not Detected /U | Not Detected |
| trans-1,2-Dichloroethene | 1500 | 5900 | Not Detected /U | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 1500 | 4400 | 3500 | 10000 |
| 4-Methyl-2-pentanone | 1500 | 6100 | 2100 | 8700 |
| 2-Hexanone | 1500 | 6100 | 170 J /J | 720 J |
| Bromoform | 1500 | 15000 | Not Detected /U | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

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# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN1 July31**

**ID#: 0308048A-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | I081114 | **Date of Collection:** | 7/31/03 |
| **Dil. Factor:** | 732 | **Date of Analysis:** | 8/11/03 |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 104 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



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# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN2 July31**

**ID#: 0308048A-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | I081115 | **Date of Collection:** | 7/31/03 |
| **Dil. Factor:** | 576 | **Date of Analysis:** | 8/11/03 |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 290 | 750 | Not Detected /U | Not Detected |
| Bromomethane | 290 | 1100 | Not Detected /U | Not Detected |
| Chloroethane | 290 | 770 | Not Detected /U | Not Detected |
| 1,1-Dichloroethene | 290 | 1200 | 350 | 1400 |
| Methylene Chloride | 290 | 1000 | 3200 | 11000 |
| 1,1-Dichloroethane | 290 | 1200 | 420 | 1700 |
| cis-1,2-Dichloroethene | 290 | 1200 | 3700 | 15000 |
| Chloroform | 290 | 1400 | 240 J /J | 1200 J |
| 1,1,1-Trichloroethane | 290 | 1600 | 3300 | 18000 |
| Carbon Tetrachloride | 290 | 1800 | Not Detected /U | Not Detected |
| Benzene | 290 | 940 | 7100 | 23000 |
| 1,2-Dichloroethane | 290 | 1200 | 200 J /J | 830 J |
| Trichloroethene | 290 | 1600 | 8800 | 48000 |
| 1,2-Dichloropropane | 290 | 1400 | Not Detected /U | Not Detected |
| cis-1,3-Dichloropropene | 290 | 1300 | Not Detected /U | Not Detected |
| Toluene | 290 | 1100 | 100000 | 380000 |
| trans-1,3-Dichloropropene | 290 | 1300 | Not Detected /U | Not Detected |
| 1,1,2-Trichloroethane | 290 | 1600 | 80 J /J | 440 J |
| Tetrachloroethene | 290 | 2000 | 16000 | 110000 |
| Chlorobenzene | 290 | 1300 | Not Detected /U | Not Detected |
| Ethyl Benzene | 290 | 1300 | 15000 | 66000 |
| m,p-Xylene | 290 | 1300 | 65000 | 290000 |
| o-Xylene | 290 | 1300 | 21000 | 95000 |
| Styrene | 290 | 1200 | Not Detected /U | Not Detected |
| 1,1,2,2-Tetrachloroethane | 290 | 2000 | Not Detected /U | Not Detected |
| Bromodichloromethane | 290 | 2000 | Not Detected /U | Not Detected |
| Dibromochloromethane | 290 | 2500 | Not Detected /U | Not Detected |
| Chloromethane | 1200 | 2400 | Not Detected /U | Not Detected |
| Acetone | 1200 | 2800 | 2800 | 6700 |
| Carbon Disulfide | 1200 | 3600 | Not Detected /U | Not Detected |
| trans-1,2-Dichloroethene | 1200 | 4600 | Not Detected /U | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 1200 | 3400 | 3600 | 11000 |
| 4-Methyl-2-pentanone | 1200 | 4800 | 2400 | 10000 |
| 2-Hexanone | 1200 | 4800 | 180 J /J | 750 J |
| Bromoform | 1200 | 12000 | Not Detected /U | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

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# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN2 July31**

**ID#: 0308048A-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | I081115 | **Date of Collection:** | 7/31/03 |
| **Dil. Factor:** | 576 | **Date of Analysis:** | 8/11/03 |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 103 | 70-130 |
| Toluene-d8 | 101 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |

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# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 July31**

**ID#: 0308048B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | y080809 | Date of Collection: | 7/31/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 8/8/03 |
| | | Date of Extraction: | 8/4/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected |
| 2-Chlorophenol | 5.0 | Not Detected |
| 1,3-Dichlorobenzene | 1.0 | Not Detected |
| 1,4-Dichlorobenzene | 1.0 | Not Detected |
| 1,2-Dichlorobenzene | 1.0 | Not Detected |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected |
| 4-Methylphenol | 5.0 | Not Detected |
| Hexachloroethane | 1.0 | Not Detected |
| Nitrobenzene | 1.0 | Not Detected |
| Isophorone | 1.0 | Not Detected |
| 2-Nitrophenol | 5.0 | Not Detected |
| 2,4-Dimethylphenol | 5.0 | Not Detected |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected |
| 2,4-Dichlorophenol | 5.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected |
| Naphthalene | 1.0 | Not Detected |
| 4-Chloroaniline | 10 | Not Detected |
| Hexachlorobutadiene | 1.0 | Not Detected |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected |
| 2-Methylnaphthalene | 1.0 | Not Detected |
| Hexachlorocyclopentadiene | 20 | Not Detected |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected |
| 2-Chloronaphthalene | 1.0 | Not Detected |
| 2-Nitroaniline | 10 | Not Detected |
| Dimethylphthalate | 5.0 | Not Detected |
| Acenaphthylene | 1.0 | Not Detected |
| 2,6-Dinitrotoluene | 5.0 | Not Detected |
| 3-Nitroaniline | 10 | Not Detected |
| Acenaphthene | 1.0 | Not Detected |
| 2,4-Dinitrophenol | 20 | Not Detected |
| 4-Nitrophenol | 20 | Not Detected |
| 2,4-Dinitrotoluene | 5.0 | Not Detected |
| Dibenzofuran | 1.0 | Not Detected |
| Diethylphthalate | 5.0 | Not Detected |
| Fluorene | 1.0 | Not Detected |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected |
| 4-Nitroaniline | 10 | Not Detected |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 July31**

**ID#: 0308048B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | y080809 | | **Date of Collection: 7/31/03** |
| **Dil. Factor:** | 1.00 | | **Date of Analysis: 8/8/03** |
| | | | **Date of Extraction: 8/4/03** |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected |
| Hexachlorobenzene | 1.0 | Not Detected |
| Pentachlorophenol | 20 | Not Detected |
| Phenanthrene | 1.0 | Not Detected |
| Anthracene | 1.0 | Not Detected |
| di-n-Butylphthalate | 5.0 | Not Detected |
| Fluoranthene | 1.0 | Not Detected |
| Pyrene | 1.0 | Not Detected |
| Butylbenzylphthalate | 5.0 | Not Detected |
| 3,3'-Dichlorobenzidine | 20 | Not Detected |
| Chrysene | 1.0 | Not Detected |
| Benzo(a)anthracene | 1.0 | Not Detected |
| bis(2-Ethylhexyl)phthalate | 5.0 | Not Detected |
| Di-n-Octylphthalate | 5.0 | Not Detected |
| Benzo(b)fluoranthene | 1.0 | Not Detected |
| Benzo(k)fluoranthene | 1.0 | Not Detected |
| Benzo(a)pyrene | 1.0 | Not Detected |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected |
| Dibenz(a,h)anthracene | 1.0 | Not Detected |
| Benzo(g,h,i)perylene | 1.0 | Not Detected |

**Container Type: XAD Tube: VOST**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 72 | 50-150 |
| Phenol-d5 | 76 | 50-150 |
| Nitrobenzene-d5 | 74 | 50-150 |
| 2-Fluorobiphenyl | 79 | 60-120 |
| 2,4,6-Tribromophenol | 88 | 50-150 |
| Terphenyl-d14 | 87 | 60-120 |

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# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN1 July31**

**ID#: 0308048B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | y080810 | **Date of Collection:** | 7/31/03 |
| **Dil. Factor:** | 1.00 | **Date of Analysis:** | 8/8/03 |
| | | **Date of Extraction:** | 8/4/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected U |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected U |
| 2-Chlorophenol | 5.0 | Not Detected U |
| 1,3-Dichlorobenzene | 1.0 | 0.65 J J |
| 1,4-Dichlorobenzene | 1.0 | 2.3 |
| 1,2-Dichlorobenzene | 1.0 | 20 |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected U |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected U |
| 4-Methylphenol | 5.0 | Not Detected U |
| Hexachloroethane | 1.0 | Not Detected U |
| Nitrobenzene | 1.0 | Not Detected U |
| Isophorone | 1.0 | 7.8 |
| 2-Nitrophenol | 5.0 | Not Detected U |
| 2,4-Dimethylphenol | 5.0 | Not Detected U |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected U |
| 2,4-Dichlorophenol | 5.0 | Not Detected U |
| 1,2,4-Trichlorobenzene | 1.0 | 0.54 J J |
| Naphthalene | 1.0 | 32 |
| 4-Chloroaniline | 10 | Not Detected U |
| Hexachlorobutadiene | 1.0 | Not Detected U |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected U |
| 2-Methylnaphthalene | 1.0 | 5.1 |
| Hexachlorocyclopentadiene | 20 | Not Detected U |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected U |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected U |
| 2-Chloronaphthalene | 1.0 | Not Detected U |
| 2-Nitroaniline | 10 | Not Detected U |
| Dimethylphthalate | 5.0 | Not Detected U |
| Acenaphthylene | 1.0 | Not Detected U |
| 2,6-Dinitrotoluene | 5.0 | Not Detected U |
| 3-Nitroaniline | 10 | Not Detected U |
| Acenaphthene | 1.0 | Not Detected U |
| 2,4-Dinitrophenol | 20 | Not Detected U |
| 4-Nitrophenol | 20 | Not Detected U |
| 2,4-Dinitrotoluene | 5.0 | Not Detected U |
| Dibenzofuran | 1.0 | Not Detected U |
| Diethylphthalate | 5.0 | Not Detected U |
| Fluorene | 1.0 | Not Detected U |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected U |
| 4-Nitroaniline | 10 | Not Detected U |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected U |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN1 July31**

**ID#: 0308048B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | y080810 | | **Date of Collection: 7/31/03** |
| **Dil. Factor:** | 1.00 | | **Date of Analysis: 8/8/03** |
| | | | **Date of Extraction: 8/4/03** |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected |
| Hexachlorobenzene | 1.0 | Not Detected |
| Pentachlorophenol | 20 | Not Detected |
| Phenanthrene | 1.0 | Not Detected |
| Anthracene | 1.0 | Not Detected |
| di-n-Butylphthalate | 5.0 | Not Detected |
| Fluoranthene | 1.0 | Not Detected |
| Pyrene | 1.0 | Not Detected |
| Butylbenzylphthalate | 5.0 | Not Detected |
| 3,3'-Dichlorobenzidine | 20 | Not Detected |
| Chrysene | 1.0 | Not Detected |
| Benzo(a)anthracene | 1.0 | Not Detected |
| bis(2-Ethylhexyl)phthalate | 5.0 | Not Detected |
| Di-n-Octylphthalate | 5.0 | Not Detected |
| Benzo(b)fluoranthene | 1.0 | Not Detected |
| Benzo(k)fluoranthene | 1.0 | Not Detected |
| Benzo(a)pyrene | 1.0 | Not Detected |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected |
| Dibenz(a,h)anthracene | 1.0 | Not Detected |
| Benzo(g,h,i)perylene | 1.0 | Not Detected |

J = Estimated value.

**Container Type: XAD Tube: VOST**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 53 | 50-150 |
| Phenol-d5 | 78 | 50-150 |
| Nitrobenzene-d5 | 86 | 50-150 |
| 2-Fluorobiphenyl | 82 | 60-120 |
| 2,4,6-Tribromophenol | 96 | 50-150 |
| Terphenyl-d14 | 90 | 60-120 |

CS
9/12/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN2 July31**

**ID#: 0308048B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | y080811 | **Date of Collection:** | 7/31/03 |
| **Dil. Factor:** | 1.00 | **Date of Analysis:** | 8/8/03 |
| | | **Date of Extraction:** | 8/4/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected U |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected U |
| 2-Chlorophenol | 5.0 | Not Detected U |
| 1,3-Dichlorobenzene | 1.0 | 0.64 J J |
| 1,4-Dichlorobenzene | 1.0 | 2.3 |
| 1,2-Dichlorobenzene | 1.0 | 19 |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected U |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected U |
| 4-Methylphenol | 5.0 | Not Detected U |
| Hexachloroethane | 1.0 | Not Detected U |
| Nitrobenzene | 1.0 | Not Detected U |
| Isophorone | 1.0 | 7.2 |
| 2-Nitrophenol | 5.0 | Not Detected U |
| 2,4-Dimethylphenol | 5.0 | Not Detected U |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected U |
| 2,4-Dichlorophenol | 5.0 | Not Detected U |
| 1,2,4-Trichlorobenzene | 1.0 | 0.60 J J |
| Naphthalene | 1.0 | 32 |
| 4-Chloroaniline | 10 | Not Detected U |
| Hexachlorobutadiene | 1.0 | 0.66 J J |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected U |
| 2-Methylnaphthalene | 1.0 | 5.2 |
| Hexachlorocyclopentadiene | 20 | Not Detected U |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected U |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected U |
| 2-Chloronaphthalene | 1.0 | Not Detected U |
| 2-Nitroaniline | 10 | Not Detected U |
| Dimethylphthalate | 5.0 | Not Detected U |
| Acenaphthylene | 1.0 | Not Detected U |
| 2,6-Dinitrotoluene | 5.0 | Not Detected U |
| 3-Nitroaniline | 10 | Not Detected U |
| Acenaphthene | 1.0 | Not Detected U |
| 2,4-Dinitrophenol | 20 | Not Detected U |
| 4-Nitrophenol | 20 | Not Detected U |
| 2,4-Dinitrotoluene | 5.0 | Not Detected U |
| Dibenzofuran | 1.0 | Not Detected U |
| Diethylphthalate | 5.0 | 0.38 J J |
| Fluorene | 1.0 | Not Detected U |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected U |
| 4-Nitroaniline | 10 | Not Detected U |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected U |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS ME205 IN2 July31**

**ID#: 0308048B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | y080811 | | **Date of Collection: 7/31/03** |
| **Dil. Factor:** | 1.00 | | **Date of Analysis: 8/8/03** |
| | | | **Date of Extraction: 8/4/03** |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected U |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected U |
| Hexachlorobenzene | 1.0 | Not Detected U |
| Pentachlorophenol | 20 | Not Detected U |
| Phenanthrene | 1.0 | Not Detected U |
| Anthracene | 1.0 | Not Detected U |
| di-n-Butylphthalate | 5.0 | Not Detected U |
| Fluoranthene | 1.0 | Not Detected U |
| Pyrene | 1.0 | Not Detected U |
| Butylbenzylphthalate | 5.0 | Not Detected U |
| 3,3'-Dichlorobenzidine | 20 | Not Detected U |
| Chrysene | 1.0 | Not Detected U |
| Benzo(a)anthracene | 1.0 | Not Detected U |
| bis(2-Ethylhexyl)phthalate | 5.0 | Not Detected U |
| Di-n-Octylphthalate | 5.0 | Not Detected U |
| Benzo(b)fluoranthene | 1.0 | Not Detected U |
| Benzo(k)fluoranthene | 1.0 | Not Detected U |
| Benzo(a)pyrene | 1.0 | Not Detected U |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected U |
| Dibenz(a,h)anthracene | 1.0 | Not Detected U |
| Benzo(g,h,i)perylene | 1.0 | Not Detected U |

J = Estimated value.

**Container Type: XAD Tube: VOST**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 56 | 50-150 |
| Phenol-d5 | 78 | 50-150 |
| Nitrobenzene-d5 | 85 | 50-150 |
| 2-Fluorobiphenyl | 82 | 60-120 |
| 2,4,6-Tribromophenol | 90 | 50-150 |
| Terphenyl-d14 | 94 | 60-120 |



CS
9/12/03

# September 4, 2003 Off-Gas Sample Laboratory Results

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 SEP4**

**ID#: 0309110AR1-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | I091213 | Date of Collection: | 9/4/03 |
| Dil. Factor: | 1.39 | Date of Analysis: | 9/12/03 05:40 PM |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 0.70 | 1.8 | 3.7 | 9.7 |
| Bromomethane | 0.70 | 2.7 | Not Detected | Not Detected |
| Chloroethane | 0.70 | 1.9 | 0.31 J /J | 0.84 J |
| 1,1-Dichloroethene | 0.70 | 2.8 | 24 | 97 |
| Methylene Chloride | 0.70 | 2.4 | 2.3 | 8.2 |
| 1,1-Dichloroethane | 0.70 | 2.8 | Not Detected | Not Detected |
| cis-1,2-Dichloroethene | 0.70 | 2.8 | 7.3 | 29 |
| Chloroform | 0.70 | 3.4 | 34 | 170 |
| 1,1,1-Trichloroethane | 0.70 | 3.8 | 0.060 J /J | 0.34 J |
| Carbon Tetrachloride | 0.70 | 4.4 | 0.24 J /J | 1.6 J |
| Benzene | 0.70 | 2.2 | 17 | 55 |
| 1,2-Dichloroethane | 0.70 | 2.8 | Not Detected | Not Detected |
| Trichloroethene | 0.70 | 3.8 | 9.1 | 50 |
| 1,2-Dichloropropane | 0.70 | 3.3 | Not Detected | Not Detected |
| cis-1,3-Dichloropropene | 0.70 | 3.2 | Not Detected | Not Detected |
| Toluene | 0.70 | 2.7 | 0.94 | 3.6 |
| trans-1,3-Dichloropropene | 0.70 | 3.2 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 0.70 | 3.8 | Not Detected | Not Detected |
| Tetrachloroethene | 0.70 | 4.8 | 28 | 190 |
| Chlorobenzene | 0.70 | 3.2 | 0.95 | 4.4 |
| Ethyl Benzene | 0.70 | 3.1 | 0.22 J /J | 0.99 J |
| m,p-Xylene | 0.70 | 3.1 | 0.61 J /J | 2.7 J |
| o-Xylene | 0.70 | 3.1 | 0.26 J /J | 1.1 J |
| Styrene | 0.70 | 3.0 | 0.16 J /J | 0.69 J |
| 1,1,2,2-Tetrachloroethane | 0.70 | 4.8 | Not Detected | Not Detected |
| Bromodichloromethane | 0.70 | 4.7 | 5.5 | 37 |
| Dibromochloromethane | 0.70 | 6.0 | 1.4 | 12 |
| Chloromethane | 2.8 | 5.8 | 1.7 J /J | 3.5 J |
| Acetone | 2.8 | 6.7 | 20 | 48 |
| Carbon Disulfide | 2.8 | 8.8 | 8.3 | 26 |
| trans-1,2-Dichloroethene | 2.8 | 11 | 1.5 J /J | 6.2 J |
| 2-Butanone (Methyl Ethyl Ketone) | 2.8 | 8.3 | 3.2 | 9.6 |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 2.8 | 12 | Not Detected | Not Detected |
| 2-Hexanone | 2.8 | 12 | Not Detected | Not Detected |
| Bromoform | 2.8 | 29 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | 70-130 |
| Toluene-d8 | 98 | 70-130 |

LH 10/27/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 SEP4**

**ID#: 0309110AR1-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

File Name: 091213 Date of Collection: 9/4/03
Dil. Factor: 1.39 Date of Analysis: 9/12/03 05:40 PM

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 4-Bromofluorobenzene | 97 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN1 SEP4**

**ID#: 0309110AR1-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

File Name: 091211 Date of Collection: 9/4/03
Dil. Factor: 5560 Date of Analysis: 9/12/03 02:51 PM

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 2800 | 7200 | 4100 | 11000 |
| Bromomethane | 2800 | 11000 | Not Detected | Not Detected |
| Chloroethane | 2800 | 7400 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 2800 | 11000 | 4000 | 16000 |
| Methylene Chloride | 2800 | 9800 | 16000 | 57000 |
| 1,1-Dichloroethane | 2800 | 11000 | 5800 | 24000 |
| cis-1,2-Dichloroethene | 2800 | 11000 | 100000 | 400000 |
| Chloroform | 2800 | 14000 | 3700 | 18000 |
| 1,1,1-Trichloroethane | 2800 | 15000 | 120000 | 660000 |
| Carbon Tetrachloride | 2800 | 18000 | Not Detected | Not Detected |
| Benzene | 2800 | 9000 | 77000 | 250000 |
| 1,2-Dichloroethane | 2800 | 11000 | Not Detected | Not Detected |
| Trichloroethene | 2800 | 15000 | 150000 | 840000 |
| 1,2-Dichloropropane | 2800 | 13000 | Not Detected | Not Detected |
| cis-1,3-Dichloropropene | 2800 | 13000 | Not Detected | Not Detected |
| Toluene | 2800 | 11000 | 880000 | 3400000 |
| trans-1,3-Dichloropropene | 2800 | 13000 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 2800 | 15000 | Not Detected | Not Detected |
| Tetrachloroethene | 2800 | 19000 | 120000 | 840000 |
| Chlorobenzene | 2800 | 13000 | 620 J /J | 2900 J |
| Ethyl Benzene | 2800 | 12000 | 83000 | 360000 |
| m,p-Xylene | 2800 | 12000 | 270000 | 1200000 |
| o-Xylene | 2800 | 12000 | 63000 | 280000 |
| Styrene | 2800 | 12000 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 2800 | 19000 | Not Detected | Not Detected |
| Bromodichloromethane | 2800 | 19000 | Not Detected | Not Detected |
| Dibromochloromethane | 2800 | 24000 | Not Detected | Not Detected |
| Chloromethane | 11000 | 23000 | Not Detected | Not Detected |
| Acetone | 11000 | 27000 | 6400 J /J | 15000 J |
| Carbon Disulfide | 11000 | 35000 | 720 J /J | 2300 J |
| trans-1,2-Dichloroethene | 11000 | 45000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 11000 | 33000 | 3100 J /J | 9200 J |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 11000 | 46000 | 7500 J /J | 31000 J |
| 2-Hexanone | 11000 | 46000 | Not Detected | Not Detected |
| Bromoform | 11000 | 120000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 101 | 70-130 |

LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN1 SEP4**

**ID#: 0309110AR1-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | 091211 | Date of Collection: | 9/4/03 |
| Dil. Factor: | 5560 | Date of Analysis: | 9/12/03 02:51 PM |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 4-Bromofluorobenzene | 96 | 70-130 |



LH 10/29/

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN2 SEP4**

**ID#: 0309110AR1-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

File Name: [illegible]1091212 Date of Collection: 9/4/03
Dil. Factor: [illegible]5560 Date of Analysis: 9/12/03 04:23 PM

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 2800 | 7200 | 3800 | 9900 |
| Bromomethane | 2800 | 11000 | Not Detected | Not Detected |
| Chloroethane | 2800 | 7400 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 2800 | 11000 | 3100 | 12000 |
| Methylene Chloride | 2800 | 9800 | 15000 | 53000 |
| 1,1-Dichloroethane | 2800 | 11000 | 5400 | 22000 |
| cis-1,2-Dichloroethene | 2800 | 11000 | 92000 | 370000 |
| Chloroform | 2800 | 14000 | 3400 | 17000 |
| 1,1,1-Trichloroethane | 2800 | 15000 | 110000 | 590000 |
| Carbon Tetrachloride | 2800 | 18000 | Not Detected | Not Detected |
| Benzene | 2800 | 9000 | 70000 | 230000 |
| 1,2-Dichloroethane | 2800 | 11000 | Not Detected | Not Detected |
| Trichloroethene | 2800 | 15000 | 140000 | 760000 |
| 1,2-Dichloropropane | 2800 | 13000 | Not Detected | Not Detected |
| cis-1,3-Dichloropropene | 2800 | 13000 | Not Detected | Not Detected |
| Toluene | 2800 | 11000 | 800000 | 3100000 |
| trans-1,3-Dichloropropene | 2800 | 13000 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 2800 | 15000 | Not Detected | Not Detected |
| Tetrachloroethene | 2800 | 19000 | 110000 | 740000 |
| Chlorobenzene | 2800 | 13000 | Not Detected | Not Detected |
| Ethyl Benzene | 2800 | 12000 | 74000 | 320000 |
| m,p-Xylene | 2800 | 12000 | 240000 | 1000000 |
| o-Xylene | 2800 | 12000 | 55000 | 240000 |
| Styrene | 2800 | 12000 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 2800 | 19000 | Not Detected | Not Detected |
| Bromodichloromethane | 2800 | 19000 | Not Detected | Not Detected |
| Dibromochloromethane | 2800 | 24000 | Not Detected | Not Detected |
| Chloromethane | 11000 | 23000 | Not Detected | Not Detected |
| Acetone | 11000 | 27000 | 7400 J /J | 18000 J |
| Carbon Disulfide | 11000 | 35000 | 850 J /J | 2700 J |
| trans-1,2-Dichloroethene | 11000 | 45000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 11000 | 33000 | 2900 J /J | 8800 J |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 11000 | 46000 | 6700 J /J | 28000 J |
| 2-Hexanone | 11000 | 46000 | Not Detected | Not Detected |
| Bromoform | 11000 | 120000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 70-130 |
| Toluene-d8 | 100 | 70-130 |

LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN2 SEP4**

**ID#: 0309110AR1-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

File Name: 091212 Date of Collection: 9/4/03
Dil Factor: 5560 Date of Analysis: 9/12/03 04:23 PM

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 4-Bromofluorobenzene | 96 | 70-130 |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 SEP4**

**ID#: 0309110B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

File Name: k091113 Date of Collection: 9/4/03
Dil. Factor: 1.00 Date of Analysis: 9/11/03 06:55 PM
Date of Extraction: 9/9/03

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected |
| 2-Chlorophenol | 5.0 | Not Detected |
| 1,3-Dichlorobenzene | 1.0 | Not Detected |
| 1,4-Dichlorobenzene | 1.0 | Not Detected |
| 1,2-Dichlorobenzene | 1.0 | Not Detected |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected |
| 4-Methylphenol | 5.0 | Not Detected |
| Hexachloroethane | 1.0 | Not Detected |
| Nitrobenzene | 1.0 | Not Detected |
| Isophorone | 1.0 | Not Detected |
| 2-Nitrophenol | 5.0 | Not Detected |
| 2,4-Dimethylphenol | 5.0 | Not Detected |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected |
| 2,4-Dichlorophenol | 5.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected |
| Naphthalene | 1.0 | Not Detected |
| 4-Chloroaniline | 10 | Not Detected |
| Hexachlorobutadiene | 1.0 | Not Detected |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected |
| 2-Methylnaphthalene | 1.0 | Not Detected |
| Hexachlorocyclopentadiene | 20 | Not Detected |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected |
| 2-Chloronaphthalene | 1.0 | Not Detected |
| 2-Nitroaniline | 10 | Not Detected |
| Dimethylphthalate | 5.0 | Not Detected |
| Acenaphthylene | 1.0 | Not Detected |
| 2,6-Dinitrotoluene | 5.0 | Not Detected |
| 3-Nitroaniline | 10 | Not Detected |
| Acenaphthene | 1.0 | Not Detected |
| 2,4-Dinitrophenol | 20 | Not Detected |
| 4-Nitrophenol | 20 | Not Detected |
| 2,4-Dinitrotoluene | 5.0 | Not Detected |
| Dibenzofuran | 1.0 | Not Detected |
| Diethylphthalate | 5.0 | Not Detected |
| Fluorene | 1.0 | Not Detected |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected |
| 4-Nitroaniline | 10 | Not Detected |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected |



LA 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 SEP4**

**ID#: 0309110B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

File Name: k091113 Date of Collection: 9/4/03
Dil.Factor: 1.00 Date of Analysis: 9/11/03 06:55 PM
Date of Extraction: 9/9/03

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected |
| Hexachlorobenzene | 1.0 | Not Detected |
| Pentachlorophenol | 20 | Not Detected |
| Phenanthrene | 1.0 | Not Detected |
| Anthracene | 1.0 | Not Detected |
| di-n-Butylphthalate | 5.0 | Not Detected |
| Fluoranthene | 1.0 | Not Detected |
| Pyrene | 1.0 | Not Detected |
| Butylbenzylphthalate | 5.0 | Not Detected |
| 3,3'-Dichlorobenzidine | 20 | Not Detected |
| Chrysene | 1.0 | Not Detected |
| Benzo(a)anthracene | 1.0 | Not Detected |
| bis(2-Ethylhexyl)phthalate | 5.0 | 0.68 J /JB |
| Di-n-Octylphthalate | 5.0 | Not Detected |
| Benzo(b)fluoranthene | 1.0 | Not Detected |
| Benzo(k)fluoranthene | 1.0 | Not Detected |
| Benzo(a)pyrene | 1.0 | Not Detected |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected |
| Dibenz(a,h)anthracene | 1.0 | Not Detected |
| Benzo(g,h,i)perylene | 1.0 | Not Detected |

J = Estimated value.

**Container Type: XAD Tube: VOST**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 72 | 50-150 |
| Phenol-d5 | 69 | 50-150 |
| Nitrobenzene-d5 | 70 | 50-150 |
| 2-Fluorobiphenyl | 73 | 60-120 |
| 2,4,6-Tribromophenol | 74 | 50-150 |
| Terphenyl-d14 | 82 | 60-120 |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN1 SEP4**

**ID#: 0309110B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | k091111 | Date of Collection: | 9/4/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/11/03 05:51 PM |
| | | Date of Extraction: | 9/9/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | /R |
| 2-Chlorophenol | 5.0 | Not Detected | /R |
| 1,3-Dichlorobenzene | 1.0 | 1.6 | /J |
| 1,4-Dichlorobenzene | 1.0 | 5.0 | /J |
| 1,2-Dichlorobenzene | 1.0 | 29 | /J |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected | /R |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | /R |
| 4-Methylphenol | 5.0 | Not Detected | /R |
| Hexachloroethane | 1.0 | Not Detected | /R |
| Nitrobenzene | 1.0 | Not Detected | /R |
| Isophorone | 1.0 | 1.9 | /J |
| 2-Nitrophenol | 5.0 | Not Detected | /R |
| 2,4-Dimethylphenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | /R |
| 2,4-Dichlorophenol | 5.0 | Not Detected | /R |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected | /R |
| Naphthalene | 1.0 | 23 | /J |
| 4-Chloroaniline | 10 | Not Detected | /R |
| Hexachlorobutadiene | 1.0 | 0.47 J | /J |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | /R |
| 2-Methylnaphthalene | 1.0 | 4.3 | /J |
| Hexachlorocyclopentadiene | 20 | Not Detected | /R |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | /R |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | /R |
| 2-Chloronaphthalene | 1.0 | Not Detected | /R |
| 2-Nitroaniline | 10 | Not Detected | /R |
| Dimethylphthalate | 5.0 | Not Detected | /R |
| Acenaphthylene | 1.0 | Not Detected | /R |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | /R |
| 3-Nitroaniline | 10 | Not Detected | /R |
| Acenaphthene | 1.0 | Not Detected | /R |
| 2,4-Dinitrophenol | 20 | Not Detected | /R |
| 4-Nitrophenol | 20 | Not Detected | /R |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | /R |
| Dibenzofuran | 1.0 | Not Detected | /R |
| Diethylphthalate | 5.0 | Not Detected | /R |
| Fluorene | 1.0 | Not Detected | /R |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| 4-Nitroaniline | 10 | Not Detected | /R |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | /R |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN1 SEP4**

**ID#: 0309110B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

File Name: [illegible]091111[illegible] Date of Collection: 9/4/03
Dil. Factor: [illegible]:00 Date of Analysis: 9/11/03 05:51 PM
Date of Extraction: 9/9/03

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | /R |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| Hexachlorobenzene | 1.0 | Not Detected | /R |
| Pentachlorophenol | 20 | Not Detected | /R |
| Phenanthrene | 1.0 | Not Detected | /R |
| Anthracene | 1.0 | Not Detected | /R |
| di-n-Butylphthalate | 5.0 | Not Detected | /R |
| Fluoranthene | 1.0 | Not Detected | /R |
| Pyrene | 1.0 | Not Detected | /R |
| Butylbenzylphthalate | 5.0 | Not Detected | /R |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | /R |
| Chrysene | 1.0 | Not Detected | /R |
| Benzo(a)anthracene | 1.0 | Not Detected | /R |
| bis(2-Ethylhexyl)phthalate | 5.0 | 1.0 J | /JB |
| Di-n-Octylphthalate | 5.0 | Not Detected | /R |
| Benzo(b)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(k)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(a)pyrene | 1.0 | Not Detected | /R |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | /R |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | /R |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | /R |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: XAD Tube: VOST**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 0 Q | 50-150 |
| Phenol-d5 | 65 | 50-150 |
| Nitrobenzene-d5 | 73 | 50-150 |
| 2-Fluorobiphenyl | 73 | 60-120 |
| 2,4,6-Tribromophenol | 71 | 50-150 |
| Terphenyl-d14 | 78 | 60-120 |

LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN2 SEP4**

**ID#: 0309110B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

File Name: [illegible]k091112 Date of Collection: 9/4/03
Dil. Factor: 1.00 Date of Analysis: 9/11/03 06:23 PM
Date of Extraction: 9/9/03

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | /R |
| 2-Chlorophenol | 5.0 | Not Detected | /R |
| 1,3-Dichlorobenzene | 1.0 | 1.2 | /J |
| 1,4-Dichlorobenzene | 1.0 | 3.5 | /J |
| 1,2-Dichlorobenzene | 1.0 | 21 | /J |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected | /R |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | /R |
| 4-Methylphenol | 5.0 | Not Detected | /R |
| Hexachloroethane | 1.0 | Not Detected | /R |
| Nitrobenzene | 1.0 | Not Detected | /R |
| Isophorone | 1.0 | 1.3 | /J |
| 2-Nitrophenol | 5.0 | Not Detected | /R |
| 2,4-Dimethylphenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | /R |
| 2,4-Dichlorophenol | 5.0 | Not Detected | /R |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected | /R |
| Naphthalene | 1.0 | 16 | /J |
| 4-Chloroaniline | 10 | Not Detected | /R |
| Hexachlorobutadiene | 1.0 | Not Detected | /R |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | /R |
| 2-Methylnaphthalene | 1.0 | 2.9 | /J |
| Hexachlorocyclopentadiene | 20 | Not Detected | /R |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | /R |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | /R |
| 2-Chloronaphthalene | 1.0 | Not Detected | /R |
| 2-Nitroaniline | 10 | Not Detected | /R |
| Dimethylphthalate | 5.0 | Not Detected | /R |
| Acenaphthylene | 1.0 | Not Detected | /R |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | /R |
| 3-Nitroaniline | 10 | Not Detected | /R |
| Acenaphthene | 1.0 | Not Detected | /R |
| 2,4-Dinitrophenol | 20 | Not Detected | /R |
| 4-Nitrophenol | 20 | Not Detected | /R |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | /R |
| Dibenzofuran | 1.0 | Not Detected | /R |
| Diethylphthalate | 5.0 | Not Detected | /R |
| Fluorene | 1.0 | Not Detected | /R |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| 4-Nitroaniline | 10 | Not Detected | /R |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | /R |



LH 10/29/0

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN2 SEP4**

**ID#: 0309110B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | k091112 | Date of Collection: | 9/4/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/11/03 06:23 PM |
| | | Date of Extraction: | 9/9/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | /R |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| Hexachlorobenzene | 1.0 | Not Detected | /R |
| Pentachlorophenol | 20 | Not Detected | /R |
| Phenanthrene | 1.0 | Not Detected | /R |
| Anthracene | 1.0 | Not Detected | /R |
| di-n-Butylphthalate | 5.0 | Not Detected | /R |
| Fluoranthene | 1.0 | Not Detected | /R |
| Pyrene | 1.0 | Not Detected | /R |
| Butylbenzylphthalate | 5.0 | Not Detected | /R |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | /R |
| Chrysene | 1.0 | Not Detected | /R |
| Benzo(a)anthracene | 1.0 | Not Detected | /R |
| bis(2-Ethylhexyl)phthalate | 5.0 | 1.2 J | /JB |
| Di-n-Octylphthalate | 5.0 | Not Detected | /R |
| Benzo(b)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(k)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(a)pyrene | 1.0 | Not Detected | /R |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | /R |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | /R |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | /R |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: XAD Tube: VOST**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 0 Q | 50-150 |
| Phenol-d5 | 73 | 50-150 |
| Nitrobenzene-d5 | 77 | 50-150 |
| 2-Fluorobiphenyl | 77 | 60-120 |
| 2,4,6-Tribromophenol | 84 | 50-150 |
| Terphenyl-d14 | 84 | 60-120 |

LH
10/29/03

# September 15, 2003 Off-Gas Sample Laboratory Results

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN1 SEP15**

**ID#: 0309268A-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | b092309 | Date of Collection: | 9/15/03 |
| Dil. Factor: | 10900 | Date of Analysis: | 9/23/03 02:08 PM |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 5400 | 14000 | 3300 J /J | 8600 J |
| Bromomethane | 5400 | 22000 | Not Detected | Not Detected |
| Chloroethane | 5400 | 15000 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 5400 | 22000 | 1700 J /J | 6900 J |
| Methylene Chloride | 5400 | 19000 | 22000 | 80000 |
| 1,1-Dichloroethane | 5400 | 22000 | 5500 | 23000 |
| cis-1,2-Dichloroethene | 5400 | 22000 | 84000 | 340000 |
| Chloroform | 5400 | 27000 | 3900 J /J | 19000 J |
| 1,1,1-Trichloroethane | 5400 | 30000 | 95000 | 530000 |
| Carbon Tetrachloride | 5400 | 35000 | Not Detected | Not Detected |
| Benzene | 5400 | 18000 | 61000 | 200000 |
| 1,2-Dichloroethane | 5400 | 22000 | Not Detected | Not Detected |
| Trichloroethene | 5400 | 30000 | 140000 | 790000 |
| 1,2-Dichloropropane | 5400 | 26000 | Not Detected | Not Detected |
| cis-1,3-Dichloropropene | 5400 | 25000 | Not Detected | Not Detected |
| Toluene | 5400 | 21000 | 1000000 | 3800000 |
| trans-1,3-Dichloropropene | 5400 | 25000 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 5400 | 30000 | Not Detected | Not Detected |
| Tetrachloroethene | 5400 | 38000 | 170000 | 1200000 |
| Chlorobenzene | 5400 | 26000 | Not Detected | Not Detected |
| Ethyl Benzene | 5400 | 24000 | 98000 | 430000 |
| m,p-Xylene | 5400 | 24000 | 370000 | 1600000 |
| o-Xylene | 5400 | 24000 | 94000 | 410000 |
| Styrene | 5400 | 24000 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5400 | 38000 | Not Detected | Not Detected |
| Bromodichloromethane | 5400 | 37000 | Not Detected | Not Detected |
| Dibromochloromethane | 5400 | 47000 | Not Detected | Not Detected |
| Chloromethane | 22000 | 46000 | Not Detected | Not Detected |
| Acetone | 22000 | 53000 | 5600 J /J | 14000 J |
| Carbon Disulfide | 22000 | 69000 | Not Detected | Not Detected |
| trans-1,2-Dichloroethene | 22000 | 88000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 22000 | 65000 | 5400 J /J | 16000 J |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 22000 | 91000 | Not Detected | Not Detected |
| 2-Hexanone | 22000 | 91000 | Not Detected | Not Detected |
| Bromoform | 22000 | 230000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | 70-130 |
| Toluene-d8 | 99 | 70-130 |

10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN1 SEP15**

**ID#: 0309268A-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

File Name: b092309 Date of Collection: 9/15/03
Dil. Factor: 10900 Date of Analysis: 9/23/03 02:08 PM

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 4-Bromofluorobenzene | 94 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN2 SEP15**

**ID#: 0309268A-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

File Name: b092310 Date of Collection: 9/15/03
Dil. Factor: 10700 Date of Analysis: 9/23/03 02:44 PM

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 5400 | 14000 | 4400 J /J | 11000 J |
| Bromomethane | 5400 | 21000 | Not Detected | Not Detected |
| Chloroethane | 5400 | 14000 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 5400 | 22000 | 2200 J /J | 9000 J |
| Methylene Chloride | 5400 | 19000 | 27000 | 95000 |
| 1,1-Dichloroethane | 5400 | 22000 | 7200 | 30000 |
| cis-1,2-Dichloroethene | 5400 | 22000 | 92000 | 370000 |
| Chloroform | 5400 | 26000 | 4400 J /J | 22000 J |
| 1,1,1-Trichloroethane | 5400 | 30000 | 100000 | 580000 |
| Carbon Tetrachloride | 5400 | 34000 | Not Detected | Not Detected |
| Benzene | 5400 | 17000 | 63000 | 200000 |
| 1,2-Dichloroethane | 5400 | 22000 | Not Detected | Not Detected |
| Trichloroethene | 5400 | 29000 | 160000 | 850000 |
| 1,2-Dichloropropane | 5400 | 25000 | 2100 J /J | 9800 J |
| cis-1,3-Dichloropropene | 5400 | 25000 | Not Detected | Not Detected |
| Toluene | 5400 | 20000 | 1100000 | 4200000 |
| trans-1,3-Dichloropropene | 5400 | 25000 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 5400 | 30000 | Not Detected | Not Detected |
| Tetrachloroethene | 5400 | 37000 | 170000 | 1200000 |
| Chlorobenzene | 5400 | 25000 | Not Detected | Not Detected |
| Ethyl Benzene | 5400 | 24000 | 97000 | 430000 |
| m,p-Xylene | 5400 | 24000 | 360000 | 1600000 |
| o-Xylene | 5400 | 24000 | 88000 | 390000 |
| Styrene | 5400 | 23000 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5400 | 37000 | Not Detected | Not Detected |
| Bromodichloromethane | 5400 | 36000 | Not Detected | Not Detected |
| Dibromochloromethane | 5400 | 46000 | Not Detected | Not Detected |
| Chloromethane | 21000 | 45000 | Not Detected | Not Detected |
| Acetone | 21000 | 52000 | 5100 J /J | 12000 J |
| Carbon Disulfide | 21000 | 68000 | 1200 J /J | 3800 J |
| trans-1,2-Dichloroethene | 21000 | 86000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 21000 | 64000 | 5700 J /J | 17000 J |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 21000 | 89000 | Not Detected | Not Detected |
| 2-Hexanone | 21000 | 89000 | Not Detected | Not Detected |
| Bromoform | 21000 | 220000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | 70-130 |
| Toluene-d8 | 100 | 70-130 |

LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 IN2 SEP15**

**ID#: 0309268A-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

File Name: b092310 Date of Collection: 9/15/03
Dil. Factor: 10700 Date of Analysis: 9/23/03 02:44 PM

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 4-Bromofluorobenzene | 94 | 70-130 |

LH 10/27/

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 SEP15**

**ID#: 0309268A-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: b092307 | Date of Collection: 9/15/03 |
| Dil. Factor: 1.34 | Date of Analysis: 9/23/03 12:29 PM |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 0.67 | 1.7 | 27 | 71 |
| Bromomethane | 0.67 | 2.6 | 1.0 J | 3.9 |
| Chloroethane | 0.67 | 1.8 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 0.67 | 2.7 | 92 | 370 |
| Methylene Chloride | 0.67 | 2.4 | 23 | 81 |
| 1,1-Dichloroethane | 0.67 | 2.8 | Not Detected | Not Detected |
| cis-1,2-Dichloroethene | 0.67 | 2.7 | 21 | 86 |
| Chloroform | 0.67 | 3.3 | 41 | 200 |
| 1,1,1-Trichloroethane | 0.67 | 3.7 | 0.83 | 4.6 |
| Carbon Tetrachloride | 0.67 | 4.3 | 9.2 | 59 |
| Benzene | 0.67 | 2.2 | 110 | 350 |
| 1,2-Dichloroethane | 0.67 | 2.8 | Not Detected | Not Detected |
| Trichloroethene | 0.67 | 3.6 | 88 | 480 |
| 1,2-Dichloropropane | 0.67 | 3.1 | Not Detected | Not Detected |
| cis-1,3-Dichloropropene | 0.67 | 3.1 | 0.83 | 3.8 |
| Toluene | 0.67 | 2.6 | 13 | 51 |
| trans-1,3-Dichloropropene | 0.67 | 3.1 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 0.67 | 3.7 | Not Detected | Not Detected |
| Tetrachloroethene | 0.67 | 4.6 | 170 | 1200 |
| Chlorobenzene | 0.67 | 3.1 | 10 | 47 |
| Ethyl Benzene | 0.67 | 3.0 | 1.4 | 6.2 |
| m,p-Xylene | 0.67 | 3.0 | 7.0 | 31 |
| o-Xylene | 0.67 | 3.0 | 1.6 | 7.0 |
| Styrene | 0.67 | 2.9 | 7.6 | 33 |
| 1,1,2,2-Tetrachloroethane | 0.67 | 4.7 | Not Detected | Not Detected |
| Bromodichloromethane | 0.67 | 4.6 | 6.5 | 44 |
| Dibromochloromethane | 0.67 | 5.8 | 1.4 | 12 |
| Chloromethane | 2.7 | 5.6 | 37 | 77 |
| Acetone | 2.7 | 6.5 | 13 | 31 |
| Carbon Disulfide | 2.7 | 8.5 | 1.6 J | 5.2 J |
| trans-1,2-Dichloroethene | 2.7 | 11 | 16 | 66 |
| 2-Butanone (Methyl Ethyl Ketone) | 2.7 | 8.0 | 1.4 J | 4.2 J |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 2.7 | 11 | 0.35 J | 1.4 J |
| 2-Hexanone | 2.7 | 11 | Not Detected | Not Detected |
| Bromoform | 2.7 | 28 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 70-130 |
| Toluene-d8 | 95 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EF1 SEP15**

**ID#: 0309268A-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

File Name: b092307 Date of Collection: 9/15/03
Dil. Factor: 1.34 Date of Analysis: 9/23/03 12:29 PM

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 4-Bromofluorobenzene | 93 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 EF1 SEP15**

**ID#: 0309268B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

File Name: y092017 Date of Collection: 9/15/03
Dil. Factor: :00 Date of Analysis: 9/20/03 04:43 PM
Date of Extraction: 9/17/03

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected |
| 2-Chlorophenol | 5.0 | Not Detected |
| 1,3-Dichlorobenzene | 1.0 | Not Detected |
| 1,4-Dichlorobenzene | 1.0 | Not Detected |
| 1,2-Dichlorobenzene | 1.0 | Not Detected |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected |
| 4-Methylphenol | 5.0 | Not Detected |
| Hexachloroethane | 1.0 | Not Detected |
| Nitrobenzene | 1.0 | Not Detected |
| Isophorone | 1.0 | Not Detected |
| 2-Nitrophenol | 5.0 | Not Detected |
| 2,4-Dimethylphenol | 5.0 | Not Detected |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected |
| 2,4-Dichlorophenol | 5.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected |
| Naphthalene | 1.0 | Not Detected |
| 4-Chloroaniline | 10 | Not Detected |
| Hexachlorobutadiene | 1.0 | Not Detected |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected |
| 2-Methylnaphthalene | 1.0 | Not Detected |
| Hexachlorocyclopentadiene | 20 | Not Detected |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected |
| 2-Chloronaphthalene | 1.0 | Not Detected |
| 2-Nitroaniline | 10 | Not Detected |
| Dimethylphthalate | 5.0 | Not Detected |
| Acenaphthylene | 1.0 | Not Detected |
| 2,6-Dinitrotoluene | 5.0 | Not Detected |
| 3-Nitroaniline | 10 | Not Detected |
| Acenaphthene | 1.0 | Not Detected |
| 2,4-Dinitrophenol | 20 | Not Detected |
| 4-Nitrophenol | 20 | Not Detected |
| 2,4-Dinitrotoluene | 5.0 | Not Detected |
| Dibenzofuran | 1.0 | Not Detected |
| Diethylphthalate | 5.0 | Not Detected |
| Fluorene | 1.0 | Not Detected |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected |
| 4-Nitroaniline | 10 | Not Detected |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected |



LA 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 EF1 SEP15**

**ID#: 0309268B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

File Name: [illegible]y092017 Date of Collection: 9/15/03
Dil. Factor: [illegible] 1/00 Date of Analysis: 9/20/03 04:43 PM
Date of Extraction: 9/17/03

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected |
| Hexachlorobenzene | 1.0 | Not Detected |
| Pentachlorophenol | 20 | Not Detected |
| Phenanthrene | 1.0 | Not Detected |
| Anthracene | 1.0 | Not Detected |
| di-n-Butylphthalate | 5.0 | Not Detected |
| Fluoranthene | 1.0 | Not Detected |
| Pyrene | 1.0 | Not Detected |
| Butylbenzylphthalate | 5.0 | 1.5 J /JB |
| 3,3'-Dichlorobenzidine | 20 | Not Detected |
| Chrysene | 1.0 | Not Detected |
| Benzo(a)anthracene | 1.0 | Not Detected |
| bis(2-Ethylhexyl)phthalate | 5.0 | Not Detected |
| Di-n-Octylphthalate | 5.0 | Not Detected |
| Benzo(b)fluoranthene | 1.0 | Not Detected |
| Benzo(k)fluoranthene | 1.0 | Not Detected |
| Benzo(a)pyrene | 1.0 | Not Detected |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected |
| Dibenz(a,h)anthracene | 1.0 | Not Detected |
| Benzo(g,h,i)perylene | 1.0 | Not Detected |

J = Estimated value.

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 74 | 50-150 |
| Phenol-d5 | 77 | 50-150 |
| Nitrobenzene-d5 | 73 | 50-150 |
| 2-Fluorobiphenyl | 74 | 60-120 |
| 2,4,6-Tribromophenol | 75 | 50-150 |
| Terphenyl-d14 | 76 | 60-120 |



LA 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 IN1 SEP15**

**ID#: 0309268B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: y092015 | Date of Collection: 9/15/03 |
| Dil. Factor: 1.00 | Date of Analysis: 9/20/03 03:40 PM |
| | Date of Extraction: 9/17/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected |
| 2-Chlorophenol | 5.0 | Not Detected |
| 1,3-Dichlorobenzene | 1.0 | 1.0 J /J |
| 1,4-Dichlorobenzene | 1.0 | 3.2 |
| 1,2-Dichlorobenzene | 1.0 | 18 |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected |
| 4-Methylphenol | 5.0 | Not Detected |
| Hexachloroethane | 1.0 | Not Detected |
| Nitrobenzene | 1.0 | Not Detected |
| Isophorone | 1.0 | 0.87 J /J |
| 2-Nitrophenol | 5.0 | Not Detected |
| 2,4-Dimethylphenol | 5.0 | Not Detected |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected |
| 2,4-Dichlorophenol | 5.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected |
| Naphthalene | 1.0 | 14 |
| 4-Chloroaniline | 10 | Not Detected |
| Hexachlorobutadiene | 1.0 | Not Detected |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected |
| 2-Methylnaphthalene | 1.0 | 4.4 |
| Hexachlorocyclopentadiene | 20 | Not Detected |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected |
| 2-Chloronaphthalene | 1.0 | Not Detected |
| 2-Nitroaniline | 10 | Not Detected |
| Dimethylphthalate | 5.0 | Not Detected |
| Acenaphthylene | 1.0 | Not Detected |
| 2,6-Dinitrotoluene | 5.0 | Not Detected |
| 3-Nitroaniline | 10 | Not Detected |
| Acenaphthene | 1.0 | Not Detected |
| 2,4-Dinitrophenol | 20 | Not Detected |
| 4-Nitrophenol | 20 | Not Detected |
| 2,4-Dinitrotoluene | 5.0 | Not Detected |
| Dibenzofuran | 1.0 | Not Detected |
| Diethylphthalate | 5.0 | 0.40 J /J |
| Fluorene | 1.0 | Not Detected |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected |
| 4-Nitroaniline | 10 | Not Detected |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected |

LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 IN1 SEP15**

**ID#: 0309268B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

File Name: [illegible]092015 Date of Collection: 9/15/03
Dil. Factor: [illegible]1.00 Date of Analysis: 9/20/03 03:40 PM
Date of Extraction: 9/17/03

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected |
| Hexachlorobenzene | 1.0 | Not Detected |
| Pentachlorophenol | 20 | Not Detected |
| Phenanthrene | 1.0 | Not Detected |
| Anthracene | 1.0 | Not Detected |
| di-n-Butylphthalate | 5.0 | Not Detected |
| Fluoranthene | 1.0 | Not Detected |
| Pyrene | 1.0 | Not Detected |
| Butylbenzylphthalate | 5.0 | 2.9 J /JB |
| 3,3'-Dichlorobenzidine | 20 | Not Detected |
| Chrysene | 1.0 | Not Detected |
| Benzo(a)anthracene | 1.0 | Not Detected |
| bis(2-Ethylhexyl)phthalate | 5.0 | 4.4 J /J |
| Di-n-Octylphthalate | 5.0 | Not Detected |
| Benzo(b)fluoranthene | 1.0 | Not Detected |
| Benzo(k)fluoranthene | 1.0 | Not Detected |
| Benzo(a)pyrene | 1.0 | Not Detected |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected |
| Dibenz(a,h)anthracene | 1.0 | Not Detected |
| Benzo(g,h,i)perylene | 1.0 | Not Detected |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 21 Q | 50-150 |
| Phenol-d5 | 74 | 50-150 |
| Nitrobenzene-d5 | 70 | 50-150 |
| 2-Fluorobiphenyl | 68 | 60-120 |
| 2,4,6-Tribromophenol | 75 | 50-150 |
| Terphenyl-d14 | 78 | 60-120 |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 IN2 SEP15**

**ID#: 0309268B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

File Name: y092016 Date of Collection: 9/15/03
Dil. Factor: 1.00 Date of Analysis: 9/20/03 04:12 PM
Date of Extraction: 9/17/03

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected |
| 2-Chlorophenol | 5.0 | Not Detected |
| 1,3-Dichlorobenzene | 1.0 | 0.67 J /J |
| 1,4-Dichlorobenzene | 1.0 | 1.9 |
| 1,2-Dichlorobenzene | 1.0 | 10 |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected |
| 4-Methylphenol | 5.0 | Not Detected |
| Hexachloroethane | 1.0 | Not Detected |
| Nitrobenzene | 1.0 | Not Detected |
| Isophorone | 1.0 | 0.60 J /J |
| 2-Nitrophenol | 5.0 | Not Detected |
| 2,4-Dimethylphenol | 5.0 | Not Detected |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected |
| 2,4-Dichlorophenol | 5.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected |
| Naphthalene | 1.0 | 7.8 |
| 4-Chloroaniline | 10 | Not Detected |
| Hexachlorobutadiene | 1.0 | Not Detected |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected |
| 2-Methylnaphthalene | 1.0 | 2.2 |
| Hexachlorocyclopentadiene | 20 | Not Detected |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected |
| 2-Chloronaphthalene | 1.0 | Not Detected |
| 2-Nitroaniline | 10 | Not Detected |
| Dimethylphthalate | 5.0 | Not Detected |
| Acenaphthylene | 1.0 | Not Detected |
| 2,6-Dinitrotoluene | 5.0 | Not Detected |
| 3-Nitroaniline | 10 | Not Detected |
| Acenaphthene | 1.0 | Not Detected |
| 2,4-Dinitrophenol | 20 | Not Detected |
| 4-Nitrophenol | 20 | Not Detected |
| 2,4-Dinitrotoluene | 5.0 | Not Detected |
| Dibenzofuran | 1.0 | Not Detected |
| Diethylphthalate | 5.0 | Not Detected |
| Fluorene | 1.0 | Not Detected |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected |
| 4-Nitroaniline | 10 | Not Detected |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 IN2 SEP15**

**ID#: 0309268B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | y092016 | Date of Collection: | 9/15/03 |
| Dil Factor: | 1.00 | Date of Analysis: | 9/20/03 04:12 PM |
| | | Date of Extraction: | 9/17/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected |
| Hexachlorobenzene | 1.0 | Not Detected |
| Pentachlorophenol | 20 | Not Detected |
| Phenanthrene | 1.0 | Not Detected |
| Anthracene | 1.0 | Not Detected |
| di-n-Butylphthalate | 5.0 | Not Detected |
| Fluoranthene | 1.0 | Not Detected |
| Pyrene | 1.0 | Not Detected |
| Butylbenzylphthalate | 5.0 | 4.1 J /JB |
| 3,3'-Dichlorobenzidine | 20 | Not Detected |
| Chrysene | 1.0 | Not Detected |
| Benzo(a)anthracene | 1.0 | Not Detected |
| bis(2-Ethylhexyl)phthalate | 5.0 | 2.3 J /J |
| Di-n-Octylphthalate | 5.0 | Not Detected |
| Benzo(b)fluoranthene | 1.0 | Not Detected |
| Benzo(k)fluoranthene | 1.0 | Not Detected |
| Benzo(a)pyrene | 1.0 | Not Detected |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected |
| Dibenz(a,h)anthracene | 1.0 | Not Detected |
| Benzo(g,h,i)perylene | 1.0 | Not Detected |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 30 Q | 50-150 |
| Phenol-d5 | 74 | 50-150 |
| Nitrobenzene-d5 | 72 | 50-150 |
| 2-Fluorobiphenyl | 71 | 60-120 |
| 2,4,6-Tribromophenol | 72 | 50-150 |
| Terphenyl-d14 | 75 | 60-120 |

LH 10/29/03

# September 18, 2003 Off-Gas Sample Laboratory Results

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 EF1 SEP18

ID#: 0309350A-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | b092318 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 5.36 | Date of Analysis: | 9/23/03 07:47 PM |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 2.7 | 7.0 | 32 | 84 |
| Bromomethane | 2.7 | 10 | 0.92 J /J | 3.6 J |
| Chloroethane | 2.7 | 7.2 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 2.7 | 11 | 89 | 360 |
| Methylene Chloride | 2.7 | 9.5 | 38 | 130 |
| 1,1-Dichloroethane | 2.7 | 11 | 3.0 | 12 |
| cis-1,2-Dichloroethene | 2.7 | 11 | 69 | 280 |
| Chloroform | 2.7 | 13 | 40 | 200 |
| 1,1,1-Trichloroethane | 2.7 | 15 | 45 | 250 |
| Carbon Tetrachloride | 2.7 | 17 | 8.9 | 57 |
| Benzene | 2.7 | 8.7 | 150 | 480 |
| 1,2-Dichloroethane | 2.7 | 11 | 0.81 J /J | 3.3 J |
| Trichloroethene | 2.7 | 15 | 190 | 1000 |
| 1,2-Dichloropropane | 2.7 | 12 | 0.99 J /J | 4.6 J |
| cis-1,3-Dichloropropene | 2.7 | 12 | 0.98 J /J | 4.5 J |
| Toluene | 2.7 | 10 | 730 | 2800 |
| trans-1,3-Dichloropropene | 2.7 | 12 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 2.7 | 15 | Not Detected | Not Detected |
| Tetrachloroethene | 2.7 | 18 | 340 | 2400 |
| Chlorobenzene | 2.7 | 12 | 11 | 52 |
| Ethyl Benzene | 2.7 | 12 | 85 | 380 |
| m,p-Xylene | 2.7 | 12 | 350 | 1500 |
| o-Xylene | 2.7 | 12 | 78 | 340 |
| Styrene | 2.7 | 12 | 13 | 56 |
| 1,1,2,2-Tetrachloroethane | 2.7 | 19 | Not Detected | Not Detected |
| Bromodichloromethane | 2.7 | 18 | 11 | 78 |
| Dibromochloromethane | 2.7 | 23 | 2.7 | 23 |
| Chloromethane | 11 | 22 | 58 | 120 |
| Acetone | 11 | 26 | 24 | 57 |
| Carbon Disulfide | 11 | 34 | 0.96 J /J | 3.0 J |
| trans-1,2-Dichloroethene | 11 | 43 | 17 | 70 |
| 2-Butanone (Methyl Ethyl Ketone) | 11 | 32 | 6.4 J /J | 19 J |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 11 | 45 | 5.5 J /J | 23 J |
| 2-Hexanone | 11 | 45 | Not Detected | Not Detected |
| Bromoform | 11 | 110 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**

LH 10/27/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 EF1 SEP18**

**ID#: 0309350A-05A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **b092318** | **Date of Collection:** | **9/18/03** |
| **Dil. Factor:** | **5.36** | **Date of Analysis:** | **9/23/03 07:47 PM** |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 92 | 70-130 |
| Toluene-d8 | 97 | 70-130 |
| 4-Bromofluorobenzene | 95 | 70-130 |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 ON IN1 SEP18**

**ID#: 0309350A-01A**

***MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN***

| | | | |
|---|---|---|---|
| **File Name:** | **b092313** | **Date of Collection:** | **9/18/03** |
| **Dil. Factor:** | **10900** | **Date of Analysis:** | **9/23/03 04:37 PM** |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 5400 | 14000 | 4200 J /J | 11000 J |
| Bromomethane | 5400 | 22000 | Not Detected | Not Detected |
| Chloroethane | 5400 | 15000 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 5400 | 22000 | 1400 J /J | 5800 J |
| Methylene Chloride | 5400 | 19000 | 24000 | 84000 |
| 1,1-Dichloroethane | 5400 | 22000 | 6000 | 24000 |
| cis-1,2-Dichloroethene | 5400 | 22000 | 85000 | 340000 |
| Chloroform | 5400 | 27000 | 5900 | 29000 |
| 1,1,1-Trichloroethane | 5400 | 30000 | 96000 | 530000 |
| Carbon Tetrachloride | 5400 | 35000 | Not Detected | Not Detected |
| Benzene | 5400 | 18000 | 57000 | 180000 |
| 1,2-Dichloroethane | 5400 | 22000 | Not Detected | Not Detected |
| Trichloroethene | 5400 | 30000 | 140000 | 780000 |
| 1,2-Dichloropropane | 5400 | 26000 | Not Detected | Not Detected |
| cis-1,3-Dichloropropene | 5400 | 25000 | Not Detected | Not Detected |
| Toluene | 5400 | 21000 | 1000000 | 3900000 |
| trans-1,3-Dichloropropene | 5400 | 25000 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 5400 | 30000 | Not Detected | Not Detected |
| Tetrachloroethene | 5400 | 38000 | 180000 | 1200000 |
| Chlorobenzene | 5400 | 26000 | Not Detected | Not Detected |
| Ethyl Benzene | 5400 | 24000 | 100000 | 460000 |
| m,p-Xylene | 5400 | 24000 | 400000 | 1700000 |
| o-Xylene | 5400 | 24000 | 98000 | 430000 |
| Styrene | 5400 | 24000 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5400 | 38000 | Not Detected | Not Detected |
| Bromodichloromethane | 5400 | 37000 | Not Detected | Not Detected |
| Dibromochloromethane | 5400 | 47000 | Not Detected | Not Detected |
| Chloromethane | 22000 | 46000 | Not Detected | Not Detected |
| Acetone | 22000 | 53000 | 7300 J /J | 18000 J |
| Carbon Disulfide | 22000 | 69000 | Not Detected | Not Detected |
| trans-1,2-Dichloroethene | 22000 | 88000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 22000 | 65000 | 3900 J /J | 12000 J |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 22000 | 91000 | 9600 J /J | 40000 J |
| 2-Hexanone | 22000 | 91000 | Not Detected | Not Detected |
| Bromoform | 22000 | 230000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**



LH 10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 ON IN1 SEP18

ID#: 0309350A-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | b092313 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 10900 | Date of Analysis: | 9/23/03 04:37 PM |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | 70-130 |
| Toluene-d8 | 94 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



LA 10/27

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 ON IN2 SEP18**

**ID#: 0309350A-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **b092314** | **Date of Collection:** | **9/18/03** |
| **Dil. Factor:** | **10700** | **Date of Analysis:** | **9/23/03 05:19 PM** |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 5400 | 14000 | 3500 J /J | 9200 J |
| Bromomethane | 5400 | 21000 | Not Detected | Not Detected |
| Chloroethane | 5400 | 14000 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 5400 | 22000 | 1600 J /J | 6400 J |
| Methylene Chloride | 5400 | 19000 | 22000 | 76000 |
| 1,1-Dichloroethane | 5400 | 22000 | 6400 | 26000 |
| cis-1,2-Dichloroethene | 5400 | 22000 | 81000 | 320000 |
| Chloroform | 5400 | 26000 | 4400 J /J | 22000 J |
| 1,1,1-Trichloroethane | 5400 | 30000 | 93000 | 510000 |
| Carbon Tetrachloride | 5400 | 34000 | Not Detected | Not Detected |
| Benzene | 5400 | 17000 | 58000 | 190000 |
| 1,2-Dichloroethane | 5400 | 22000 | Not Detected | Not Detected |
| Trichloroethene | 5400 | 29000 | 140000 | 790000 |
| 1,2-Dichloropropane | 5400 | 25000 | 2000 J /J | 9500 J |
| cis-1,3-Dichloropropene | 5400 | 25000 | Not Detected | Not Detected |
| Toluene | 5400 | 20000 | 1000000 | 4000000 |
| trans-1,3-Dichloropropene | 5400 | 25000 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 5400 | 30000 | Not Detected | Not Detected |
| Tetrachloroethene | 5400 | 37000 | 180000 | 1200000 |
| Chlorobenzene | 5400 | 25000 | Not Detected | Not Detected |
| Ethyl Benzene | 5400 | 24000 | 100000 | 460000 |
| m,p-Xylene | 5400 | 24000 | 390000 | 1700000 |
| o-Xylene | 5400 | 24000 | 95000 | 420000 |
| Styrene | 5400 | 23000 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5400 | 37000 | Not Detected | Not Detected |
| Bromodichloromethane | 5400 | 36000 | Not Detected | Not Detected |
| Dibromochloromethane | 5400 | 46000 | Not Detected | Not Detected |
| Chloromethane | 21000 | 45000 | Not Detected | Not Detected |
| Acetone | 21000 | 52000 | 7400 J /J | 18000 J |
| Carbon Disulfide | 21000 | 68000 | Not Detected | Not Detected |
| trans-1,2-Dichloroethene | 21000 | 86000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 21000 | 64000 | 3500 J /J | 10000 J |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 21000 | 89000 | 9400 J /J | 39000 J |
| 2-Hexanone | 21000 | 89000 | Not Detected | Not Detected |
| Bromoform | 21000 | 220000 | Not Detected | Not Detected |

*J = Estimated value.*

**Container Type: 6 Liter Summa Canister**



LA 10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 ON IN2 SEP18

ID#: 0309350A-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | b092314 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 10700 | Date of Analysis: | 9/23/03 05:19 PM |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 94 | 70-130 |



10/21/

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 OF IN1 SEP18**

**ID#: 0309350A-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **b092315** | **Date of Collection:** | **9/18/03** |
| **Dil. Factor:** | **3570** | **Date of Analysis:** | **9/23/03 06:08 PM** |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1800 | 4600 | 670 J /J | 1800 J |
| Bromomethane | 1800 | 7000 | Not Detected | Not Detected |
| Chloroethane | 1800 | 4800 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 1800 | 7200 | 1600 J /J | 6600 J |
| Methylene Chloride | 1800 | 6300 | 88000 | 310000 |
| 1,1-Dichloroethane | 1800 | 7300 | 14000 | 56000 |
| cis-1,2-Dichloroethene | 1800 | 7200 | 33000 | 130000 |
| Chloroform | 1800 | 8800 | 6300 | 31000 |
| 1,1,1-Trichloroethane | 1800 | 9900 | 120000 | 650000 |
| Carbon Tetrachloride | 1800 | 11000 | Not Detected | Not Detected |
| Benzene | 1800 | 5800 | 78000 | 250000 |
| 1,2-Dichloroethane | 1800 | 7300 | 3300 | 13000 |
| Trichloroethene | 1800 | 9800 | 68000 | 370000 |
| 1,2-Dichloropropane | 1800 | 8400 | 1100 J /J | 5200 J |
| cis-1,3-Dichloropropene | 1800 | 8200 | Not Detected | Not Detected |
| Toluene | 1800 | 6800 | 490000 | 1900000 |
| trans-1,3-Dichloropropene | 1800 | 8200 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 1800 | 9900 | Not Detected | Not Detected |
| Tetrachloroethene | 1800 | 12000 | 89000 | 610000 |
| Chlorobenzene | 1800 | 8400 | Not Detected | Not Detected |
| Ethyl Benzene | 1800 | 7900 | 46000 | 200000 |
| m,p-Xylene | 1800 | 7900 | 220000 | 990000 |
| o-Xylene | 1800 | 7900 | 68000 | 300000 |
| Styrene | 1800 | 7700 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 1800 | 12000 | Not Detected | Not Detected |
| Bromodichloromethane | 1800 | 12000 | Not Detected | Not Detected |
| Dibromochloromethane | 1800 | 15000 | Not Detected | Not Detected |
| Chloromethane | 7100 | 15000 | 1200 J /J | 2600 J |
| Acetone | 7100 | 17000 | 77000 | 180000 |
| Carbon Disulfide | 7100 | 22000 | 820 J /J | 2600 J |
| trans-1,2-Dichloroethene | 7100 | 29000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 7100 | 21000 | 62000 | 190000 |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 7100 | 30000 | 23000 | 98000 |
| 2-Hexanone | 7100 | 30000 | Not Detected | Not Detected |
| Bromoform | 7100 | 75000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**



LH 10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 OF IN1 SEP18

ID#: 0309350A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | b092315 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 3570 | Date of Analysis: | 9/23/03 06:08 PM |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 OF IN2 SEP18**

**ID#: 0309350A-04A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | b092316 | **Date of Collection:** | 9/18/03 |
| **Dil. Factor:** | 3570 | **Date of Analysis:** | 9/23/03 06:47 PM |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1800 | 4600 | 790 J /J | 2000 J |
| Bromomethane | 1800 | 7000 | Not Detected | Not Detected |
| Chloroethane | 1800 | 4800 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 1800 | 7200 | 1500 J /J | 5900 J |
| Methylene Chloride | 1800 | 6300 | 85000 | 300000 |
| 1,1-Dichloroethane | 1800 | 7300 | 13000 | 54000 |
| cis-1,2-Dichloroethene | 1800 | 7200 | 32000 | 130000 |
| Chloroform | 1800 | 8800 | 6200 | 31000 |
| 1,1,1-Trichloroethane | 1800 | 9900 | 110000 | 610000 |
| Carbon Tetrachloride | 1800 | 11000 | Not Detected | Not Detected |
| Benzene | 1800 | 5800 | 82000 | 270000 |
| 1,2-Dichloroethane | 1800 | 7300 | 3900 | 16000 |
| Trichloroethene | 1800 | 9800 | 70000 | 380000 |
| 1,2-Dichloropropane | 1800 | 8400 | 1300 J /J | 6000 J |
| cis-1,3-Dichloropropene | 1800 | 8200 | Not Detected | Not Detected |
| Toluene | 1800 | 6800 | 520000 | 2000000 |
| trans-1,3-Dichloropropene | 1800 | 8200 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 1800 | 9900 | Not Detected | Not Detected |
| Tetrachloroethene | 1800 | 12000 | 93000 | 640000 |
| Chlorobenzene | 1800 | 8400 | Not Detected | Not Detected |
| Ethyl Benzene | 1800 | 7900 | 51000 | 220000 |
| m,p-Xylene | 1800 | 7900 | 240000 | 1100000 |
| o-Xylene | 1800 | 7900 | 77000 | 340000 |
| Styrene | 1800 | 7700 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 1800 | 12000 | Not Detected | Not Detected |
| Bromodichloromethane | 1800 | 12000 | Not Detected | Not Detected |
| Dibromochloromethane | 1800 | 15000 | Not Detected | Not Detected |
| Chloromethane | 7100 | 15000 | 1600 J /J | 3300 J |
| Acetone | 7100 | 17000 | 72000 | 180000 |
| Carbon Disulfide | 7100 | 22000 | 730 J /J | 2300 J |
| trans-1,2-Dichloroethene | 7100 | 29000 | 550 J /J | 2200 J |
| 2-Butanone (Methyl Ethyl Ketone) | 7100 | 21000 | 62000 | 180000 |
| 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) | 7100 | 30000 | 25000 | 100000 |
| 2-Hexanone | 7100 | 30000 | Not Detected | Not Detected |
| Bromoform | 7100 | 75000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**



LH 10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 OF IN2 SEP18

ID#: 0309350A-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | b092316 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 3570 | Date of Analysis: | 9/23/03 06:47 PM |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 92 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |



LA 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 EF1 SEP18**

**ID#: 0309350B-05A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | |
|---|---|---|
| File Name: | k092513 | Date of Collection: 9/18/03 |
| Dil. Factor: | 1.00 | Date of Analysis: 9/25/03 05:57 PM |
| | | Date of Extraction: 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | Not Detected | |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | |
| 2-Chlorophenol | 5.0 | Not Detected | /UJ |
| 1,3-Dichlorobenzene | 1.0 | Not Detected | |
| 1,4-Dichlorobenzene | 1.0 | Not Detected | |
| 1,2-Dichlorobenzene | 1.0 | Not Detected | |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected | /UJ |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | /UJ |
| 4-Methylphenol | 5.0 | Not Detected | |
| Hexachloroethane | 1.0 | Not Detected | /UJ |
| Nitrobenzene | 1.0 | Not Detected | /UJ |
| Isophorone | 1.0 | Not Detected | /UJ |
| 2-Nitrophenol | 5.0 | Not Detected | /UJ |
| 2,4-Dimethylphenol | 5.0 | Not Detected | |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | |
| 2,4-Dichlorophenol | 5.0 | Not Detected | /UJ |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected | |
| Naphthalene | 1.0 | Not Detected | |
| 4-Chloroaniline | 10 | Not Detected | |
| Hexachlorobutadiene | 1.0 | Not Detected | |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | /UJ |
| 2-Methylnaphthalene | 1.0 | Not Detected | |
| Hexachlorocyclopentadiene | 20 | Not Detected | |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | /UJ |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | /UJ |
| 2-Chloronaphthalene | 1.0 | Not Detected | /UJ |
| 2-Nitroaniline | 10 | Not Detected | /UJ |
| Dimethylphthalate | 5.0 | Not Detected | /UJ |
| Acenaphthylene | 1.0 | Not Detected | /UJ |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | /UJ |
| 3-Nitroaniline | 10 | Not Detected | /UJ |
| Acenaphthene | 1.0 | Not Detected | /UJ |
| 2,4-Dinitrophenol | 20 | Not Detected | |
| 4-Nitrophenol | 20 | Not Detected | /UJ |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | /UJ |
| Dibenzofuran | 1.0 | Not Detected | |
| Diethylphthalate | 5.0 | Not Detected | /UJ |
| Fluorene | 1.0 | Not Detected | |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | |
| 4-Nitroaniline | 10 | Not Detected | /UJ |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | /UJ |



LH 10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 EF1 SEP18

ID#: 0309350B-05A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

| | |
|---|---|
| File Name: k092513 | Date of Collection: 9/18/03 |
| Dil. Factor: 1.00 | Date of Analysis: 9/25/03 05:57 PM |
| | Date of Extraction: 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | /UJ |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | /UJ |
| Hexachlorobenzene | 1.0 | Not Detected | |
| Pentachlorophenol | 20 | Not Detected | /UJ |
| Phenanthrene | 1.0 | Not Detected | |
| Anthracene | 1.0 | Not Detected | /UJ |
| di-n-Butylphthalate | 5.0 | Not Detected | /UJ |
| Fluoranthene | 1.0 | Not Detected | |
| Pyrene | 1.0 | Not Detected | /UJ |
| Butylbenzylphthalate | 5.0 | Not Detected | /UJ |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | /UJ |
| Chrysene | 1.0 | Not Detected | |
| Benzo(a)anthracene | 1.0 | Not Detected | |
| bis(2-Ethylhexyl)phthalate | 5.0 | 0.65 J | /JB |
| Di-n-Octylphthalate | 5.0 | Not Detected | |
| Benzo(b)fluoranthene | 1.0 | Not Detected | /UJ |
| Benzo(k)fluoranthene | 1.0 | Not Detected | |
| Benzo(a)pyrene | 1.0 | Not Detected | /UJ |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | /UJ |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | /UJ |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | /UJ |

J = Estimated value.

**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 62 | 50-150 |
| Phenol-d5 | 63 | 50-150 |
| Nitrobenzene-d5 | 66 | 50-150 |
| 2-Fluorobiphenyl | 68 | 60-120 |
| 2,4,6-Tribromophenol | 68 | 50-150 |
| Terphenyl-d14 | 71 | 60-120 |

LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 ON IN1 SEP18**

**ID#: 0309350B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | k092509 | **Date of Collection:** | 9/18/03 |
| **Dil. Factor:** | 1.00 | **Date of Analysis:** | 9/25/03 03:47 PM |
| | | **Date of Extraction:** | 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | /R |
| 2-Chlorophenol | 5.0 | Not Detected | /R |
| 1,3-Dichlorobenzene | 1.0 | 2.3 | /J |
| 1,4-Dichlorobenzene | 1.0 | 6.9 | /J |
| 1,2-Dichlorobenzene | 1.0 | 37 | /J |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected | /R |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | /R |
| 4-Methylphenol | 5.0 | Not Detected | /R |
| Hexachloroethane | 1.0 | Not Detected | /R |
| Nitrobenzene | 1.0 | Not Detected | /R |
| Isophorone | 1.0 | Not Detected | /R |
| 2-Nitrophenol | 5.0 | Not Detected | /R |
| 2,4-Dimethylphenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | /R |
| 2,4-Dichlorophenol | 5.0 | Not Detected | /R |
| 1,2,4-Trichlorobenzene | 1.0 | 0.43 J | /J |
| Naphthalene | 1.0 | 19 | /J |
| 4-Chloroaniline | 10 | Not Detected | /R |
| Hexachlorobutadiene | 1.0 | 0.51 J | /J |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | /R |
| 2-Methylnaphthalene | 1.0 | 5.4 | /J |
| Hexachlorocyclopentadiene | 20 | Not Detected | /R |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | /R |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | /R |
| 2-Chloronaphthalene | 1.0 | Not Detected | /R |
| 2-Nitroaniline | 10 | Not Detected | /R |
| Dimethylphthalate | 5.0 | Not Detected | /R |
| Acenaphthylene | 1.0 | Not Detected | /R |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | /R |
| 3-Nitroaniline | 10 | Not Detected | /R |
| Acenaphthene | 1.0 | Not Detected | /R |
| 2,4-Dinitrophenol | 20 | Not Detected | /R |
| 4-Nitrophenol | 20 | Not Detected | /R |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | /R |
| Dibenzofuran | 1.0 | Not Detected | /R |
| Diethylphthalate | 5.0 | Not Detected | /R |
| Fluorene | 1.0 | Not Detected | /R |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| 4-Nitroaniline | 10 | Not Detected | /R |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | /R |



UH
10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 ON IN1 SEP18

ID#: 0309350B-01A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | k092509 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/25/03 03:47 PM |
| | | Date of Extraction: | 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | /R |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| Hexachlorobenzene | 1.0 | Not Detected | /R |
| Pentachlorophenol | 20 | Not Detected | /R |
| Phenanthrene | 1.0 | Not Detected | /R |
| Anthracene | 1.0 | Not Detected | /R |
| di-n-Butylphthalate | 5.0 | Not Detected | /R |
| Fluoranthene | 1.0 | Not Detected | /R |
| Pyrene | 1.0 | Not Detected | /R |
| Butylbenzylphthalate | 5.0 | 2.9 J | /JB |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | /R |
| Chrysene | 1.0 | Not Detected | /R |
| Benzo(a)anthracene | 1.0 | Not Detected | /R |
| bis(2-Ethylhexyl)phthalate | 5.0 | 2.2 J | /JB |
| Di-n-Octylphthalate | 5.0 | Not Detected | /R |
| Benzo(b)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(k)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(a)pyrene | 1.0 | Not Detected | /R |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | /R |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | /R |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | /R |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 0 Q | 50-150 |
| Phenol-d5 | 70 | 50-150 |
| Nitrobenzene-d5 | 74 | 50-150 |
| 2-Fluorobiphenyl | 68 | 60-120 |
| 2,4,6-Tribromophenol | 67 | 50-150 |
| Terphenyl-d14 | 71 | 60-120 |



LH 10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 ON IN2 SEP18

ID#: 0309350B-02A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | k092510 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/25/03 04:20 PM |
| | | Date of Extraction: | 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | /R |
| 2-Chlorophenol | 5.0 | Not Detected | /R |
| 1,3-Dichlorobenzene | 1.0 | 2.2 | /J |
| 1,4-Dichlorobenzene | 1.0 | 6.6 | /J |
| 1,2-Dichlorobenzene | 1.0 | 34 | /J |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected | /R |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | /R |
| 4-Methylphenol | 5.0 | Not Detected | /R |
| Hexachloroethane | 1.0 | Not Detected | /R |
| Nitrobenzene | 1.0 | Not Detected | /R |
| Isophorone | 1.0 | Not Detected | /R |
| 2-Nitrophenol | 5.0 | Not Detected | /R |
| 2,4-Dimethylphenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | /R |
| 2,4-Dichlorophenol | 5.0 | Not Detected | /R |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected | /R |
| Naphthalene | 1.0 | 17 | /J |
| 4-Chloroaniline | 10 | Not Detected | /R |
| Hexachlorobutadiene | 1.0 | 0.53 J | /J |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | /R |
| 2-Methylnaphthalene | 1.0 | 4.2 | /J |
| Hexachlorocyclopentadiene | 20 | Not Detected | /R |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | /R |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | /R |
| 2-Chloronaphthalene | 1.0 | Not Detected | /R |
| 2-Nitroaniline | 10 | Not Detected | /R |
| Dimethylphthalate | 5.0 | Not Detected | /R |
| Acenaphthylene | 1.0 | Not Detected | /R |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | /R |
| 3-Nitroaniline | 10 | Not Detected | /R |
| Acenaphthene | 1.0 | Not Detected | /R |
| 2,4-Dinitrophenol | 20 | Not Detected | /R |
| 4-Nitrophenol | 20 | Not Detected | /R |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | /R |
| Dibenzofuran | 1.0 | Not Detected | /R |
| Diethylphthalate | 5.0 | Not Detected | /R |
| Fluorene | 1.0 | Not Detected | /R |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| 4-Nitroaniline | 10 | Not Detected | /R |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | /R |



10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 ON IN2 SEP18

ID#: 0309350B-02A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

| | |
|---|---|
| File Name: k092510 | Date of Collection: 9/18/03 |
| Dil. Factor: 1.00 | Date of Analysis: 9/25/03 04:20 PM |
| | Date of Extraction: 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | /R |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| Hexachlorobenzene | 1.0 | Not Detected | /R |
| Pentachlorophenol | 20 | Not Detected | /R |
| Phenanthrene | 1.0 | Not Detected | /R |
| Anthracene | 1.0 | Not Detected | /R |
| di-n-Butylphthalate | 5.0 | Not Detected | /R |
| Fluoranthene | 1.0 | Not Detected | /R |
| Pyrene | 1.0 | Not Detected | /R |
| Butylbenzylphthalate | 5.0 | Not Detected | /R |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | /R |
| Chrysene | 1.0 | Not Detected | /R |
| Benzo(a)anthracene | 1.0 | Not Detected | /R |
| bis(2-Ethylhexyl)phthalate | 5.0 | 1.1 J | /JB |
| Di-n-Octylphthalate | 5.0 | Not Detected | /R |
| Benzo(b)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(k)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(a)pyrene | 1.0 | Not Detected | /R |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | /R |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | /R |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | /R |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 0 Q | 50-150 |
| Phenol-d5 | 77 | 50-150 |
| Nitrobenzene-d5 | 83 | 50-150 |
| 2-Fluorobiphenyl | 79 | 60-120 |
| 2,4,6-Tribromophenol | 70 | 50-150 |
| Terphenyl-d14 | 79 | 60-120 |



LA
10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 OF IN1 SEP18**

**ID#: 0309350B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: k092511 | Date of Collection: 9/18/03 |
| Dil. Factor: 1.00 | Date of Analysis: 9/25/03 04:52 PM |
| | Date of Extraction: 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | 10 | IJ |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | IR |
| 2-Chlorophenol | 5.0 | Not Detected | IR |
| 1,3-Dichlorobenzene | 1.0 | 7.6 | IJ |
| 1,4-Dichlorobenzene | 1.0 | 23 | IJ |
| 1,2-Dichlorobenzene | 1.0 | 140 | IJ |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected | IR |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | IR |
| 4-Methylphenol | 5.0 | 5.5 | IJ |
| Hexachloroethane | 1.0 | Not Detected | IR |
| Nitrobenzene | 1.0 | Not Detected | IR |
| Isophorone | 1.0 | 25 | IJ |
| 2-Nitrophenol | 5.0 | Not Detected | IR |
| 2,4-Dimethylphenol | 5.0 | 2.8 J | IJ |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | IR |
| 2,4-Dichlorophenol | 5.0 | Not Detected | IR |
| 1,2,4-Trichlorobenzene | 1.0 | 1.5 | IJ |
| Naphthalene | 1.0 | 67 | IJ |
| 4-Chloroaniline | 10 | Not Detected | IR |
| Hexachlorobutadiene | 1.0 | 4.2 | IJ |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | IR |
| 2-Methylnaphthalene | 1.0 | 12 | IJ |
| Hexachlorocyclopentadiene | 20 | Not Detected | IR |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | IR |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | IR |
| 2-Chloronaphthalene | 1.0 | Not Detected | IR |
| 2-Nitroaniline | 10 | Not Detected | IR |
| Dimethylphthalate | 5.0 | Not Detected | IR |
| Acenaphthylene | 1.0 | Not Detected | IR |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | IR |
| 3-Nitroaniline | 10 | Not Detected | IR |
| Acenaphthene | 1.0 | Not Detected | IR |
| 2,4-Dinitrophenol | 20 | Not Detected | IR |
| 4-Nitrophenol | 20 | Not Detected | IR |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | IR |
| Dibenzofuran | 1.0 | Not Detected | IR |
| Diethylphthalate | 5.0 | Not Detected | IR |
| Fluorene | 1.0 | Not Detected | IR |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | IR |
| 4-Nitroaniline | 10 | Not Detected | IR |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | IR |



UH
10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 OF IN1 SEP18

ID#: 0309350B-03A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | k092511 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/25/03 04:52 PM |
| | | Date of Extraction: | 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | IR |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | IR |
| Hexachlorobenzene | 1.0 | Not Detected | IR |
| Pentachlorophenol | 20 | Not Detected | IR |
| Phenanthrene | 1.0 | Not Detected | IR |
| Anthracene | 1.0 | Not Detected | IR |
| di-n-Butylphthalate | 5.0 | Not Detected | IR |
| Fluoranthene | 1.0 | Not Detected | IR |
| Pyrene | 1.0 | Not Detected | IR |
| Butylbenzylphthalate | 5.0 | Not Detected | IR |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | IR |
| Chrysene | 1.0 | Not Detected | IR |
| Benzo(a)anthracene | 1.0 | Not Detected | IR |
| bis(2-Ethylhexyl)phthalate | 5.0 | 0.64 J | 1 JB |
| Di-n-Octylphthalate | 5.0 | Not Detected | IR |
| Benzo(b)fluoranthene | 1.0 | Not Detected | IR |
| Benzo(k)fluoranthene | 1.0 | Not Detected | IR |
| Benzo(a)pyrene | 1.0 | Not Detected | IR |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | IR |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | IR |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | IR |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 0 Q | 50-150 |
| Phenol-d5 | 92 | 50-150 |
| Nitrobenzene-d5 | 93 | 50-150 |
| 2-Fluorobiphenyl | 86 | 60-120 |
| 2,4,6-Tribromophenol | 79 | 50-150 |
| Terphenyl-d14 | 85 | 60-120 |

LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS T02 OF IN2 SEP18**

**ID#: 0309350B-04A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | k092512 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/25/03 05:25 PM |
| | | Date of Extraction: | 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | 8.3 | /J |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | /R |
| 2-Chlorophenol | 5.0 | Not Detected | /R |
| 1,3-Dichlorobenzene | 1.0 | 6.4 | /J |
| 1,4-Dichlorobenzene | 1.0 | 20 | /J |
| 1,2-Dichlorobenzene | 1.0 | 120 | /J |
| 2-Methylphenol (o-Cresol) | 5.0 | 3.1 J | /J |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | /R |
| 4-Methylphenol | 5.0 | 4.4 J | /J |
| Hexachloroethane | 1.0 | Not Detected | /R |
| Nitrobenzene | 1.0 | Not Detected | /R |
| Isophorone | 1.0 | 21 | /J |
| 2-Nitrophenol | 5.0 | Not Detected | /R |
| 2,4-Dimethylphenol | 5.0 | 2.6 J | /J |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | /R |
| 2,4-Dichlorophenol | 5.0 | Not Detected | /R |
| 1,2,4-Trichlorobenzene | 1.0 | 1.2 | /J |
| Naphthalene | 1.0 | 57 | /J |
| 4-Chloroaniline | 10 | Not Detected | /R |
| Hexachlorobutadiene | 1.0 | 3.4 | /J |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | /R |
| 2-Methylnaphthalene | 1.0 | 9.4 | /J |
| Hexachlorocyclopentadiene | 20 | Not Detected | /R |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | /R |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | /R |
| 2-Chloronaphthalene | 1.0 | Not Detected | /R |
| 2-Nitroaniline | 10 | Not Detected | /R |
| Dimethylphthalate | 5.0 | Not Detected | /R |
| Acenaphthylene | 1.0 | Not Detected | /R |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | /R |
| 3-Nitroaniline | 10 | Not Detected | /R |
| Acenaphthene | 1.0 | Not Detected | /R |
| 2,4-Dinitrophenol | 20 | Not Detected | /R |
| 4-Nitrophenol | 20 | Not Detected | /R |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | /R |
| Dibenzofuran | 1.0 | Not Detected | /R |
| Diethylphthalate | 5.0 | Not Detected | /R |
| Fluorene | 1.0 | Not Detected | /R |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| 4-Nitroaniline | 10 | Not Detected | /R |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | /R |



LH 10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS T02 OF IN2 SEP18

ID#: 0309350B-04A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | k092512 | Date of Collection: | 9/18/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/25/03 05:25 PM |
| | | Date of Extraction: | 9/22/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | IR |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | IR |
| Hexachlorobenzene | 1.0 | Not Detected | IR |
| Pentachlorophenol | 20 | Not Detected | IR |
| Phenanthrene | 1.0 | Not Detected | IR |
| Anthracene | 1.0 | Not Detected | IR |
| di-n-Butylphthalate | 5.0 | Not Detected | IR |
| Fluoranthene | 1.0 | Not Detected | IR |
| Pyrene | 1.0 | Not Detected | IR |
| Butylbenzylphthalate | 5.0 | Not Detected | IR |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | IR |
| Chrysene | 1.0 | Not Detected | IR |
| Benzo(a)anthracene | 1.0 | Not Detected | IR |
| bis(2-Ethylhexyl)phthalate | 5.0 | 1.2 J | JB |
| Di-n-Octylphthalate | 5.0 | Not Detected | IR |
| Benzo(b)fluoranthene | 1.0 | Not Detected | IR |
| Benzo(k)fluoranthene | 1.0 | Not Detected | IR |
| Benzo(a)pyrene | 1.0 | Not Detected | IR |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | IR |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | IR |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | IR |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 0 Q | 50-150 |
| Phenol-d5 | 96 | 50-150 |
| Nitrobenzene-d5 | 98 | 50-150 |
| 2-Fluorobiphenyl | 84 | 60-120 |
| 2,4,6-Tribromophenol | 85 | 50-150 |
| Terphenyl-d14 | 86 | 60-120 |



LH 10/29/03

# September 25, 2003 Off-Gas Sample Laboratory Results

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EFF 1600 SEP25**

**ID#: 0309495A-04A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | |
|---|---|
| **File Name:** s100314 | **Date of Collection:** 9/25/03 |
| **Dil. Factor:** 1.36 | **Date of Analysis:** 10/3/03 06:17 PM |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 0.68 | 1.3 | 25 | 66 |
| Bromomethane | 0.68 | 2.7 | 4.9 | 19 |
| Chloroethane | 0.68 | 1.8 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 0.68 | 2.7 | 74 | 300 |
| Methylene Chloride | 0.68 | 2.4 | 14 | 49 |
| 1,1-Dichloroethane | 0.68 | 2.8 | Not Detected | Not Detected |
| cis-1,2-Dichloroethene | 0.68 | 2.7 | 18 | 74 |
| Chloroform | 0.68 | 3.4 | 16 | 77 |
| 1,1,1-Trichloroethane | 0.68 | 3.8 | 0.90 | 5.0 |
| Carbon Tetrachloride | 0.68 | 4.3 | 7.2 | 46 |
| Benzene | 0.68 | 2.2 | 92 | 300 |
| 1,2-Dichloroethane | 0.68 | 2.8 | Not Detected | Not Detected |
| Trichloroethene | 0.68 | 3.7 | 64 | 350 |
| 1,2-Dichloropropane | 0.68 | 3.2 | Not Detected | Not Detected |
| cis-1,3-Dichloropropene | 0.68 | 3.1 | 0.61 J /J | 2.8 J |
| Toluene | 0.68 | 2.6 | 40 | 150 |
| trans-1,3-Dichloropropene | 0.68 | 3.1 | 0.57 J /J | 2.6 J |
| 1,1,2-Trichloroethane | 0.68 | 3.8 | Not Detected | Not Detected |
| Tetrachloroethene | 0.68 | 4.7 | 160 | 1100 |
| Chlorobenzene | 0.68 | 3.2 | 7.9 | 37 |
| Ethyl Benzene | 0.68 | 3.0 | 6.5 | 29 |
| m,p-Xylene | 0.68 | 3.0 | 34 | 150 |
| o-Xylene | 0.68 | 3.0 | 7.4 | 33 |
| Styrene | 0.68 | 2.9 | 7.5 | 32 |
| 1,1,2,2-Tetrachloroethane | 0.68 | 4.7 | Not Detected | Not Detected |
| Bromodichloromethane | 0.68 | 4.6 | 8.9 | 60 |
| Dibromochloromethane | 0.68 | 5.9 | 3.8 | 33 |
| Chloromethane | 2.7 | 5.7 | 29 | 60 |
| Acetone | 2.7 | 6.6 | 9.2 | 22 |
| Carbon Disulfide | 2.7 | 8.6 | 1.2 J /J | 3.8 J |
| trans-1,2-Dichloroethene | 2.7 | 11 | 13 | 54 |
| 2-Butanone (Methyl Ethyl Ketone) | 2.7 | 8.2 | 1.0 J /J | 3.1 J |
| 4-Methyl-2-pentanone | 2.7 | 11 | 0.34 J /J | 1.4 J |
| 2-Hexanone | 2.7 | 11 | Not Detected | Not Detected |
| Bromoform | 2.7 | 28 | 0.63 J /J | 6.6 J |

J = Estimated value.

**Container Type: 6 Liter Silonite Canister**



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EFF 1600 SEP25**

**ID#: 0309495A-04A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: s100314 | Date of Collection: 9/25/03 |
| Dil. Factor: 1.36 | Date of Analysis: 10/3/03 06:17 PM |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 108 | 70-130 |
| Toluene-d8 | 97 | 70-130 |
| 4-Bromofluorobenzene | 97 | 70-130 |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EFF 1500 SEP25**

**ID#: 0309495A-05A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | s100315 | Date of Collection: | 9/25/03 |
| Dil. Factor: | 5.56 | Date of Analysis: | 10/3/03 06:56 PM |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 2.8 | 7.2 | 170 | 440 |
| Bromomethane | 2.8 | 11 | 31 | 120 |
| Chloroethane | 2.8 | 7.4 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 2.8 | 11 | 430 | 1700 |
| Methylene Chloride | 2.8 | 9.8 | 180 | 660 |
| 1,1-Dichloroethane | 2.8 | 11 | Not Detected | Not Detected |
| cis-1,2-Dichloroethene | 2.8 | 11 | 59 | 240 |
| Chloroform | 2.8 | 14 | 92 | 450 |
| 1,1,1-Trichloroethane | 2.8 | 15 | 0.98 J /J | 5.4 J |
| Carbon Tetrachloride | 2.8 | 18 | 32 | 210 |
| Benzene | 2.8 | 9.0 | 750 | 2400 |
| 1,2-Dichloroethane | 2.8 | 11 | 2.7 J /J | 11 J |
| Trichloroethene | 2.8 | 15 | 280 | 1500 |
| 1,2-Dichloropropane | 2.8 | 13 | Not Detected | Not Detected |
| cis-1,3-Dichloropropene | 2.8 | 13 | 2.1 J /J | 9.6 J |
| Toluene | 2.8 | 11 | 210 | 800 |
| trans-1,3-Dichloropropene | 2.8 | 13 | 1.6 J /J | 7.6 J |
| 1,1,2-Trichloroethane | 2.8 | 15 | Not Detected | Not Detected |
| Tetrachloroethene | 2.8 | 19 | 730 | 5000 |
| Chlorobenzene | 2.8 | 13 | 16 | 78 |
| Ethyl Benzene | 2.8 | 12 | 13 | 57 |
| m,p-Xylene | 2.8 | 12 | 21 | 92 |
| o-Xylene | 2.8 | 12 | 6.0 | 27 |
| Styrene | 2.8 | 12 | 76 | 330 |
| 1,1,2,2-Tetrachloroethane | 2.8 | 19 | Not Detected | Not Detected |
| Bromodichloromethane | 2.8 | 19 | 11 | 74 |
| Dibromochloromethane | 2.8 | 24 | 3.3 | 29 |
| Chloromethane | 11 | 23 | 170 | 360 |
| Acetone | 11 | 27 | 64 | 160 |
| Carbon Disulfide | 11 | 35 | 4.1 J /J | 13 J |
| trans-1,2-Dichloroethene | 11 | 45 | 48 | 200 |
| 2-Butanone (Methyl Ethyl Ketone) | 11 | 33 | 7.6 J /J | 23 J |
| 4-Methyl-2-pentanone | 11 | 46 | Not Detected | Not Detected |
| 2-Hexanone | 11 | 46 | Not Detected | Not Detected |
| Bromoform | 11 | 120 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EFF 1500 SEP25**

**ID#: 0309495A-05A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **s100315** | **Date of Collection:** | **9/25/03** |
| **Dil. Factor:** | **5.56** | **Date of Analysis:** | **10/3/03 06:56 PM** |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 70-130 |
| Toluene-d8 | 98 | 70-130 |
| 4-Bromofluorobenzene | 94 | 70-130 |



LH 10/29/3

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 ONS IN1 SEP25**

**ID#: 0309495A-01A**

***MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN***

| | | | |
|---|---|---|---|
| **File Name:** | **s100311** | **Date of Collection:** | **9/25/03** |
| **Dil. Factor:** | **6700** | **Date of Analysis:** | **10/3/03 04:17 PM** |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 3400 | 8700 | 3600 | 9300 |
| Bromomethane | 3400 | 13000 | Not Detected | Not Detected |
| Chloroethane | 3400 | 9000 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 3400 | 14000 | 16000 | 64000 |
| Methylene Chloride | 3400 | 12000 | 16000 | 56000 |
| 1,1-Dichloroethane | 3400 | 14000 | 4400 | 18000 |
| cis-1,2-Dichloroethene | 3400 | 14000 | 59000 | 240000 |
| Chloroform | 3400 | 17000 | 3500 | 18000 |
| 1,1,1-Trichloroethane | 3400 | 18000 | 54000 | 300000 |
| Carbon Tetrachloride | 3400 | 21000 | Not Detected | Not Detected |
| Benzene | 3400 | 11000 | 43000 | 140000 |
| 1,2-Dichloroethane | 3400 | 14000 | 1000 J /J | 4100 J |
| Trichloroethene | 3400 | 18000 | 99000 | 540000 |
| 1,2-Dichloropropane | 3400 | 16000 | Not Detected | Not Detected |
| cis-1,3-Dichloropropene | 3400 | 15000 | Not Detected | Not Detected |
| Toluene | 3400 | 13000 | 750000 | 2900000 |
| trans-1,3-Dichloropropene | 3400 | 15000 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 3400 | 18000 | Not Detected | Not Detected |
| Tetrachloroethene | 3400 | 23000 | 160000 | 1100000 |
| Chlorobenzene | 3400 | 16000 | 850 J /J | 4000 J |
| Ethyl Benzene | 3400 | 15000 | 90000 | 400000 |
| m,p-Xylene | 3400 | 15000 | 330000 | 1500000 |
| o-Xylene | 3400 | 15000 | 88000 | 390000 |
| Styrene | 3400 | 14000 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 3400 | 23000 | Not Detected | Not Detected |
| Bromodichloromethane | 3400 | 23000 | Not Detected | Not Detected |
| Dibromochloromethane | 3400 | 29000 | Not Detected | Not Detected |
| Chloromethane | 13000 | 28000 | Not Detected | Not Detected |
| Acetone | 13000 | 32000 | 6600 J /J | 16000 J |
| Carbon Disulfide | 13000 | 42000 | 1900 J /J | 6100 J |
| trans-1,2-Dichloroethene | 13000 | 54000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 13000 | 40000 | 8800 J /J | 26000 J |
| 4-Methyl-2-pentanone | 13000 | 56000 | 9000 J /J | 37000 J |
| 2-Hexanone | 13000 | 56000 | Not Detected | Not Detected |
| Bromoform | 13000 | 140000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**



UH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 ONS IN1 SEP25**

**ID#: 0309495A-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | s100311 | **Date of Collection:** | 9/25/03 |
| **Dil. Factor:** | 6700 | **Date of Analysis:** | 10/3/03 04:17 PM |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 97 | 70-130 |
| 4-Bromofluorobenzene | 94 | 70-130 |



VH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 ONS IN2 SEP25**

**ID#: 0309495A-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **s100312** | **Date of Collection:** | **9/25/03** |
| **Dil. Factor:** | **6700** | **Date of Analysis:** | **10/3/03 04:57 PM** |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 3400 | 8700 | 3500 | 9200 |
| Bromomethane | 3400 | 13000 | Not Detected | Not Detected |
| Chloroethane | 3400 | 9000 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 3400 | 14000 | 15000 | 62000 |
| Methylene Chloride | 3400 | 12000 | 16000 | 56000 |
| 1,1-Dichloroethane | 3400 | 14000 | 4500 | 18000 |
| cis-1,2-Dichloroethene | 3400 | 14000 | 62000 | 250000 |
| Chloroform | 3400 | 17000 | 3600 | 18000 |
| 1,1,1-Trichloroethane | 3400 | 18000 | 55000 | 310000 |
| Carbon Tetrachloride | 3400 | 21000 | Not Detected | Not Detected |
| Benzene | 3400 | 11000 | 41000 | 130000 |
| 1,2-Dichloroethane | 3400 | 14000 | 820 J /J | 3400 J |
| Trichloroethene | 3400 | 18000 | 98000 | 540000 |
| 1,2-Dichloropropane | 3400 | 16000 | 1500 J /J | 7200 J |
| cis-1,3-Dichloropropene | 3400 | 15000 | Not Detected | Not Detected |
| Toluene | 3400 | 13000 | 760000 | 2900000 |
| trans-1,3-Dichloropropene | 3400 | 15000 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 3400 | 18000 | Not Detected | Not Detected |
| Tetrachloroethene | 3400 | 23000 | 160000 | 1100000 |
| Chlorobenzene | 3400 | 16000 | 920 J /J | 4300 J |
| Ethyl Benzene | 3400 | 15000 | 93000 | 410000 |
| m,p-Xylene | 3400 | 15000 | 340000 | 1500000 |
| o-Xylene | 3400 | 15000 | 94000 | 410000 |
| Styrene | 3400 | 14000 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 3400 | 23000 | Not Detected | Not Detected |
| Bromodichloromethane | 3400 | 23000 | Not Detected | Not Detected |
| Dibromochloromethane | 3400 | 29000 | Not Detected | Not Detected |
| Chloromethane | 13000 | 28000 | Not Detected | Not Detected |
| Acetone | 13000 | 32000 | 7800 J /J | 19000 J |
| Carbon Disulfide | 13000 | 42000 | 1400 J /J | 4600 J |
| trans-1,2-Dichloroethene | 13000 | 54000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 13000 | 40000 | 9100 J /J | 27000 J |
| 4-Methyl-2-pentanone | 13000 | 56000 | 9000 J /J | 37000 J |
| 2-Hexanone | 13000 | 56000 | Not Detected | Not Detected |
| Bromoform | 13000 | 140000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 ONS IN2 SEP25**

**ID#: 0309495A-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | s100312 | Date of Collection: | 9/25/03 |
| Dil. Factor: | 6700 | Date of Analysis: | 10/3/03 04:57 PM |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 70-130 |
| Toluene-d8 | 97 | 70-130 |
| 4-Bromofluorobenzene | 95 | 70-130 |



UH 10/3/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 OFS IN1 SEP25**

**ID#: 0309495A-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: s100313 | Date of Collection: 9/25/03 |
| Dil. Factor: 2680 | Date of Analysis: 10/3/03 05:37 PM |

| Compound | Rpt. Limit (ppbv) | Rpt. Limit (uG/m3) | Amount (ppbv) | Amount (uG/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1300 | 3500 | 1800 | 4600 |
| Bromomethane | 1300 | 5300 | Not Detected | Not Detected |
| Chloroethane | 1300 | 3600 | Not Detected | Not Detected |
| 1,1-Dichloroethene | 1300 | 5400 | 20000 | 83000 |
| Methylene Chloride | 1300 | 4700 | 56000 | 200000 |
| 1,1-Dichloroethane | 1300 | 5500 | 10000 | 42000 |
| cis-1,2-Dichloroethene | 1300 | 5400 | 27000 | 110000 |
| Chloroform | 1300 | 6600 | 5000 | 25000 |
| 1,1,1-Trichloroethane | 1300 | 7400 | 72000 | 400000 |
| Carbon Tetrachloride | 1300 | 8600 | Not Detected | Not Detected |
| Benzene | 1300 | 4400 | 63000 | 210000 |
| 1,2-Dichloroethane | 1300 | 5500 | 2400 | 9900 |
| Trichloroethene | 1300 | 7300 | 54000 | 300000 |
| 1,2-Dichloropropane | 1300 | 6300 | 1200 J /J | 5700 J |
| cis-1,3-Dichloropropene | 1300 | 6200 | Not Detected | Not Detected |
| Toluene | 1300 | 5100 | 380000 | 1500000 |
| trans-1,3-Dichloropropene | 1300 | 6200 | Not Detected | Not Detected |
| 1,1,2-Trichloroethane | 1300 | 7400 | Not Detected | Not Detected |
| Tetrachloroethene | 1300 | 9200 | 68000 | 470000 |
| Chlorobenzene | 1300 | 6300 | 320 J /J | 1500 J |
| Ethyl Benzene | 1300 | 5900 | 41000 | 180000 |
| m,p-Xylene | 1300 | 5900 | 180000 | 800000 |
| o-Xylene | 1300 | 5900 | 58000 | 260000 |
| Styrene | 1300 | 5800 | Not Detected | Not Detected |
| 1,1,2,2-Tetrachloroethane | 1300 | 9400 | Not Detected | Not Detected |
| Bromodichloromethane | 1300 | 9100 | Not Detected | Not Detected |
| Dibromochloromethane | 1300 | 12000 | Not Detected | Not Detected |
| Chloromethane | 5400 | 11000 | Not Detected | Not Detected |
| Acetone | 5400 | 13000 | 68000 | 160000 |
| Carbon Disulfide | 5400 | 17000 | 1400 J /J | 4400 J |
| trans-1,2-Dichloroethene | 5400 | 22000 | Not Detected | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 5400 | 16000 | 60000 | 180000 |
| 4-Methyl-2-pentanone | 5400 | 22000 | 24000 | 99000 |
| 2-Hexanone | 5400 | 22000 | 990 J /J | 4100 J |
| Bromoform | 5400 | 56000 | Not Detected | Not Detected |

J = Estimated value.

**Container Type: 6 Liter Summa Canister**



LH 10/29/03

# AIR TOXICS LTD.

SAMPLE NAME: ACS TO2 OFS IN1 SEP25

ID#: 0309495A-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

| | | | |
|---|---|---|---|
| File Name: | s100313 | Date of Collection: | 9/25/03 |
| Dil. Factor: | 2680 | Date of Analysis: | 10/3/03 05:37 PM |

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 104 | 70-130 |
| Toluene-d8 | 97 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |



LH 10/8

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EFF 1600 SEP25**

**ID#: 0309495B-04A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | k100110 | Date of Collection: | 9/25/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 10/1/03 04:43 PM |
| | | Date of Extraction: | 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected |
| 2-Chlorophenol | 5.0 | Not Detected |
| 1,3-Dichlorobenzene | 1.0 | Not Detected |
| 1,4-Dichlorobenzene | 1.0 | Not Detected |
| 1,2-Dichlorobenzene | 1.0 | Not Detected |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected |
| 4-Methylphenol | 5.0 | Not Detected |
| Hexachloroethane | 1.0 | Not Detected |
| Nitrobenzene | 1.0 | Not Detected |
| Isophorone | 1.0 | Not Detected |
| 2-Nitrophenol | 5.0 | Not Detected |
| 2,4-Dimethylphenol | 5.0 | Not Detected |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected |
| 2,4-Dichlorophenol | 5.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected |
| Naphthalene | 1.0 | Not Detected |
| 4-Chloroaniline | 10 | Not Detected |
| Hexachlorobutadiene | 1.0 | Not Detected |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected |
| 2-Methylnaphthalene | 1.0 | Not Detected |
| Hexachlorocyclopentadiene | 20 | Not Detected |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected |
| 2-Chloronaphthalene | 1.0 | Not Detected |
| 2-Nitroaniline | 10 | Not Detected |
| Dimethylphthalate | 5.0 | Not Detected |
| Acenaphthylene | 1.0 | Not Detected |
| 2,6-Dinitrotoluene | 5.0 | Not Detected |
| 3-Nitroaniline | 10 | Not Detected |
| Acenaphthene | 1.0 | Not Detected |
| 2,4-Dinitrophenol | 20 | Not Detected |
| 4-Nitrophenol | 20 | Not Detected |
| 2,4-Dinitrotoluene | 5.0 | Not Detected |
| Dibenzofuran | 1.0 | Not Detected |
| Diethylphthalate | 5.0 | 0.49 J /JB |
| Fluorene | 1.0 | Not Detected |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected |
| 4-Nitroaniline | 10 | Not Detected |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected |



LA 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EFF 1600 SEP25**

**ID#: 0309495B-04A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| **File Name:** k100110 | **Date of Collection:** 9/25/03 |
| **Dil. Factor:** 1.00 | **Date of Analysis:** 10/1/03 04:43 PM |
| | **Date of Extraction:** 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected |
| Hexachlorobenzene | 1.0 | Not Detected |
| Pentachlorophenol | 20 | Not Detected |
| Phenanthrene | 1.0 | Not Detected |
| Anthracene | 1.0 | Not Detected |
| di-n-Butylphthalate | 5.0 | Not Detected |
| Fluoranthene | 1.0 | Not Detected |
| Pyrene | 1.0 | Not Detected |
| Butylbenzylphthalate | 5.0 | Not Detected |
| 3,3'-Dichlorobenzidine | 20 | Not Detected |
| Chrysene | 1.0 | Not Detected |
| Benzo(a)anthracene | 1.0 | Not Detected |
| bis(2-Ethylhexyl)phthalate | 5.0 | Not Detected |
| Di-n-Octylphthalate | 5.0 | Not Detected |
| Benzo(b)fluoranthene | 1.0 | Not Detected |
| Benzo(k)fluoranthene | 1.0 | Not Detected |
| Benzo(a)pyrene | 1.0 | Not Detected |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected |
| Dibenz(a,h)anthracene | 1.0 | Not Detected |
| Benzo(g,h,i)perylene | 1.0 | Not Detected |

J = Estimated value.

**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 50 | 50-150 |
| Phenol-d5 | 60 | 50-150 |
| Nitrobenzene-d5 | 61 | 50-150 |
| 2-Fluorobiphenyl | 61 | 60-120 |
| 2,4,6-Tribromophenol | 73 | 50-150 |
| Terphenyl-d14 | 80 | 60-120 |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EFF 1500 SEP25**

**ID#: 0309495B-05A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: k100604 | Date of Collection: 9/25/03 |
| Dil. Factor: 1.00 | Date of Analysis: 10/6/03 03:24 PM |
| | Date of Extraction: 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| Phenol | 5.0 | Not Detected |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected |
| 2-Chlorophenol | 5.0 | Not Detected |
| 1,3-Dichlorobenzene | 1.0 | Not Detected |
| 1,4-Dichlorobenzene | 1.0 | Not Detected |
| 1,2-Dichlorobenzene | 1.0 | Not Detected |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected |
| 4-Methylphenol | 5.0 | Not Detected |
| Hexachloroethane | 1.0 | Not Detected |
| Nitrobenzene | 1.0 | Not Detected |
| Isophorone | 1.0 | Not Detected |
| 2-Nitrophenol | 5.0 | Not Detected |
| 2,4-Dimethylphenol | 5.0 | Not Detected |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected |
| 2,4-Dichlorophenol | 5.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected |
| Naphthalene | 1.0 | Not Detected |
| 4-Chloroaniline | 10 | Not Detected |
| Hexachlorobutadiene | 1.0 | Not Detected |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected |
| 2-Methylnaphthalene | 1.0 | Not Detected |
| Hexachlorocyclopentadiene | 20 | Not Detected |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected |
| 2-Chloronaphthalene | 1.0 | Not Detected |
| 2-Nitroaniline | 10 | Not Detected |
| Dimethylphthalate | 5.0 | Not Detected |
| Acenaphthylene | 1.0 | Not Detected |
| 2,6-Dinitrotoluene | 5.0 | Not Detected |
| 3-Nitroaniline | 10 | Not Detected |
| Acenaphthene | 1.0 | Not Detected |
| 2,4-Dinitrophenol | 20 | Not Detected |
| 4-Nitrophenol | 20 | Not Detected |
| 2,4-Dinitrotoluene | 5.0 | Not Detected |
| Dibenzofuran | 1.0 | Not Detected |
| Diethylphthalate | 5.0 | Not Detected |
| Fluorene | 1.0 | Not Detected |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected |
| 4-Nitroaniline | 10 | Not Detected |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected |



LH 10/9/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 EFF 1500 SEP25**

**ID#: 0309495B-05A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | k100604 | Date of Collection: | 9/25/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 10/6/03 03:24 PM |
| | | Date of Extraction: | 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) |
|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected |
| Hexachlorobenzene | 1.0 | Not Detected |
| Pentachlorophenol | 20 | Not Detected |
| Phenanthrene | 1.0 | Not Detected |
| Anthracene | 1.0 | Not Detected |
| di-n-Butylphthalate | 5.0 | Not Detected |
| Fluoranthene | 1.0 | Not Detected |
| Pyrene | 1.0 | Not Detected |
| Butylbenzylphthalate | 5.0 | Not Detected |
| 3,3'-Dichlorobenzidine | 20 | Not Detected |
| Chrysene | 1.0 | Not Detected |
| Benzo(a)anthracene | 1.0 | Not Detected |
| bis(2-Ethylhexyl)phthalate | 5.0 | Not Detected |
| Di-n-Octylphthalate | 5.0 | Not Detected |
| Benzo(b)fluoranthene | 1.0 | Not Detected |
| Benzo(k)fluoranthene | 1.0 | Not Detected |
| Benzo(a)pyrene | 1.0 | Not Detected |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected |
| Dibenz(a,h)anthracene | 1.0 | Not Detected |
| Benzo(g,h,i)perylene | 1.0 | Not Detected |

**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 51 | 50-150 |
| Phenol-d5 | 59 | 50-150 |
| Nitrobenzene-d5 | 63 | 50-150 |
| 2-Fluorobiphenyl | 63 | 60-120 |
| 2,4,6-Tribromophenol | 65 | 50-150 |
| Terphenyl-d14 | 81 | 60-120 |



VH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 ONS IN1 SEP25**

**ID#: 0309495B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: k100107 | Date of Collection: 9/25/03 |
| Dil. Factor: 1.00 | Date of Analysis: 10/1/03 03:06 PM |
| | Date of Extraction: 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | /R |
| 2-Chlorophenol | 5.0 | Not Detected | /R |
| 1,3-Dichlorobenzene | 1.0 | 2.7 | /J |
| 1,4-Dichlorobenzene | 1.0 | 7.6 | /J |
| 1,2-Dichlorobenzene | 1.0 | 37 | /J |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected | /R |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | /R |
| 4-Methylphenol | 5.0 | Not Detected | /R |
| Hexachloroethane | 1.0 | Not Detected | /R |
| Nitrobenzene | 1.0 | Not Detected | /R |
| Isophorone | 1.0 | Not Detected | /R |
| 2-Nitrophenol | 5.0 | Not Detected | /R |
| 2,4-Dimethylphenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | /R |
| 2,4-Dichlorophenol | 5.0 | Not Detected | /R |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected | /R |
| Naphthalene | 1.0 | 13 | /J |
| 4-Chloroaniline | 10 | Not Detected | /R |
| Hexachlorobutadiene | 1.0 | Not Detected | /R |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | /R |
| 2-Methylnaphthalene | 1.0 | 3.0 | /J |
| Hexachlorocyclopentadiene | 20 | Not Detected | /R |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | /R |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | /R |
| 2-Chloronaphthalene | 1.0 | Not Detected | /R |
| 2-Nitroaniline | 10 | Not Detected | /R |
| Dimethylphthalate | 5.0 | Not Detected | /R |
| Acenaphthylene | 1.0 | Not Detected | /R |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | /R |
| 3-Nitroaniline | 10 | Not Detected | /R |
| Acenaphthene | 1.0 | Not Detected | /R |
| 2,4-Dinitrophenol | 20 | Not Detected | /R |
| 4-Nitrophenol | 20 | Not Detected | /R |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | /R |
| Dibenzofuran | 1.0 | Not Detected | /R |
| Diethylphthalate | 5.0 | 0.67 J | /JB |
| Fluorene | 1.0 | Not Detected | /R |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| 4-Nitroaniline | 10 | Not Detected | /R |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | /R |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 ONS IN1 SEP25**

**ID#: 0309495B-01A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: k100107 | Date of Collection: 9/25/03 |
| Dil. Factor: 1.00 | Date of Analysis: 10/1/03 03:06 PM |
| | Date of Extraction: 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | IR |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | IR |
| Hexachlorobenzene | 1.0 | Not Detected | IR |
| Pentachlorophenol | 20 | Not Detected | IR |
| Phenanthrene | 1.0 | Not Detected | IR |
| Anthracene | 1.0 | Not Detected | IR |
| di-n-Butylphthalate | 5.0 | Not Detected | IR |
| Fluoranthene | 1.0 | Not Detected | IR |
| Pyrene | 1.0 | Not Detected | IR |
| Butylbenzylphthalate | 5.0 | Not Detected | IR |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | IR |
| Chrysene | 1.0 | Not Detected | IR |
| Benzo(a)anthracene | 1.0 | Not Detected | IR |
| bis(2-Ethylhexyl)phthalate | 5.0 | Not Detected | IR |
| Di-n-Octylphthalate | 5.0 | Not Detected | IR |
| Benzo(b)fluoranthene | 1.0 | Not Detected | IR |
| Benzo(k)fluoranthene | 1.0 | Not Detected | IR |
| Benzo(a)pyrene | 1.0 | Not Detected | IR |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | IR |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | IR |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | IR |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 0 Q | 50-150 |
| Phenol-d5 | 71 | 50-150 |
| Nitrobenzene-d5 | 76 | 50-150 |
| 2-Fluorobiphenyl | 74 | 60-120 |
| 2,4,6-Tribromophenol | 73 | 50-150 |
| Terphenyl-d14 | 84 | 60-120 |



UH
10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 ONS IN2 SEP25**

**ID#: 0309495B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| File Name: | k100108 | Date of Collection: | 9/25/03 |
| Dil. Factor: | 1.00 | Date of Analysis: | 10/1/03 03:38 PM |
| | | Date of Extraction: | 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | Not Detected | IR |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | IR |
| 2-Chlorophenol | 5.0 | Not Detected | IR |
| 1,3-Dichlorobenzene | 1.0 | 3.8 | IJ |
| 1,4-Dichlorobenzene | 1.0 | 11 | IJ |
| 1,2-Dichlorobenzene | 1.0 | 54 | IJ |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected | IR |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | IR |
| 4-Methylphenol | 5.0 | Not Detected | IR |
| Hexachloroethane | 1.0 | Not Detected | IR |
| Nitrobenzene | 1.0 | Not Detected | IR |
| Isophorone | 1.0 | Not Detected | IR |
| 2-Nitrophenol | 5.0 | Not Detected | IR |
| 2,4-Dimethylphenol | 5.0 | Not Detected | IR |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | IR |
| 2,4-Dichlorophenol | 5.0 | Not Detected | IR |
| 1,2,4-Trichlorobenzene | 1.0 | Not Detected | IR |
| Naphthalene | 1.0 | 21 | IJ |
| 4-Chloroaniline | 10 | Not Detected | IR |
| Hexachlorobutadiene | 1.0 | 0.59 J | IJ |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | IR |
| 2-Methylnaphthalene | 1.0 | 4.9 | IJ |
| Hexachlorocyclopentadiene | 20 | Not Detected | IR |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | IR |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | IR |
| 2-Chloronaphthalene | 1.0 | Not Detected | IR |
| 2-Nitroaniline | 10 | Not Detected | IR |
| Dimethylphthalate | 5.0 | Not Detected | IR |
| Acenaphthylene | 1.0 | Not Detected | IR |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | IR |
| 3-Nitroaniline | 10 | Not Detected | IR |
| Acenaphthene | 1.0 | Not Detected | IR |
| 2,4-Dinitrophenol | 20 | Not Detected | IR |
| 4-Nitrophenol | 20 | Not Detected | IR |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | IR |
| Dibenzofuran | 1.0 | Not Detected | IR |
| Diethylphthalate | 5.0 | 0.69 J | IJB |
| Fluorene | 1.0 | Not Detected | IR |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | IR |
| 4-Nitroaniline | 10 | Not Detected | IR |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | IR |



LH
10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 ONS IN2 SEP25**

**ID#: 0309495B-02A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: k100108 | Date of Collection: 9/25/03 |
| Dil. Factor: 1.00 | Date of Analysis: 10/1/03 03:38 PM |
| | Date of Extraction: 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | /R |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| Hexachlorobenzene | 1.0 | Not Detected | /R |
| Pentachlorophenol | 20 | Not Detected | /R |
| Phenanthrene | 1.0 | Not Detected | /R |
| Anthracene | 1.0 | Not Detected | /R |
| di-n-Butylphthalate | 5.0 | Not Detected | /R |
| Fluoranthene | 1.0 | Not Detected | /R |
| Pyrene | 1.0 | Not Detected | /R |
| Butylbenzylphthalate | 5.0 | 1.2 J | /JB |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | /R |
| Chrysene | 1.0 | Not Detected | /R |
| Benzo(a)anthracene | 1.0 | Not Detected | /R |
| bis(2-Ethylhexyl)phthalate | 5.0 | 0.69 J | /JB |
| Di-n-Octylphthalate | 5.0 | Not Detected | /R |
| Benzo(b)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(k)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(a)pyrene | 1.0 | Not Detected | /R |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | /R |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | /R |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | /R |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 0 Q | 50-150 |
| Phenol-d5 | 72 | 50-150 |
| Nitrobenzene-d5 | 84 | 50-150 |
| 2-Fluorobiphenyl | 81 | 60-120 |
| 2,4,6-Tribromophenol | 77 | 50-150 |
| Terphenyl-d14 | 88 | 60-120 |



UH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 OFS IN1 SEP25**

**ID#: 0309495B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: Y101005 | Date of Collection: 9/25/03 |
| Dil. Factor: 1.00 | Date of Analysis: 10/10/03 12:56 PM |
| | Date of Extraction: 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| Phenol | 5.0 | 7.1 | /J |
| bis(2-Chloroethyl) Ether | 1.0 | Not Detected | /R |
| 2-Chlorophenol | 5.0 | Not Detected | /R |
| 1,3-Dichlorobenzene | 1.0 | 5.7 | /J |
| 1,4-Dichlorobenzene | 1.0 | 17 | /J |
| 1,2-Dichlorobenzene | 1.0 | 120 | /J |
| 2-Methylphenol (o-Cresol) | 5.0 | Not Detected | /R |
| N-Nitroso-di-n-propylamine | 1.0 | Not Detected | /R |
| 4-Methylphenol | 5.0 | Not Detected | /R |
| Hexachloroethane | 1.0 | Not Detected | /R |
| Nitrobenzene | 1.0 | Not Detected | /R |
| Isophorone | 1.0 | 14 | /J |
| 2-Nitrophenol | 5.0 | Not Detected | /R |
| 2,4-Dimethylphenol | 5.0 | Not Detected | /R |
| bis(2-Chloroethoxy) Methane | 1.0 | Not Detected | /R |
| 2,4-Dichlorophenol | 5.0 | Not Detected | /R |
| 1,2,4-Trichlorobenzene | 1.0 | 0.93 J | /J |
| Naphthalene | 1.0 | 44 | /R |
| 4-Chloroaniline | 10 | Not Detected | |
| Hexachlorobutadiene | 1.0 | 2.9 | /J |
| 4-Chloro-3-methylphenol | 5.0 | Not Detected | /R |
| 2-Methylnaphthalene | 1.0 | 6.8 | /J |
| Hexachlorocyclopentadiene | 20 | Not Detected | /R |
| 2,4,6-Trichlorophenol | 5.0 | Not Detected | /R |
| 2,4,5-Trichlorophenol | 5.0 | Not Detected | /R |
| 2-Chloronaphthalene | 1.0 | Not Detected | /R |
| 2-Nitroaniline | 10 | Not Detected | /R |
| Dimethylphthalate | 5.0 | Not Detected | /R |
| Acenaphthylene | 1.0 | Not Detected | /R |
| 2,6-Dinitrotoluene | 5.0 | Not Detected | /R |
| 3-Nitroaniline | 10 | Not Detected | /R |
| Acenaphthene | 1.0 | Not Detected | /R |
| 2,4-Dinitrophenol | 20 | Not Detected | /R |
| 4-Nitrophenol | 20 | Not Detected | /R |
| 2,4-Dinitrotoluene | 5.0 | Not Detected | /R |
| Dibenzofuran | 1.0 | Not Detected | /R |
| Diethylphthalate | 5.0 | Not Detected | /R |
| Fluorene | 1.0 | Not Detected | /R |
| 4-Chlorophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| 4-Nitroaniline | 10 | Not Detected | /R |
| 4,6-Dinitro-2-methylphenol | 10 | Not Detected | /R |



LH 10/29/03

# AIR TOXICS LTD.

**SAMPLE NAME: ACS TO2 OFS IN1 SEP25**

**ID#: 0309495B-03A**

**MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN**

| | |
|---|---|
| File Name: y101005 | Date of Collection: 9/25/03 |
| Dil. Factor: 1.00 | Date of Analysis: 10/10/03 12:56 PM |
| | Date of Extraction: 9/26/03 |

| Compound | Rpt. Limit (ug) | Amount (ug) | |
|---|---|---|---|
| N-Nitrosodiphenylamine | 10 | Not Detected | /R |
| 4-Bromophenyl-phenyl Ether | 1.0 | Not Detected | /R |
| Hexachlorobenzene | 1.0 | Not Detected | /R |
| Pentachlorophenol | 20 | Not Detected | /R |
| Phenanthrene | 1.0 | Not Detected | /R |
| Anthracene | 1.0 | Not Detected | /R |
| di-n-Butylphthalate | 5.0 | Not Detected | /R |
| Fluoranthene | 1.0 | Not Detected | /R |
| Pyrene | 1.0 | Not Detected | /R |
| Butylbenzylphthalate | 5.0 | 2.3 J | /JB |
| 3,3'-Dichlorobenzidine | 20 | Not Detected | /R |
| Chrysene | 1.0 | Not Detected | /R |
| Benzo(a)anthracene | 1.0 | Not Detected | /R |
| bis(2-Ethylhexyl)phthalate | 5.0 | Not Detected | /R |
| Di-n-Octylphthalate | 5.0 | Not Detected | /R |
| Benzo(b)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(k)fluoranthene | 1.0 | Not Detected | /R |
| Benzo(a)pyrene | 1.0 | Not Detected | /R |
| Indeno(1,2,3-c,d)pyrene | 1.0 | Not Detected | /R |
| Dibenz(a,h)anthracene | 1.0 | Not Detected | /R |
| Benzo(g,h,i)perylene | 1.0 | Not Detected | /R |

J = Estimated value.
Q = Exceeds Quality Control limits, possibly due to matrix effects.
**Container Type: XAD Tube**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 2-Fluorophenol | 0 Q | 50-150 |
| Phenol-d5 | 92 | 50-150 |
| Nitrobenzene-d5 | 85 | 50-150 |
| 2-Fluorobiphenyl | 77 | 60-120 |
| 2,4,6-Tribromophenol | 64 | 50-150 |
| Terphenyl-d14 | 78 | 60-120 |

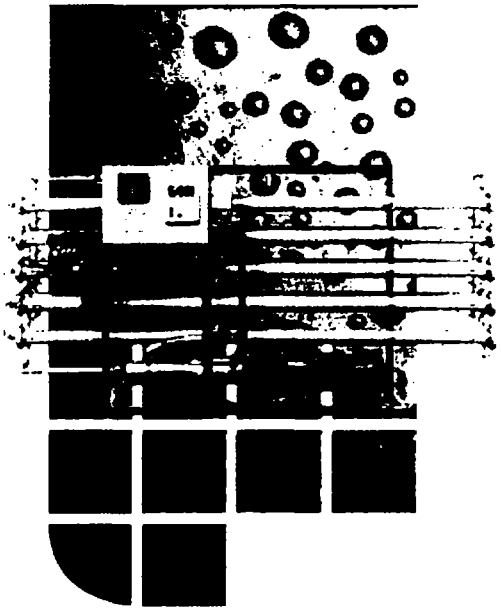


LH 10/29/03

# APPENDIX C

# NANOFILTRATION UNIT CUT SHEET

UNIT OF MEASURE: ENGLISH METRIC BOTH



GE Osmonics

# E4H-21K-ECN-50

## Reverse Osmosis Machine

Osmonics has more than 30 years experience in designing and building high quality reverse osmosis systems. Our E-series RO machines are designed for durable operation, high quality product water production, easy installation and straightforward control

Applications include (but not limited to)

- Boiler feedwater
- Ion exchange pre-treatment
- Process ingredient water
- Safe drinking water

## Dimensions

- Height: **61" (155 cm)**
- Width: **132" (335 cm)**
- Depth: **34" (86 cm)**
- Approximate Weight: **1,300 lbs (590 kg)**

## Pumps and Motors

- RO Pump Model: **SS2834D**
- RO Pump Manufacturer: **Osmonics / Tonkaflo**
- RO Pump Motor Power: **7.5**
- RO Pump Quantity: **1**
- Motor Type: **TEFC**
- Pump Efficiency: **0.6**
- Brake HP: **4.92**

## General

- Series: **E4H**
- Type: **ECN**
- Frequency: **50 Hz**
- Part Number: **1163820**
- **Cold Water Option**

## Operating Parameters

- Permeate Rate: **15.00 gpm (3.41 $m^3$/hr)**
- Concentrate Rate: **5.00 gpm (1.14 $m^3$/hr)**
- Feed Rate: **20.00 gpm (4.54 $m^3$/hr)**
- Recovery Range: **66-75%**
- Maximum Recovery: **75%**
- Nominal Rejection: **95-98%**
- Operating Temperature: **55 - 85°F (13 - 29°C)**
- Design Temperature: **77°F (25°C)**
- Operating pH: **5.5 - 8.5**

## Features

- Stainless steel high-pressure plumbing
- Automatic inlet shut-off valve
- Lakewood Instruments 2450 controller
- Modem Monitoring
- Digital permeate and concentrate flow meters
- Digital conductivity meter
- ALARMS: Low inlet pressure, starter overload trip, high temperature, high permeate conductivity
- Remote on/off capability
- Autoflush system
- Pre-filter, post-filter, pump discharge, primary, and final pressure gauges

## Instrumentation

- Flow Meters: **Permeate, concentrate**
- Flow Meter Model: **400 Series**
- Flow Meter Manufacturer: **Osmonics / Autotrol**
- Conductivity: **Permeate**
- Conductivity Sensor Model: **540K.1-4-10I-10-TC500**
- Conductivity Sensor Manufacturer: **Osmonics / Lakewood Instruments**

## Installation and Utility Requirements

- Inlet: **1.50" (3.81 cm)**
- Permeate: **1.00" (2.54 cm)**
- Concentrate: **1.00" (2.54 cm)**
- Connection Type: **FPT**
- Drain Size: **20.00" (50.80 cm)**
- Inlet Pressure: **30 - 60**
- Motor Power: **380VAC, 3Φ, 50Hz**
- Control Power: **220V, 1Φ, 50Hz**

## Cartridge Filtration

- Cartridge Filtration Manufacturer: **Osmonics**
- Housing Material: **Polypropylene**
- Number of Housings: **2**
- Cartridge Filter: **Hytrex, LD05-20**
- Number of Ties: **4**
- Pressure Gauges: **Pre-filter, post-filter, primary, pump discharge, final**
- Pressure Switch: **Inlet**
- Instrument Center: **Osmonics / Lakewood Instruments**

## Materials of Construction

- Frame: **Epoxy-coated carbon steel**
- Membrane Element Housing: **Stainless Steel**
- Inlet Plumbing: **Schedule 80 PVC**
- High Pressure Plumbing: **Stainless Steel**
- Permeate / Concentrate Plumbing: **PE Tubing, Schedule 80 PVC**
- Control Enclosure: **NEMA 12**
- Motor Starter Enclosures: **NEMA 4X**

## Membrane Elements

- Membrane Element Model: **AG4040T**
- Membrane Manufacturer: **Osmonics / Desal**
- Number of Membrane Elements: **12**
- Membrane Array: **2-2**
- Membrane Housing Model: **404P-500**
- Membrane Housing Manufacturer: **Osmonics**
- Membrane Housing Material: **304L Stainless Steel**
- Number of Membrane Housings: **4**